SUBJECT, BODY, AND TECHNOLOGY IN THE DISCOURSE OF CYBERCULTURE: THE CASE OF WIRED MAGAZINE

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ABSTRACT

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This study aims to provide an account of the production of subject through the representations of body and technology in the discourse of cyberculture through the analysis of Wired magazine. The findings indicate that the subject produced in this discourse is normatively white and male, and is produced along the ways of liberal humanism as it is conceptualized as autonomous, having free will and preceding the discursive operations and market relations. The production of this subject requires a series of exclusions and abjections including the smart machines which are becoming increasingly humanoid and thus forming a threat to the category of "human" and to the boundaries of the autonomous subject.

KEYWORDS: Body, Cyberculture, Gender, Subject, Technology

ÖZ

SİBERKÜLTÜR SÖYLEMİNDE ÖZNE, BEDEN VE TEKNOLOJİ :
WIRED DERGİSİ ÖRNEĞİ

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Bu çalıma siberkültür söyleminde beden ve teknoloji temsilleri üzerinden özne üretimini Wired dergisi örneği üzerinden incelemektedir. Bulgular bu söylemde üretilen öznenin liberal hümanist özneye benzer şekilde, normatif olarak beyaz ve erkek olarak temsil edildiğini, otonom, özgür irade sahibi, ve pazar ilişkileri ile söylemsel süreçlere öncül olarak kavramlaştırıldığını göstermektedir. Öznenin bu tanıma uygun olarak üretimi bir dizi dışlama üzerinden yapılmakta, gittikçe insansı özellikler kazanmaları nedeniyle bu söylemde "insan" kategorisi ve otonom öznenin sınırları için bir tehdit oluşturmaya başlayan sibernetik makinaların da bu dışlanmaya dahil edildiği görülmektedir.

ANAHTAR KELİMELER: Beden, Özne, Siberkültür, Teknoloji, Toplumsal Cinsiyet

In loving memory of my parents,

Zuhal Uğurlu Peksoy

and

Mehmet Mustafa Karadeniz

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INTRODUCTION

1.1 Cyberculture, Cyberspace and Posthuman

The term *cyberculture* refers to an oppositional subculture that is situated at the conjuncture of *cybernetics*, *counterculture*, *cyberpunk literary movement* and *hacker subcultures*. It is characterized by fetishism and consumption of high-tech commodities, fascination with cyberpunk science fiction, and McLuhanite technological determinism. Combining the utopian ideals of counterculture with an utter belief in the revolutionary potentials of technology, cyberculture claims to be subversive to corporate capitalism through its usage of technology, while ironically being deeply rooted in consumerism, individualism and a Western middle class economic and educational privilege.

According to Turner (2006b) cyberculture stems from the popularity of *cybernetics* in the 1960s American counterculture and the resulting celebration of the cybernetic principles and technology by some of the countercultural communes. Cybernetics is the the interdisciplinary science of control and communication, founded by Norbert Wiener and developed within the American military-academic research complex during the World War II and the following cold war era. By means of analogy, cybernetics conceptualizes machines and biological organisms as interconnected parts of an information system (Turner, 2006b: pp.20-3). This vision of the world as "a single, interlinked pattern of information" was comforting for a generation that had grown up with anxieties about an impending war and nuclear annihilation; which resulted in particular communalist groups' embracing

cybernetics' principles and small scale technologies as revolutionary tools and as harbingers of global harmony (Turner, 2006b: pp.4-5).

The embracing of cybernetic principles and technology by counterculture posed a dilemma as they were developed in the American military industrial complex, and therefore represented the very structures that counterculture loathed and sought to undermine. According to Turner, this dilemma was resolved by a *technological determinism* drawn from the works of the media theorist Marshall McLuhan (Turner, 2006b: p.54). In the *Gutenberg Galaxy,* McLuhan (1962) asserts that technologies that are dominant in a society are determinant of the type of the society and the individuals in it. Regardless of being product of the "old society", the new technology would inevitably produce a "new society": While the older technologies had resulted in a bureaucratic, rational and fragmented society, new technologies would result in a new society, a "global village" in which each person is intimately connected with the rest of humanity (McLuhan, 1962: p.12; p.31; p.253). Following this, cybernetics' principles and the new technology could be embraced by certain groups within American counterculture as revolutionary tools that are capable of bringing "individual and collective transformation" despite their being developed within the context of war and capitalism. Likewise, the countercultural communes that used the products of the new technology were not seen as "communities built around consumption of industrial products" ; they were seen as "model communities for a new society" (Turner 2006b.: p.54). Counterculture communes' embracing of cybernetic principles, technology, and McLuhanite technological determinism marks the beginning of the cyberculture; and their experimentations in self discovery and community building using new technology prefigures cyberculture's utopian discourse around virtual communities and cyberspace.

In the later years, cyberculture incorporated other elements, mainly *hacker culture* and the literary genre *cyberpunk*, both of which focus on subversive usage of technology; and this combination resulted in an array of utopian, oppositional and

dystopian narratives woven around the consumption of technology. These narratives rely on cybernetic technology to biotechnically enhance human body, or trancend the materiality of body altogether by immersion into *cyberspace*, in order to reach the next evolutionary stage of humankind called *posthuman*.

Cyberspace, a term coined by William Gibson in his seminal novel *Neuromancer* (1984), stands for a medium of computer mediated communication, an imaginary and immaterial non-space that can be entered by connecting to a computer network. Gibson defines cyberspace as a "consensual hallucination" made up of visual representation of data, a complex vista of light clusters resembling a cityscape (Gibson 1984: p.67). Entry to cyberspace represents a state of disembodied exultation which Gibson's characters constantly seek, a 'bodiless exultation', while the embodied existence outside the cyberspace is referred as a 'prison of [one's] own flesh' (Gibson, 1984: p.12).

With the popularity of Gibson's novel, the concept of cyberspace inspired a generation of science fiction writers and hackers and the novel became a part of cyberculture canon. At the same time, Gibson's cyberspace also profoundly influenced technological research by giving a common name to the previously separate technological phenomena like "computer simulations, networks and hypertext windows" (Hayles, 1999: pp.35-6) and enabled researchers in these fields to "recognize and organize themselves as a community" (Stone, 2000: p.515). Consequently, the term came to be used for many distinct forms of computer mediated communication and network technology, including virtual reality, on line communities and the Internet.

Although the focus of the Gibsonian cyberspace was the disembodied emancipation of consciousness from the limits of embodiment, this concept was later charged with utopian connotations and started to represent a gender and race free way of communication and interaction. In this utopian conceptualization, cyberspace stands for a new form of community in which freedom of the authentic

self from cultural and material constraints is upheld. The notion of an ideal community built in computer networks proved attractive for scholars, entrepreneurs and politicians alike (Turner, 2006b: p.1) : For instance, Howard Rheingold suggested that cyberspace could revitalize a long lost sense of community by creating a new public space (as cited in Wolmark p.221). John Perry Barlow called cyberspace "a civilization of the Mind" where identities are free from bodies; a society where race, economic power and birth place are irrelevant (1996). Pierre Lévy saw in cyberspace the apotheosis of Enlightenment ideals, "a universality without totality" (Lévy, 2001: p.100). In the political arena, the utopian notions attached to cyberspace were used to legitimize legislations that are otherwise driven by economic concerns; for example, Clinton-Gore administration in United States used the narrative of universality to present the Global Information Infrastructure as a humanitarian mission despite its market driven principles (Stratton, 2000: p.726). Thus, despite having originated as a science fictional term signifying a state of disembodied exultation, the concept of cyberspace later became the core of a social and political utopia that is largely based on the reiteration of Enlightenment values.

Closely related to the concept of cyberspace is *posthuman*, the other utopian concept of cybercultural narratives. N. Katherine Hayles (1999) defines the common theme running through all articulations of posthuman as the "union of the human with the intelligent machine", and the resulting altered mode of subjectivity (p.2). According to Hayles, the concept of posthuman can be read as a subversive intervention to the historical construction "human" as it denaturalizes the historically constructed liberal humanist subject by defining the human as a part of an information system (Hayles, 1999: pp.3-4). However, posthumanism also reiterates the erasure of embodiment by identifying the subject with the mind, defining it not as "being a body" but possessing a body. This enables posthumanism to erase the bodily markers of difference like sex, race and ethnicity from the subject, and enabling it once again to claim universality (Hayles, 1999: pp.4-5). Moreover, in most narratives of cyberculture, the concept of posthuman is

attached to the idea of progress, defined in terms of an upgrade to human body, or a voluntary evolution (Terranova, 2000: p.268). For example, Extropy institute's F.A.Q. defines posthuman in terms of biotechnological enhancements that aim to overcome the biological, neurological and psychological constraints of human body (Extropy Institute, quoted in Terranova, 2000: p.273). Tiziana Terranova points how these narratives erase societal as well as biological factors with an "utter belief in the individual will to realize its potential", consisting in what he calls "a rampant super-voluntarism" (2000: p.275). Despite Hayles's (1999) emphasis on the subversiveness of the concept of posthuman to the historically constructed "human" subject, Terranova's account (2000) shows posthumanism's reiteration of this human subject with the insistence on a free-will that precedes and overcomes societal and biological factors in this discourse.

1.2 Research Focus: Subject and Body in the Discourse of Cyberculture

Both cyberspace and posthuman narratives envision ways of changing individual and society through a technological intervention to the body, which points to the importance of embodiment in the discourse of cyberculture. Accordingly, the discussions in the field of cyberculture studies often focus on embodiment. The debates about embodiment in cyberculture resulted in two overlapping yet different constellations of arguments. One strand of arguments, which includes Vivian Sobchack's (2000), Deborah Lupton's (2000) , Scott Bukatman's (2000) and Nicola Nixon's (as cited in Wolmark, 2003) accounts point to the fantasy of *disembodiment* and the reproduction of the unitary masculine subject in the discourse of cyberculture. This position holds that the narratives related to cyberspace and posthuman address the anxieties around the body's mortality, permeability of its boundaries, and its irrationality as they envision technological ways to either escape the body or fortify it (2000: pp.142-3; Lupton, 2000: pp.479-80). It also points to an unacknowledged assumption of a disembodied unitary subject and the reiteration of the Cartesian split in cyberculture as these narratives imply that even if the body is transcended and reconstructed as information, the

subject remains intact (Wolmark, 2003: p.227-8; Hayles, 1999). In this logic, the body and machine are conceptualized in similar terms, and portrayed as feminine, forming a binary opposition with the disembodied and unitary subject that is specifically coded as masculine (Lupton, 2000: p.479; p.487, Sofia as cited in Wolmark, 2003: p.222; Wolmark, 2003: p.222).

The second position focuses on the *refiguration of embodiment* in cyberculture, arguing that both cyberspace and posthuman narratives entail a re-embodiment of the subject, if distinct from its actual physical embodiment (Stone, 2000: p.522; Foster, 2000: p.440). While in most cases this re-embodiment takes place according to the dominant discourses about a culturally desirable body, this process is potentially subversive as it is also capable of producing a culturally illegitimate subject that virtually exists in many locations and multiple states of embodiment (Stone, 2000: p.524). The virtual remapping of subjectivity and body also enables gender performance as the virtual embodiment can have a different gender than the actual body; which is emphasized in this position as another way the virtual refiguration of embodiment is potentially subversive to the hegemonic construction of human subject (Foster, 2000: pp.452-3).

The debate between these two positions is not merely a discussion "what happens to body in cyberculture" or "disembodiment vs. not disembodiment" because both positions have different implications on subjectivity: The first position emphasizes the recuperation of the liberal humanist subject in this discourse, reproduced as universal, disembodied, masculine and unitary in opposition to the body and machine that are portrayed in feminine and material terms. The other position emphasizes the subversion of this subject by its denaturalization and destabilization, as its embodiment is refigured and multiplied, and its identity is rendered more fluid.

Taking this debate as a starting point, this research focuses on the representations of body and technology in cyberculture and the raced and gendered subject that is

produced through these representations: How does cyberculture portray body in relation with the technology? What does this relation imply for the subject? Are the Cartesian binaries such as male/female, culture/nature, active/passive are reproduced in this discourse; or are they destabilized? How are race and gender represented in this discourse? Is the unitary subject undermined by a more fluid and open subjectivity, or merely reproduced?

To address such questions related to the issue of embodiment in cyberculture, this research will follow two interrelated paths: First, the relevant literature will be reviewed, covering the discussions pertaining to the body, technology and subject in cyberculture. This review will provide the conceptual framework that is necessary for the rest of the research. Secondly, a discourse analysis of Wired magazine, a prominent magazine in cyberculture, will be carried out in order to account for the production of the subject through its representations of embodiment and technology. As a result, the research will advance an understanding on whether, and to what extent, the discourse of contemporary cyberculture reproduces the unitary subject of liberal humanism through its representations of body and subject; and to what extent it is subversive to it.

1.3 Research Objectives

The aim of this research is to account for the production of the subject in cyberculture's representations of body and technology by analyzing the discourse of Wired magazine. This will be achieved through the following objectives:

1. Explore the definitions of cyberculture and examine its constituents.

2. Examine the accounts of subject and body in cyberculture in the relevant literature.

3. Analyze the discourse of Wired and examine the production of subject through

its representations of body and technology.

4. Discuss the ways that the subject of Western liberal humanism is reproduced in the discourse of Wired and the ways in which it is subverted.

Explore the definitions of cyberculture and examine its constituents: The term cyberculture is notorious for its ambiguity: It is used flexibly in academic and popular discourses, referring to many distinct phenomena related to technology (Macek, 2004). As a result, many different definitions and delimitations of the term exist. David Silver (1996) points that Cyberculture is broad and deep, and constantly changing, and making it difficult to locate its boundaries and delimit it. As cyberculture has many facets and elements, he suggests to examine those elements separately to gain a better understanding (Silver, 1996). Jakub Macek (2005) similarly points to the many segments that constitute cyberculture, and argues that it can be misleading to reduce cyberculture to one of its aspects and neglect others. Because of the depth and multi-facetiousness of the term, the first objective of this research is to explore the definitions of cyberculture in the academic literature, and examine the various components that constitute it. This will preclude any confusion that can result from the multiplicity of definitions in the literature, and will provide a conceptual framework for the rest of the study.

Examine the accounts of subject and body in cyberculture in the relevant literature: The issue of embodiment is of significant importance in cyberculture studies since most narratives of cyberculture envision means of technological intervention to embodiment. As pointed in the previous section, two different yet overlapping positions can be identified in the academic accounts of embodiment in cyberculture: One of them emphasizes the ways in which cyberculture re-enacts the disembodiment fantasy and the Cartesian subject that is paradigmatic in the Western thought, and the other emphasizes how cyberculture refigures embodiment in ways that are potentially subversive to the liberal humanist subject. The second objective of this study is to elaborate this discussion of embodiment in cyberculture studies and examine these two positions in more detail.

Analyze the discourse of Wired and examine the production of subject through its representations of body and technology: The third objective of this research is to examine the discourse of Wired magazine. Along with Mondo 2000 and Extropy journal, Wired magazine is one of the iconic magazines of cyberculture. In contrast to its predecessor Mondo 2000 which represented the subcultural and oppositional side of the cyberculture, the colorful yet carefully packaged Wired has a more business oriented approach signaling the increasing mainstream attention payed to cyberculture and the neutralization of its oppositional and subcultural aspects due to its absorption by popular culture (Lovink, 1999). Founded by Lois Rosetto and Jane Metcalfe, *Wired* started its publication in 1993. Since its launch, Wired enjoyed a great success from its earliest years, winning two National Magazine Awards for General Excellence and one for Design in its first four years (Fisher, 2007: p.45). It brought together a group of charismatic and influential writers such as leaders of techno-libertarian organization *Electronic Frontier Foundation, "*academics from the *Stanford Research Institute*, Nicholas Negroponte from MIT Media Lab", and "Kevin Kelly, the editor of the *Whole Earth Review"* (Wolf as cited in Fisher, 2007: p.45). With its influential roster of writers, loyal commitment to McLuhanite technological determinism and vibrant celebration of the "digital revolution", Wired represents a salient example of cyberculture publications and therefore has been chosen to be analyzed in this study. The rationale of selection of discourse analysis as the research strategy for this study and its implementation will covered in the next section of this introduction.

Discuss the ways that the subject of liberal humanism is reproduced in the discourse of Wired and the ways in which it is subverted: The fourth objective of the thesis is to use the findings of the analysis to evaluate the subject position produced in the discourse of Wired and discuss the ways in which it is subversive and recuperative of the subject of liberal humanism. This objective will bring together the findings of all previous objectives and will result discussion of the subject in cyberculture. Such a discussion will be valuable in its potential to shed light to the extent cyberculture is subversive towards the subjectivity of Western

liberal humanism that has been inextricably associated with oppression and domination

1.4 Methodology

This research consists of a theoretical component and an empirical component. The theoretical component investigates the accounts of cyberculture and examines the discussions of embodiment in cyberculture studies, while the empirical component consists of the discourse analysis of Wired magazine. This methodology section focuses on the discourse analysis, the rationale of its selection as the research strategy for this study, and its implementation.

Jonathan Potter and Margaret Wetherell identify four types of studies that are described as discourse analysis (1994:p.47): The first type, which is exemplified in *Studies in Discourse Analysis* by Coulthard and Montgomery, is influenced by the speech act theory, and thus refer to a systematic account of the organization of conversation exchange in social settings, such as classrooms (Potter & Wetherell, 1994 : p.47). The second type, seen in *Strategies of Discourse Comprehension* by van Dijk and Kintch focuses on the psychological processes related to discourse, such as the effects of discourse on understanding (Potter & Wetherell, 1994: p.47). The third type, exemplified in *Opening Pandora's Box: a Sociological Analysis of Scientists' Discourse* by Gilbert and Mulkay, is developed within the sociology of scientific knowledge, and focuses on the construction of scientists' talk and texts to "display their acts as rational and warrantable in any particular setting" (Potter & Wetherell, 1994:p.47). The fourth type of discourse analysis consists of Foucault's *archaeology*, and is dedicated to showing that institutions, practices and the human subject can be understood as produced through the workings of discourse (Potter & Wetherell, 1994:p.47). As this study focuses primarily on the production of the subject in the discourse of cyberculture, this fourth type of discourse analysis will be employed in the empirical part of the research.

In Foucault's account, discourse is not a manifestation of a transcendental or psychological subject but a "totality in which the dispersion of subject and his discontinuity with itself may be determined" (Foucault, 2005: p.60). According to him, discourse not only forms its objects (Foucault, 2005: p.54), or forms and organizes its concepts but it also makes available subject positions that can be occupied by different individuals (Foucault, 2005: pp.60-69). This conceptualization of discourse and subject reverses the modernist relation between them since subject is defined here not as the producer of the discourse but its effect; a variable and complex function of it (Oliviera, 1989: p.9).

The deemphasis of individual subjects as authors makes discourse analysis a suitable method for the analysis of Wired: Like many other magazines, Wired features a variety of texts written by different authors in every issue. As discourse analysis takes authors not as producers of discourse but as its products, the idiosyncrasies of the individual authors can be omitted to focus on the texts and the discursive formation which they are parts of. Many different types of texts can be found in Wired such as editorials, essays, news stories, and product reviews. Discourse analysis does not run counter but in fact demands such eclecticism of sources, since texts can belong to different genres including fictional and non fictional ones, and can still be parts of the same discursive formation (Rose, 2000: pp.142-3; Green as cited in Rose, 2000: p.143). Accordingly, the material in Wired can be accepted as part of the discourse of cyberculture regardless of genres, participating in the formation of a coherent regime of truth about body and technology and producing subject positions. Because of this, the material in Wired are included in the analysis without any classification according to the genre they belong or their fictional status.

1.4.1 Archaeology, Genealogy and the Technologies of the Self

Archaeology is one of the three axes of Foucault's work: *Archaeology*, *genealogy* and the *technologies of the self*. Despite some scholars' conclusion that genealogy

is superior to archaeology, and therefore archaeology is abandoned by Foucault in favor of genealogy; they represent different theoretical shifts, necessitated to study different aspects of the production of truth (Scheurich and McKenzie, 2005: p.849). As Foucault points:

> '[A]rchaeology' would be the appropriate methodology of this analysis of local discursivities, and 'genealogy' would be the tactics whereby, on the basis of the descriptions of these local discursivities, the subjected knowledges which were thus released would be brought into play (Foucault 1980: p.85).

While focusing on the discursivities, archaelogy does not downplay the role of power. On the contrary, many aspects of archaelogy point to institutions or authorities that operate in tandem with discourse. Emergence of the objects of a discourse (Foucault, 2004: p.47), workings of enunciative modalities that authorize different individuals with different subject positions to speak from (Foucault, 2004: p.57-8), and the unrealized potentials at the points of diffraction within a discourse (Foucault, 2004 : 75-7), all point to operation of authorities and institutions that are located at the limits of discourse. On the other hand, the archaelogy focuses more specifically on the workings of discourse in producing truth and subjects rather than power and the way it operates on bodies.

Genealogy, the second axis of Foucault's work, overlaps with archaelogy in that it opposes the notions of origin, universal truth, progress of humanity, manifestations of destiny, intentions of subjects; and aims to trace discontinuities rather than accounting for continuities (1977: p.144; p.146). On the other hand, in genealogy the focus shifts from the discursive formations and the rules of their production to the relations of power, and domination (1977: p.150). Within this conceptualization

of history as a succession of dominations, the body becomes the subject of history, produced and inscribed by it (1977: p.153).

The technologies of the self is the third axis of Foucault's work, examining the ways individuals constitute themselves. In *Technologies of the Self* (1988), Foucault defines them as technologies which

> permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state-of happiness, purity, wisdom, perfection, or immortality (1988: p.18).

As with the archaeological and genealogical axes, the technologies of self does not represent Foucault's abandoning his previous projects but complementing them, as well as his increasing interest in " interaction between oneself and others and in the technologies of individual domination, the history of how an individual acts upon himself, in the technology of self" (1988: p.19)

Since this study aims to account for the ways that human subject is discursively produced and/or subverted in its relation with technology and machine in cyberculture, it focuses on the discursive processes by which objects, concepts and statements about human, technology and body are formed and dispersed, rather than the processes of domination or individuals' techniques of acting upon themselves. While part of the research problem in this study pertains to body, the focus of the research is more on the representations of body and the ways the relation between body and technology is conceptualized within cyberculture than the operation of power as productive of and inscriptive on body. Likewise, this research problem focuses more on the discursive and exclusionary means the subject is constructed rather than the techniques that are at the disposal of the

individuals to apply on themselves. Because of this research focus, discourse analysis and archaeological methodology is preferred as the research strategy of this research instead of genealogy or technologies of the self.

1.4.2 Discursive Production of Subject

As Foucault points, through the enunciative modalities discourse makes available subject positions and authorizes individuals to speak from them (2004: p.55). However, when the research problem pertains to the human subject and its posthumanistic subversion, the question also includes processes of exclusion that delineates “human” from “inhuman” . For this reason, Judith Butler's concept of cultural intelligibility provides a useful addition to the conceptual framework of this study.

The concept of cultural intelligibility, as developed by Judith Butler in *Gender Trouble* (1999), refers to a set of norms that are cited to delimit the legitimate subject (p.:xxiii). According to Butler, the materialization of the body and its morphogenesis is a forcible reiteration of these norms (1999: p.2). The normative framework that is responsible for the production of subjects as “humans” also requires the production of an abject domain, a domain of exclusion that designates a zone of unlivable bodies and what cannot be recognized as human (1993: p.3; 1999: viii). As the potential subversion of the human subject in cybernetics and cyberculture is often formulated in academic literature through human body's merging with the “inhuman”, Butler's conceptual framework seems fit for accounting the production of subject in cyberculture. Her account of delineation of subject through exclusion of an abject domain will be used in addition to Foucault's concepts in the last chapter of the thesis where the findings of the previous chapters will be used to discuss the production of the subject in cyberculture as stated in the fourth research objective.

1.4.3 Analysis of Visual Content

Wired magazine is well known for its striking visual design (Lovink, 1999). Moreover, the on line edition of Wired magazine features a myriad of interactive elements, ranging from picture galleries and streaming video to registration forms and an interactive commenting and voting system. This abundance of non verbal elements in Wired brings up the question of whether, and how they should be included in the discourse analysis.

To answer this question, it can be helpful to examine Foucault's concept of statement. Statements are the basic elements of the discourse, but they do not comprise the discourse in the way that sentences, propositions or speech acts are units of language (Foucault, 2004: 92-5). Statements differ from these units in that, they are defined as enunciative functions that belong to the domain of signs (Foucault, 2004: p.98). As they are defined in terms of functions, grammatical content that are non-sentences are also classified as statements: "[A] classificatory table of the botanical species", " a genealogical tree, an accounts book, the calculations of a trade balance", "equation of the n^{th} degree, or the algebraic formula of the law of refraction", none of which are sentences are nevertheless statements (Foucault, 2004: pp.93-4). This definition also includes non-verbal content and images: " graph, a growth curve, an age pyramid, a distribution cloud" (Foucault, 2004: pp.93-4). While these are not grammatical or linguistic units, they are nevertheless elements that produce an effect of truth and play part in the production of subjects, parts of the discourse.

However, accepting the visuals as statements leads to other questions regarding their analysis. While some non-verbal statements such as maps can be interpreted quite easily as producing an effect of truth, others, such as illustrations, or artwork may not readily lend themselves for interpretation. Examining images as statements firstly requires a means of interpreting the elements in their composition as *signs*. In Ferdinand De Saussure's (1974) well known formulation, sign designates the whole which consists of the *signifier* and *signified*, in which the signifier represents

the sound image, and the signified represents the the concept that corresponds to it. These terms exist in an opposition that separates them from each other, and the whole that they constitute (De Saussure, 1974: p.67). An important aspect in this formulation is that the bond between the signifier and the signified is arbitrary as the signified can be equally represented by any other signifier (De Saussure, 1974 :pp.67-8).

Since Saussure's model primarily deals with linguistic signs, its ability to deal with particularities of the visual is controversial (Rose, 2001: p.77). For example, Iversen points that while the relation between the signifier and signified are arbitrary in linguistic signs, it is motivated in visual signs with a rationale for the choice of signifier; resulting that "semiotics based on linguistics will fall far short of offering an account of visual signification" (as cited in Rose, 2001: pp.77-8). Peter Wollen (1998) similarly points that motivated signs cannot be as easily thrown out of semiotics as Saussure argued, as non-arbitrary signs can also produce strong systems of meanings (p.108).

