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Cyberfeminist Theories and the Benefits of Teaching Cyberfeminist Literature

Maya Zalbidea Paniagua Camilo José Cela University of Madrid Spain

1. Introduction

In 2010 I had the opportunity to interview Julianne Pierce, writer and artist who took part of the first cyberfeminist group called VNS Matrix, at the conference "Riot Girls Techno Queen: the Rise of Laptop Generation Women" at the Reina Sofía Museum in Madrid. When I asked her what she thought about present day cyberfeminism she answered melancholically: "Cyberfeminist movements are not as visible as they used to be during the 90s" ("Personal Interview with Julianne Pierce by Maya Zalbidea Paniagua" n/p) It is certainly true that the 80s and 90s supposed the golden age of cybercultures. Cybernetics arrived in the 1960s (Wiener 1968) but the glorious age of the Internet started in the 80s. In 1984 William Gibson coined the term cyberspace and anticipated the Internet revolution in his novel Neuromancer (1984). Other cyberpunk novels also illustrated a post-apocalyptic future such as: Do Androids Dream of Electric Sheep? (1968) by Philip K. Dick. Cyberpunk films such as Blade Runner (1982) and The Terminator (1984) received enormous impact. And some years later the Web was invented by British scientist Tim Berners-Lee in 1989, CERN publicized the new World Wide Web project in 1991, and during the 90s cyberfeminist theories and movements spread internationally. Unfortunately a climax of disillusion and a crisis of moral values has influenced negatively cyberfeminist thought, promoted by the idea that women in the third world cannot have access to the Internet, the battle between ecofeminists and cyberfeminists, and the ecological awareness of the difficulty to eliminate electronic garbage.

In the same conference I also had the opportunity to have a conversation with Professor Remedios Zafra, who investigates on cyberfeminism and the body in cyberspace. She has translated into Spanish language the most famous cyberfeminist media artworks and writings in her project "Violencia sin cuerpos", as well as introducing cyberfeminist and body theories in cyberspace in the Spanish academia publishing: *Netianas N(h)acer mujer en Internet* (2005) and has recently published *Un cuarto propio conectado. (Ciber)espacio y (auto)gestión del yo* (Fórcola, Madrid, 2010) as well as coordinated "X0y1 #ensayos sobre género y ciberespacio" (2010). When I commented that I was doing my research on topics related to hers, she coincided with Julianne Pierce's view that most of the research on cyberfeminism corresponds to the 90s period. Notwithstanding this fact, due to the increase of electronic media for reading, a renewed interest on feminist networks emerged. Nowadays the use of the new technologies is becoming more responsible and professional

in communication, research and education, and curiosity for the effects of this Information Society revolution is increasing. In cyberspace private becomes public and thus, it is beneficial to cyberfeminists to accomplish the common objectives of feminists: take part in public life and empowering themselves creating communities of politically and socially active women.

2. Bodies and gender in cyberspace

In cyberspace and electronic literature the reader and writer become posthuman. Machines become writers and writers become machines. The term posthuman is regarded positively by Katherine Hayles in *How We Became Posthuman*, from her view human can be a distributed cognitive system, where part of the intelligence lies in the human brain, part in intelligent machines and part in the interface between them (Wiman "N. Katherine Hayles: *How We Became Posthuman* n/p).

Katherine Hayles explains in *How We Became Posthuman* that it seems to be difficult to try to guess when we are talking to a person or a machine in the famous Turing test. Every time an individual uses a computer and cannot see the recipient the task consists of posing questions that can distinguish verbal performance from embodied reality. When one cannot distinguish the intelligent machine from the intelligent human there is some evidence that, to some extent, machines can think.

The important intervention comes not when you try to determine which is the man, the woman, or the machine. Rather, the important intervention comes much earlier, when the test puts you into a cybernetic circuit that splices your will, desire, and perception into a distributed cognitive system in which represented bodies are joined with enacted bodies through mutating and flexible machine interfaces. As you gaze at the flickering signifiers scrolling down the computer screens, no matter what identifications you assign to the embodied entities that you cannot see, you have already become posthuman (Hayles xiv)

Electronic literature is the one that can only be read on a computer while cyberliterature is generated by computers. Cyberliterature is a literary proposal where the machine can be considered co-author of the text (Borrás 42). In generative writing the human writer disappears. It is the machine which creates writing without human intervention. The traditional printed text is static while the digital is dynamic. The distinction of woman, man, human and machine is blurred in the use of the new technologies. As Donna Haraway affirms, the cyborg suggests the possibility of moving beyond the old limits of male and female into a new world of human, machine and animals (Haraway 173). Haraway used the metaphor of the cyborg as a means of understanding and navigating one's place in a rapidly ever-changing techno-scientific world as well as challenging what it means to be human.