In *The Photographic Message,* Roland Barthes (1977b) points that all analogical reproductions of reality - "drawings, paintings, cinema, theatre"- comprise coexisting of *denotative* , and *connotative* messages (p.17). The denotative messages arise from the analogical content, "scene, object, landscape", "the *style* of reproduction", while the connotative messages arise from the aesthetic and ideological significations of the image that communicates to the society it addresses (1977b: p.17). While all the analogical images have these aspects, only photograph has the capacity to present a perfect analogon of the reality, "a message without a code" (1977b: pp.17-8). Coexisting of the two messages, denotative and connotative, comprises what Barthes calls *the photographic paradox* (1977b:p.19).

> The photographic paradox can then be seen as the co-existence of two messages, the one without a code (the photographic analogue), the other with a code (the 'art', or the treatment, or the 'writing', or the

> rhetoric, of the photograph); structurally, the paradox is clearly not the collusion of a denoted message and a connoted message (which is the - probably inevitable - status of all the forms of mass communication), it is that here the connoted (or coded) message develops on the basis of a message without a code.

According to Barthes, the connotative message is developed with procedures such as “trick effects” (1977b: p.21), “pose”, “objects” that are posed (1977b: p.22), “photogenia”, which involves techniques of embellishment of the photograph with “light, exposure and printing” techniques (1977b: p.23), “aestheticism” (1977b: p.24), and “syntax”, which involves the concatenation of a sequence of photos (1977b: pp.24-5). These procedures impose the second order meaning to the denotation of the photograph, yet the analogon of the photograph conceals these procedures, allowing the connotations to “benefit from the prestige of denotation” (1977b: pp.20-1).

In the *Rhetoric of the Image*, Barthes further elaborates these concepts as he distinguishes between three types of messages within the image: The *linguistic message,* which stands for the texts that are in or added to the image, as well as the *coded* and *non-coded iconic messages*, which respectively stand for the connotative and denotative aspects of the image. The linguistic messages here, *anchorage* and *relay,* has a repressive role in that they delimit the polysemy of the image, directing the “reader through the signifieds of the image, causing him to avoid some and receive others” (1977a: 38-40).

Barthes' conceptualizations for analogical images and photographs provide a rich conceptual framework for the analysis of the images in Wired: His formulations of the connotative and denotative aspects of images, and his account of the paradox of photograph and connotation will be used in analyzing how certain statements are connoted in the images in Wired through the procedures of connotation . The

anchorage and relay are also important concepts for reading of the images as they point to the articulation of a certain message within a possible multitude enabled by the polysemy of the image.

1.4.4 Reader Comments and Interaction

As Lev Manovich (1995) points, interactive media asks the user to follow directions by clicking one image to go to another from a set of preprogrammed set of associations. By responding to the interactive media, the user identifies with a predefined mental structure, thus is interpellated as a subject (Manovich, 1995: p.61). As the interactive media functions in the production of the subject in this way, the interactive components of a web site can be accepted as statements within the discourse, just like their visual and textual counterparts.

Each text in Wired features an interactive comment section at the bottom of the page. The comment system requires membership to the site, which can be attained filling an interactive registration form. The registered members can post comments for the text on that page, or vote the comments posted by other members to make them rank higher or lower among other comments. While not produced by the official authors of the magazine but the readers, comments are parts of the same discursive formation because the readers also occupy subject positions that are made available by the same discursive formation. As with the authors, the reader subjects are bound with the same rules regarding what is possible to say or know in the discourse of cyberculture. While the interactive comments enables contradictory views on the topics covered in magazine or discussions among readers, these contradictions do not run counter to the discursive formation: As Tonkiss points, contradictions and debates are all accepted as parts of a discursive formation, as their combination produce an effect of truth (as cited in Rose, 2001: p.154). For this reason, the reader comments that are found in the Wired magazine are also included in this analysis.

1.4.5 Sampling

Since discourse analysis is not a quantitative research strategy, statistical significance is not relevant in this research, and therefore sampling was performed for the sole purpose of limiting the texts to a number that is appropriate for the scope of this thesis and for the researcher's resources. In order to limit the number of texts that will be analyzed, random sampling was applied to the issues belonging to the last 10 years period, selecting two random issues from each year in order to ensure a more evenly distributed sampling. There are two exceptions to this sampling procedure: The first one is the January 2007 issue named "Body 2.0", which was included regardless of the randomization due to its high relevance to the research problem. The second exception is the addition of the two articles titled "Man vs. Machine" for the same reason. Apart from these exceptions, the sampling procedure was carried out randomly.

Wired magazine's on-line edition is published monthly and each issue of the magazine typically features 1-5 cover stories, and about 50 non-cover stories. The cover stories are presented along with related photography, artwork, multimedia, and span multiple pages; while non-cover stories usually consist of one page of regular text which can be with or without related pictures or artwork. For the analysis, all of the covers and cover stories from the randomly selected issues, all of the headings in those issues, and four of the non-cover texts were chosen randomly; resulting in a sample consisting of 21 magazine covers and about 105 randomly selected texts (depending on how many cover stories are featured in that issue) and all the pictures and galleries that are presented with the selected texts[1]. While this number may seem overwhelming, some of the articles contain only one or two paragraphs of text, which reduces this sample to a manageable amount of text.

Using this sampling, the analysis will firstly focus on the symbolic and visual

1 Appendix A contains a full list of issues of Wired and texts that comprise the sample of this research.

representations of body, technology and their interrelation in these texts; and how these representations work to produce a regime of truth about body and technology as well as their interrelation. The analysis of the embodiment also includes the representations of race and gender, or lack of such a representation since the erasure of the embodied markers of identity is one of the prominent features of the contemporary cyberculture. After examining these representations, the analysis will move on to discuss how the examined representations of body and technology operate to produce a subject, the properties of the produced subject and its relation with technology and body.

CHAPTER 2

CYBERCULTURE

2.1 Introduction

As Jakub Macek points in *Defining Cyberculture* (2005), cyberculture is an ambiguous term that is flexibly used to refer to a number of cultural phenomena relating to the prefix 'cyber'. It is used to refer to "cybernetics, computerization, digital revolution, cyborgization of human body", contemporary and historical hackers' subcultures, cyberpunk literary genre, computer user groups, and as a "metaphor for the prospective or emerging forms of society" related to the Information and Communication Technologies (ICTs) and the Internet (Macek, 2005.). Such a myriad of different uses makes it necessary to provide a definition for the term in order to provide a conceptual framework for the rest of the study. For this purpose, the first section of this chapter explores the different definitions of cyberculture in the literature. While some of the definitions discussed here take cyberculture as a specific subcultural formation that is distinct from the mainstream, others give a broader definition to the term which includes mainstream discourse and practices related to technology. Following the accounts that point to the subcultural and oppositional aspects of cyberculture, in this section I will argue that cyberculture needs to be defined as separate from the mainstream technological discourses and practices in that it claims subversiveness in its usage of technology.

The second section of this chapter focuses on three elements within cyberculture that represent this oppositional use of technology: The countercultural celebration

of technology, the hacker culture, and the cyberpunk literary movement; each of which represent different yet interrelated constituents of cyberculture that will be examined in this section. Finally, the third section deals with two central concepts that recur in the utopian and oppositional narratives of cyberculture, *cyberspace* and *posthuman*; and also examines to the dystopian anxieties which are inextricable from these narratives.

2.2 Definitions of Cyberculture

One of the earliest and most contested definitions of cyberculture is given by Mark Dery in his article "Cyberculture" (Dery, 1992: p.509):

> A far-flung, loosely knit complex of sublegitimate, alternative, and oppositional subcultures whose common project is the subversive use of technocommodities often framed by radical body politics … Cyberculture is divisible into several major territories: visionary technology, fringe science, avant-garde art, and pop culture.

This definition, while capturing many aspects of cyberculture, has been criticized both for being too inclusive and exclusive. For example, David Bell (2007) argues that this definition is too narrow in that it limits cyberculture to subcultures, and he opts for a more expansive definition in order to keep up with the "contested and evolving" discourse of cyberculture (p.5). Examining the most inclusive definitions of "cyber-" and "culture", he offers his definition of cyberculture as a "way of thinking" about the interaction and "living together" of people and digital technologies and the "ways of life" that are lived in cyberspace or shaped by it (Bell, 2007: p.5). David Silver (1997) on the other hand, offers a more limiting definition of cyberculture as he criticizes Dery for including many non "cyber" issues under the term cyberculture. Instead, he puts forth his own definition of cyberculture as "a collection of cultures and cultural products that exist on and/or are made possible by the Internet, along with the stories told about these cultures

and cultural products" (Silver, 1997). As this definition explicitly limits cyberculture to discourses and practices related to Internet, it leaves out the reference to any body politics or utopian/oppositional aspects of cyberculture.

The utopian and oppositional discourse that underpins the cyberculture are informed by many other writers such as Mark Dery (1992) , Andrew Ross (2000), Jenny Wolmark (2003), Jakub Macek (2004), Arturo Escobar (2000) . Most notably, Fred Turner in "From Counterculture to Cyberculture" (2006b) gives a very detailed elaboration of the utopian ideology within cyberculture. Tracing the roots of cyberculture in the 1960s American counterculture movement, he shows that cyberculture has originated as an extension of the 1960s countercultural movement that embraced the cybernetic technology and its principles, weaving revolutionary and utopian narratives around this technology (2006b.: p.8). Similarly, Jakub Macek (2004) shows how cyberculture is strongly intertwined with oppositional and subversive discourses and practices, starting with the early hackers of the 1960s, moving towards an anti-heroic and individualistic hacker and cyberpunk of the 1980s. As exemplified in these accounts, cyberculture includes a utopian and subversive relationship with technology, therefore cannot be reduced to everyday practices related to technology as this neglects its referentiality to the utopian and oppositional discourses around technology.

Another aspect of cyberculture that requires clarification is the complex relation between the utopian narratives, scientific and technological discourses, and science fiction. According to Jenny Wolmark (2003), cyberculture is broad enough to include the scientific discourses related to digital technology, academic and critical accounts of technology, and the forms of uncritical celebration of technology that is found in popular discourses, such as Wired and Mondo 2000 magazines (p.219; pp.223-4). In an attempt to delineate between these scientific, critical and utopian discourses, David Silver introduces terms such as "popular cyberculture", "cyberculture studies" and "critical cyberculture studies" (Silver as cited in Wolmark, 2003). While this nomenclature is useful in demonstrating the

heterogeneity within cyberculture, Silver also acknowledges elsewhere (1996) that such attempts to introduce boundaries within cyberculture are rendered "feeble" because of the breadth, depth and state of flux of cyberculture.

Macek (2004) invokes the concept of self reflexivity to account for the complexity of the relation between the scientific discourses, celebratory and utopian discourses and science fiction within cyberculture. As he argues, the discourses of natural and social sciences and fiction are so intertwined and permeating in cyberculture that it is misguided to impose boundaries between them; and best that can be done is to acknowledge these discourses' continuous interaction, shaping and transforming one another (Macek, 2004). Accordingly, cyberculture can be defined as an inseparable amalgam of the discourses and practices related to techno-science and science fiction that continually shape and transform each other. While these discourse and practices certainly intersect with practices of daily usage of Internet and digital technology as acknowledged in Silver's (2007) and Bell's (1997) definitions, they are not reducible to them since cyberculture inextricably entails subversive and utopian discourses and practices, as pointed by Turner (2006a, 2006b) and Macek (2004).

2.3 Cyberculture and the Oppositional Usage of Technology

This section takes a closer look of the oppositional uses of technology that characterizes cyberculture. The first subsection focuses on the countercultural appropriation of cybernetics principles and technology for utopian ideals, purposes related to community building and individual self discovery. While the intent behind cybernetics was not subversive or oppositional, countercultural groups nevertheless saw it as the harbinger of a utopian community that would form an alternative to the existing system. The embracing of technology by counterculture marks the beginning of cyberculture and prefigures some of its important elements such as the concept of cyberspace or technological determinism.

The second subsection deals with the hacker subcultures, another important constituent of cyberculture. With the effect of social policy changes and the criminalization of hacking in the early 1990s, hacker subculture became a point of discontinuity within cyberculture in which the earlier communalist celebration of technology left its place to an anti-heroic and individualistic stance. Finally, the third subsection deals with cyberpunk, a science fiction literary movement which was influenced by cybernetics, hacker culture and punk sensibility; and in turn influenced technological research and hacker subcultures profoundly. Cyberpunk provided cyberculture with a commentary on the technologically saturated contemporary society, and the writers of this genre such as William Gibson attained the status of celebrity in cyberculture, making cyberpunk another important constituent of cyberculture.

2.3.1 Cybernetics and Counterculture

In his very elaborate book *From Counterculture to Cyberculture* (2006b) , Fred Turner traces the subversive and utopian celebration of technology back to the 1960s American counterculture: As some of the communes of the countercultural movement in 1960s America were influenced by the then new interdisciplinary science of *cybernetics*, they started imagining a utopian society based on its principles and celebrated technology as a means of self enrichment and self discovery. This subsection deals with this intersection of cybernetics with counterculture that has given rise to cyberculture, first by introducing the principles of cybernetics and then examining why and how these principles appealed to a generation that had previously loathed technology.

The term cybernetics comes from the Greek word *gubernetes*, meaning *steersman* and it refers to “the science of control and communication in animal and machine”. In order to maintain control over the biological and mechanical fields, cybernetics conceptualizes animals and machines as parts of the same information system. The control of these systems is achieved through the exchange of ordered patterns of

information among these systems; resulting in control and organization of these systems, and enabling their effective collaboration (Turner, 2006b: p.22; Cavallaro , 2000: p.12).

Cybernetics was founded by Norbert Wiener as a part of warfare research, and developed at the American military industrial research complex and MIT's Rad Lab during the World War II (Turner, 2006b: p.20). At that time, Wiener was working with the young engineer Juan Bigelow on a machine called "predictor", an anti-aircraft device which would be used to determine the future course of an airplane using its location and motion. Early in the process, they faced the problem of combining human and machine: both components of the system, the "predictor" machine and its human operator, as well as airplanes it would track and their pilots, had to be imagined in similar terms in order to mathematically model their behavior (Turner, 2006b: pp.20-1).

To solve this problem, Wiener imagined the human component of the system as a machine that can observe it error and change its behavior accordingly, responding to feedback (Turner, 2006b: p.21). The functioning of the human individual and such machines can be conceptualized as analogous in that they both have sensory receptors that enable them to observe the performed action, report it to "central regulatory apparatus" and use this information to "control the entropy", that is, reduce the error of the performance in the next stages of the action (Weiner, 1968: p.26-7). This conceptualization allows the human operator to exchange signals with the machine as a part of the system, thus forming a circuit of information between human and machine, called a *feedback loop*.

In 1948, Wiener published *Cybernetics; or Control and Communication in the Animal and the Machine* in which he announced to the public the new discipline he founded. *Cybernetics* was followed two years later by the more accessible *The Human Use of Human Beings: Cybernetics and Society*, in which he expanded his theory to from biology and mechanics to culture, arguing that society also

functioned as an information processing device (Turner, 2006b: p.22). Both books became bestsellers demonstrating the seminal character of cybernetics. Cybernetics continued to develop outside the warfare research context through a series of interdisciplinary discussions at the Macy conferences, and its arguments found their ways into other disciplines (Turner, 2006b: p.26).

While most accounts of cybernetics emphasize the individual genius of Wiener, the invention of cybernetics can also be read as a discontinuity in the scientific and philosophical constructions of the previous paradigm. The introduction of the concept of a system in which human is not the controller but only a component poses a whole different conceptualization of biological and mechanical systems than the previously accepted opposition of nature and technology. Drawing from Kuhn's concept of *crisis science*, Lister, Dovey, Giddings, Grant, and Kelly (2003) argue that cybernetics is a *crisis technology* (p.393). In Kuhn's account of history of science, *crisis science* is defined as a period in scientific inquiry in which more questions than answers accumulate and basic theories and assumptions of science are held for interrogation (as cited in Lister et al. 2003: p.393). This period is followed by a paradigm shift, which renders the objects of investigation that were constructed in the previous paradigm incompatible with the current one (2003: p.393). According to Lister et al., cybernetics disrupts previously unquestioned constructions and taken for granted assumptions related to the "oppositions of human and machine, nature and artifice, nature and culture, the physical and the human", similar to a period of crisis science, thus it can be defined as a crisis technology (2003. p.393; 2003. p.380).

According to Turner (2006b), the appropriation of cybernetics principles by counterculture was brought about by the conditions of the postwar America. Youth of postwar America was fraught with fears of an impending nuclear threat (pp.30-1). As schoolchildren, they had been raised watching government-sponsored films in which children were annihilated by atomic bombs, and being fed instructions on what to do in case of a nuclear flash; becoming a generation beset by nightmares

about a nuclear war (Turner, 2006b: p.30-1). Besides those fears, the youth of 1960s America was also troubled by anxieties about their own professional and personal futures. Although due to the postwar industry there were no shortage of jobs, the youth of 1960s was troubled about growing up in a bureaucratic environment that had brought nuclear weapons and war to the world (Turner, 2006b: p.31). The anxieties of the 1960s American youth about war and the bureaucratic life led to two interrelated social movements: The New Left, which "turned outward" towards political action and social change, and the counterculture movement which "turned inward towards questions of consciousness and interpersonal intimacy", "small-scale tools such as LSD or rock music as ways to enhance both" (Turner, 2006b: p.31). Through those practices, the countercultural groups which Turner calls the *New Communalists* attempted to build small egalitarian communities outside American cities aiming to form an alternative to the cold-war era society (Turner, 2006b: p.32). These attempts resulted in an estimated several tens of thousands of communes that were built from 1965 to 1972 by those groups (Miller as cited in Turner, 2006b: p.32; Jerome as cited in Turner, 2006b: p.32).

The New Communalists held that political activism was "at best aside the point and at worst part of the problem" as the key to changing the society was the individuals mind (Turner, 2007b: p.36). However, Turner follows that, as the New Communalists closed the doors to mainstream politics by turning to self discovery, "they opened new doors to mainstream culture, […] particularly to high technology research culture". For them, as the "self" was capable of bringing about social change, the individual lifestyle choices, consumption and lifestyle technologies could be seen as political acts for them (Turner, 2006b: p.38). As a result, these communes took premises of cybernetics as an alternative model to the bureaucratic society. The notion of "the globe as a single interlinked pattern of information" implied the possibility of harmony and provided comfort for their anxieties about war (Turner, 2006b: pp.4-5). In Turner's words:

> For the New Communalists [...] and for much of the broader culture, cybernetics and systems theory offered an ideological alternative. Like Norbert Wiener two decades earlier, many in the counterculture saw in cybernetics a vision of a world built not around vertical hierarchies and top-down flows of power but around looping circuits of information. These circuits presented the possibility of a stable social order based not on the psychologically distressing chains of command that characterized military and corporate life, but on the ebb and flow off communication (Turner, 2006b: p.38)

The utilization of cybernetic principles and technology by the countercultural communes poses a contradiction: The cybernetics represented a bureaucratic industrial culture that had been loathed by the American post-war youth. How did they came to embrace the technology that represented the very system that they sought to undermine? According to Turner, the New Communalists resolved this dilemma through McLuhanite technological determinism (Turner, 2006b: p.54). In Medium is the Massage (1996), Marshall McLuhan conflates the concepts of media and technology: all the artifacts and processes of electric technology are referred as "media" (1996: p.8). Moreover, he also conceptualizes media as "extensions of a some human faculty – psychic or physical" (1996: pp.26-47). It follows that, "wheel is an extension of the foot" (1996: pp.31-2), "book is an extension of eye" (1996: pp.34-7), "clothing , an extension of skin" (1996: pp.38-9) and "electronic circuitry" is "an extension of the nervous system" (Turner, 2006b: p.40). Following these assumptions, McLuhan asserts that, as these media change, they affect the sensorium of the body, thus determine "the whole psychic and social complex"(1996: p.41; 2005: p.3-4).

As technology determines the individual and the society that uses it, it follows that different technologies will determine different societies: mechanical technologies result in mechanized cultures while electronic technologies produce cultures based on instantaneousness (Turner 2006b: p.336). Accordingly, McLuhan asserts that

humankind was leaving the typographical age, entering a new one (1962: p.31; p.252). While older typographical technologies are responsible for a linear and rational culture that fragments and alienates the individual, the new electronic technologies will permit the "human family" to live intimately connected with the rest of the world, in a global village, "a single constricted space resonant with tribal drums" (1962: pp.212-3; p.31). In Understanding Media (2005), he writes that, while the mechanical age had resulted in extending the body physically in space, the electronic technology was extending the central nervous system to embrace the globe and "abolishing both time and space" (p.3), and predicts the final phase of this extension as "the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society" (2005: pp.3-4).

McLuhan carefully remarks that whether this process "will be a good thing" is hard to answer (2005: p.4), nevertheless, as Lister et al. (2003) point, many of McLuhan's such ideas appear within a narrative of redemption, which provides ideological basis for the enthusiasts for new technology:

> There is little doubt that much of McLuhan's appeal to new media and cyber enthusiasts lies in the way that he sees the arrival of an 'electronic culture' as a rescue or recovery from the fragmenting effects of 400 years of print culture. McLuhan has, indeed, provided a range of ideological resources for the technological imaginary of the new millennium. (Lister et al. 2003: p.80)

It was a similar narrative of redemption that resolved the dilemma of the New Communalists: McLuhan's technological determinism implied that even if the social order that had produced the new technology was threatening the species with nuclear war and alienating the individuals; the technologies themselves promised to change the individual and the society. This enabled the countercultural communes to imagine their local communities not as communities built on consumption of

technology but "as model communities for a new society", as long as they were using new technology (Turner, 2006b: p.54). Accordingly, the small scale technologies like sound-systems, strobe lights, slide projectors, geodesic domes and LSD became tools to be employed to build communities and experience a "technology-induced experience of togetherness that would allow them to become self-sufficient and whole once again" (Turner, 2006b: pp.4-5).

At this conjuncture of cybernetics and counterculture, aided by McLuhanite technological determinism emerge some of the core elements of the discourse of cyberculture that would become more prominent in the later years in hacker cultures and cyberpunk narratives. The technological utopianism emerge, as the principles of cybernetics were taken by New Communalists as a promise of a interconnected world where humans, nature, technological systems and institutions are part of a harmonious system (Turner, 2006b: p.243). The usage of technology to build egalitarian communities and as means of self actualization anticipates the concept of cyberspace, both as a means for attaining individual freedom, as virtual community building, and as a consensual hallucination. The continuity between human and technology in cybernetics and McLuhan's conceptualization of technology as an extension of body prefigures the concepts of cyborg and posthuman. A lifestyle based consumption of technology as a means of opposition to mainstream culture is also a central element in cyberculture, recurring both in hacker cultures and cyberpunk literary movement.

In *Archaeology of Knowledge*, Foucault points to the possibility several distinct emergences of a discursive function, which he calls *thresholds*. One of these thresholds is *threshold of positivity*, a moment when "a discursive practice achieves individuality and autonomy" (2004: pp.205-6). While neither cybernetics or counterculture can be pointed as a single source for the discourse of subversive use of technology, their conjunction as a revolutionary practice within the framework of McLuhanite technological determinism marks the threshold where the discourse of cyberculture gains autonomy, and can be identified as a distinct discursive

formation that has its own rules for dispersion of statements related to these fields.

2.3.2 Hacker Subcultures

Cyberculture changed in the 1980s and 1990s into a more individualistic and pessimistic opposition against mainstream culture and corporate capitalism. Along with the cyberpunk literary movement, the hacker subcultures and the criminalization of hackers in early 1990s represent one of the plot twists in the story of cyberculture where the utopian celebration of technology leaves its place to a more acerbic culture of resistance. This section examines hacker subcultures, and their oppositional usage of technology in more detail.

The earliest hacker group formed in 1959 at the M.I.T, and consisted of students, mainframe programmers, academics and researchers in cybernetics and computer science (Levy, as cited in Turner, 2006a: p. 259). The term *hacker* and *hacking* was coined by this group, and did not have a reference to a criminal activity. It merely referred to an opposition between two groups of students; between the more theory oriented *planners* and the practice oriented *hackers* who focused on experimenting with systems and inventing (Levy as cited in Turner, 2006a: pp.259-60). The academic hackers of the 1960s were followed by the hardware hackers of the 1970s and the "young game hackers" of early 1980s who grew up with the microcomputers that were newly invented by the previous generations of hackers (Turner, 2006a: pp.260-1). While these three generations of hackers were separate, they shared a common "hacker ethic", a set of six values which carried the same countercultural overtones (Levy as cited in Turner, 2006a: p.261). Moreover, these earlier generations of hackers all shared a benign popular image, romanticized with names such as "rebel with a modem", "maverick though nerdy cowboy", "amateur mischief maker" (Ross, 2000: pp.255-6).

1980s witnessed transformations both in hacker groups' activities and their public image: Firstly, with the spread of microcomputers, hacker culture and at a more

general level cyberculture, expanded from being limited to a small group of expert communities to a diversified subculture (Macek, 2004). Despite this expansion, hackers' subcultures remained separate from the wider community of computer users, and with the influence of cyberpunk fiction hacking became more focused on individual subversive use of computers and became the field of self realization for the members of this subculture (Macek, 2004). With this transformation, activities of hackers shifted to new areas such as "software cracking or unauthorized entry into computer systems and networks" (Macek, 2004).

Secondly, in 1988 a viral attack in engineered by hacker Robert Morris resulted in a change in social policy against hackers, officially criminalizing them (Ross, 2000: p.254). While it did not cause any serious damage, the attack was a "profitable ideological moment" as it provided the necessary background for the fabrication of the hacker as a menace to society and the rewriting of the property law to include the information technology crimes (Ross, 2000: p.254). Consequently, the hacker that was romanticized by the previous generations was redefined as a deviant. In Ross' words, "[a]n increasingly criminal connotation today has displaced the more innocuous, amateur-mischief-maker-cum-media-star role reserved for hackers until a few years ago" (Ross, 2000: p.255). This construction of the hacker as a criminal lead to major FBI operations in 1990s; in which teenage hacker's homes were habitually raided and several of them arrested, and harshly punitive prosecutions were carried out (Ross, 2000: pp.254-6). The moral panic that was created around hackers urged the "full repressive wrath of judges" (Ross, 2000: p.255).

As the social policies redefined the hacker as a criminal and hacking activities shifted to underground activities such as unauthorized access; the identity of hacker changed from the amateur inventor to an identity of opposition and resistance (Macek, 2004). The term hacker gained its current, negative connotations, and even the earlier generations of hackers stigmatized contemporary hackers as "computer criminals," "vandals", "crackers", "miscreants" or, with a reference to the generational difference, 'juvenile delinquents" (Macek, 2004; Mizrach as cited in

Macek, 2004). In Macek's words, “[t]he change of context transformed the evaluation of similarly motivated action – what was an act of a “programmer’s heroism” in the 1960s, seemed to be almost (or definitely) a crime in the 1980s” (Macek, 2004).

2.3.3 Cyberpunk Literary Movement

Cyberpunk subgenre of science fiction is another one of the constituents of cyberculture, co-influencing with hacker's cultures and cybernetics technology. Its characteristic themes are deteriorated urban environments, dystopian corporate capitalism, high-tech gangs, anti-heroic protagonists, subversive usage of technology, emphasis on technological body modification, drug usage and style.

As can be inferred from the "cyber” prefix, science fictional aspect of cyberpunk refers to cybernetics instead of "spaceships or robots” (Cavallaro, 2000: p.14). "Punk” on the other hand, refers to "a defiant attitude based in the urban street culture” (Cavallaro, 2000: p.14): Devoted to undermine mainstream values even if it means its undermining itself, punk constructs its aesthetics from its alienation from mainstream culture, deliberately exaggerating "features that would make it object of revulsion and aversion” and seeking "rejection with a self-destructive determination by defiantly constructing a simultaneously desecrated and self-desecrating subculture” (Cavallaro, 2000: p.20). The paradoxical combination of cybernetics technology with the oppositional aesthetics of punk results in narratives in which technology is adored and its subversive usage is emphasized. As Cavallaro writes, in the works of this genre the constant interaction of "cyber” and "punk” produces "constellations of the relationship between the glossy world of high technology and the murky world of addiction and crime”(Cavallaro, 2000: pp.23-4). Cyberpunk is distinctive in that it lets neither of those elements become prior to the other; and according to Cavallaro the effectiveness of the genre stems from their dynamic interplay (Cavallaro, 2000: pp.23-4).

The central narrative of cyberpunk is the "breaking down of the boundaries that separate bodies and machines", which has been welcomed by the critics for being in touch with the "contemporary techno-reality", and for providing images through which to imagine the near future fates of individuals and society (Hollinger, 1997: p.126). Similarly, according to Larry McCaffery, cyberpunk is an attempt to find a means to express the "powerful and troubling" technological logic in contemporary society:

> Concocted out of 'equal measures of anger and bitter humour, technological know-how and formal inventiveness', cyberpunk 'systematically distorts our sense of who or where we are, of what is "real" at all, of what is most valuable about human life'. Reality and identity are rendered unstable by their reduction to the status of commodities, namely interchangeable and disposable products doomed to a fate of planned and rapid obsolescence. (McCaffery as cited in Cavallaro, 2000: pp.14-5)

The clash between the utopian desire for technology and the "pessimistic reflection" in cyberpunk forms one of the driving forces of the genre, and is one of the reasons that this genre has been a source of inspiration for cyberculture (Macek, 2004). Cyberpunk offered cyberculture a commentary of technology related societal transformations in a way that is relevant to its own discourse, and as a result cyberpunk became an important element of cyberculture and cyberpunk writers became accepted as celebrities and spokespeople of cyberculture (Macek, 2004).

William Gibson's Neuromancer (1984) is particularly important in this context because of the massive popularity it enjoyed, and it is usually taken as representative of both cyberpunk genre and cyberculture. Neuromancer not only invigorated the cyberpunk literary movement but it also coined the term cyberspace (Hayles 1999: p.36). As Veronica Hollinger states;

> [S]ince the mid-80s, no other sf[sic] writer has been so influential in helping to shape our anxieties about, and our yearnings for, techno-transcendence. The influence of a novel like Neuromancer has been felt far outside the sf field; this novel in particular, and cyberpunk in general, has been instrumental in moving the discourse of science fiction out of its relatively limited sphere into the wider culture. [...] Gibson even gave us a name for the virtual space many of us were starting to spend time in — cyberspace, that space on the other side of our computer screens. (Hollinger, 1997: p.126)

As well as indicating Gibson's significant influence, Hollinger's words also point to another aspect of cyberculture: the "anxieties" and "yearnings" that are present about technology. From the early days of cybernetics, discourses about technology are accompanied by both utopian visions and dystopian anxieties. They rise to a crescendo in the 1980s with the imagery provided by cyberpunk literary movement, particularly around the interrelated concepts of "cyberspace" and "posthuman". The next section deals with these concepts, and the utopian and dystopian narratives that surround them.

2.4 Utopia and Dystopia in Cyberculture

2.4.1 The Concept of Cyberspace

The term cyberspace is used in many contexts as synonymous with the Internet. Despite this reduction in the daily usage, as Stone and Hayles point, cyberspace refer to a number of phenomena including but not limited to the Internet (Hayles, 1999: p. 36; Stone, 2000: p.513). Likewise, Paasonen defines cyberspace not as equivalent to Internet but as a narrative figure having considerable influence on it (Paasonen, 2005: p.2). The original definition of the term also shows its distinction from the Internet: As stated earlier, the term cyberspace is coined by William Gibson in his seminal novel Neuromancer. The following is the often quoted

definition that has become a part of the cyberculture canon:

> Cyberspace. A consensual hallucination experienced daily by millions of legitimate operators. … A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding. (Gibson, 1984: p.67)

Despite its immateriality, Gibson depicts cyberspace in spatial terms. The usage of a spatial representation for a symbolic phenomena is akin to psychoanalysis' representation of the unconscious, however, unlike the psychoanalytic unconscious cyberspace can be inhabited and navigated by the subjects. The protagonist enters this immaterial topography as a disembodied self, and is signified in the novel as a "pov", an acronym for a point of view (Hayles, 1999: p.37). This representation of the character as a monocular point of view resolves the conundrum of representing a disembodied subject in a setting that is presented in spatial terms.

The concept of cyberspace was influential in cyberculture at many levels. Firstly, it organized the technological research on a variety of disparate technologies , such as computer networks, computer simulations, 3D graphics, hypertext, virtual reality, on line communities under the same concept. After Gibson's introduction of the term, all these separate technological phenomena were collected under the concept of cyberspace (Hayles, 1999: p 36; Stone, 2000: p.513). Moreover, with the influence of the concept of cyberspace, the community of researchers working on these disparate technologies began to recognize themselves as a community (Stone, 2000: p.515). Secondly, Gibson's cyberspace caused hacker subcultural groups to start seeing computer networks as a space of resistance and self-actualization: As the image of the "console cowboy" entering the cyberspace fascinated the third generation of hackers, access to computer networks became an activity of resistance and freedom for them (Macek, 2004). Thirdly, as the immateriality of

cyberspace implied freedom from embodied markers of race and gender, it opened the door to the later conceptualizations of network technology as a societal utopia (Balsamo, 2000: p.493 ; Paasonen, 2005 :pp.2-3; Terranova, 2000: p.277).

The notion of disembodiment alone forms a large part of the utopian conceptualizations of cyberspace. For example Michael Benedikt refers to cyberspace as a parallel universe which offers the prospect of fulfilling "a dream of thousands of years old: the dream of transcending the physical world, fully alive, at will, to dwell in some Beyond" (as cited in Wolmark, 2003: p.221). Similarly the discourse of the hacker magazine Mondo 2000 is largely characterized by a pursuit of a an alternative "cutting edge" reality that is to be achieved by uploading their consciousness to cyberspace and "leaving their 'obsolete' bodies behind" (Sobchack, 2000: pp.141-2).

However, in the 1990s the term cyberspace gained new connotations related to virtual communities and the Internet, and the utopian narratives around the term expanded to include a notion of a "perfect society" built within computer networks. Alluding to countercultural notions of a perfect community, these narratives represent cyberspace as a form of society in which the individual experiences being part of a community without having to leave behind its authentic self (Macek, 2004; Turner, 2006b: p.1). Such narratives about cyberspace are often based on the immateriality of cyberspace. Firstly, as the individuals do not have bodies in cyberspace, they are rendered equal and are no longer subject to power relations based on bodily markers such as sex or race (Balsamo, 2000: p.493; Cavallaro, 2000: p.35; Paasonen, 2005: pp.2-3; Terranova, 2000: p.277). Secondly the immateriality of the cyberspace enables individuals to communicate without limits imposed by distance and time. Thirdly, the individuals in cyberspace are rendered invulnerable to physical coercion. John Perry Barlow's "A Declaration of Freedom of Cyberspace" exemplify these aspects of this conceptualization of cyberspace (1996):

> Our identities have no bodies, so, unlike you, we cannot obtain order by physical coercion. We believe that from ethics, enlightened self-interest, and the commonweal, our governance will emerge . Our identities may be distributed across many of your jurisdictions. [...] We will create a civilization of the Mind in Cyberspace. (Barlow, 1996)

These utopian narratives around the concept of cyberspace also reiterate the Enlightenment discourse as the erasure of the materiality of the body and the bodily markers of identity renders the subjects equal and signals the return of the Enlightenment ideal of universality (Hayles, 1999 : pp.4-5). Likewise, cyberspace is taken to represent universality as it is interpreted as a bridge between global and local contexts, akin to Marshall McLuhan's "global village". For example, Pierre Levy refers to cyberspace as a universal without totality (Lévy, 2001: p.100). In this arguments, Lévy asserts that totalization is an effect of semantic closure. Written text is a medium that aims be universal, as it aims semantic closure without any reference to a conditioning context (Lévy, 2001: pp.94-6). The meaning in these texts is unchangeable depending on context as "the signification of the message must be same in all places and at all times" (Lévy, 2001:p.96). Because of this decontextualization, the universality of written text also brings about its totalizing effect (Lévy, 2001: p.96). The mass media continues the universal and totalizing nature of written text as it is produced for a large number of recipients, thus suffering from a similar decontextualization and becoming totalizing as a result of it (Lévy, 2001: pp.96-7). However, for Lévy cyberspace is different, as the virtual communities in cyberspace produces messages that are inseparable from the context of those communities (Lévy, 2001: p.99). Since all messages are connected to an active community, the totalizing effect of meaning wears off, resulting in a universal without totality in cyberspace (Lévy, 2001: pp.99-100).

Lévy's utopian vision conceptualizes cyberspace as the peak of enlightenment project (Macek, 2004): "the humanity of free, empowered subjects oppressed neither by the power of the unity of language and meaning nor by unified and

binding forms of social being" (Macek, 2004). This vision is criticized for several reasons: Firstly, Lévy is criticized for not substantiating how a lack of semantic closure will bring about this societal transformation, in Macek's (2004) words, "he simply knows" it. Secondly, he fails to clearly define the emerging new society that is conditioned by the cyberspace: "The universal without totality" lacks any definition (Macek, 2004). Thirdly, his account is also criticized for being overly conventional and conservative, written with pragmatic aspirations and a political agenda (Robins and Webster as cited in Macek, 2004).

To summarize, while originating as a science fictional concept, the concept of cyberspace has become a key concept of cyberculture, standing for an array of existing and imaginary technologies of virtual reality and computer networking. The concept has picked up utopian connotations throughout the 1990s, and became a trope representing a perfect society in which the individual is free from the societal constraints based on race and gender, invulnerable to physical coercion and free from the constraints of distance and time. These utopian narratives also have allusions to Enlightenment ideals since cyberspace represents a conflation of global and local, and thus referred as a universality without totality, a pinnacle of Enlightenment project.

2.4.2 The Concept of Posthuman

The concept of *posthuman* is the other central concept in the utopian narratives of cyberculture, referring to a "union of the human with the intelligent machine" (Hayles, 1999: p.2). This union may or may not be to a union that can be uncoupled, for example, a computer and a user, or a cybernetic hybrid of machine and organism, a cyborg. The definitive characteristic of a posthuman is its being a part of a cybernetic circuit that alters the subjectivity, or in Hayles's words, "splices [one's] will, desire, and perception into a distributed cognitive system" (Hayles, 1999: p.xiv).

Hayles (1999) identifies four assumptions that characterize the posthuman point of view: First, the privileging of “informational pattern over material instantiation”, which implies that biological embodiment is not seen as “an inevitability of life” but “as an accident of history”. Secondly, consciousness that has been regarded as “seat of human identity” in the Western thought is regarded as an epiphenomenon, “an evolutionary upstart trying to claim that is the whole show when in actuality it is only a minor sideshow”. Thirdly, body is regarded as an object of manipulation, an “original prosthesis” that can be extended or replaced with other prostheses. Fourth, in these narratives human being is defined in such a way that “it can be seamlessly integrated with intelligent machines”(Hayles, 1999 : p.4).

The the utopian posthumanism result from the encapsulation of the concept of posthuman into narratives of progress and evolution. For example, as Tiziana Terranova (2000) shows, the Mondo 2000 magazine and Extropy journal define posthumanism as an "enhanced artificial evolution” (p.270), as opposed to the subversive technology-machine hybrid in Hayles’s definition. In what Terranova calls a "rampant super-voluntarism”, both The Extropy Institute and Mondo 2000’s narratives about posthuman tend to erase the material constraints imposed by biology and society. The economical and political forces are erased in the favor of individual free will (Terranova, 2000: p.275). In his words, "[b]elievers of posthumanism are not so much saying ’‘we are what our genes say we are’ but ’‘we are what we want to be’, and ’‘thanks to technology there are no limits to what we can be’” (Terranova, 2000: p.275). Another example of such an emphasis on voluntary evolution is found in Stelarc’s (2000) works. Using the motto "body is obsolete”, his work entails speculations on how body must be redesigned and "upgraded” in order to cope with the flux of information that has accumulated and live up to the potential of the mind (Stelarc, 2000: p.563). As Dery (2000) points, this vision does not take into account the issues of power in a way similar to McLuhan's: "Technology intersects with the body but never collides with social and economic issues” (Dery, 2000: p.583).

2.4.3 Dystopian Anxieties

As Dani Cavallaro (2000) points, dystopia is often inextricable from utopia in cyberculture (p.36). As early as the 1960s, the founder of the cybernetics Norbert Wiener was afflicted by the anxiety caused by the implications of his findings: Wiener was haunted by the possibility of cybernetics' leading to uncontrollable computers that are acting on their own, replacing and dominating human beings and society. Moreover, he feared that cybernetics would bring about a hyper-rationalized society populated by automated humans and organizations. Because of his dystopian vision, he sought out and advised union leaders against the threats implied by the technology he created (Turner, 2006b: pp.21-3; Hayles, 1999: p.107).

While Wiener's dystopian vision haunted him and American public imagination throughout the 1960s (Turner, 2006b: p.21), the dystopian anxieties around technology in contemporary cyberculture are focused more around issues of government and corporate control and surveillance in cyberspace. As Tiziana Terranova (2000) points, cyberspace is conceived in cyberculture as a superior medium as opposed to older mediums of communication like television, dominated by the monopolistic and commercial culture (p.277). Accordingly, most frequently recurring "horror stories" in cyberculture are ones about corporate control of the Net, constraining of its freedom, resulting in a "nightmare of total surveillance" (Terranova, 2000: p.277). These dystopian visions are dispelled by "the repeated re-enactment of the rhizomatic nature of the Net, its impermeability to any complete form of censorship", and invulnerability to total control because of its not being a single entity thus (Terranova, 2000: p.277).

The threat of a corporate and government control and surveillance over technology is taken to its extreme in the narratives of cyberpunk. These narratives draw a bleak picture of future as they portray commodified bodies, and decayed urban environments controlled by powerful corporations. Dani Cavallaro compares this genre to classical fantasy, with "conventional dragons replaced by another

monster, the greedy corporational economy, and the stereotypical maiden in distress by a commodified victim" (2000: p.9). While cyberspace and posthumanism provide means of temporarily escaping or gaining power in this dystopian setting, they also depict the individual's utter dependence to corporate capitalism: The posthumanistic augmentations made to the body in cyberpunk make use of commercial body parts, and in turn they define body as commodities that are "planned for obsolescence" (Cavallaro, 2000: p.133). These dystopian narratives of define technological transformations made to the body not as a voluntary enhancements as in the utopian narratives, but as "dictated by ideological and economic imperatives", therefore the technologies by which those transformations are performed are depicted as "simultaneously enabling and oppressive" (Cavallaro, 2000: pp.133-4).

One possible way to account for the coexistence of utopia and dystopia in cyberculture is by referring to the ontology of cyberspace. According to Margaret Morse (1998), cyberspace has an "ontologically uncertain mode of presence", because of its immateriality (Morse, 1998: p.24). Cyberspace does not have a "reality status" that has been been "culturally mastered or regulated", and therefore it undermines the culturally accepted notions of reality, systems of belief and identity (Morse, 1998: p.24). Jenny Wolmark (2003) follows Morse to argue that this ontological uncertainity results in cyberspace being conceived in both utopian and dystopian terms (p.221)

Drawing from Don Ihde, Vivian Sobchack reads the coexistence of utopian and cynical feelings around technology as a "doubled desire" (2000: p.143). According to Don Ihde, doubled desire exists in relations with any technology that expands the sensorium and perceptions (1990: p.75). Ihde describes this as a wish for total transparency of the technology, its total embodiment, a wish "for the technology to truly 'become me'", which is equivalent of non-existence of technology (1990:p75.). The flip side of this desire is the desire for gaining power through the enhancements to the body that are enabled by technology, which are always

different from ones naked capacities (1990: p.75). Thus the doubled desire involves both the technological augmentation of body and the disappearance of technology. According to Ihde, this desire is at best contradictory:

> I want the transformation that technology allows but I want it in such a way that I am basically unaware of its presence. I want it in such a way that it becomes me. Such a desire both rejects what technologies are and overlooks the transformational effects which are necessarily tied to the human-technology relations. This illusory desire belongs equally to pro- and anti- technology interpretations of technology (1990: p.75).

According to Sobchack, this contradictory desire results in the coexistence of the utopian and dystopian desires which are self-preservational and self-exterminating at the same time, wishing to enhance the body by technological extensions, while at the same time desiring to escape this extended embodiment (2000: p.144).

2.5 Conclusion

In most definitions and accounts, cyberculture is conceptualized as a culture woven around consumption of technology. Despite some critics' conflating cyberculture with mainstream consumption of technology, it is distinct from these mainstream practices because of its utopian and oppositional narratives. This distinction is exemplified by its origins in counterculture, and its constituents hacker culture and cyberpunk literary movements, as seen in this chapter. While the digital divide is closing rapidly at least in the Western societies, it would be an extrapolation to claim that the mainstream technology, computer and Internet practices necessarily and equally involve all users' subscribing to a utopian ideology or subversive practices. Accordingly, assuming an equality between mainstream technology usage and cyberculture runs the risk of neglecting the complex interaction between the subversive and oppositional subcultures such as counterculture, hackers' subcultures, punk sensibility and consumption of technology that writers like

Turner (2006b), Macek (2004), Lovink (1999), Dery (1992), and Cavallaro (2000) acknowledge. Therefore, for the scope of this research I take cyberculture not merely as practices around the usage and consumption of technology but also an oppositional and utopian, and at times dystopian discourse that organizes these practices, in accordance with Mark Dery's definition (1992).

The conjuncture of cybernetics and counterculture – the subculture that Turner (2006a) calls New Communalists, hacker subcultures and cyberpunk literature comprise different yet intersecting and interacting elements of cyberculture, from which cyberculture's objects, concepts, and central narratives emerge. As examined in this chapter, the narratives in cyberculture are centered around two overlapping core concepts, 'cyberspace' and 'posthuman'. *Cyberspace* refers to a number of existing and fictional network and virtual reality technologies as well as a utopian form of society that is formed around these technologies. *Posthuman* on the other hand is conceptualized in various ways, sometimes as a hybridization of human and machine and sometimes as a technological improvement of the human body in accordance with the Enlightenment ethos. The utopian narratives related to these concepts are inextricable from dystopian fears, starting from earliest days of cybernetics, to the cynicism found in contemporary cyberculture, as pointed in this chapter.

CHAPTER 3

EMBODIMENT IN CYBERCULTURE

3.1 Introduction

As Mark Dery points, the consumption of technology in cyberculture is often framed within radical body politics (1992: p.509). Both cyberspace and posthuman narratives involve a technological intervention to body, making embodiment a significant and often discussed issue in cyberculture studies. The discussions of embodiment in cyberculture studies has yielded two strands of arguments. The first strand focuses on the disembodiment that is found in both the cyberpunk literature and the early celebratory discourses on cyberspace and posthumanism, and argues that cyberculture reproduces the subject of Western liberal humanism, quintessentially as a male disembodied and universal subject, and the masculinist subordination of body to mind. The second strand argues that the discourse of cyberculture does not merely produce a disembodied subject but rather effects a refiguration of embodiment, which can result in the subversion of the unitary subject by making its identity more fluid, and its boundaries more open. While overlapping in some aspects, these two strands represent different positions on the issue.

This chapter focuses on these accounts of embodiment in cyberculture. It constitutes the second part of the literature review of this thesis, and will form the theoretical basis for the actual analysis of the Wired magazine. The accounts that are explored in this chapter draw from a variety of resources in order to examine embodiment in cyberculture, ranging from Vivian Sobchack's (2000) reading of

Mondo 2000 magazine, Dani Cavallaro's (2000) and Thomas Foster's (2000) analyses of cyberpunk literature, Allucquere Rosanne Stone's (2000) analysis of virtual communities, to N. Katherine Hayles's (1999) readings of the works of Norbert Wiener and the transcritps of the Macy conferences. While none of those resources can be taken as representative of cyberculture in themselves, their eclecticism reflect the heterogeneity and multifacetiousness of cyberculture.

3.2 Disembodiment

The narratives in cyberculture are commonly read as a fantasy of disembodiment: The original Gibsonian concept of cyberspace depict it as a place for disembodied exultation, a mode of existence where the subject is reduced to a point in space, a disembodied monocular gaze (Hayles, 1999: p.37; Balsamo, 2000: p.494). In Scott Bukatman's words, it is "a place for the return of the omnipotence of thoughts" where "the mind is freed from bodiless limitations", "a celebration of spirit, as the disembodied consciousness leaps and dances with unparalleled freedom" (Bukatman, 2000: p.159). Body, in contrast, is regarded as contemptible, as "a prison of flesh" (Gibson, 1984: p.12).

This notion of disembodiment also forms the foundation of the utopian narratives related to cyberspace. One of the most salient examples of such a celebration of disembodiment is found in Mondo 2000 magazine. As Vivian Sobchack (2000) states

> [Mondo 2000's] raison d'être is the techno-erotic celebration of a reality to be found on the far side of the computer screen and in the 'neural nets' of a 'liberated', disembodied, computerized, yet sensate consciousness […] so that the user transcends – and, all too often in this context, elides – not only his (or her) being in an imperfect human body, but also the imperfect world that we all 'really' materially create and physically inhabit. At best, encounters in virtual reality and

> cyberspace promoted by *M2* are video games that one can lose without real loss. At worst, they falsely promote a new Eden for cyborg Adams and Eves (Sobchack, 2000: pp.141-2)

According to Sobchack, the celebratory stance which is represented by such vacationing in cyberspace marks a dangerous and miscalculated attempt to escape the actual material conditions and politics such as "social fragmentation", "body's essential mortality", and "planet's increasing fragility" (Sobchack, 2000: p.142). While the vulnerability of the body and the limited resources of the planet could cause one to take ethical responsibility, cyberculture pursues leaving their "obsolete bodies" behind by either entering the datascape as a disembodied stream of information or posthumanistically fortifying their bodies to a state of invulnerability. Sobchack points that the pursuit and the utopian celebration of a disembodied escape is both "extremely disturbing and comprehensible" when material reality is full of starving, displaced and dead bodies that fill the television screens and the streets. Accordingly, while the initial promoters of virtual reality used the slogan "reality isn't enough anymore", for Sobchack a more psychoanalytically informed reading of this slogan would read it in the inverse, that is, "reality is too much right now": As the reality proves too much to deal for this "economically privileged" subculture, they use the cyberspace as an escape route while promoting it as a possibility of liberation (Sobchack, 2000: p.142).

According to Deborah Lupton (2000), body represents an unfortunate barrier between the users and their computers because of its vulnerabilities and its consistent demands for nourishment and maintenance (p.479). It follows that body is often seen in this culture as the "meat", "the dead flesh that surrounds the active mind which constitutes the authentic self" (Lupton, 2000: p.479). In this sense, the dream of disembodiment in cyberculture aims to escape the needs and the irrationality of body, and to become "distilled in a clean and pure, uncontaminated relationship with computer technology" (Lupton, 2000: p.479). Such an unmediated, pure fusion with technology through a disembodied immersion into a

hyper-rational order can be seen as a manifestation of the "post-Enlightenment separation of body and mind" where body is depicted as "earthly, irrational, weak and passive", and mind as "spiritual, rational, abstract, and active, seeking constantly to stave off the demands of embodiment" (Lupton, 2000: p.480).

The fantasy of escaping the materiality of the body can also be found in the narratives of posthumanism. As Lupton points, an idealized body "does not eat, drink, urinate or defecate; it does not get tired; it does not become ill, it does not die", and the figure of the cyborg represents closest to this ideal that can be attained (Lupton, 2000: p.480). With its invulnerability, sheer strength, and ability to self-repair, cyborg body addresses the anxieties around the permeability of body. Drawing from Theweleit and Grosz, Lupton also points to the gendered aspect of these anxieties: "[T]he boundaries of the feminine body are viewed far more permeable, fluid and subject to "'leakage' than those of the masculine body" (Theweleit and Grosz, as cited in Lupton 2000: p.480). In contrast to the permeable representations of female body, cyborg bodies are represented as having a "clean, hard, tightness of form" (Lupton, 2000: p.480), which represents a similar desire to escape the vulnerability of the body, to the narratives of cyberspace.