Our daily use of computers is influencing us to become cyborgs, we depend on the Internet to manage practically all our social and commercial transactions: e-mails, booking on-line, searching for information, using GPS with our mobile phones, learning on-line, interacting in social networks (*facebook, twitter, myspace*), etc. When technology is added to human body in a real physical extension to repair a deficiency (in the use of contact lenses, glasses, false teeth) or to change the physical appearance (highlights on the hair, wearing heels or beauty surgery) it is not easy to identify the limits between nature and technology. As Haraway affirmed in her "Cyborg Manifesto" : "the boundary between physical and non-physical is

very imprecise for us" (Haraway, Simians, Cyborgs and Women: The Reinvention of Nature 153). Humans have always used tools to satisfy their needs and desires, primitive men and women worked with sticks, stones, spires, used make up and wore piercings. Present day humans use cars, computers, cellphones and other technological body extensions such as prosthesis. Haraway affirms how even if we are not aware of it we are connecting the technology to our bodies: "We are all cyborgs, hybrids of machine and organism" (p.150). Haraway makes reference to the tools of early primate females, the baby-sling and the containers for carrying things that these female primates invented to make their lives easier. These inventions were right alongside male-created weaponry tools. Those baby-slings combined with modern cosmetic surgery and other technology adaptations for women were a revelation (Haraway, Primate Visions 196, 334). Furthermore, according to Katherine Hayles, we have always been posthuman (Hayles 279). In sciences we find constant prosthetic applications: the C-Leg system by Otto Bock HealthCare to replace a human leg that has been amputated because of injury or illness, cochlear and magnetic implants and even the possibility to link the nervous system into the Internet as Kevin Warwick showed in his 2002 Project Cyborg.

The term "cyborg" was coined by Manfred E. Clynes and Nathan S. Kline in 1960 to refer to their conception of an enhanced human being who could survive in space, in extraterrestrial environments. Clynes melded "cybernetics" and "organism" into "cyborg". Both, Clynes and Kline suggested that humans could be modified with implants and drugs so that they could exist in space without space suits (Gray 18): "Altering man's bodily functions to meet the requirements of extraterrestrial environments would be more logical than providing an earthly environment for him in space" (Clynes and Kline 26). Recently, NASA and General Motors revealed "Robonaut 2", a very advanced humanoid robot. It was part of the payload of Shuttle Discovery on the successful launch February 24, 2010. This robot is intended to do spacewalks for NASA ("Robonaut 2 wakes up in space" Nasa Homepage).

All these experiments with cyborgs and humanoid robots provide the possibilities of humans living in other planets. This question creates controversy for the hypothetical inmorality of altering the nature of humans to develop cyborg astronauts. Grant Gillett, a professor of medical ethics at the Bioethics Center of the University of Otago Medical School in New Zealand expressed the ethical concern of the alteration of humans which can be so significantly that they could end up being not entirely human (Herath "Cyborg Astronauts needed to colonize space" n/p). Medical and military interventions to inject implants in human beings for getting information causes controversy too, for the loss of private life and the nightmarish possibility of being mentally controlled via satellite.

Cyborgs have been in the imaginary long time ago before technological advances. Centuries before, in 1843, Edgar Allan Poe described a man with extensive prostheses in the short story "The Man That Was Used Up". In 1908, Jean de la Hire introduced "Nyctalope" -the first cyborg superhero- in the novel *L'Homme Qui Peut Vivre Dans L'eau* (*The Man Who Can Live in the Water*). Edmond Hamilton presented space explorers with a mixture of organic and machine parts in his novel *The Comet Doom* in 1928. He later featured the talking, living brain of an old scientist, Simon Wright, floating around in a transparent case, in all the adventures of his famous hero, Captain Future. In the short story "No Woman Born" in 1944, C. L. Moore imagined a dancer whose body was burned completely and whose brain was placed in a faceless but beautiful and supple mechanical body.