While cyberculture often seeks to escape embodiment either by transcending it into cyberspace or by strengthening it by posthumanistic means, paradoxically the computer technology is marketed and represented in ways that draw from an analogy with the human body, regularly employing the "computer as human" trope (Lupton, 2000: p.482). Advertisements for computers represent them as "warm, soft friendly and humanoid", going through many human life stages such as birth and death (Lupton, 2000: p.482). Computers are also represented as emotional entities; depicted as complaining, grudging, feeling lonely and alienated when not connected to a network, or capable to act hostile to users by failing to operate in order to make life difficult for them (Ross, as cited in Lupton, 2000: p.482; Lupton, 2000: pp.482-3). Moreover, according to Lupton the repeated usage of tropes related to a sexuality or commitment portrays the computer/user relationship as a

"romantic, sexual or marital" relationship (Lupton, 2000: p.483). Lupton quotes an article on an Australian newspaper, titled "No Time to Divorce Your Mac" as an example, which demonstrates both the anthropomorphism that is attributed to computers and the romanticized / sexualized representations of the relationship between user and computer :

> Choosing to buy a Macintosh or any other specific personal computing platform such as Windows is a little like getting married. In both cases you are signing up for a long-term partnership that can be costly to leave […] ''Come grow old with me, the best is yet to come' applies to both situations. (Withers, as cited in Lupton 2000: p.483)

Michael Heim (1993) too points to an erotic aspect in the users relationship with the computer. According to him, fascination with computer is not due to purely utilitarian or aesthetic reasons: Unlike the relationship with a toy, the relationship with the computer technology and the cyberspace involves a symbiotic relationship and "a mental marriage" (Heim: 1993: p.84). Similarly, the feeling of augmentation and empowerment provided by cyberspace exceeds a rational interest but becomes an erotic fascination (Heim: 1993: p.84).

Lupton argues that, computers and cyberspace are also frequently portrayed in cyberculture as feminine and maternal (2000: p.487). As Claudia Springer points, the word *matrix*, which is another word for cyberspace in Gibson's fiction, has its origins in the Latin word *mater,* meaning mother or womb, "a source of comforting security" (Springer as cited in Lupton, 2000: p.487). Accordingly, in cyberculture computers and cyberspace are represented as feminine entities that are to be overpowered and penetrated by the users. The discourse of hacking is one example of such masculinist representations: Both the words of actual hackers (Lupton, 2000: p.487) and cyberpunk literature (Nixon as cited in Wolmark, 2003: p.222) represent the task of hackers as penetrating a dangerous and feminine system in order to gain mastery over it. In these narratives computers and cyberspace are

portrayed as risky and emasculating. For example, Lupton shows the parallels between the discourses on the risks of computing and the viral metaphor, and the representation of computers that is embodied and subject to invasion by viral particles (Lupton, 1994, as cited in Lupton, 2000: p.486). The viral metaphor used for computers have similar cultural meanings that are related to human illnesses, particularly the discourses around HIV and AIDS (Lupton, 2000: p.478): The malfunctioning of the computer due to a virus is suggested as the result of a promiscuous behavior like using “'foreign’ disks” (Lupton, 2000: p.478-9). Similar to how discourses related to AIDS conceptualize gay men or women as “'leaky bodies’ who lack control over their bodily boundaries”, the discourse of hacking and cybercrime represent computers as "unable to police or protect their boundaries, thus rendering them vulnerable to penetration (Lupton, 2000: p.486). Likewise, Nicola Nixon in her discussion of cyberpunk argues that cyberpunk depicts cyberspace as a "form of scary feminized software”, "a space that is fatally compromised by viruses” (as cited in Wolmark, 2003: p.222). In these narratives, the masculinity of hacker is defined against this feminized other: His task is to penetrate this "potentially emasculating feminine matrix or die” (Wolmark, 2003: p.222).

Lupton draws from Julia Kristeva’s concept of "abject” to account for this portrayal of user/computer relationship that involves both risk and desire: Abject body inspires “both desire and repulsion”, as it challenges the "boundaries of the clean proper, contained body, the dichotomy between inside and outside” (Kristeva as cited in Lupton, 2000: p.487). Maternal body and the sexual body represent two examples for the abject body as they both involve merging and blurring of the boundaries and between one’s and other’s bodies (as cited Lupton, 2000: p.487). Using this definition of abject body, Lupton argues that the user's relation with computer and cyberspace involves both desire and fear because of their representations similar to abject body:

> Computer users [...] are both attracted towards the promises of

> cyberspace, in the utopian freedom from the flesh, its denial of the body, the opportunity to achieve a cyborgian seamlessness and to ’‘connect’ with others, but are also threatened by its potential to engulf the self and expose one’s vulnerability to penetration of enemy others. As with the female body, a site of intense desire and emotional security but also threatening engulfment, the inside of the computer is dark, enigmatic, potentially leaky, harbouring danger and contamination, vulnerable to invasion. (Lupton, 2000: p.487)

According to Jenny Wolmark (2003), the aligning of computers and cyberspace with "feminine” in cyberculture reiterates the Cartesian dualisms (p.219; p.227). In such narratives, despite the transcendence of the body the masculine unitary subject is left intact (Wolmark, 2003: pp.227-8). According to her such gendered fantasies of disembodiment not only reproduce the binaries of “male/female, human/machine, self/other”, but also “fail to recognize that subjectivity is a cultural construction” (Wolmark, 2003: p.228).

While critics such as Nixon and Wolmark criticize the masculinist link that cyberculture forges between feminine and technology, Sadie Plant welcomes this connection and makes it the foundation of her feminist stance. According to her, the relation between women and machine is a part of the patriarchal myth: It can be considered as similar to the one between women and nature as both are represented as without agency and subject to the will and interest of men. Man’s escape from the dependence and subordination to nature and biology associated with the flight from "material and maternal” turns into "the drive for dominance and the dream of transcendence” (Plant as cited in Wolmark, 2003: pp.225-6). Plant follows by arguing for an essential link between women and cybernetic systems using the metaphor of weaving: According to her computers simulate weaving on threads of ones and zeros in their operations in cyberspace. This "metaphor of weaving” and the feminization of technology resulting from it allows the return of the long repressed feminine (Plant as cited in Wolmark, 2003: p.226).

Although thought provoking, Plant's account has been criticized for being essentialist and apolitical: While Plant imbues technology with the feminine and paints a utopian picture of the return of feminine through computing, her work does not address the the issues of power and hierarchy that exist within technoscience and computer networks (Wolmark, 2003: pp.226-7). Plant is also criticized for "gingerly" stepping around the material issues concerning women and computing as she scarcely mentions the exploitation of Third World women in computer industry (Gere, 1999: pp.152-3). As Alison Adams points, since Plant is preoccupied by the "mystical qualities" of the systems, she neglects the fact that these systems are organized outside the control of women (Adams as cited in Wolmark, 2003).

Following the prospect of a disembodied existence, one of the most talked about claims of the narratives of cyberspace is the erasure of bodily markers of identity such as race and gender. Such an erasure, as the likes of John Perry Barlow (1996), Pierre Lévy (2001) and Jaron Lanier (as cited in Cavallaro, 2000: p:35) claim, will result in a virtual society based on equality and universality. Anne Balsamo warns against the assumption in this approach that the technologies of disembodiment will unilaterally produce "disembodied citizens" (2000: pp.495-6): She points that, as with the technologies related to it, cyberspace is a conjunctural experience that stems from the intersection of "economic, technological, bodily, political and cultural" practices (Balsamo, 2000: pp.495-6). She argues that although the body is cast off in these narratives, the body based identities and power relations persist due to the cultural context that has produced the technology and the narratives related to them (Balsamo, 2000: pp.496-7). Accordingly, she holds that cyberspace technologies are likely to retell the old stories, "stories that reproduce, in high-tech guise, traditional narratives about the gendered and race marked body" (Balsamo, 2000: p.498).

3.3 Refiguration of Embodiment

An overlapping yet different set of arguments suggest that the utopian narratives in cyberculture represent a desire to refigure embodiment. This strand of accounts point to the re-embodiment in virtual environments or through technological interventions to body, effecting an embodiment that is distinct from the actual physical embodiment. Academics such as Allucquere Rosanne Stone (2000), Thomas Foster (2000), and N. Katherine Hayles (1999) emphasize the ways in which this refiguration is potentially subversive to the unitary subject as identity becomes fluid and its boundaries are made permeable in this process. However, it is also acknowledged by these writers that this refiguration is not free from the masculinist logic, and has the potential to reinscribe the power structures that are prevalent in dominant discourses.

One of the works that emphasize the refiguration of embodiment is Allucquere Rosanne Stone's "Will the Real Body Please Stand Up?" (2000) in which she explores the ramifications of virtual systems on body and identity. According to her, the virtual spaces cause "concepts like distance, inside/outside, and even physical body to take on new and frequently disturbing meanings", and "instantiate the collapse of the boundaries between social and technological, biology and machine, natural and artificial" (2000: p.506). Virtual spaces have their separate "consensual loci", and each consensual locus within a virtual space can have a different reality based on its local conditions; and this multiplicity of realities enable their inhabitants to have a different persona in each of them. Accordingly, although the socially recognized gendered models of communications persist within virtual systems, they can be used flexibly, for example, enabling people to take on the persona of opposite sex or a different age (Stone, 2000: p.506).

An example Stone uses to show how embodiment in cyberspace is independent from the physical body of the person is the case of Julie, "a totally disabled older woman" who could only use the computer using her "headstick". (Stone, 2000: p.505). Julie logged on to a computer network in 1985; and despite her disability,

with her "big heart", sharp, perceptive, thoughtful and caring personality, she shared her women friends' "deepest troubles" and offered advice (Stone, 2000: p.505). In the later years, to her online friends' surprise, Julie turned out to be a male middle-aged psychiatrist who had accidentally started a conversation with a woman after being mistaken for another woman. He was impressed with the "vulnerability", "depth" and "complexity" in the communication among women which was lacking among men, and therefore he developed the persona of Julie in order to continue having such conversations. Through the case of Julie, Stone shows how a virtual embodiment can be radically distinct from the physical body of the person, in terms of gender, age and physical condition (Stone, 2000: pp.505-6). Other examples she examines include phone sex workers and virtual reality engineers; two groups that are similar in that they both virtually model bodies. Despite being constructed in ways drawn from cultural codes and expectations on the desirable body, these cases of virtual embodiment exemplify how virtual spaces entail a refiguration of embodiment in ways that are not associated by physical reality but only with the consensual locus of that virtual space (Stone, 2000: pp.518-9). As a result, despite cyberspace disembodies, Stone points that it also reembodies, effecting a potentially subversive refiguring of embodiment (Stone, 2000: p.522). In Stone's words,

> the unitary, bounded, safely warranted body constituted within the frame of bourgeois modernity is undergoing a gradual process of translation to the refigured and reinscribed embodiments of the cyberspace community. (Stone, 2000: p.523)

The desire to virtually refigure the body results from what Stone calls *cyborg envy,* an experience which stems from a "sense of loss of control that accompanies adolescent male embodiment". In contrast to his inability to control his body, the cyberspace, with its feminine and maternal connotations, represents unlimited power to the adolescent male subjectivity (Stone, 2000: pp.521-2). Accordingly, the intense desire for cyberspace represents a desire to control the embodiment by

enveloping oneself with the cyberspace, "to physically *put on* cyberspace. To become the cyborg, to put on the seductive and dangerous cybernetic space like a garment, is to put on *the female*" (Stone, 2000: p.522).

Stone invokes Judith Butler's concept of *cultural intelligibility* in order to account for the implications of this refiguration of embodiment on subject (Stone, 2000: p.524). Cultural intelligibility refers to the production of the set of norms which condition the criteria of recognition as a legitimate subject. This criteria is tied to the "normative ideals of sex and gender", as well as the "cultural and racial frames". If someone is seen as deviant from this normative framework, they will not be viable as subjects, and will be seen as "impossible" (Butler, 1999: p.viii). Stone also draws from Gloria Anzaldúa's concept of *mestiza* to exemplify this impossibility that is counterposed to the culturally intelligible subject: Anzaldua's *mestiza* is defined as an "illegible boundary-subject" that society only partially recognizes and cannot adequately describe in a single account. Following these conceptualizations, Stone goes on to argue that the subjects in cyberspace are illegible subjects, similar to Anzaldúa's *mestiza*: "Existing quantum-like in multiple states" and sharing their social systems with entities like "quasi people", "delegated agencies", "machines" and "clusters of people", participants of virtual environments constitute illegible bodies for modern society. These subjects are not fully recognized as subjects, yet cannot be fully ignored, and because of their multiplicity of embodiment and fluidity of identity, they cannot be captured into a singular cultural account (Stone, 2000: p.524).

Thomas Foster (2000) follows Stone to argue that the virtual refiguring of embodiment subverts the dominant modes of subjectivity by enabling subversive gender performance. Foster acknowledges that the detachment of "public persona from the physical space of the body" certainly reiterates the Cartesian dualism and the related "gendered hierarchy that equates masculinity with universal rationality and femininity with embodied particularity". However, he also argues that the same detachment reveals that sex and gender do not have to exist in a one-to-one

causality, which has an effect similar to transgendered performance (Foster, 2000: p.440). According to Foster, popular narratives on cyberspace and virtual reality often depict "possibilities for subversive gender and sexual performance that the technologies make possible" (Foster, 2000: p.453). Yet, the same narratives also ignore and minimize the potentials for racial performances. Foster points that, since the history of racial performance suggests that it actually installs and reinforces the racial norms that it tries to subvert, which may account for its absence from the popular narratives about cyberspace (Foster, 2000: p.453).

There are also arguments that cyberspace is subversive in that provides women, non-white races, and marginalized and stigmatized groups with new and empowering ways of representing themselves. For example, in "Body on Screen", Michele White (2006) suggests that webcams give women control over the ways that they are looked at, disrupting the power structure within the binary of spectator-spectated, and disabling the spectator from gaining voyeuristic pleasure from the scene (p.84). Similarly, Lisa Nakamura (2008) points that the ability to create their visual representations and avatars on instant messaging applications gives the user the ability to participate actively in racial formation rather than simply being subjected to it (p.17). On a different note, Thomas Foster (2000) points that cyberspace can provide a safe space for gay people for being openly gay or spectacularized gayness, however he also warns that this safety risks turning cyberspace into a virtual closet (p.449).

While these accounts focus on its subversive aspects, as Cavallaro (2000) points, virtual embodiment in cyberspace can also be read as intensification of consumerist mechanisms in which "identities are put on and discarded as easily as garments" (p.35). Stone (2000) makes a similar remark as she acknowledges the affinity of the virtual identity play with consumerist mechanisms (p.506): According to her, such a virtual identity play can bring about the commodification of bodies and identities, resulting in what she refers to as "multiple personality as a commodity fetish" (Stone, 2000: p.506).

Another subversive aspect of the refiguration of embodiment is the blurring of the boundaries between human and machine. According to Cavallaro (2000), immersion to cyberspace entails a fusion of user with technology, causing it to enter the “domain of the hybrid” as its “humanity becomes indissolubly linked to non-human apparatusses” (pp.28-9). Similarly, Weinstein and Kroker introduce the term “hypertexed body” to account for the fusion of human and machine when accessing the Internet: Echoing Marshall McLuhan, according to Weinstein and Kroker the body in cyberspace is not simply connected to the Net but it becomes a net: Cruising the cyberspace causes the sensorium to be physically involved with "oceans of data” (as cited in Cavallaro, 2000: pp.28-9).

Besides the immersive technologies like cyberspace, technological modifications to body is another way that the body is refigured in cyberculture. Salient examples of such modifications can be found in cyberpunk narratives where human bodies are technologically altered. These modifications consists in what David Tomas refers to as *technophilic body*:

> A *technophilic body* is the product of various degrees of aesthetic and functional transformations directed to the human body’s surface and functional organic structure. Such transformations can be directed into two distinct categories. The first category is composed of techniques and technologies that are used for various *aesthetic* manipulations of the body surface. These include cosmetically redesigned faces, muscle grafts, and animal and/or human transplants that effectively blur visual cues for gender and human/non-human differentiation. The second category is directed to fundamental *functional* alterations to human body’s organic architecture. It includes biochip implants, prosthetic additions mediated by myolectric coupling an redesigned upgraded senses. (Tomas, 2000: p:176).

According to N. Katherine Hayles (1999), such fusion of the subject with

technology denaturalizes the subject and therefore it is subversive to the humanist definitions of the subject. Drawing from C. B. Macpherson's analysis of possessive individualism, Hayles points to the possessive quality that is attributed to the individual in the historical construction of liberal humanist subject (1999: p.3): This construction conceptualizes the individual as the proprietor of its "own person and capacities", and "owing nothing to society", and accordingly, the essence of the individual is defined as "freedom from the will of the others" (as cited in Hayles, 1999.: p.3). The discourse of the individual that owes nothing to society has its origins in the arguments of Hobbes and Locke which conceptualize the "human" in a state of nature that predates the market relations (as cited in Hayles, 1999: p.3). This imagined "natural" self serves as the foundation of market relations such as "selling one's labor" (as cited in Hayles, 1999: p.3). This concept of human is a paradox, since rather than pre-existing the market relations and serving as a foundation to them, the natural self is actually a retrospective creation of market relations (as cited in Hayles, 1999: p.3). Following Macpherson, Hayles (1999) argue that when the subject fuses with technology and becomes posthuman, this construction of "natural" human that owes nothing to society is undercut (Hayles, 1999.: p.3), since the posthuman is inextricably linked with apparatuses and prosthesis produced by the market society. Hayles gives the example of six-million-dollar-man to support her point: As can be inferred from the name, the parts of six-million-dollar-man are owned because they are bought, not because of a "natural" possessive individual that preexists the market relations. She argues that , in this heterogeneity of biological and mechanic parts, there is no way *a priori* way of distinguishing self from the "wills of others" (Hayles, 1999: pp.3-4).

The fusion of technology and human is also central to Donna Haraway's "A Manifesto for Cyborgs" (2004a). Haraway defines a *cyborg* as "a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" , "simultaneoutly animal and machine" (Haraway, 2004a: pp.7-8). The image of cyborg functions in her text both as a commentary for the late 20th century, as she states that "we are all chimeras theorized and fabricated hybrids of machine and

organism", "we are cyborgs" (2004a: pp.7-8); and the basis of her efforts to build an "ironic political myth faithful to feminism, socialism and materialism" (2004a: p.7).

The importance of the cyborg in Haraway's argument is that it has no origins, thus it has no myths of original unity; neither within a pre-Oedipal symbiosis, nor with unalienated labour. It "would not recognize the Garden of Eden", and has no dreams about salvation and returning to a state of union (2004a: p.9). This lack of origins in cyborg provides Haraway with a means to criticize both the essentialism inherent in the eco-feminisms and the socialist feminisms' finding comfort in an impending revolution, a "divine resolution" rather than opting for the “contradictions of everyday life” (Squires, 2000: p.367). The ironically reconfigured cyborg represents her effort to combine environmentalist, Marxist, and feminist concerns and ground them into political realities of technologically saturated contemporary society (Squires, 2000: p.367). Without origins or teleological dreams, the image of cyborg resists both essentialism and "conventional unifying utopian vision" that had impeded the previous feminisms, while not losing the sight of "the nitty-gritty of social relations" (Squires, 2000: p.367).

3.4 Conclusion

The two constellations of accounts of embodiment in cyberculture are not diametrically opposite to each other, as they have overlapping and opposing aspects. For example, both strands of arguments point to the feminine and maternal meanings attached to computers and cyberspace, and the gendered aspects of the desires related to technology and cyberspace. In the accounts that emphasize the disembodiment in cyberculture, both the computers and cyberspace is depicted along the lines of masculinist representations of female body; portraying them as sites of risk and desire, and as associated with compromised security, permeable boundaries, vulnerability to invasion and infection, and engulfing and

demasculating qualities. In opposition to these representations, the user/hacker/cyberpunk subject is typically represented as a male whose main task is to penetrate this feminized space. The accounts that emphasize the refiguring of embodiment such as Alluquere Rosanne Stone's (2000) do not oppose that cyberculture represents these machines as feminine, yet the feminine quality attached to computers and cyberspace is used to explain the subjects' desire for attaining power and control on its own body (p.522).

As pointed in this chapter, these two strands of thought have different implications for the subject that is produced in cyberculture: Accounts of Bukatman (2000), Lupton (2000), Nixon (as cited in Wolmark 2003), Wolmark (2003) point to the reiteration of the Cartesian logic, and the fantasy of a masculine, autonomous and disembodied subject in cyberculture; while second strand, including Stone (2000), Foster (2000), Hayles (1999) emphasize the denaturalization and subversion of this subject through this refiguring of embodiment, subversive gender performance, and blurring of the boundaries between human and machine.

The next chapter proceeds into the actual analysis of the Wired magazine. The discourse of Wired magazine will be analyzed in its texts and the visuals it use in order to account for the production of subject in this discourse. Like the accounts provided in this chapter, the analysis of the Wired will focus on the representations of body and technology, and their relationship; and the subject that is produced through these representations.

CHAPTER 4

REPRESENTATION OF BODY IN WIRED MAGAZINE

4.1 Introduction

This chapter examines the textual and visual representations of body in Wired. As examined in the second chapter, the brand of posthumanism in cyberculture focuses on improving the human body in accordance with the capabilities of the mind, and accordingly, many of the texts found in Wired focus on how the physical performance or fitness of the body can be technologically improved. The first section of this chapter examines this discourse of human enhancement in order to find out whether the technological interventions to body have subversive effects on the human subject. The second section examines the portrayal and/or erasure of bodily markers of identity in textual and visual representations of body. Most of the accounts of cyberculture mention the erasure of body based markers of identity as the core of the utopian narratives in cyberspace, and as related to a fantasy of disembodiment. When combined with the white male normative in cyberculture, this erasure effects the production of the subject of cyberculture as a universalized white male. The aim of this section is to examine if this tendency to erase the race and gender from the representations of body and posit the white male as universal continues in the discourse of Wired. The third section in this chapter explores the portrayal of virtual embodiment in Wired. Virtual embodiment allows to refigure one's body by changing parameters such as race and sex and changing body parts. While this refiguration accommodates passing, which potentially reinforces the white male normativity in cyberculture, it also enables race and gender performance and causes the subject to assume different identities, resulting in a

subversion of a subject with a fixed race, sex and identity. The aim of this section is to find out to what degree this refiguration effects a subversion of the autonomous human subject.

4.2 “The Perfect Human”: The Discourse of Body-Enhancement

> Pills? Pop 'em. The scalpel? Sharpen it. New ways to train? Bring them on. The Wired way to max out your bod.
>
> “The Science of Human Enhancement” (Wired , January 2007)

Enhancement of the human body is a recurring theme in cyberculture: Cyberpunk literature, magazines such as Mondo 2000 and Extropy Journal, and works of prominent figures in cyberculture such as Stelarc, all focus on various technological procedures aiming to overcome limitations of the body (Dery, 2000; Terranova, 2000; Stelarc, 2000). In accordance with this tendency, Wired shows an almost obsessive interest in means of extending the capacities of the body and overcoming its weaknesses; featuring texts that cover a variety of interrelated topics including ways of improving sports performance, improving the shape and fitness of the body, weight loss, overcoming genetic predispositions, improving mental performance, and attaining new senses. The January 2007 issue of Wired is especially salient in this context as that issue features a section named "The Science of Human Enhancement" dedicated to these topics.

The first article in the feature, "The Perfect Human" (Wired 2007), is about Dean Karnazes, a high achieving marathon runner. Karnazes used to be a "corporate hack desperately running the rat race", when he realized that he was utterly dissatisfied with the corporate life. His epiphany came when he was at a bar in a "slobbering drunk" state and being “hit on by an attractive woman other than his wife". When he went outside to vomit, he found a pair of sneakers, and he spontaneously decided to wear them and started running. According to the article, that decision

shaped his next 14 years in which transformed himself to an "ultramarathon man" and "a perfect human", as the article refer to him ("The Perfect Human", Wired 2007). After a brief section that tells Karnazes' life story and marvels at his accomplishments, the article proceeds to giving advices from the runner himself ("The Perfect Human", Wired 2007). His advises to readers range from common sense to unorthodox, and comply with the general premises of cyberculture in that they involve notions of a boundless mind, pushing the limits (less sleep, intensive training, slow-carb diet, no alcohol, and showing the "who's the boss"), self-confidence (being audacious, taking risks, self promotion), and consumption of techno-commodities[2].

The pictures of him accompanying the story reaffirm this idealization: Karnazes, a white male with a chiselled body, standing self-confident in the morning light (Figure 4.1). To monumentalize Karnazes as the "perfect man", the photograph uses many of the connotative procedures Barthes mention in *The Photographic Message* (1977b): The *objects* in the photograph are Karnazes, standing alone and shirtless and wearing sports equipment, road, desert vegetation at the sides of the road, and the sky. His solitude in the picture signifies autonomy, and when combined with the desert landscape that is virtually in the middle of nowhere, it also connotes man in a struggle against nature. The *pose of the objects*, the posture of Karnazes and his face expression also implies that he is confident that he will overcome this challenge. The *photogenia,* the usage of light, exposure, and printing techniques, which, with contemporary technology, also include various postprocessing and color correction techniques, are also significant in this photograph as they portray his body in a certain way. The lighting in the scene and the contrast it causes between body and the scenery in the background emphasizes the contours of his body and the definition of muscles. These processes collectively signify Karnazes as a self-confident and autonomous man, a user of technological sports equipment, a man that struggles against nature, and a healthy, fit and rigid

2 The items mentioned in the article include a high-end Timex watch, GPS enabled cell phone, North Face Endurus Boa laceless sports shoes and Krazy Glue.

male body with defined contours of body.

Figure 4.1 – Dean Karnazes in the article "The Perfect Human"
Source: Wired, January 2007

Another photograph in the same article (Wired, January 2007) is a close-up of his legs and feet (Figure 4.2). This second picture also has some aspects of photogenia similar to the previous one, with light and contrast are used to emphasize the muscle definition and bodily contours. The objects in the scene are slightly different as this time he is shown as standing bare feet on earth, in a field covered with cactuses, thorns and pieces of rock; a surface that is difficult and painful to walk on. His standing barefoot on such a surface reiterates the "man against nature" message that is connoted in the previous photograph. Except for a bandage on his sole, Karnazes looks unaffected by the difficult terrain, signifying the impermeability of his body, and emphasizing his mastery over his body and endurance to pain. The title that anchors these photographs, "The Perfect Human" further limits the meanings generated by these images: As he is announced as the perfect human, Karnazes becomes not just a man with an admirable physique; he, as a white male, represents as the ideal for *human*.

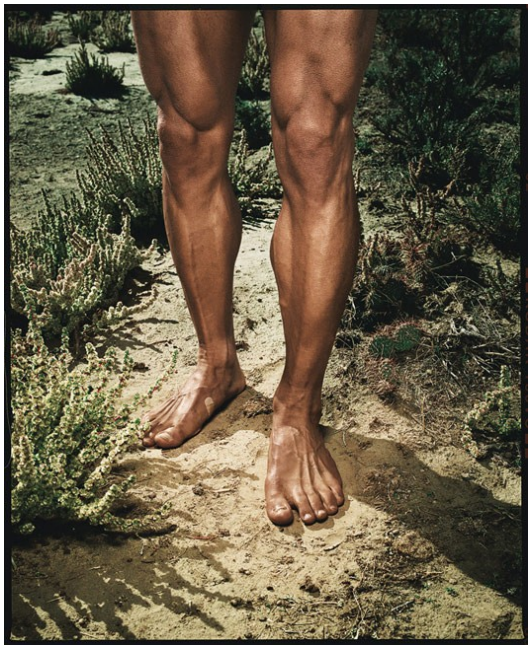

Figure 4.2 – Dean Karnazes in the article “The Perfect Human”
Source: Wired, January 2007

The rest of the feature in this issue provides other examples of human enhancement: The section named "Wired enhance-athon" (Wired, 2007) covers three of the Wired writers' quests for self-enhancement using exercise and dieting. "How to Build a Better Body" features an interactive diagram on how various products, chemicals, surgical procedures, dietary supplements and training regimens can be employed to improve body, as well as a "bonus" section giving advise on "how to build a better baby". The procedures covered in "how to build a better body" are far more invasive than Karnazes' advices or the procedures Wired writers have chosen to undertake: Various invasive surgical procedures involving mechanical and electronic implants, and chemical supplements. Despite this difference in the invasiveness, all the procedures shown in all these texts are driven by the same principles, aiming to increase physical and mental performance and decrease the permeability of body, often using a combination of innovative technology and willpower.

Interestingly, it is not only the body which is subject to mastery and improvement in Wired: Mind is also included in the self-enhancement procedures, as some of the

texts focus on ways of improving mental capabilities. For example, one of the Wired enhance-athon projects in the issue involve becoming "smarter" as the Wired writer Joshua Green undertakes a project of improving his cognitive performance (“Be Smarter”, Wired January 2007). Most of his training involves lifestyle changes such as change of diet, improving sleep, mental exercises, increased caffeine consumption and listening to Mozart, resulting in the writer's "Brain Age" becoming a decade younger. Other similar texts on cognitive improvement include drugs that improve IQ (“Really Smart Drugs”, April 2005) and a humor section with speculations about a future chewing gum that increases IQ (“Artifacts From the Future: Chewing Gum”, Wired June 2009). These texts make the discourse of human-enhancement in Wired difficult to read as a reiteration of the mind/body split in which mind shapes and controls the body as it likes. However, while the cognitive functions of the mind are also subject to mastery just like physical fitness of the body, it is notable that all of the narratives of self-improvement in these texts underline the notion of a coherent identity and willpower, which precedes these procedures and persists throughout them. Even if physical and cognitive capacities of the subject change during these processes, the identity of the person that undertake the challenge of self-transformation is held as the driving force of these projects and assumed to stay intact in these texts.

3.2.1 Erasure of Societal and Biological Factors

It has been pointed both by Mark Dery (2000) and Tiziana Terranova (2000) that the discourse of technological enhancement of body often neglects societal and biological factors in favor of freewill and voluntarism. Likewise, the articles in *Wired* on human-enhancement downplay society and body as limits of such enhancements. The advises given to the reader in these texts indicate the assumption that it is simply a matter of personal decision and perseverance to become a “perfect human” like Karnazes, without much reference to limitations imposed by class, gender or race or economical factors. While some articles include the prices of the technological apparatuses and applications, the texts are written with the implication that they are easily accessible and affordable to

everyone. One article in this context, "Vision Quest" (Wired September 2002) seems to be an exception: Along with the price of the prosthesis and surgery costs, the patient's struggle to fund the procedure is also mentioned in the text. Despite this brief mentioning, most of the article revolves around the details of the technology and the procedure, as well as the talents of the patient undergoing the surgery which enabled him to save the necessary money for the procedure, thus stealing the focus from socio-economic factors back to individual choices and accomplishment.

Wired's stance on self-improvement also deemphasizes the biological constraints. Although there are texts putting substantial focus on DNA research and The Human Genome Project, these topics are always covered in separate articles such as "Drilling Down on DNA" (Wired April 2005) where the information about genetics and DNA are abstracted from their implications on concepts of self-enhancement. In rare cases in which effects of genes are mentioned within the context of self-enhancement, they are either accompanied by information about technologies and supplements that can be used to suppress the genetic predispositions or the potentials of gene treatment as a means of human-enhancement ("How to Build a Better Body", Wired January 2007; "Gene Enhancement", Wired January 2007; "Take These Genes and Call Me in the Morning", Wired September 2002).

According to Foucault, for every statement there can be a number of potential *unsaids.* These unsaids are not hidden meanings within statements but are "limits", "gaps", "exclusions", and what remains unsaid is governed by the same rules as the statements that are said (2004: pp.123-4). Accordingly, in Wired's discourse on human enhancement, the social and economic conditions that makes these enhancements possible remain unsaid due to the discursive rules that made possible the emphasis put on autonomy, willpower, hard work, and innovative use of technology as the conditions of the human enhancements, in tandem with the larger discursive constellation of liberal humanism.

4.2.2 Prostheses and Implants

Some of the human-enhancement projects covered in Wired involve invasive technological procedures such as prosthetics, implants, chemical supplements, and gene therapy[3]. Such references to invasive procedures of technologically augmenting body resembles David Tomas' previously mentioned concept of *technophillic body,* human body augmented with functional and aesthetic transformations (Tomas 2000: 176-7). By many writers, such a merging of body with technology is held as subversive to the subject. For N. Katherine Hayles(1999), the union of body and technology is subversive as it undermines the humanist notion of body and subjectivity that precedes market relations (pp.3-4). Similarly, Dani Cavallaro (2000) points how, when technological commodities and implants are looked upon as prostheses rather than tools that are used by the person, they become subversive because of the instability of their status as a commodity being tied to constantly shifting ideas and meanings (2000: pp.ix-x).

In “Volatile Bodies”, Elizabeth Grosz states that when an object is held in contact with body for a time long enough, it becomes perceived as part of the body image (1994: pp.79-80). Similarly, in the discourse of Wired, although the prosthetics and implants are not accepted as a parts of body immediately after the procedures, in time they are transformed from being machine to parts of the body image. Moreover, as pointed in the article "Mixed Feelings" (Wired, March 2007) prosthetics are also expected to lend themselves for such incorporation into the body image without feeling awkward, to be “something transparent, something that users can (safely) forget they're wearing” ("Mixed Feelings", Wired, March 2007) as the article states.

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3 Many texts pertaining to such invasive body enhancement procedures are found in Wired. Some examples are, “The Science of Human-enhancement” (Wired January 2007), “Gene Enhancement” (Wired January 2007), “Take These Genes and Call Me in the Morning” (Wired September 2002) and “Ready, Set, Mutate!” (Wired September 2000).

In "Technology and the Lifeworld From Garden to Earth" Don Ihde states:

> First, the technology must "fit" the use. [...] The closer to invisibility, transparency, and the extension of one's own bodily sense this technology allows, the better. Note that the design perfection is not one related to the machine alone but to the combination of machine and human (1999: p.74).

According to Ihde, this desire for total transparency is the result of, what he calls, a *doubled desire*: To want the technology to be "me" which would also mean that there would be no technology, enabling one to have the power and increase in capacities technology makes possible while paradoxically being unaware of its presence (1999: p.75). Ihde also points that this doubled desire for quasi-transparent technology is responsible for both the utopian and dystopian dreams related to technology (1999: p.75). The desire in Wired for technologically improving the body seems stem from such a doubled desire: forgetting about technology and incorporating technology simultaneously. None of the articles about the body augmentation mentioned here conceptualize the relation of body and technology as a co-dependence with technology or a revelation of body's being a product of society. Instead, the technology is conveniently appropriated to body and made transparent, fortifying the body and augmenting the subject's physical and mental performance while maintaining the notion of coherent identity and freewill.

Accordingly, the human subject, with technological augmentations is represented as having increased capacities or regained senses but not subverted. Reiterating McLuhan's (1966) conceptualization of technology and media, the technological interventions to embodiment such as prosthesis and implants are conceptualized as extensions to the body or the consciousness of the human: Just as in McLuhan's account asserts that the wheel extends the foot and electronic circuitry extends the nervous system (1966: pp.34-9), these technological apparatuses are represented as extending the body but not as denaturalizing it. It follows that the resultant of this process is represented not as a posthumanistic hybrid of human and machine but as

a human with extended capacities. Therefore, despite the arguments of Hayles (1999) and Cavallaro (2000), the union of body with technology is presented as not interfering with the autonomous subject and its material body, as technology is incorporated into the body image and becomes transparent.

4.3. Representation of Race and Gender

4.3.1. Representation of Gender

At the first look, aside from the necessary usage of gender specific pronouns Wired portrays "human" as without gender. The reader is addressed as a generic "you", although the texts sometimes reveal that the "you" refers to a male or female. The gender neutrality in Wired extends to the reader comments section: The comment section provides the username of the poster, a timestamp indicating how long ago it has been posted, a permalink to the comment in order to refer to it from outside the site, and a voting system that enables to readers to vote the comment to rank it to a higher or lower position on the page. However, the comment section provides no way for indicating the gender of the reader who has posted the comment, or a means of providing a visual avatar to visually represent him/herself. Therefore, the subject position made available for the reader within the commenting interface is gender neutral unless he/she chooses to disclose it textually in their username or in the comment text. As in the rest of the texts in Wired, the comment section renders the gender of the body a secondary issue, and need not be indicated in most cases.

While the texts in Wired tend to erase gender, the visual representations tend to represent male and female bodies in different ways. As exemplified in the previously mentioned photographs of Dean Karnazes (Figures 4.1; 4.2), male bodies tend to be portrayed as lean and fit, having a self-assured posture and face expression, and looking directly into the camera. In general, male subject is centered in the frame and shot from the eyeline level, and higher or lower angles are almost never used. The person in photograph is usually shown as standing tall (Figures 4.1; 4.2; 4.3), yet there are also cases where he is sitting (Figure 4.4). In

both positions, male subject is portrayed in a way that exudes self confidence and an unyielding attitude. Dean Karnazes' (Figure 4.1; 4.2), Shai Agassi's (Figure 4.3) and James Cameron's (Figure 4.4) photographs provide examples for this portrayal of male bodies.

Figure 4.3 – Photograph of Shai Agassi
Source: Wired, September 2008

Another common aspect of these photographs is the relation of the male subject to the technology: In Agassi's photograph (Figure 4.3), Agassi is shown standing in front of a car. The anchor text limits the meanings the image generates, pointing to his specific relation to technology, a position of mastery to the extent that he plans to "change the way the world drives". Cameron (Figure 4.4) is also shown in a similar relation to technology, sitting inside the cockpit of a submarine. Both photographs connote a relation of male subject in a position of a confident mastery of machines. In Agassi's photograph, with the reference to an "audacious plan" and "changing the way world drives", the anchor texts also connotes Agassi's innovative usage of technology and determination to change the world, in accordance with the values of both cyberculture and liberal humanism. Likewise, the photograph of Cameron in his submarine and the textual references to the "Drive to Discovery" imply exploration and discovery as aspects of his character,

both of which reflects Western values.

Figure 4.4– Photograph of James Cameron
Source: Wired, December 2004

Visual portrayals of female bodies are different than male bodies in Wired. While most photographs portray men directly facing the camera, women tend to be photographed looking away, and sometimes their back turned, representing them as less confident and in an off guard state in contrast to men. If the picture features both male and female characters, the male tends to be in the center of the frame while women are in an off center position. However, when there is only a woman in the picture, the woman is positioned in the center of the frame.

In terms of pose, the female body is portrayed less rigid and in a more flexible posture compared to the portrayal of male subjects. The photographs of Sarah Silverman in the February 2009 issue provide an example: The issue's cover feature "Why things suck" (Wired, February 2008) consists of a series of articles on technology that does not work as it is supposed to. The articles are supplemented

with two photographs of Sarah Silverman . The first photograph portray the actress centered in the frame, wearing a shirt with "Tech Support" written on it (Figure 4.5). Silverman's eyes are diverted to the side in this picture, she is scratching her head, and her face expression conveys a mixture of frustration and confusion. To the left of the frame, the anchor text gives a short list of some of "the 33 things that make us crazy", most of which are related to computer and network technology. The combination of the linguistic and the iconic messages in this photograph connote a lack of technological skills and confusion in women, as opposed to the representations of the men, which connote a mastery and innovative usage of technology. The second photograph in the feature shows her in the right hand side of the frame, squatting on the floor with a spray can in her hand, and the words "Why things SUCK" on the wall behind her (Figure 4.6). Compared to the portrayal of men as strong, determined, this photograph shows her in a flexible and malleable state.

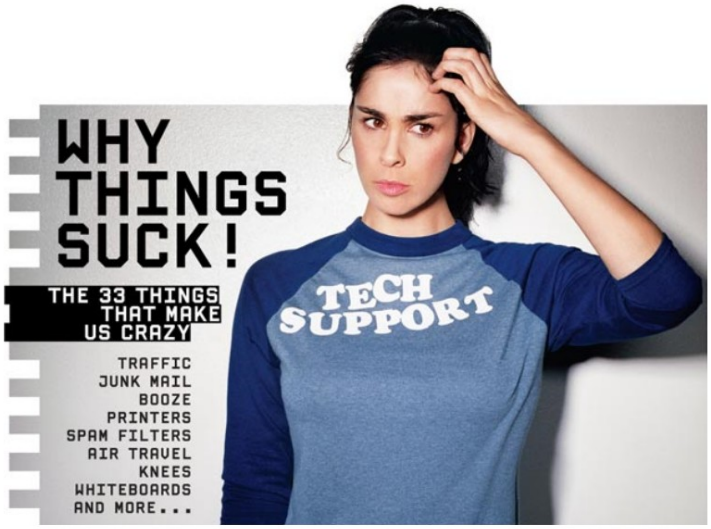

Figure 4.5 - Sarah Silverman in "Why things suck"
Source: Wired, February 2009

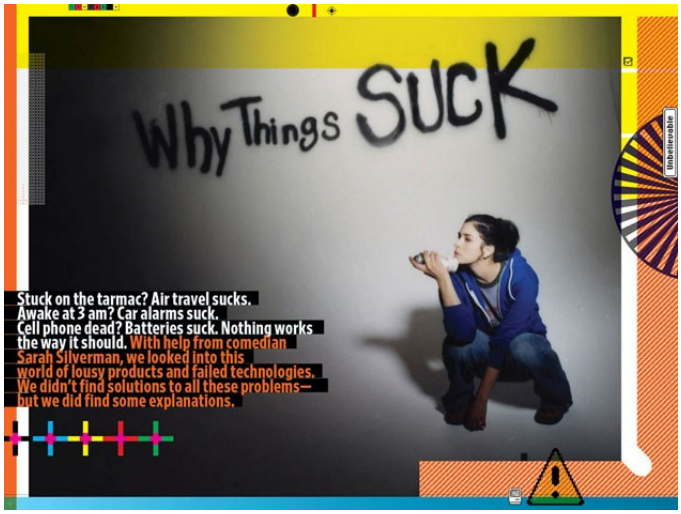

Figure 4.6– Sarah Silverman in “Why things suck”
Source: Wired, February 2009

Another example of portrayal of female body is an image in "Get naked and rule the world" (Figure 4.7), a series of cover articles about radical corporate transparency (Wired, March 2007). The cover of the issue shows a woman dressed in formal business clothing, holding a cardboard in front of her which reads "Get naked and …" . The article presents an interactive version of the same photograph (Figure 4.4), which, on mouse rollover, changes with a naked version of the same woman, and the text on the cardboard changes to "... Rule the World" (Figure 4.7). This interactive photograph empowers the user to interactively “undress” her with a mouse movement, while the depicted woman is portrayed as having no control over her clothes. Similarly, the cover of the May 2001 issue shows a pop-art image of a naked woman lying on a bed behind sheets and smoking a cigarette; a set of objects and a pose which collectively connote the afterwards of a sexual intercourse in Western cultural lexicon (Figure 4.8). While the graphic is already connotative even without a linguistic message, it also feature a speech bubble which reads “From Now On You've Gotta Pay”, assuming a relay function for the image. The combination of this relay and the coded iconic messages connotes that the woman depicted in the picture is available for intercourse if payed. Like “get naked and rule the world”, this picture represents boundaries of the female body as

manipulable, not with an interactive mouse gesture in this instance, but with payment.

Figure 4.7 – "Get Naked and Rule The World"
Source: Wired, March 2007

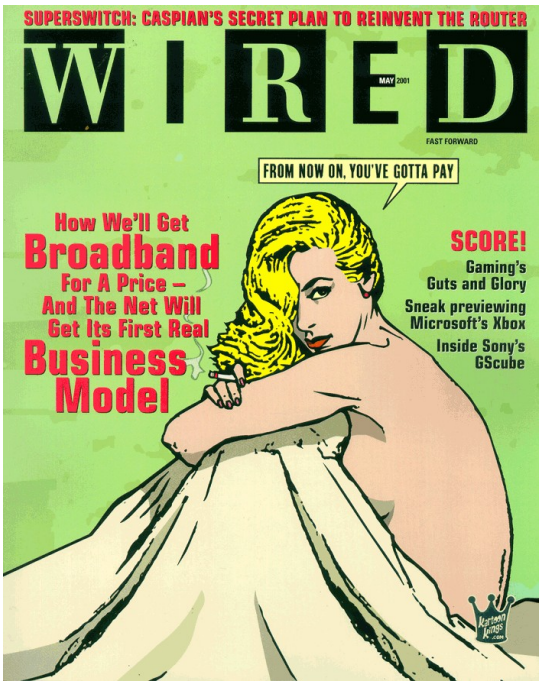

Figure 4.8– "From Now On You've Gotta Pay"
Source: Cover, Wired, May 2001

On a different note, the cover of issue January 2009 shows a digitally recolored photograph of a nude woman with slightly her back turned (Figure 4.9), and the anchor text reads “The truth about cancer”. The photograph in the cover article shows the same woman from a different angle (Figure 4.10), and the taglines give information about the correlation between early detection of cancer and survival rates. The word “cancer” and the facts about cancer anchor the image, resulting in an association of female body with vulnerability to cancer. As a photogenial process of connotation, a light effect divides the body in half; the left side of the body is lit with a harsh blue-white light making it almost the same color with the background, as if it is transparent: Female body is not only implied to be invaded by disease but also shown as divided into two by lighting which makes it partially see-through and merged into the background. This portrayal is in opposition to the representation of male bodies (Figures 4.1; 4.2; 4.3; 4.4) where photogenial procedures are used to emphasize the contours of body rather than erasing them. The combination of literal and iconic connotation in this photograph compromises the boundaries and integrity of her body, both with the implication of disease with anchors, and the light effect that divides her body and erases its contours.

Figure 4.9 - “The Truth About Cancer”
Source: Wired, January 2009

Figure 4.10 - “The Truth About Cancer”
Source: Wired, January 2009

According to Susan Bordo, the 1990s reinvented the ideal body as “lean, strong, androgynous, and physically fit, conveying the core Western values of autonomy toughness, competitiveness, youth, and self-control” (as cited in Carson, 2001: p.127). These values also mark the difference between the portrayals of male and female bodies in Wired. While Bordo points to a masculinization of the ideal female body , the portrayals of male and female bodies in Wired seems to associate these attributes with masculine body whereas female body in comparison is represented in with their opposites: malleable, vulnerable, lacking clear boundaries, and prone to disease (Carson, 2001).

4.3.2 Representation of Race

In Digitizing Race, Lisa Nakamura points to the color-blind racism which accompanied the election of Bill Clinton and was acerbated by the emergence of the new ICT's at the beginning of the 1990s neoliberalism (2008: pp.2-3). According to Michael Omi and Howard Winant (as cited in Nakamura, 2008: pp.2-

3), this neoliberal project aimed avoiding "framing issues and identities racially" as much as possible; thus speaking of race became held equal to being racist (Omi and Winant as cited in Nakamura, 2008: p.3).According to Prashad, this color-blind politics contain a more subtle racism which ignores the uneven allocation of resources based on racial identities (as cited in Nakamura, 2008: 2008). Moreover, as Nakamura points, the beginnings of this color-blind neoliberal race politics coincides with the emergence of Global Information Infrastructure and the Internet; technologies which are associated with a universalist discourse and often used in utopian narratives based on erasure of race and sex (Nakamura, 2008: p.3).

The erasure of race in the textual representations of body in Wired reiterates this colorblind politics that is associated with neoliberalism and the advent of the ICT's and the Internet: As in gender, there is almost no textual reference to race in Wired. The very few mentions of race appear in narratives of equality of opportunity in stories of young people struggling to enter into the world of the technological elite. One of the two examples in which race appears in texts as a signifier is "Viva la Robot" (Wired, April 2005), a story about a team of Hispanic teenage roboticists. The protagonists' being hispanic is briefly mentioned in the article few times, yet the focus of the story quickly shifts to their illegal immigrant status and to the gang violence in the area they live. A second example is in the article "Gen Equity" (Wired, July 1999). Race is indirectly implied in the article, however the mention is again brief, and is mentioned solely for the purpose of emphasizing the equality of opportunity in Silicon Valley. The reader comments section, as mentioned above, does not provide any means of textually or visually representing the body, and therefore just like the reader is represented as gender neutral, it is also assumed as "raceless".

The appearance of race only within narratives of equality of opportunity and stories of personal struggle also serves as a reiteration of the white male normative of this social milieu and its impenetrability by the non-white races. The struggles of a few gifted Asian, Latin and Hindu people for entering this world by working

exceptionally hard and going through ordeals are elaborated in detail, and in contrast to this, white males are portrayed as already a central part of this world. This opposition between the already there white male elite and the non-white that is constantly struggling to be a part of that milieu explicitly promotes the equality of opportunity in one hand, and implicitly reaffirms the technological elite as predominantly white male on the other.

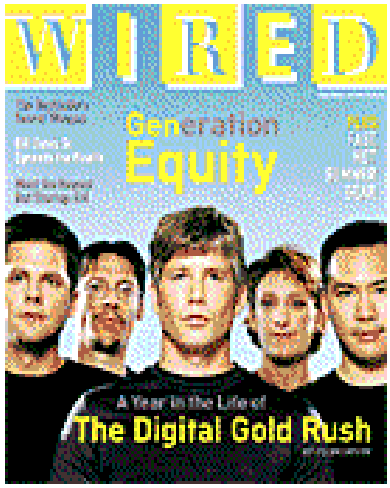

Figure 4.11– "Gen/eration Equity"
Source: Wired, July 1999

The cover of the July 1999 issue visually indicate the central place of the white male in the technological elite: The photograph depicts European, Hispanic and Asian men in the same picture, and a woman. A blond white man positioned is in the center of the frame, a position which signifies leadership within the Western cultural lexicon. Hispanic and Asian men and the woman are distributed in the picture to the side and behind him as tokens of non-white races and women, and as the "followers". According to Barthes, in some cases the anchor text can produce a connotation that contradicts or compensates the image. While the title "gen/eration equality" anchors the image as a representation of genetic equality within that generation and in Silicon Valley, it contradicts the central position of the white male, and the dominance of men in the picture as the posing of the objects represent the white male in a position of superiority and leadership, and the non-white races and women in a way that connotes their within marginality within the

technological elite.

4.4 Virtual Refiguration of Embodiment

In “Will the Real Body Please Stand Up?”, Alluquere Rosanne Stone (2000) argues that virtual reality enables the subject to change and refigure the body, enabling the subject to assume many different personas and resulting in a fluidity of identity. This refiguration of identity is potentially subversive to the notion of a fixed identity that is constituted in a safely bounded body within a modern bourgeois framework (Stone, 2000: p.523), as well as the naturalist link forged between sex and gender as it figures different ways that body and subject couple and enables subversive gender performance (Foster, 2000: p.440; p.453). According to Stone (2000), being able to virtually refigure the body causes the subject to exist in “quantum like multiple states” in opposition to the modern bourgeois subject, and share its environment with other entities that cannot be considered as subjects (p.524). As opposed to the body that is culturally intelligible, the subject that undergoes such refiguration and multiplicity of embodiment becomes an illegible subject (Stone, 2000: 524).

Wired precludes this subversive potential as it represents the physical body, “real” identity and the virtual body in very different terms, within a metaphysics of “reality” and “appearance” . In Wired's portrayal of virtual reality, the virtual body of the user, his avatar, is represented not as a refiguration of his embodiment but as an appearance and superficial, in opposition to a “real” self and physical body as opposed to subversive refiguration. For example, the article "Wired Travel Guide: Second Life" (Wired, October 2006) represents the user's ability to refigure its body as changing clothes: The shopping section of the travel guide starts with information about the virtual boutiques and virtual clothing. As the text advances, it is pointed that bodies are also like clothes in this virtual environment: Eyes, faces, genitalia, can all be bought from the virtual stores, and donned as clothes :

> WALK AROUND in your avatar's standard-issue look and everyone you meet will quickly identify you as a rube. This is a world where people appear as elves, kittens, and samurai, after all. So once you've got your bearings, play around with the Appearance tools in the Edit menu. These let you size, stretch, and squash everything from your shirt and pants to your hips and hair. (Hey, in SL, fashion is more than clothes.) […] Of course, to really fit in, you'll need some custom threads – and maybe a new body part or two. Luckily, Second Life has plenty of expert tailors to help you. ("Wired Travel Guide: Second Life", Wired October 2006)

By representing the the virtual body both as clothing and appearance, the article implies an unchanging true identity under them rather than one that is refigured and destabilized. Whatever body parts the person uses to refigure its body, the trope of cloth and the textual emphasis on appearance serves to conceptualize virtual body as superficial, hiding a more "real" subject that is underneath and remains unaffected by it.