Some artists have used cybernetic mechanisms to improve their bodies, to express monstruosity, or for artistic experimentation. This is the case of Orlan, the first artist to use surgery as an artistic medium, what she called: "Carnal Art" which consisted of modifying her body through constant surgical interventions. This French artist recorded her operations and used the videos as a performance. "Carnal Art" opposes the social pressures that are exerted upon both the human body and the corpus of art:

Carnal Art is self-portraiture in the classical sense, but realized through the possibility of technology. It swings between desfiguration and refiguration. Its inscription in the flesh is a function of our age. The body has become a "modified ready-made", no longer seen as the ideal it once represented; the body is not anymore this ideal ready-made it was satisfying to sign ("Manifesto of Carnal Art", Orlan n/p)

In May 1990 Orlan started a project called: "The Reincarnation of Saint-Orlan". She underwent nine plastic surgical operations to transform herself into a new woman. With these operations her aim was to deconstruct mythological images of women: have the chin of Botticelli's Venus, the nose of Jean-Léon Gérôme's Psyche, the lips of François Boucher's Europa, the eyes of Diana (as depicted in a sixteenth-century French School of Fontainebleu painting), and the forehead of Leonardo da Vinci's Mona Lisa. Orlan stated: "my work is a struggle against the innate, the inexorable, the programed, Nature, DNA (which is our direct rival as far as artists of representation are concerned), and God!" (Orlan, Official Website n/p)

Many feminists consider Orlan an anti-feminist because she embraces plastic surgery, which is painful and dangerous for health. Orlan states that she is trying to reveal against beauty canons that men have invented. As a response, we may wonder: Would not be more appropriate to admit that instead of liberating herself from those beauty canons suggested by male artists she is using her own body as an object of circus spectacles, suffering painful plastic surgeries? Orlan has answered to feminist reproaches in the following way:

Feminists reproach me for promoting cosmetic surgery. In fact, although I am a feminist, I am not against cosmetic surgery. In the past we had a life expectancy of forty to fifty years. Today, it has risen to seventy or eighty (and is still rising). We all have a feeling of strangeness in front of a mirror; this often becomes more acute as we age. For some people this becomes unbearable and the use of cosmetic surgery could be very positive (Orlan, Official Website n/p)

The intervention of cybernetics in the human body is an idea that comes from science fiction narratives and it is present nowadays. Tattoos and piercings are signs of ancient tribes and metaphors of avant-garde and cyberculture at the same time. Most of celebrities in the media get plastic surgery. Michael Jackson's change of skin color is one of the most representative ones. The spectators have unavoidably fantasies of posthumanism "developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities" (Brostrom n/p). In the 21st century citizens dream of having a body in which all beautiful possibilities are exalted. According to María Goicoechea de Jorge Orlan's live plastic surgery and her slogan represents the spirit of the 90s in relation to body and its manipulation, the continuous insatisfaction, beauty as an ideal which is always beyond us, a feeling of disadjustment and lack of identification of our own body (Trans. from Spanish by Maya Zalbidea Paniagua, Goicoechea 406).

Another artist who experiments with his own body following a posthuman philosophy is Stelarc, an Australian performance artist who has visually probed and acoustically amplified his body. Most of his works are centered on his idea that the human body is obsolete. Orlan based one of her operations on a text by Antonin Artaud who dreamed of a body without organs. Transhumanist artists and scientists are obsessed with the dream of the disappearance of the body, an old idea which Plato had already discussed, considering the body as a prison of the soul. Stelarc uses medical instruments, prosthetics, robotics, virtual reality systems, the Internet and biotechnology to explore alternate, intimate and involuntary interfaces with the body. He has made three films of the inside of his body and has performed with a third hand and a virtual arm. Between 1976-1988 he completed 25 body suspension performances with hooks into the skin. For 'Third Ear' he surgically constructed an extra ear within his arm that was Internet enabled, making it an publicly accessible acoustical organ for people in other places. Another more recent artist, French artist Émilie Simon is one of the latest cyborg musicians, she uses a prosthetic arm to control music effects and distort her own voice when performing her songs in which she mixes organic sounds, like her own voice or the sound of water, with electronic music. Her voice becomes robotic in her album The Big Machine (2009).