The representation of virtual environments as appearances and fiction also signifies the world outside them as "real" and "natural". In "Simulations", Jean Baudrillard points to the metaphysics of "reality" and "appearance" which tends to seek and produce a "natural" referent for the image. Despite the lack of such referents, natural referents are artificially produced by the images, resulting in a "proliferation of myths of origin, signs of reality; of second-hand truth, objectivity and authenticity" (1983: p.12, p.86). Disneyland is an example in which such a retrospective production of a "real" origin through the appearance takes place. According to Baudrillard, Disneyland is a "deterrence machine" that maintains the fiction that a "real" exists outside of it. It provides a "miniature" and "comic strip" version of America, "its way of life", values, down to the "morphology of the crowd" (Baudrillard, 1983: pp.24-5). By providing miniaturized, caricaturized and childish model of the country, it also maintains that there is a "real" America, an

adult world existing outside it (Baudrillard, 1983: p.25). Similarly the carucaturistic, superdeformed, cartoonish representations of users in the virtual reality serves to represent the user in physical reality as having a “natural” identity, widening the gap between the notion of a true self and the virtual avatar, and precluding the subversion that virtual realities can offer.

Figure 4.12– “Wired Travel Guide: Second Life”
Source: Wired, October 2006

Not only the appearance, but the skills, actions, animations of the avatar are also represented as separate from the real self. An example from a reader question in the “Mr. Know-it-all” section (Wired, February 2007) makes this point more clear: The reader asks “Mr. Know-it-all” whether s/he can buy a more advanced character for World of Warcraft rather than having to play the game and level up. According to the answer, the reader can easily buy a "hot, female, level-60 warrior with Cloudkeeper legplates and a Hammer of the Northern Wind [...] with the swipe of a credit card"(Wired, February 2007). However, the answer also states that the reader will look like a level 60 warrior but will not be able to act like one since "[i]t takes a lot of practice, thinking, and time to learn how to play a character" (Ito as cited in “Mr. Know-it-all”, Wired, February 2007). His/her "real" identity will be transparent to the other players despite the high level avatar, causing him/her to be

outcast in the game world. The user's avatar can travel to virtual locations, and don different virtual clothes, body parts, virtual animations and skill sets, yet, the implication in these articles is that these processes are superficial and pertain to appearance, do not affect the “real” self[4].

While maintaining a notion of a "real" identity as separate from the virtual body, Wired's discourse also makes a distinction between the "real" body and the "virtual" body. The virtual body parts can be bought and sold, donned and discarded from the virtual body, and these processes are portrayed with amusement with their carnivalesque results and without much anxiety. In contrast to the amusement at these virtual transactions of body parts, articles about organ donations and transactions, processes that can be referred as analogous to them in that they too involve a commodification of human body, are portrayed in a tone that conveys horror. For example, "Organs for Sale" (Wired, March 2007) provides a chart showing the prices of organs in various developing countries, as well as a world map showing which organs are available in those countries. The blood red color of the world map on the yellow background is complemented with the pictures of the available organs below the map, making appearance of the chart much more striking and grotesque. The text refers to this issue as a "macabre turn for medical tourism", indicating the anxiety caused by the topic. Another article on a similar topic, “Stripped for Parts” (March, 2003), is about the procedures that sustains the body of the brain dead patient in order to preserve his organs until they are harvested for transplanting. The procedure is referred as barbaric in the text, and a mixture of horror and sympathy for the "dead man" runs throughout the text. The writer tries to convince herself the procedure is "good" since transplants save thousands of lives every year, in order to cope with the anxiety witnessing the process causes her. The text is supplemented with pictures of “preserved” organs in

4 This separation is also emphasized in the articles “Mutilated furries, flying phalluses: Put the blame on griefers, the sociopaths of the Virtual World” (Wired February 2009), and “World of Warcrack” (Wired June 2006), both of which imply a true self, and a consistent identity that is underneath the virtual representation, rather than fluidity in virtual environments.

jars, providing an additional sense of grotesqueness to the process referred in the article. Both articles show that “real” body is held strictly outside of the mechanisms that enable the transactions of body parts in virtual reality.

Slavoj Zizek points that immersion to a virtual world does not take place on a continuum of two extremes of “total psychotic immersion versus non-engaged external distance towards the artificial universe of the cyber-fiction”, between which a proper balance must exist. On the contrary, according to him the distance is a condition of immersion: In order to “surrender” to the virtual world, one has to “mark a border” that designate the virtual reality as a fiction. Participating in the symbolic fictions of cyberspace necessitates a mode of disavowal, an acknowledgement that “this is not real life” (n.d.). The possibility to assuming any persona online depends on their disctance from the “real”: The fluidity of identity celebrated by theorists such as Sandy Stone and Sherry Turkle depends on the fundamental impossibility of that identity, the impossibility of circumventing the interface which separates the person from its avatar (Zizek, 2004: p.813). Accordingly, the virtual environments like “Second Life” and “World of Warcraft” depends on the separation of the real and virtual identities. The distance taken from the virtual world enables the user to produce, buy, sell virtual body parts, and change their virtual avatars radically; and these processes are neither traumatic nor subversive as the condition for the virtual embodiment is the acknowledgement of its fictive status in the first place.

According to N. Katherine Hayles (1999), liberal humanism's conceptualization of human is paradoxical in that it posits the "individual" and "freewill", products of the market society as preceeding it (p.3). Hayles argues that a virtually refigured body is subversive to this assumption in that it reveals the reversal at the heart of this thought: The dependence of the individual to the market relations is revealed in this refiguration of body, the notion of a "natural" human in a state of autonomy and free-will is subverted (Hayles, 1999 :pp.3-4). Since Wired draws a distinction between the virtual embodiment from the “real” identity, and from the “real” body,

the virtual transactions of body parts do not have any subversive effect on the assumption of a natural identity or a natural body, notwithstanding Hayles's argument. The separation of virtual body and "real" body is emphasized by the opposition of the amusement with the virtual embodiment and transaction of body parts; and the extreme horror and anxiety conveyed by the actual analogues of these processes: The virtual body can be produced, bought, sold and changed as a commodity, but the "true" body needs to be held outside the market relations and discursive operations in this discourse, in order to maintain the assumption of a natural human subject whose body and identity precedes and resides market society.

4.5 Conclusion

In the previous chapter I had explored two strands of theories in cyberculture studies; one pointing to the prominence of the fantasy of disembodiment in cyberculture and the resulting reproduction of the autonomous human subject; and the other pointing to the subversion of this subject through either virtual refiguration of embodiment or physical technological interventions to embodiment such as prosthesis or implants. The discourse of Wired seems to support neither positions: The fantasy of becoming disembodied in cyberspace seems to be left in the early 1990s, as there are almost no reference to a disembodied existence of consciousness in cyberspace or the discourse of "leaving the meat behind" that was previously popular in cyberculture. Having said that, the texts in Wired contain almost no reference to race or gender, and the interactive reader comment sections provide no means of disclosing them; and this results in an erasure of bodily markers of identity in the discourse of Wired which resonates with the early utopian narratives related to cyberspace that are based on the erasure of body, despite not explicitly referencing them.

As in the articles like "The Perfect Human" (Wired, Januray 2007), the perfect human body is represented as lean, rigid and self-assured. The "Perfect Human" is

quintessentially white and male in the visual representations, and these representations associate this white male body with a tall and unyielding posture and strength. The female body, on the other hand, is represented as flexible, and permeable, and vulnerable. Women is portrayed with either a confused or frustrated face expression or in a sexual scenario that is unrelated to the text, conveying a lack of technological prowess and a marginal position in cyberculture. Moreover, using various connotative procedures, male bodies are represented in ways that emphasize their bodily contours and boundaries, while women are represented as lacking them, either through photogenial procedures such as use of light, or other means such as interactivity or relay texts. Non white races are mentioned or portrayed visually very scarcely, and often within narratives of struggle hardships to enter the world of the technological elite in which white-males are predominant. These representations serve to reaffirm the white male normative of the technological elite despite their explicitly promoting the equality of opportunity.

The merging of technological prosthesis and implants are with body is not represented as subversive to the human subject or identity in the discourse of Wired. The reason for this is the technological apparatuses mentioned in these texts are represented as becoming transparent and seamlessly integrated into the body image: Technology becomes non-existant while subject's capacities increase. Rather than the technophilic body that Foster (2000) mentions, this simultaneous incorporation and erasure of technology is in accordance with Ihde's (1976) double desire which conflates the love and hate for technology. As a result the capacities of the individual is represented as increased, but as the technology is accepted as non-existant; the identity thus remains intact rather than being destabilized by the fusion with the technology.

Moreover, in the discourse of Wired virtual re-embodiment subverts neither the notion of a coherent identity nor the unitary and autonomous human subject. Texts related to virtual reality maintain a notion of "true identity" that persists in virtual reality. Virtual refiguration of embodiment is portrayed as cloth changing or a

disguise rather than a fluidity of identity, implying a "real" self lying underneath the virtual appearance. Actions and skills in the virtual reality are represented as controlled by this "real" identity, but not as affecting it. The distinction between the “real” self and the virtual avatar which is represented as an “appearance” implies that a virtual representation does not always match the "true" identity, akin to clothes that does not match who wears them.

The implication of the “real” identity is also reaffirmed with an opposition drawn between "virtual body" and "real body". The virtual body is represented as an appearance or cloth that is produced and can be bought or sold within the market system. However, any implication of a similar relation between market society and the physical body is represented with horror in Wired. While Hayles (1999) argues that the virtual transformation of body is subversive to the liberal humanism in that it reveals the subject and the body as produced by the market relations; the discourse of Wired effectively avoids this subversion by maintaining the opposition between "virtual body" and the "real" body and identity. In this discourse the virtual body can be a part of market system in this discourse; but the assumed underlying “real” person and its body is not.

CHAPTER 5

REPRESENTATION OF TECHNOLOGY AND SMART MACHINES IN WIRED MAGAZINE

5.1 Introduction

Being a cyberculture magazine, technologies and products covered in Wired tend to focus on information technology, cybernetics, robotics, and computers. These technologies produce artifacts that look and act like alive and are capable of carrying out rational and logical operations that are associated with human mind. On the other hand, these machines cannot be categorized as human or alive in that they do not share the biological properties of organisms and they do not have most of the cognitive or emotional properties of a human. Because of this marginal status, these machines, generally referred as smart machines, problematize the boundaries that separate human from non-human, and thus are a source of fascination and fear alike in this discourse.

As the literature review in the third chapter shows, the concept of "machine" and its relationship with human is represented in many different ways in cyberculture: They are represented as anthropomorphic, embodied, feminine, enigmatic, emotional, risky, and fascinating. Taking cues from these accounts, the first section examines the representations of smart machines as objects of the discursive formation of cyberculture, and the way their relationship with human is conceptualized. The second section will focus on the portrayal of technology in general, examining its representation in both as utopian and dystopian terms. Through this analysis, the aim of this chapter is to reach to a rule according to

which these different representations and conceptualizations are dispersed.

5.2 Representation of Smart Machines

5.2.1 Machine and Anthropomorphism

In "Second Self", Sherry Turkle (2005) defines *boundary objects*[5] as objects without clear place within categories (pp.34-5). Smart machines like computers, robots, animatronic toys, and artificial intelligence agents are boundary objects in that they reside on the the boundaries of alive and non-alive, human and non-human. As Turkle point, the inability to classify them as “alive” and “not alive” generally leads to the ambiguous expression “sort of alive” (Turkle, 2005: pp.60-1; p.293).

Accordingly, Wired's approach to the smart machines is ambiguous, mostly referring to them as alive in an ironic way that also implies their non-alive status. The recurring exclamation “It's alive!” is one example of this approach. In January 2007 issue, the phrase is used to refer to an “oddly convincing robotic dinosaur”, and in March 2003 issue the term addresses the AI technology that is advancing at a surprisingly rapid rate. The phrase “It's alive!”, complete with the exclamation mark, not only shows that the referred object is almost as if alive, but it also implies that it is not something that is expected to be , or should be alive.

In "Will the Real Body Please Stand Up?" Allucquere Rosanne Stone mentions the cosequences of rethinking machines as having agency, resulting in phrases such as "[T]he machines are restless tonight..." (2000: p.504). She points that what's intriguing is not the phrase, which cannot be appreciated intuitively even after reading Haraway or Latour, but the ellipses which are as audible as the phrase.

5 In “The Second Self”, Sherry Turkle uses both the terms “boundary object” and “marginal object” to refer to objects that trouble categories like “human” “non-human”, “alive”, “non-alive”.. In the main chapters of "The Second Self" Sherry Turkle, uses the term marginal objects, however, in the 2004 epilogue to the Second Self Turkle adopts the term "boundary object" instead of marginal object.

According to her, the ellipses that follow the phrase say a great deal about the "complex and frequently uneasy imbrications with the unliving" (Stone, 2000: p.504). As audible as as the ellipses that Stone mentions, the exclamation in the phrase "It's alive!" says a great deal about the complexity of representing these technologies in relation to living things: Advances in electronics, AI programming, and product design brought smart machines very close to being accepted as living, yet still a world apart because of their lack of sentience and their inorganic structure. Accordingly, although the texts in Wired indicate the proximity of these technologies to a living being and a fascination with this closeness, they also indicate their inability of being represented as one.

Besides this life like representation, smart machines are also represented as capable of dying: The picture gallery "Blue Stages of Death" (March, 2007) presents screenshots of "blue screen of death" (BSOD) of various versions of Windows operating system, an error message that appears when the system encounters an error from which it cannot "recover". While the Blue Screen consists of lines of text over a blue background, within the discourse of computing it has also became a signifier in itself for the instability of the Windows operating systems. The picture gallery in “Blue Stages of Death” (March, 2007) associates these screens of different Windows versions, to five stages of grief in Kübler-Ross model, using the words "denial", "anger", "bargain", "depression" as relays, and concatenating images in a sequence which comprises the connotative process that Barthes calls a *syntax*. While referring to a system crash as death is already significant, the gallery in “Blue Stages of Death” goes further with the analogy by signifying the emotional state of user as stages of grief. The anchor text complements this connotation as it states, after "[d]ecades of Windows upgrades, and we still haven't reached acceptance" (“Blue Stages of Death, Wired, March 2007). Other similar analogies are found in articles "Desktop R.I.P." (Wired, March 2007), "Discs are so dead" (Wired, April 2005), "The Linux Killer" (Wired, July 2004), all of which refer to a particular type of machine, software or a technology's obsolescence as death.

Figure 5.1– “Blue Stages of Death”

Source: Wired, March 2007

Besides their being represented as “sort of alive” and capable of dying, in many texts in Wired further analogies are drawn between human body and machines. For example, in the article called "18 Days of Reckless Computing" (Wired, June 2006), Steve Knopper tells how he "willingly" and "eagerly" exposed his newly bought Dell computer and trying to "kill it for more than two weeks" by exposing it to "all the virus and malware he can". The parallel between the computer and body continues as he admits that if he was to treat his body the way he treated that computer, he would get "yellow fever, bird flu, and Alzheimer’s". While machines can contract diseases, they can also be treated: "The Bot Docs" (Wired, March 2007) is about Kazuhiro Ohro, a physician for robots at the Akazawa Roboclinic in Japan, "a hospital-meets-repair shop for ailing androids". The humanoid portrayal of machines can be partially attributed to design and marketing strategies that emphasize "human like" and "friendly" qualities to countermeasure the anxiety and frustration these machines can cause. For example, according to Lupton, computers' portrayal in technology related discourses as human-like stem from their enigmatic and incomprehensible construction and potential to cause "strong feelings of anxiety, impotence, frustration and fear" in their users. To address these

emotions related to to computer technology, most manufacturers of computer hardware started to produce more human like and "user friendly" software and hardware (Lupton, 2000: pp.484-5). For other technological commodities in general, the anthropomorphic design is used for purposes ranging from maintaining the product identity, explaining the unknown functions of the products, conveying information on products' attributes, to projecting "human" values to the product (Gemperle and Di Salvo, 2003: pp.70-1).

These arguments emphasize humanoid form as a design strategy that aims to reduce the anxiety caused by a complex technological artifact, thus point that the anthropomorphism in technological products is a means for user-friendliness and a market strategy rather than ends. However, in many occasions the human like qualities are represented as not as a means of achieving better user interaction but as an end in itself. The text "Why things suck: Robots" in February 2008 issue exemplifies this:

> Automatons work pretty well — if you're looking to weld thousands of cars exactly the same way. But what we really want is C-3P0: a robot that looks, acts, and responds like a human, except is easier to boss around. So why don't we have one?[...] [W]e're so set on that humanoid robot (Hollywood creates unrealistic body-shape expectations for androids, too) that we're killing ourselves to perfect biomimicry, computer vision, and artificial intelligence. Each of those fields has claimed countless careers as the discipline marches into one dead end after another, and together they're a recipe for perpetual disappointment. That's why US roboticists are secretly delighted that the world's robotics superpower has fallen in love with walking man-machines ("Why things suck: Robots", Wired, February 2008)

Similarly, "Rise of the Machines" (Wired, July 2004), an article about the movie "I, Robot" based on Isac Asimov's novel, laments that robotics today is nowhere near

producing the androids that Asimov had once envisioned. These two articles indicate that anthropomorphic design is not simply a strategy for achieving user friendliness or self-explanatory interfaces: The human like form is a fixation in itself. Moreover, the fascination with human like form in machines is not limited to robotics. Computer software, particularly Artificial Intelligence, is also represented in humanoid forms whether or not it refers to a software application that is physically or virtually embodied. For example, the cover of the March 2002 issue use "Abe", a bipedal humanoid character to represent artificial intelligence (Figure 5.2) . Likewise, the in the article "The Love Machine" the software interface "Laura" is designed in the figure of an attractive woman (Figure 6.1) [6].

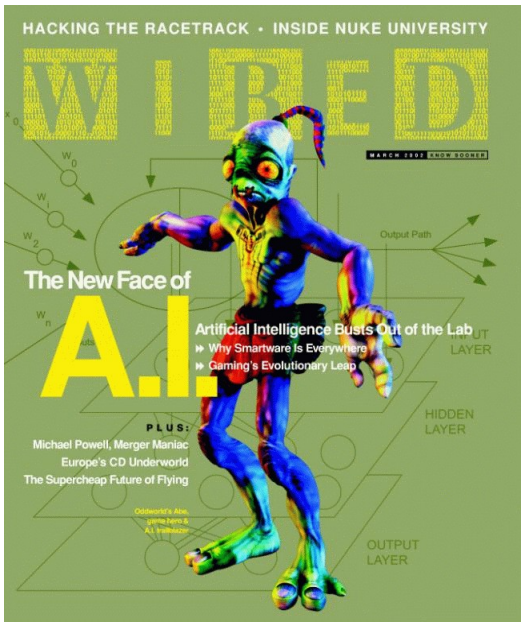

Figure 5.2 - The humaoid alien character Abe, presented as an icon for advanced Artificial Intelligence

Source: Wired, March 2002

Machines' increasingly becoming human-like is not only source of fascination but also fear: "Monster in a Box" (Wired, September 2002) tells the story of "The Turk", "an ingenious chess-playing machine that thrilled crowds, terrified

6 Other examples of fascination with anthropomorphic machines are found in the articles “The Humanoid Race” (Wired July 2004), and “Congratulations, It's A Bot!” (Wired September 2000).

opponents, and won like clockwork". The Turk was an 18th Century automaton constructed in 1770 by Wolfgang von Kempelen. It consisted of a mannequin sitting behind a cabinet made of carved wood, dressed in a robe, loose trousers and a turban, and holding a long Turkish pipe in his left hand. According to Standage, the sight of a mechanical man playing chess was astounding in its own right, yet it was not all: With its quick and aggressive play, The Turk was defeating its opponents one by one. Kempelen and his machine quickly became the talk of Vienna, then Europe. The Turk played with many famous and formidable opponents such as Benjamin Franklin, defeated almost all, and inspired fascination and fear alike in its audience ("Monster in a Box", Wired, September 2002):

> On one hand, they were fascinated - public exhibitions of automata were wildly popular in London and Paris during the 18th century - but they were also concerned that humans might end up being superseded. Just as science fiction movies of the 1960s featured evil robots and computers, 18th-century books and plays explored the dramatic possibilities of thinking machines, or of people concealed inside boxes and pretending to be machines. While many of these stories were straightforward comedies or romances, a darker mood was also abroad: The Turk's tour of Europe coincided with the Luddite riots and Mary Shelley's publication of Frankenstein. ("Monster in a Box", Wired, September 2002)

The Turk was, of course, a hoax: The 18th Century technology was not advanced enough to permit the construction of an automaton that can play chess. The Turk was designed to allow a chess player to hide inside the cabinet and command its play, thus it was not an automaton (Wired, September 2002). However, both the reaction of its audiences and the fascination that runs through the text points to its importance as a boundary object.

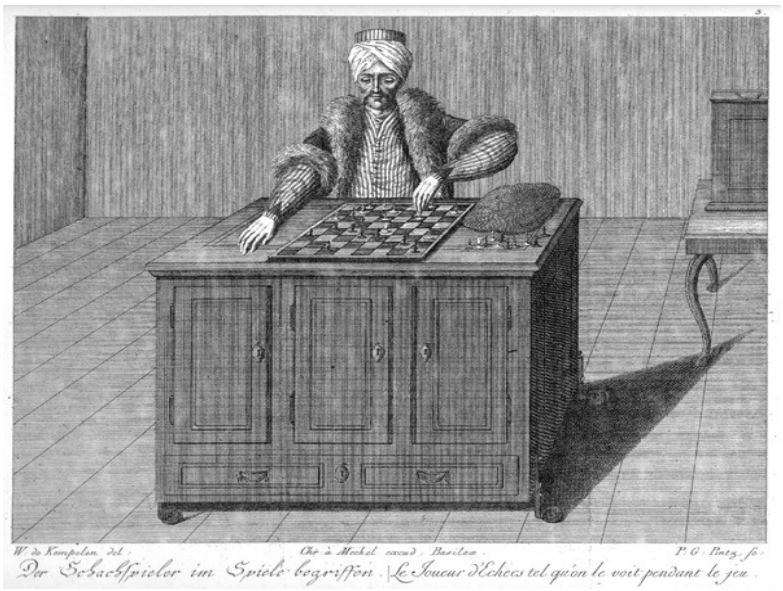

Figure 5.3 – An image of “The Turk”, the chess playing automaton
Source: Wikipedia, 2010

Both the title of the text, “The Monster in the Box”, and the references made to Frankenstein, point to the monstrosity of such a construct. Lupton points in *The Embodied Computer/User* that fears around monsters revolve around their liminal status and their elision between categories of life, especially if "human" is involved as one of the categories (Lupton 2000: p.484). Frankenstein is an example in which the distinctions between human and machine, living and non-living is elided (Lupton 2000: p.484) . Like Dr. Frankenstein's monster, The Turk elides many boundaries: By its mechanical construction, it can be categorized as non-living and not having sentience, yet it moves and acts like a human. It indicates rational thinking, a cognitive function required to play chess which is deemed as a human quality. The costume it wears also indicates a boundary crossing as it is dressed like an Ottoman while it was manufactured and its public performances were held in Europe. It problematizes the boundaries between alive and non-alive, human and non-human, familiar and strange, causing fear and fascination in its audience.

While these examples point to a fascination and fear with human like qualities of smart machines and emphasize their undecidability, there are also indications that

machines are held as a separate category from human. Like “It's alive!”, the comparison "Man vs. Machine" is a recurring theme in Wired. This expression represents machine not only as inhuman but also as a rival to human, if not a threat. The more subtle version of the opposition is in the December 2004 issue in an essay discussing the advantages and disadvantages of sending robots to extraterrestrial exploration missions (“Man vs. Machine”, Wired, December 2004). Despite the exploration of solar system continues using robots, according to the author it is only a matter of time until human explorers are sent to these missions again. While being "magnificent examples of human ingenuity", these robots lack free will: they can only "do only what they're told" and "detect only what they have been designed to detect". "[H]uman mind and hand" needs to be put into the work in order to realize the ful potential of scientific discovery on other planets (“Man vs. Machine”, Wired, December 2004) . Another version of "Man vs. Machine" is the review of a book called "How to Survive a Robot Uprising" in the June 2006 issue, which gives "realistic" tips on how to survive a "kill all humans" android insurrection (“Man vs. Machine”, Wired, June 2006). The review points that despite the book is categorized under the humor section in bookstores , it needs to be taken serious "just in case". The tips in the book focus on outsmarting the robots by confusing their algorithmic strategies; for example, wearing a hood and cape to confuse the recognition features of the robots (“Man vs. Machine”, Wired, June 2006).

As Sherry Turkle (2005) argues, while reluctantly granted the status of being "sort of alive" by people, smart machines are held separate from humans, usually by valuing what is most “unlike machine” in humans (pp.63-4). The criteria people use to separate the smart machine from the human changes over the years, yet the act of distinguishing human and smart machine remains: While Turkle's research in 1980s emphasizes "biology", "sensuality" and "spirituality" as the defenses of human uniqueness, in the 2004 epilogue she finds that the concepts of "fragility", "family" and "experience" have replaced them as the qualities that make humans uniquely “special” (2005: p.297-8). Despite smart machines simulate human form,

cognition and behavior in increasingly advanced and complex ways, there is a tendency to find new criteria to separate machines from the human. Wired seems to exemplify this tendency, as there are always some criteria to separate human from non-human and to assign a privileged place to human: Sentience, intelligence, frailty, free-will, creativity... While the criteria differ between texts, the need to distinguish human from the machine that is becoming increasingly human-like by inserting a “vs.” between “man” and “machine” persists.

5.2.2 Machine and Female Body

Many theorists in cyberculture studies has pointed to an association cyberculture tends to make between machine and the female body. Computers, hardware, software, robots and cyberspace has been likened to female body in many instances. Sadie Plant (as cited in Wolmark, 2003: pp.223-4), Nicola Nixon (as cited in Wolmark, 2003:p.222), Deborah Lupton (2000), Alluquere Rosanne Stone (2000) all point to the parallels drawn between the female body and the machine in this discourse, the ways machine is represented as female and embodied; and the user interacting with the machine being constructed as predominantly male in opposition to this feminized technology. Wired is not an exception to such representations.

"La Vida Robot" (Wired, April 2005) is an article about “The High Flying Falcons”, a team of Mexican teenage roboticists who have built "Stinky", a "cheap but astoundingly functional underwater robot" . The text follows the Falcons' quest to win an underwater robot competition organized by Office of Naval Research and NASA. The analogy between the machine and the female body starts the day before competition when the team lowered the robot into water and found out that there was a leakage. The inner circuitry had to be protected from moisture and there were two possible solutions: either to fix the leak or find an absorbent material o keep the circuitry dry ("La Vida Robot", Wired, April 2005).

The mechanic of the team, Lorenzo comes up with the idea of using tampons to block the leak. After a nervous anecdote at the grocery store in which Lorenzo asks for help to buy the "best tampons" from the woman who attends the shop, he buys a pack of "O.B. ultra-absorbency" and goes back to fix the problem. The robot is fixed in a short time, but the analogy overstays ("La Vida Robot", Wired, April 2005):

> When Luis lowered Stinky into the water for their run, Lorenzo prayed to the Virgin Mary. He prayed that the tampons would work but then wondered if the Virgin got her period and whether it was appropriate for him to be praying to her about tampons. He tried to think of a different saint to pray to but couldn't come up with an appropriate one ("La Vida Robot", Wired, April 2005).

The narrative indicates an association of the robot's body with a female body and menstruation. Despite its being tangential to the narrative, both Lorenzo and the writer of the article fixates on this analogy, showing a fascination with this spontaneous parallel drawn between the female body, maternal body, and the body of the robot ("La Vida Robot", Wired, April 2005).

Another example involving a similar association is in an article related to an experiment in affective computing. The article named "The Love Machine" (Wired, December 2003) is about an MIT project on developing a computer software that is capable of perceiving and showing emotions and communicating with the user accordingly. The writer David Diamond is invited to participate in an experiment for the research, in which he will be interacting with a humanoid software that will coach him through an exercise regimen. The software named "Laura" is designed to look like a woman "with bobbed chestnut hair, and a flinty voice" and wearing a "formfitting polo shirt" . During the interaction, Laura stays on the left side of Diamond's PC, asking about his problems, offering advice, asking him about his weekend plans and tells jokes, while Diamond enters the data of his progress and

answers her questions by either clicking on a multiple choice option or typing in input. The experiment measures how the emotional feedback from a software can affect the emotional state of the test subject and motivate it ("The Love Machine", Wired, December 2003).

While the term affective computing does involve a reference to an emotional interaction between the computer and user, the article also adds an erotic implication to this interaction, portraying the experiment in which the writer participated as a romance. Accordingly, from the very beginning of the text, the words and actions of "Laura" are represented in the article as double entendres:

> I've seen that look before; she wants me.
>
> It's in the way she raises her eyebrows and playfully glides her eyes right to left, then moves in close and intones:
>
> "I know you'll be super." ("The Love Machine", Wired December 2003)

It is gradually revealed that the relationship with Laura is not a sexual one but part of an experiment in human-computer interaction, yet the implication of a sexual relationship is omnipresent in the text as the writer plays with the analogy he draws between his relationship with Laura and a sexual fling. Accordingly, Laura's body is depicted both in the textual descriptions and her visual representation in the accompanying artwork as a sexual body.

In *The Embodied User/Computer*, Deborah Lupton (2000) argues that computers are represented as abject bodies as they are discursively associated with potentially leaky and penetrable boundaries (Lupton, 2000: p.487). The central loci of abject body are maternal and the sexual female bodies in that both involve the blurring

and merging of boundaries between one and another (Lupton, 2000: p.487).In both narratives cited here, there is a similar association between the machine and the female body: The first story "La Vida Robot", the leakage in the hull of the robot is repaired with a tampon, and the metaphor continued with references to Virgin Mary, and menstruation, implying a maternal feminine body. Likewise, in “The Love Machine” (Wired, December 2003) with the insistent sexual innuendos, the experiment with software "Laura" is represented as a sexual fling and the software itself is represented as a sexual female body. While not all smart machines are represented as female or abject bodies in Wired, such representations nevertheless seem to be another recurring theme in Wired.

5.2.3 Machine as Animal

Machines' representation as humanoid, embodied and feminine in Wired does not come as a surprise since many cyberculture theorists' work mention such representations[7]. However, there are also plenty of texts in Wired in which machines are associated with animals, an association that is rarely mentioned in cyberculture studies. Examples mostly consists robots and machines named or referred as animals, such as the submersible robot “Sawfish” (“Reservoir Logs”, Wired February 2007), spyplanes named “Blackbird” (“Silent But Deadly”, Wired March 2003), electronic pens named “The Fly” (“LeapFrog's Wild Ride” Wired November 2005) , robots that inspect and clean oil pipelines referred as pigs (“Protecting the Pipeline”, Wired, January 2007), or the previously mentioned robotic dinosaur (“It's Alive!”, Wired, January 2007). There are also more indirect implications of machine as an animal such as in “Steven Levy on How the Chumby Could Become Man's New Best Friend”, (Wired, September 2008) where “man's best friend” figuratively refers to a dog. While the abundance these texts contradicts the fascination with the humanoid portrayal that has been mentioned earlier, they nevertheless support the “man vs. machine” opposition that this discourse aims to maintain.

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7 These theories were elaborated in the third chapter in detail.

5.3 Representation of Technology

5.3.1 Technology and Utopia

There are many texts in Wired which argues that the new technology is changing the world for the better. In relation to the discourse of body enhancement that has been discussed in the last chapter, many examples of this utopianism refer to technologies related to medicine, surgery and prosthetics. The article titled "How is technology changing surgery?" (Wired, March 2003) is one example: The text gives opinions of three experts on the subject, and while all three experts mention different procedures they all agree that new technology is changing surgery for better as it develops less intrusive processes. This and other articles hold that the newly developed biotechnologies enable the individual to enhance its body like never before, similar to the body modification articles covered in the previous chapters[8]. Only exceptions to this medical utopianism seem to be the previously mentioned organ donation articles, which are written in an anxious and mortifying tone (“Organs for Sale”, Wired March 2007; “Stripped for Parts”, Wired March 2003)

Warfare technology, often referred to as "national security", is another branch of technology portrayed in utopian and positive terms in Wired. The article "Security, schmecurity - This stuff is cool" (Wired, July 2004) can be given as an example for such a representation. The article marvels at the "cool" new technologies that have resulted from the war on terror:

> **The cold war** gave us the space program, missile defense, and GPS. Now the war on terror is bringing us t-rays, safe buildings, and other technological advances. The Feds are pouring $4.2 billion into domestic defense research in fiscal year 2005 alone. Here are some of the most promising new developments ("Security, schmecurity - This

8 “The Science of Human Enhancement”, Wired January 2007, “Vision Quest”, Wired September 2002; “My Bionic Quest for Bolero”, Wired November 2005; “Mixed Feelings”, Wired March 2007; “Ready, Set, Mutate!” Wired September 2000

stuff is cool", Wired, July 2004).

Despite their destructive potentials, the warfare technology is represented in utopian terms along with the medical technologies and human enhancement procedures.

5.3.2 Technology and Dystopia

While utopia and dystopia are generally inextricable in cyberculture's portrayal of technology, the upbeat style of Wired magazine and its generally favorable stance towards technology makes it more difficult to come across darker portrayals of technology. However, visions of technological dystopia do exist in Wired's pages, sometimes in the form of an ironic humor or a tongue-in-cheek attitude, and sometimes as expressing more overt concerns. Although some of these articles put machines and humanity in a face to face confrontation, others focus on the effects of ICTs, and particularly Internet on society and individual. One example is "End Time for Internet", which is about an upcoming turning away from network computing caused by the dangers it poses (January 2007):

> Spam, spyware, and viruses can already get in the way of good, clean computing fun. But what happens when malicious code becomes apocalyptic? According to Jonathan Zittrain, professor of Internet governance and regulation at Oxford University, these software saboteurs will drive smart users to dumber appliances like BlackBerrys, iPods, and Xboxes (“End Time for Internet”, Wired January 2007).

The "apocalypse" in this article refers to an abandoning of the open network computing in favor of a closed computing because of the threats caused by viruses and malware. Privacy and surveillance is also one of the most frequently recurring theme in the dystopian portrayals of technology. For example, reader questions

page titled "What happens on the Internet?" (Wired January 2007) is on concerns about the consequences of network computing, and defending ones privacy and family life from the consequences of networked computing. "The see-through CEO" (Wired March 2007) and "The Surveillance Society" (December 2001) similarly lament the death of personal and corporate privacy as the new technologies and social media blur the line between public and private life[9].

As a result, in tandem with the smart machines' representation as objects of fascination and fear, the technology that produces them is also seem in both utopian and dystopian terms. The utopian representations tend to focus on improvements in medicine, prosthesis and bionic parts, and national security; technology that either enhances or restores human body or reinforeces the boundaries of the nation. Similarly, the technologies that are held dystopian are ones that are held to be a threat to the boundaries; boundaries of body or individual subject, boundaries of private life, boundaries of nuclear family or corporation.

5.4 Conclusion

The smart machines are represented in variety of ways in the discourse of Wired. In these representations these machines are referred as human-like, inhuman, monster, animal, feminine, and associated with fear and fascination. Kristeva's concept of abject can provide the common ground for this variety of representations that are dispersed within this discursive formation. According to Kristeva abject functions as what the "symbolic must reject, cover, or contain". Abject represents subjects relation to "death, corporeality, animality and materiality", intolerable by consciousness and reason, and both impossible and necessary to draw borders from (Grosz, 1989.: p.73). Moreover, the abject points an ambivalent space of

9 Other similar texts include "Your Money or Your Site" (Wired June 2006), "Sim City: Terrortown" (October 2006). Some of the texts do not portray the new technologies or open network as dystopian, yet they still express serious concerns with privacy, such as "Keep Your Eyes Locked in the Full, Upright Position" (Wired October 2006).

"[d]iscomfort, unease, dizziness stemming from an ambiguity" which is necessary for objects and signification to emerge; it "marks out a territory that I can call my own because the Other, having dwelt in me as alter ego, points it out to me through loathing" (Kristeva, 1982: p.10). Demarcated by this Other, the abject space precedes the subject and object, signification, thus belonging to a level of imaginary and primal repression, and to the threshold of conscious and unconscious (Kristeva, 1982: p.11). Because of its necessary ambiguity abject cannot be properly put into categories:

> [I]t is "undecidably inside and outside (like the skin or milk), dead and alive (like the corpse), autonomous and engulfing (like infection and pollution). It disturbs identity, It disturbs identity, system and order, respecting no definite positions, rules, boundaries or limits. It is the body's acknowledgement that its boundaries and limits are the effects of desire not nature. It demonstrates the precariousness of the subject's grasp of its own identity. The subject may slide back into the chaos from which it is formed. Abjection is one of the few avowals of the death drive, an undoing of the processes constituting the subject (Grosz 1989: p.74).

Similarly, the representations of smart machines in Wired indicate their inability to be categorized: They are described as similar to living things, yet in a way that also suggests their non-alive status, representing them as "sort of alive": Wired discourse acknowledge and show fascination to their humanoid aspects but also underline human as a superior category. Moreover, many articles machines not only as "sort of human" and "sort of alive" but also sexualized in most occasions, associating them with maternal and sexual female bodies. As pointed earlier, maternal body and sexual body represent central loci of abject body because of their association with blurring boundaries (Lupton 2000: p.487). The parallels drawn between the smart machines, and maternal, sexual and feminine bodies also underline their abject status in this discourse, and suggest a metonymic link between these abjections.

As with cyberculture in general, utopian and dystopian views of technology coexist in the discourse of Wired. Technologies like Internet, social media and mobile phones are at times represented in dystopian terms on the grounds that they are a potential threat to the boundaries separating private life from public, boundaries surrounding the nuclear family and boundaries surrounding corporations. However, technologies which are arguably dystopian in their destructive qualities, such as warfare technologies, can be portrayed as "cool" technologies in this discourse as they are presented within a discourse of “national security”.

While the concerns about privacy and surveillance are certainly not misplaced, it is interesting that while these concerns result in apocalyptic visions or fantasies of individual recluse, potentially destructive technologies such as warfare technologies are held to be utopian and “cool”. The dividing line here seems to be their relation to boundaries: One strand of technologies are represented as dystopian as they are taken as threatening to what is perceived as boundaries of body, private and individual life, nuclear family, and nation; while another strand, despite their potentially destructive applications, are presented as “cool” as they reinforce them by providing “national security”. Thus, the anxiety over boundaries seem to be a recurring theme in the technologies' portrayal in utopian and dystopian terms in cyberculture.

In the "The Promises of Monsters", Donna Haraway (2004b) points to how, when confronted with the "unthinkable complexity" of the cyberspace and its too many connections, the subject falls into a state of paranoia. Because of this paranoia, "the belief in the unrelieved density of connection" (p.107), the subject closes unto itself to a state of reclusion (Haraway, 2004b: p.110). Arthur and Mariluise Kroker (2000) make a similar point in "Code Warriors", where they argue that the electronic-self cuts itself from the rest of the world and "bunkers in" in order to immunize itself, while sacrificing its all other interests for the sake of this immunity (p.96). Wired's dystopian narratives about technology seems to follow a similar path: Becoming paranoid because of too many connections and the threats

posed by the technology, the subject resolves to close itself off from the world.

Finally, in her readings of an array of cyberpunk fiction N. Katherine Hayles (1999) argues that both the dystopian and utopian narratives on technology show a commitment to a particular understanding of subject (p.281). Drawing from the findings of the previous sections, the next chapter deals with the subject produced in the discourse of Wired: How this subject is produced through a series of exclusions of what is held as “inhuman”, and how it reestablishes its boundaries and protects its autonomy against this monster-ized other by reconstituting their relationship within a safer framework.

CHAPTER 6

DELINEATION OF SUBJECT IN WIRED MAGAZINE

6.1 Production of Subject through the Exclusions of Inhuman

This chapter focuses on the production of subject in the discourse of Wired magazine through the representations of body and technology, drawing from the findings of the previous chapters. As the fourth chapter of this thesis explored, the textual portrayals of the body in Wired tend to erase the race and sex of the body, resulting in a "generic" universal human subject. However, the analysis of the visual representations of body in Wired indicate that this subject is not without race or gender but predominantly white and male. The texts and the visuals supplementing them reveal other qualities of this subject, such as being lean and fit, having defined contours of body, a self-assured tall posture, and a determined face expression and an emphasis on body contours. Female and non-white bodies rarely find their way into the pages of Wired, and when they do they are textually and visually represented differently in ways that indicate their marginalization in cyberculture: Female bodies are represented as malleable, vulnerable, prone to disease, lacking boundaries and contours, in opposition with the strong and rigid male body; and women are portrayed either with a confused expression on their faces or in seductive roles. Non-white races, on the other hand, appear in narratives of struggle to succeed, in opposition to the white male technological elite which is already occupying a central position within cyberculture. These portrayals of non-white races and female bodies serve to distill the human subject portrayed in Wired as quintessentially white and male.

The fifth chapter examined the representations of technology and smart machines in Wired. Smart machines are represented in embodied terms and as "almost alive", and increasingly becoming human like. In some articles machines and computer software are depicted as having qualities associated with maternal and sexual female body. In other instances, machines are represented less anthropomorphic, and associated with animals, aliens, and monsters. The discourse of Wired shows a significant effort to draw a line between human and machine and to secure the privileged position of human. Articles titled "man vs. machine" present vis-à-vis comparisons of human and smart machine, pointing to different criteria in each instance to emphasize the distinction human and the humanoid machines. I argued that, while these conceptualizations of smart machines differ and contradict in some aspects, the smart machine is in most instances defined in ways that associate it with abjection, forming a necessary yet threatening outside to the human. The representations of technology also differ, ranging from utopian celebration to a dystopian paranoia. Drawing from Haraway (2004) and Kroker(2000), I argued that these different conceptualizations of technology address concerns related to the boundaries; representing the technologies that threaten boundaries as dystopian while ones that reinforce them as utopian, or plain “cool”.

As Foucault points in Archaeology of Knowledge, there are points of incompatibility within a discourse: points he call *points of diffraction* where “two objects, or two types of enunciation, or two concepts may appear, in the same discursive formation” (Foucault, 2004: p.73). According to Foucault all such possibilities are not realized, due to the relation of the dicursive formation to other discursive formations and the economy of the discursive cluster it belongs (Foucault, 2004: p.74). Discourse of Wired represents such a point of diffraction where certain conceptualizations are privileged over others. The representation of the body, and the conceptualizations of the “human” generally indicate a reiteration of liberal humanism in its insistence on autonomy and strong boundaries, a rampant free-will that triumphs over societal and biological factors, and a universalized white male. However, this conceptualization of human shares its discursive space

with a relatively new concept of machine that makes it problematic: "Smart" machines can carry out complex rational cognition and logical operations that were previously thought as exclusive to human, and they further problematize the human subject with the concept of feedback loop which involves the redefinition of boundaries in terms of information rather than boundaries of body or walls of the ego. As elaborated in the previous chapters, this concept of machine, and the human – machine relationship it brings about has the potential to subvert the autonomous human subject and give rise to a new conceptualization of human, a posthuman. So, the question is, due to what discursive strategy these potentials remain unrealized, and the subject of liberal humanism is reproduced within this discursive space that, according to writers like Hayles (1999), Cavallaro (2000) and Stone (2000), is supposed to bring about its subversion? In this section, drawing from the theories of Luce Irigaray and Judith Butler, I will argue that in the reproduction of the "human" in the discourse of cyberculture operates a binary and exclusionary logic that is paradigmatic to the Western patriarchal discourses.

It was pointed in the last chapter that, despite their being boundary artifacts, undecidables that elide the categories of "human / non-human", "alive / non-alive", there is a tendency in this discursive formation to countermeasure their subversiveness by reconceptualizing them as opposites of human. With the typical examples being the "man vs. machine" articles, smart machines are conceptualized as opposite of human, and as lacking qualities that are represented as essentially human. While the quality that machine lacks changes in every instance (sentience, freewill, emotion...), what is constant is their representation as the lacking opposites of human.

The conceptualization of machine as the lacking symmetric of human bears resemblance to the representation of "woman" as the lacking opposite of "man" in the discourse of psychoanalysis. As Irigaray argues, rather than being an explanation of it, psychoanalysis is a symptom of the Western social and cultural economy, from which its conceptualization of woman as lacking and castrated

emerges (Grosz, 1990: pp.169-70):

> Irigaray's audacious claim is that women are represented only on models that are masculine. [...] The problem with this libidinal structure of masculine desire is that it leaves no space for woman as such. Women can be represented only by means of a violence that contains them, and their differences, within masculine sameness (Grosz, 1990: p. 107).

The masculinist logic makes it impossible to represent the reality of the female sex, and the disruptive excess of the feminine is banished from the discourse to remain in an elsewhere (Irigaray, 1985: p.76). This removal of the feminine from the cultural representation except for being the castrated symmetric of the masculine ensures the coherence of the discourse (Irigaray, 1985: p.122; p.149).

Irigaray's argument is cogent as an account of Western cultures' representation of feminine as lacking and undercutting its subversive potential, yet, despite briefly hinting that there are other forms of otherness that patriarchal logic excludes (1985: p.124), she exclusively focuses on the exclusion of the feminine, and for this reason her account does not provide a sufficient theoretical ground for other exclusions of this logic. Judith Butler follows Irigaray, agreeing that patriarchal logic depends on exclusion; but she also criticizes Irigaray for “monopolizing” the exclusion and idealizing and appropriating the elsewhere to feminine; and thus neglecting other exclusions of the masculinist reason makes that are metonymically linked to feminine (Butler, 1993: pp.48-9). Butler argues that, masculinist reason operates through a number metonymically connected exclusions such as “woman”, “animal”, “slave” (Butler, 1993: p.52). According to her, the production of subject depends on the simultaneous production and repudiation of a domain of such abject beings that are neither subjects or objects. This domain forms the constitutive outside for the subject, a site of “dreaded identification” (Butler, 1993:p.3).

It can be argued that Wired's discourse delineates its subject in a similar way, through a series of exclusions. As in Kristeva's and Butler's concepts of abject, the boundary status of the smart machines poses a threat to the subject, compelling but required to be kept at bay. Therefore, coexisting with their humanoid and "sort of alive" representation, there is a considerable effort to portray these machines as a separate category, preferably symmetrical and in opposition to "human", as its lesser counterparts. Similar to Turkle's (2005) findings, the criteria that separate human from machine varies among instances yet the effort to represent human as a separate and privileged category persists. In many texts machines either named as animals, or represented in ways that suggest their categorization as animals, which contradicts with the humanoid portrayal but supports the opposition between human and machine that the discourse tries to maintain. Representing the smart machines as an opposite and lacking category, and associating them with other exclusions of this logic undermines their subversive potentials as boundary machines, and thus keeps the category of human as uncontaminated.

Because of this discursive strategy, the subversive and undecidable concept of "boundary machine" and the posthuman subject that would potentially result from it it remains as an unrealized path at this point of diffraction. The conceptualization of subject, machine and their relationship reiterates the autonomous human subject through representing smart machines as its lacking opposites; not within a posthumanistic circuit.

6.2 "Cybernetics" and "The Love Machine": Defending Unitary Subject's Boundaries

As I argued previously in this chapter, the architectonics of subject in cyberculture depends on an exclusionary matrix which the smart machines share with other excluded abjects, forms of embodiment that contradict with the normative white male body. In order to further elaborate the subject's relation with this abject domain, in this section I will refer to N. Katherine Hayles' reading of Norbert

Wiener's *Cybernetics* and offer my reading of the previously mentioned article "The Love Machine" by David Diamond in December 2003 issue of Wired. As Hayles (1999) points, cybernetics was both a source of pride and anxiety in Wiener, and this anxiety often surfaced as "an anxious desire to limit the *scope* of cybernetics". This anxiety takes a different turn when the boundaries of the body are in question (Hayles, 1999: p.107). In Hayles' words:

> When the physical boundaries of the human form are secure, [Weiner] celebrates the flow of information. All this changes, however, when the boundaries cease to define an autonomous self, either through manipulation or engulfment. (Hayles, 1999: p. 107)

As pointed in the chapter 2, cybernetics is paradigm shifting in that it defines human and non-human in similar terms: as information processors. In *Human Use of Human Beings*, Weiner extends this analogy to include social organizations, arguing that the intercommunication among the hierarchical levels of a society can be conceptualized as similar to the information flow between humans and machines in cybernetics (Hayles, 1999: p.109). Hayles observes that, as the boundaries between humans, machines, and social bodies are threatened by this information flow , Weiner's text starts resorting to erotically coded metaphors, first of which is an analogy between information and pheromones, "'sexually attractive substances' secreted by various species" which "ensure that the sexes will be brought together" (Weiner as cited in Hayles, 1999: p.109; Hayles, 1999 : p.109). The comparison of flow of information and the flow of pheromones suggest that human body becomes a "permeable membrane through which hormonal information flows" (Hayles, 1999: : p.109). According to Hayles, the idea is disturbing and speculative in that it implies individual identity and autonomous free will are possibly illusions governed by information flows; which leads to more questions related to manipulation and engulfment (Hayles, 1999: p.109):

> If our body surfaces are membranes through which information flows,

> who are we? Are we the cells that respond to stimuli? Are we larger collectives whose actions are resultant of the individual members? (Hayles, 1999: p.109)

According to Hayles, Weiner's the anxiety around the boundaries of the autonomous subject and his use of erotic metaphors are interrelated. Weiner's choice of examples underlines sex, however, this is “a sexless sex” involving flows of pheromones, hormonal information, instead of the sexuality of an autonomous subject experiencing pleasure (Hayles, 1999: p.109). As Hayles states, "confronted with this sexless sex, [Weiner's] first impulse is to withdraw" (Hayles, 1999: p.109). Weiner follows this withdrawal by constructing another fantasy which restores him the power to reconstitute boundaries and control over the information flow (Hayles, 1999: p.108): He reconstructs himself as a liberal subject through the cliché of a Western white male communicating with an intelligent savage (Hayles, 1999: p.109). Alone in the woods, Wiener and his savage friend communicate "through the interplay of their gazes" (Hayles, 1999: p.110). Hayles points that this narrative represents a disguised and controlled eroticism related to "deferred intimacy between men in a society that is homophobic, racist, and misogynist" (Hayles, 1999: p109). Compared to the involuntary information flow that transgresses boundaries of the autonomous subject, in this restructured fantasy Wiener and his "intelligent savage" friend exchange information without touching or language. In this new narrative, information flow is under control, body boundaries are not problematized, and the protagonist is thus reconstituted as an autonomous subject [10](Hayles, 1999: pp.109-10).

A similar reconstitution is seen in "The Love Machine", (Wired, December 2003) an article on an experiment in affective computing that was mentioned in the previous chapter. In this experiment, the interaction between the software agent Laura and author David Diamond is a feedback loop *par excellence*: An exchange

10 According to Hayles, this narrative also reveals the appropriation of the subaltern voices by the liberal humanist subject in the discourse of cybernetics (Hayles, 1999.: p.110).

of information between the human and machine, causing each one to adjust their actions accordingly. This flow of information not only affects Laura the computer program since test subject is changed at many levels. At one level he goes through emotions, as this is the aim of the experiment in affective computing. At another level, Laura's responses causes him to adjust his exercise regimen and therefore it affects his body. The information flow changes Diamond both emotionally as well as materially, affects his will and desire, and blurs the boundary between Laura and him. As in Hayles'(1999) reading of Wiener and his metaphor of pheromones, the interaction between Diamond and Laura can also be called a “sexless sex”, not involving autonomous subjects experiencing pleasure but a continuous flow of information between them.

Just like Wiener does in “Human Use of Human Beings”, in the experiment with "Laura" Diamond withdraws from one kind of intimacy to another one by reconstituting the fantasy scene: The narrative is hijacked from an experimental cybernetic circuit to a safer territory, to a cliché of a sexual fling, and the software agent Laura is reconstituted in the text as a seductress through recurring sexual innuendos. Diamond completes this cliché by portraying his wife as the woman that is being cheated on. As the narrative proceeds, his wife is represented as jealous as she starts treating Laura as "some college girlfriend [..] who has overstayed her welcome" ("The Love Machine", Wired, December 2003).

Following the logic of this reconstituted fantasy, the end of the experiment is portrayed in terms of a relationship breakup after which Diamond returns to his family life. Laura is announced as "shallow and mechanical", no match for a real human in the first place ("The Love Machine", Wired, December 2003). While the boundaries of the nuclear family are somewhat challenged, the autonomous subject is saved: The protagonist is portrayed as a family man that is somewhat tempted, but not as a posthuman component of a cybernetic system. At the same time, the status of Laura is reaffirmed as inhuman, thus the narrative safely reconstitutes the boundaries between human and machine, in a way akin to the previously

mentioned “Man vs. Machine” articles.

The artwork supplementing the text, a collage that is loosely based on the narrative of the article (Figure 6.1) also support the narrative in reaffirming the human machine opposition and emphasizing impermeability of boundaries on the part of the human subject. The woman in the collage roughly matches the description of Laura with minor differences: Her hair color is not chestnut as in the text but a blue-black; and instead of the form-fitting polo shirt, she wears a shiny yet elegant evening dress, little details added to portray her more sexually attractive than the graphical interface described in the text. She is sitting on the right hand side of the picture, and holding hands with a white male on the left hand side of the screen. The man (supposedly David Diamond) and Laura are sitting almost symmetrical and looking into each other's eyes. The symmetry in the picture is supplemented with three wavy vertical lines and a lap-top computer that separates the couple.

Figure 6.1 - “The Love Machine”
Source: Wired, December 2003

In the artwork, Laura's virtual body is portrayed as pixellated: Her image is blurred

and separated into small squares as if on a computer screen, indicating her being a virtual entity. Moreover, her body is shown as further disintegrating into pixels towards the right hand side of the picture. The white male user on the left is portrayed with clearly defined boundaries like most visual representations of male bodies in Wired, in opposition to Laura's lack of contours (Figure 6.1). Like the text, the visual interpretation of the experiment reconstitute the experiment as a fantasy in which the human user has control over its boundaries.

The opposition between Laura's lack of contours and the human with strong boundaries is also emphasized with recurring textual references to Diamond's increasing fitness, his newly gained muscles, and weight loss. The article ends with Diamond's celebration of his (re)established body contours as he states that he is

> in killer shape - and 8 pounds lighter. Too bad Laura can't see me marching around the house, shirtless, for the first time in years. Really, you should see my body. (“The Love Machine”, December 2003)

This obsession with the contours of body resembles “The Perfect Human” in January 2007 issue, as examined in Chapter 4. However, in Diamond's case the fixation with the body also represents the reestablishment of the boundaries that were threatened by an information flow with the inhuman “Laura”. As a result, similar to Weiner's restructuring his narrative to gain control over the flow of information and the erotic tensions that follow from it; "The Love Machine" restructures the narrative on multiple levels as an erotically coded fantasy scene to address the anxiety over the boundaries of the subject and its body. Both the text and the visuals show the constant effort to represent human subject as autonomous and with strong boundaries in opposition to the smart machine, represented as lacking boundaries both in the text and in the visual representation.

While the encounter between Laura and David Diamond easily lends itself to

comparison with Hayles' reading of Weiner's *Cybernetics*, “The Love Machine” is not the only one example of the subject's highly charged encounter with the smart machine in the discourse of Wired. As I have tried to elaborate in the previous chapters, the boundaries of the subject in Wired is constantly threatened by the technological advancement at many levels: Firstly, the category “human” has to be kept separate and privileged from the smart machines that are increasingly becoming human like, and secondly, the human subject's autonomy has to be defended against the information flow that threatens to bypass its boundaries, and imply engulfment and manipulation. Accordingly, the findings of this and previous chapters indicate that the process of producing the subject in the discourse of Wired is not only an interrelated set of exclusions but also a continuous struggle in which liberal humanist subject has to defend its boundaries in many different fronts simultaneously; trying to keep its “universal” human category uncontaminated by its abjects, which are both a source of anxiety and a compelling fascination to it.

CHAPTER 7

CONCLUSION

This study aimed to provide an account of the production of subject through the representations of body and technology in the discourse of cyberculture by analyzing the discourse of Wired magazine. The findings mostly indicate that the subject produced in this discourse is normatively white, and male, and is produced along the ways of liberal humanism in that it is conceptualized as autonomous, having free will, and preceding the discursive operations and market relations. The production of the subject in this way requires a series of exclusions, including the smart machines that are becoming increasingly humanoid, and thus threatening to the category of human. I argued that these exclusions are represented as abjects, entities that are on the margins the subject and object, and are sources of fascination and anxiety for the subject.

While the so called "closing" of the digital divide is well celebrated in cyberculture studies, the analysis of Wired magazine shows that technological elite is still normatively white and male. This is evident in the portrayals of body in Wired: Although the textual representations of body mention neither gender or race, the visual portrayals privilege a white masculine subject. Non-white races and women on the other hand, are represented in ways that indicate their marginality in cyberculture or lack of technological skills. Moreover, while many theorists point that that non-white races and women often find subversive ways of visually or textually representing themselves in the interactive environments on the Internet, these subversive possibilities are precluded in Wired by imposing a user registration system that does not allow any means of visually or textually

representing the body, assimilating its readers into a universalized white male majority.

The discourse of Wired reiterates the values of Western humanism, such as autonomy and will power. On the other hand the reiteration of these values also depends on an *unsaid*, as it downplays of the cultural and economic privileges that enables the subject of this discourse to have access to the technologies portrayed in Wired. This points to an unacknowledged elitism operating within this discourse, which runs counter to the equality of opportunity, and empowering of individuals through subversive usage of technology which cyberculture blatantly promotes. This latent elitism may indicate a point of diffraction in cyberculture from the counterculture and punk sensibility that most writers associate with it, and, again a stronger relationship with the discursive constellation of liberal humanism.

In the third chapter of this study, I identified two positions within cyberculture studies; one emphasizing the fantasy of disembodiment and the reproduction of an autonomous human subject, and the other emphasizing a refiguration of embodiment through virtual representations or physical interventions like prosthesis. Surprisingly, Wired's discourse affirms neither of these positions: The fantasy of a disembodying immersion to cyberspace appears to be left in the 1990s as there is no reference to such a disembodiment. Yet, both physical interventions to embodiment, such as prosthesis, and virtual refigurations are represented in ways that undermine their subversive potentials. Physical prosthesis and implants are made transparent and accepted as a part of body image rather than being represented as fusions of body and technology forming hybrid forms and undermining the notion of a "natural" human. Moreover, virtual reality environments are represented in a strict opposition with a "real" world , virtual bodies are represented as superficial, and as appearance, maintaining a metaphysics of "appearance" and "reality", thus holding a notion of a "real" identity and a "real" body that exists intact despite the virtual embodiment.

While it was not a part of the original formulation of my research problem, boundaries turned out to play an important part in the discourse of Wired. Boundaries that separate the human subject from its abject domain surface in the discourse of Wired in a number of ways. Firstly, the differences between the portrayals of male bodies and female bodies produce the strong contours of a white male body as a normative ideal, while female bodies are represented as having less control over their bodies and unable to police their boundaries.

Secondly, the boundaries that separate the human subject from technology also gains importance in Wired. The advent of cybernetics and smart machines blurs the distinction between human and machines, making them threats to the uniqueness and the privileged position of the human. On one hand, the machines that are becoming increasingly humanoid are a source of fascination in this discourse, and on the other they trigger anxieties around the boundaries that separate these categories. As a result Wired's discourse expends considerable effort to keep machine as a separate category from human, conjuring tropes such as “man vs. machine” to establish the opposition between these terms. Akin to Sherry Turkle's (2005) findings, the attributes that make human the privileged category in this opposition change in each instance (“free will”, “spontaneity”, “depth”, etc.) while the efforts to maintain the opposition persist.

Thirdly, with the advent of Network technologies, the subject is faced with “too many connections” (Haraway 2004b), which also causes anxiety over its boundaries and results in a paranoid reclusion unto itself (Haraway, 2004b; Kroker and Kroker, 2000). The dystopian narratives on network technology, apocalyptic fantasies of disconnecting from the Net and concerns over privacy all point to this paranoid gesture. These narratives are opposed with utopian narratives on “cool” technologies that aim reinforcing boundaries, such as warfare technologies that are conveniently referred in Wired as “national security”.

Finally, the cybernetic concept of the feedback loop, the flow of information

between human and the non-human is another source of anxiety over boundaries, one which results in reconfigurations of the narratives to reestablish boundaries and mastery over the abject domain, occasionally through erotically coded metaphors. To deal with the information flow that is akin to “pheromones” or a “sexless sex” (Hayles, 1999: p.109 ; Weiner as cited in Hayles, 1999: p.109), the narrative is taken to a safer fantasy which both reconstructs the protagonist as an autonomous subject and hands him the control over the information flow (Hayles, 1999: p.108). I discussed this anxiety in the last chapter of the thesis through the reading of “The Love Machine” article in Wired's December 2003 issue.

In “The Promises of Monsters”, Donna Haraway attempts to use Trinh Minh-ha's term inappropriate/d others to “both organic and technological inhumans” (2004b: p.70). Trin Minh-ha's phrase refer to the “historical positioning of those who cannot adopt the mask of either 'self' or 'other'” that are offered by the dominant Western narratives of identity or politics. The “inappropriate/d” does not refer to being in a non-relation, “authentic”, or innocent, but refers to a critical, deconstructive relationality. (Haraway, 2004b: pp.69-70). In her adoption of the term to “organic and technological non-humans”, Haraway conceptualizes this critical relationality as a diffraction, an optical phenomenon. Like Irigaray's speculum, diffraction is a critical challenge to Lacan's mirror phase, yet it is also a criticism to humanism and productionism, which, akin to mirror phase, continually reproduces the same through “self-birthing reflections” of the one (Haraway, 2004b: p.67; p.72). The diffraction, on the other hand, does not produce a displaced reflection of the self but rather maps the effects of the difference on the subject as an interference pattern (Haraway, 2004b: p.70). However the subversive interference of the “inappropriate/d other” is not easy on the subject (Haraway, 2004b: p.109). Confronted with the diffraction and interference by the potentially subversive inappropriate/d other, the subject typically closes the circuit, closes onto itself (v: pp.109-10).

Other than the Inappropriate/d Other, the technologies referred in this study and

their fusion with body were given many different names and conceptualized in different ways by theorists: cybernetic machines, smart machines, boundary / margin objects, relational artifacts (Turkle, 2005), cyborgs, monsters (Haraway, 2004a; Haraway 2004b), cyborg mirror (Hayles, 1999), mestiza (Stone, 2000)… The common theme in these conceptualizations seems to be that they all represent a problematization of the historical construction "human", its autonomy, boundaries and the ways it universalizes itself, confronting it and causing anxiety and fear; but also representing potentials for a more open subjectivity built on non-closure, openness to difference and change in place of a self-reproducing same. With these potentials, cyberculture represents a point of diffraction from which different conceptualizations of smart machines, and the relation between human and machine can emerge, revealing new possibilities for the subject. While these new conceptualizations of human-machine relationship and the resulting "posthuman" subject exist as possibilities within this discursive formation, these possibilities tend to remain unrealized, notwithstanding the celebration of "posthuman" in the academic discourses. To follow Foucault (2004: pp.74-5), the deciding factor on which of the alternatives will be realized are *discursive strategies*, which are determined by the discourse's relations with the other discursive formations exist and in general the constellation of discourses it is part of. The discursive strategy that reproduces the "human" within the discourse of cyberculture, notwithstanding the arguments that posit a "posthuman", is an effect of the discourses it is located within: Liberal humanism, Western patriarchal logic that is based on exclusions and economy of the same. The subversive potential celebrated by Haraway (2004a; 2004b), Turkle (2005), Hayles (1999), and Stone (2000) remains, at least in the discourse of Wired, as an unrealized potential, a path not taken due to the larger discursive cluster it belongs to, the discourse of liberal humanism, and the masculinist exclusionary logic that operates within Western culture.

Finally, as pointed in the introduction of this study, Foucault's work comprises three axes, *archaeology*, *genealogy*, and *technologies of the self*. Among these three axes,

this study focused more on the archaeology, and concerned with the production of a regime of truth and subjects with the operations of discourse with which subject positions are produced; at the expense of the other two axes. Accordingly, there was less focus, if any, on the workings of biopower, and the tactics of the individuals within this discursive formation to make themselves subjects. A more geneological focus would result in a more elaborate discussion on the workings of normative power through the technology portrayed in Wired, production of normalized bodies, as well as issues of surveillance and panopticism. Likewise, a focus on the practices of the self would provide a more in depth exploration of the means the technologies portrayed in Wired can be put into subversive use by the individuals. These aspects of this issue warrants further research that focuses on the workings of biopower and practices of the self in cyberculture.

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APPENDIX A:

LIST OF WIRED ISSUES AND TEXTS IN THE SAMPLE

Issue 17.06, June 2009

Wired Magazine, Issue 17.06. (2009, June). Retreived from <http://www.wired.com/wired/issue/17-06>

Cover Features:

KELLY, K. "The new socialism: Global collectivist society is coming online" in Wired Magazine, Issue 17.06 (2009, June). Retreived from <http://www.wired.com/culture/culturereviews/magazine/17-06/nep_newsocialism#ixzz0kOLFbEUs>

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KEATS, J. "Why a plastic camera pioneer reinvented lo-fi film shooter" in Wired Magazine, Issue 17.06. (2009, June). Retreived from <http://www.wired.com/culture/design/magazine/17-06/pl_design>

DADICH, S. "Artifacts from the future: Chewing gum" in Wired Magazine, Issue 17.06. (2009, June). Retreived from <http://www.wired.com/culture/culturereviews/multimedia/2009/05/found>

"Clive Thompson on the Future of Reading in a Digital World" in Wired Magazine, Issue 17.06. (2009, June). Retreived from <http://www.wired.com/techbiz/people/

magazine/17-06/st_thompson>

"Wired Guide to the Tubiverse, From SimTube to PotTube" in Wired Magazine, Issue 17.06. (2009, June). Retreived from <http://www.wired.com/culture/culturereviews/magazine/17-06/st_tubes>

Issue 17.01, January 2009

Wired Magazine, Issue 17.01. (2009, January). Retreived from <http://www.wired.com/wired/issue/17-01>

Cover Feature:

"Why Early Detection Is the Best Way to Beat Cancer" in Wired Magazine, Issue 17.01. (2009, January). Retreived from <http://www.wired.com/medtech/health/magazine/17-01/ff_cancer>

Other Texts:

"Science We Can Believe In: How President Obama Can Recharge US Research" in Wired Magazine, Issue 17.01. (2009, January). Retreived from <http://www.wired.com/culture/culturereviews/magazine/17-01/st_essay>

"What's Inside Raid? Watch Out, Kitty!" in Wired Magazine, Issue 17.01. (2009, January). Retreived from <http://www.wired.com/science/discoveries/magazine/17-01/st_whatsinside>

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ASHLEY, R. and SALO, D. "Think Your Desktop Is Cluttered? Try World of Warcraft" in Wired Magazine, Issue 17.01. (2009, January). Retreived from <http://

www.wired.com/gaming/gamingreviews/magazine/17-01/pl_games>

Issue 16.09, September 2008

Wired Magazine, Issue 16.09. (2008, September). Retreived from <http://www.wired.com/wired/issue/16-09/>

Cover Feature:

"Shai Agassi's Audacious Plan to Put Electric Cars on the Road" in Wired Magazine, Issue 16.09. (2008, September). Retreived from <http://www.wired.com/cars/futuretransport/magazine/16-09/ff_agassi?currentPage=all>

Other Texts:

"Mr. Know-It-All: Investing in Hog Manure, Splitting Data Discs, Twittering About Sex"" in Wired Magazine, Issue 16.09. (2008, September). Retreived from <http://www.wired.com/techbiz/people/magazine/16-09/st_kia>

"Q&A: Philippe Starck on Bioplastics, Virgin Galactic, and His Impossible Chair" in Wired Magazine, Issue 16.09. (2008, September). Retreived from <http://www.wired.com/culture/design/magazine/16-09/pl_design>

"Steven Levy on How the Chumby Could Become Man's New Best Friend" in Wired Magazine, Issue 16.09. (2008, September). Retreived from <http://www.wired.com/gadgets/gadgetreviews/magazine/16-09/ts_levy>

"Safe and Sexy: Motorcycle Helmets With Bluetooth, MP3 Players, and GPS" in Wired Magazine, Issue 16.09. (2008, September). Retreived from <http://www.wired.com/gadgets/gadgetreviews/magazine/16-09/ts_reviews_helmets>

Issue 16.02, February 2008

Wired Magazine, Issue 16.02. (2008, February). Retreived from <http://www.wired.com/wired/issue/16-02/>

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"Why Things Suck: The 33 Things That Make Us Crazy" in Wired Magazine, Issue 16.02. (2008, February). Retreived from <http://www.wired.com/culture/culturereviews/magazine/16-02/su_silverman>

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LORGE, G. "The Next Frontier: Gene Enhancement" in Wired Magazine, Issue 15.01. (2007, January). Retreived from <http://www.wired.com/wired/archive/15.01/dopinggenes.html>

MCHUGH, J. "Wired Enhance-athon: Run Faster"Wired Magazine, Issue 15.01. (2007, January). Retreived from <http://www.wired.com/wired/archive/15.01/running.html>

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<http://www.wired.com/wired/archive/15.01/bullseye.html>

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THOMPSON, C. "It's Alive"in Wired Magazine, Issue 15.01. (2007, January). Retreived from <http://www.wired.com/wired/archive/15.01/alive_pr.html>

THOMPSON, C. "What Happens on the Internet..."in Wired Magazine, Issue 15.01. (2007, January). Retreived from
<http://www.wired.com/wired/archive/15.01/start.html?pg=10>

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PEARSON, A. "Protecting the Pipeline"in Wired Magazine, Issue 15.01. (2007, January). Retreived from <http://www.wired.com/wired/archive/15.01/start.html?pg=4>

Issue 9.05, May 2001

Wired Magazine, Issue 15.04. (2007, March). Retreived from
<http://www.wired.com/wired/archive/15.04/>

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THOMPSON, C. "See-Through CEO" in Wired Magazine, Issue 15.04. (2007, March). Retreived from <

http://www.wired.com/wired/archive/15.04/wired40_ceo.html

TANZ, J. "Desktop R.I.P." in Wired Magazine, Issue 15.04. (2007, March). Retreived from <http://www.wired.com/wired/archive/15.04/wired40_rip.html>

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BAINS, S. "Mixed Feelings" in Wired Magazine, Issue 15.04. (2007, March). Retreived from <http://www.wired.com/wired/archive/15.04/esp_pr.html>

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CALORE, M. "Blue Stages of Death" in Wired Magazine, Issue 15.04. (2007, March). Retreived from <http://www.wired.com/wired/archive/15.04/start.html?pg=15>

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Issue 15.02, February 2007

Wired Magazine, Issue 15.02. (2007, February). Retreived from <http://www.wired.com/wired/archive/15.02/>

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HODGMAN, J. "What We Don't Know" in Wired Magazine, Issue 15.02. (2007, February). Retreived from <http://www.wired.com/wired/archive/15.02/bigquestions_pr.html>

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BEHAR, M. "Reservoir Logs" in Wired Magazine, Issue 15.02. (2007, February). Retreived from <http://www.wired.com/wired/archive/15.02/logs_pr.html>

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SILBERMAN, S. "The Invisible Enemy" in Wired Magazine, Issue 15.02. (2007, February). Retreived from <http://www.wired.com/wired/archive/15.02/enemy.html>

"Rants + Raves" in Wired Magazine, Issue 15.02. (2007, February). Retreived from <http://www.wired.com/wired/archive/15.02/rants.html>

Issue 14.06, June 2006

Wired Magazine, Issue 14.06. (2006, June). Retreived from <http://www.wired.com/wired/archive/14.06/>

Cover Feature:

ITO, J. "World of Warcrack" in Wired Magazine, Issue 14.06. (2006, June). Retreived from <http://www.wired.com/wired/archive/14.06/warcraft.html>

Other Texts:

CAPPS, R. "Man vs. Machine" in Wired Magazine, Issue 14.06. (2006, June). Retreived from <http://www.wired.com/wired/archive/14.06/books_pr.html>

BEISER, V. "Baghdad, USA" in Wired Magazine, Issue 14.06. (2006, June). Retreived from <http://www.wired.com/wired/archive/14.06/iraq_pr.html>

KUSHNER, D. "Your Money or Your Site" in Wired Magazine, Issue 14.06. (2006,

June). Retreived from <http://wired.com/wired/archive/14.06/posts.html?pg=2>

KNOPPER, S. "18 Days of Reckless Computing" in Wired Magazine, Issue 14.06. (2006, June). Retreived from <http://wired.com/wired/archive/14.06/start.html?pg=6>

Issue 14.10, October 2006

Wired Magazine, Issue 14.10. (2006, October). Retreived from <http://www.wired.com/wired/archive/14.10/>

Cover Feature:

GOETZ, T. "The Thin Pill" in Wired Magazine, Issue 14.10. (2006, October). Retreived from <http://www.wired.com/wired/archive/14.10/thin.html>

Other Texts:

LEE, J. "Speed Freaks" in Wired Magazine, Issue 14.10. (2006, October). Retreived from <http://www.wired.com/wired/archive/14.10/speedbike.html>

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SUELLENTROP, C. "Sim City:Terrortown" in Wired Magazine, Issue 14.10. (2006, October). Retreived from <http://www.wired.com/wired/archive/14.10/posts.html?pg=2>

THOMPSON, C. "Keep Your Eyes Locked in the Full, Upright Position" in Wired Magazine, Issue 14.10. (2006, October). Retreived from <http://www.wired.com/wired/archive/14.10/start.html?pg=11>

Issue 13.04, April 2005

Wired Magazine, Issue 13.04. (2005, April). Retreived from <http://www.wired.com/wired/archive/13.04/>

Cover Feature:

KOERNER, B. I. "Rise of the Green Machine" in Wired Magazine, Issue 13.04. (2005, April). Retreived from <http://www.wired.com/wired/archive/13.04/hybrid_pr.html>

Other Texts:

DAVIS, J. "La Vida Robot" in Wired Magazine, Issue 13.04. (2005, April). Retreived from <http://www.wired.com/wired/archive/13.04/robot.html>

CAPPS, R. "Discs Are So Dead" in Wired Magazine, Issue 13.04. (2005, April). Retreived from <http://www.wired.com/wired/archive/13.04/start.html?pg=2>

BAKER M., and LAWRENCE, S. "Drilling Down on DNA" in Wired Magazine, Issue 13.04. (2005, April). Retreived from <http://www.wired.com/wired/archive/13.04/start.html?pg=7>

GOLDENBERG, D. "Really Smart Drugs" in Wired Magazine, Issue 13.04. (2005, April). Retreived from <http://www.wired.com/wired/archive/13.04/start.html?pg=3>

Issue 13.11, November 2005

Wired Magazine, Issue 13.11. (2005, November). Retreived from <http://www.wired.com/wired/archive/13.11/>

Cover Feature:

ROSE, F. "Battle for the Soul of the MP3 Phone" in Wired Magazine, Issue 13.11. (2005, November). Retreived from <http://www.wired.com/wired/archive/13.11/phone.html>

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CHOROST, M. "My Bionic Quest for Bolero" in Wired Magazine, Issue 13.11. (2005, November). Retreived from <http://www.wired.com/wired/archive/13.11/bolero.html>

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ZJAWINSKI, S. "Your Bod, My Mod" in Wired Magazine, Issue 13.11. (2005, November). Retreived from <http://www.wired.com/wired/archive/13.11/start.html?pg=17>

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Issue 12.12, December 2004

Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12>

Cover Features:

CAMERON, J. "The Drive to Discover" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/cameron.html>

MENDUNO, M. "Dive! Dive! Dive!" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/dive.html>

O'BRIEN, J. M. "To Hell and Back" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/stone_pr.html>

PORTERA, J. "After the X Prize" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/rutan.html>

Other Texts:

MACINNIS, J. "Aliens of the Abyss" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/aliens.html>

CHAIKIN, A. "Man vs. Machine" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/machine.html>

SCANLON, J. "Phones That Get in Your Face" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/start.html?pg=12>

ZJAWINSKI, S. "Starry-Eyed" in Wired Magazine, Issue 12.12. (2004, December). Retreived from <http://www.wired.com/wired/archive/12.12/play.html?pg=8>

Issue 12.07 , July 2004

Wired Magazine, Issue 12.07. (2004, July). Retreived from <http://www.wired.com/wired/archive/12.07/>

Cover Feature:

DOCTOROW, C. "Rise of the Machines" in Wired Magazine, Issue 12.07. (2004, July). Retreived from <http://www.wired.com/wired/archive/12.07/machines_pr.html>

Other Texts:

CAPPS, R. "The Humanoid Race" in Wired Magazine, Issue 12.07. (2004, July). Retreived from <http://www.wired.com/wired/archive/12.07/race_pr.html>

BROWN, E. "Security, Schmecurity - This Stuff Is Cool" in Wired Magazine, Issue 12.07. (2004, July). Retreived from <http://www.wired.com/wired/archive/12.07/start.html?pg=7>

STONE, B. "Tour de Lance" in Wired Magazine, Issue 12.07. (2004, July). Retreived from <http://www.wired.com/wired/archive/12.07/armstrong.html>

HEWITT, B. "The Linux Killer" in Wired Magazine, Issue 12.07. (2004, July). Retreived from <http://www.wired.com/wired/archive/12.07/linux_pr.html>

Issue 11.03, March 2003

Wired Magazine, Issue 11.03. (2003, March). Retreived from <http://www.wired.com/wired/archive/11.03/>

Cover Feature:

Jeffrey M. O'Brien, J. M, PORTRERA, J., ROBINSON, M, BERGER, A, and BAKER, C. "Speed Demons" in Wired Magazine, Issue 11.03. (2003, March). Retreived from <http://www.wired.com/wired/archive/11.03/speed_pr.html>

Other Texts:

COONCE, C. "War of the Wheels" in Wired Magazine, Issue 11.03. (2003, March). Retreived from <http://www.wired.com/wired/archive/11.03/wheels_pr.html>

KAHN, J. "Stripped for Parts" in Wired Magazine, Issue 11.03. (2003, March). Retreived from <http://www.wired.com/wired/archive/11.03/parts_pr.html>

STERLING, B. "Silent But Deadly" in Wired Magazine, Issue 11.03. (2003, March). Retreived from <http://www.wired.com/wired/archive/11.03/view.html?pg=4>

"How is technology changing surgery?" in Wired Magazine, Issue 11.03. (2003, March). Retreived from <http://www.wired.com/wired/archive/11.03/view.html?pg=1>

Issue 11.12, December 2003

Wired Magazine, Issue 11.12. (2003, December). Retreived from <http://www.wired.com/wired/archive/11.12/>

Cover Features:

ROSE, F. "The Second Coming of Philip K. Dick" in Wired Magazine, Issue 11.12. (2003, December). Retreived from <http://www.wired.com/wired/archive/11.12/philip_pr.html>

Other Texts:

DIAMOND, D. "The Love Machine" in Wired Magazine, Issue 11.12. (2003, December). Retreived from <http://www.wired.com/wired/archive/11.12/love_pr.html>

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