Orlan, Stelarc and Simon's work questions if our natural or artificial body represents our identity or not and how artificial materials added to the body can make the individual feel that he or she can be transformed physically to look like the self he/she feels inside. The notion we have of ourselves does not necessarily correspond to our physical bodies. An old person does not recognize himself/herself in the mirror, and some old people use a picture of themselves when they were young on their social networks profiles because this is how they may feel inside or would like to look: young and beautiful. Transgendered people think that their sex does not correspond to their gender, and in order to get rid of this ambiguity some have sex change operations. Some intersexuals also have sex change surgery, however, recent researches on intersexuals problematics reject the idea of surgical interventions on babies because they consider that the idea comes from some doctors who assume that intersexuals cannot have a real identity. Parent's choice of the baby's genitalia can create a gender identity problem on the individual in case that he/she does not feel identified with the imposed gender. Furthermore, 20-50% of surgical cases result in a loss of sexual sensation ("The Surgical Management of Infants and Children With Ambiguous Genitalia" Newman, Randolph and Anderson 644).

The perception of our own body has changed through decades. Merci Torras explains that before the creation of mirrors, men and women were born, lived and died without having seen their whole bodies, and on the contrary nowadays we can not imagine ourselves without looking at a mirror (Trans. from Spanish by Maya Zalbidea Paniagua, *Textualidades Electrónicas* Borrás 147). Cyberspace allows the individual to lose gender or to acquire different identities at the same time. When the Internet user adopts different roles, bodies or gender, he/she may acquire unconsciously transgressive identities. Cyberspace has been seen as a place where nobody is judged in no respect by one's body, but perhaps by an imagined body. Gender, race and class can disappear in the non-physical relationships online. In online games, social networks and chats, people change their genders and play the role of a different gender from the one they own. However, we wonder: Are these gender performances subversive? In the MUDs, Lori Kendall observed, this was not necessarily true. The performance was not always acknowledged, and imitations were not always subversive (Kendall quoted in Raymond "Performativity on the Net" n/p). Judith Butler

points out that the ambivalence between the ideal and the norm makes compulsory heterosexuality forever unstable, forever needing to reinforce itself, to repeat imitations of its ideals. Compulsory heterosexuality is performative because it is an ideal which we fail to approximate, and because it is an identification which we exceed, and which we cannot define us completely. Ambivalence means that compulsory heterosexuality it is a performance requiring a reiteration of norms and the continued exclusion of that which exceeds certain definitions of sexuality, race, and gender. As Butler explains performativity is not a deliberate "act" but rather as the reiterative practice by which discourse produces the effects that it names (Butler, *Bodies that Matter 2*). In cyberspace performativity and gender differences remain, therefore, it is cyberfeminists objective to create non-phallocentric spaces where women can stand for their rights.

3. Precedents and background of cyberfeminism

Cyberfeminism started in the 90s and acquired an international impact. Donna Haraway coined the term "cyborg feminism" referring to a specific branch of feminism in which women's use of the new technologies would be profitable for them in their fight against patriarchy. Echoing Karl Marx "Comunist Manifesto" (1847), Haraway published a "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century", in 1985. She criticized second wave feminism and proposed a feminist theory where affinity substitutes identity. She deployed the metaphor of a cyborg to challenge feminists to engage in a politics beyond naturalism and essentialism. The Manifesto vindicated feminists acknowledge of their situation within what she termed the "Informatics of Domination."

According to Haraway we all live in an era in which flesh is losing ground against wires and circuits. We can appreciate this cyborgization in the tecnological advances in different fields. The cyborg represents a postmodernist utopia of a genderless world without genesis. The metaphor of the cyborg is used to construct a postmodernist feminism that moves beyond dualisms (male/female, black/white, gay/straight, etc.). As well as attempting to surpass the limitations of traditional (second wave) gender politics. The cyborg represents the postmodern utopia of a world without gender or genesis. From Haraway's point of view the cyborg is unchained; it is released from God's demands or parents weaknesses. Cyborgs are influenced by militarism, patriarchy and socialism, but they are above the traditional Western polarity of public and private properties. They tend to unite front politics without any kind of innocence. Cyborgs emerge from cosmos ashes. Society is being completely reconstructed, mutating its economic, cultural, political and family environments, ignoring the given heritage from patriarchal capitalism. According to Donna Haraway:

The main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offspring are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential (Haraway, p. 151)

Haraway suggests a society deconstruction and a renewal in culture, economics, medicine and politics to ignore the capitalist patriarchal inheritance. In Donna Haraway's "Cyborg Manifesto" she criticizes earlier feminisms: especially second wave feminism, conservative, socialist and Marxist feminisms. In order to assimilate Haraway's attacks and proposals it is necessary to elaborate a preliminary study on the third feminist background of late 80s and early 90s. Many scholars have commented or debated Haraway's cyborg theory without knowledge of the previous feminist theories she follows or objects. My research contributes to study of feminist and gender theory emphasizing the importance of reading and rereading previous and subsequent feminist theories before criticizing third wave feminist ideas.

Haraway's theories were clearly influenced by one of the most important works of the third wave and present day feminisms: *Gender Trouble* (1990) by Judith Butler. In her first work Butler enacted a very logical reason about women and men condition affirming that both sex and gender are constructed. This idea is inspired from J. L. Austin *How to Do Things with Words* (1962) and Jacques Derrida's "Signature, Event, Context" (1971) as well as Paul de Man's notion of "matalepsis" in *Allegories of Reading* (1981). Butler revolutionized the concept of gender creating a fusion of feminist insights into linguistic theories.

In Gender Trouble: Feminism and the subversion of Identity, Butler denaturalizes gender categories by proposing that they are performative; That is, gender is part of an overall structure of power that can be disrupted by individual agency (Xiana Sotelo, 342)

Like Judith Butler, who does not believe in purely feminine or masculine behaviors but "performative" acts which follow rituals imposed by culture and society, Haraway also rejects the idea of the situation of all women as a universal one. Haraway criticizes some of the second-wave determinations. Haraway responds to the essentialist feminism rejecting any theory which identifies the constitution of gender identity or patriarchy, universal, historical and necessary. For Haraway:

There is nothing about being 'female' that naturally binds women. There is not even such a state as 'being' female, itself a highly complex category constructed in contested sexual scientific discourses and other social practices. Gender, race, or class consciousness is an achievement forced on us by the terrible historic experience of the contradictory social realities of patriarchy, colonialism, and capitalism (Haraway 155)

For Haraway a cyborg has a changing identity and feminists should create coalitions based on affinity rather than on identity. Haraway supports Chela Sandoval's theory on "oppositional consciousness" (1984) arguing that feminists had suffered breakdowns because of insisting on the idea of unity rather than on multiplicity: "Painful fragmentation among feminists (not to mention among women) has made the concept of woman elusive" (Haraway 155), and women of color contribution to feminism is essential to transform the old colonialist way of thinking. If we read the text Haraway's is referring to: Chela Sandoval's "U.S. Third World Feminism: The Theory and Method of Oppositional Consciousness in the Postmodern World" we will realise that what she is supporting is that it is essential to consider the distinction of some women to others as positive. "Oppositional consciousness" consists of the opposition to the dominant social order:

I propose that the hegemonic, feminist structure of oppositional consciousness be recognized for what it is, reconceptualized, and replaced by the structure which follows. [...] Those subordinated classes which have sought subjective forms of resistance other than those forms determined by the social order itself (Sandoval 2-3, 10-11)

Admitting that there are many feminisms and women have different needs depending on their culture, religion, philosophies, history, profession, background, etc is one of the most appropriate positions that some third wave feminists like Donna Haraway defends. Haraway coincides with Katie King in the idea that taxonimizing -classifying into categories- the feminist movement into liberal, radical or socialist only creates a battle among different political tendencies. She compares Sandoval's theory of "oppositional consciousness" with cyborg policy. She criticizes popular feminist 80s tendencies like those of Catharine MacKinnon (1982-1987), anti-pornography feminist, whose error, according to Haraway was to develop an authoritarian doctrine making a feminist consciousness of the non-existence of women in public life, except as desire products addressed to men. Haraway disagrees with the opinion of certain socialist Marxist feminists who tried to eliminate the polyvocal difference from the anti-colonialist discourse. For her, MacKinnon erases every possibility of differenciating between some women and others.

With regards to Haraway's view, I think that it is necessary to clarify that Catharine MacKinnon tried to defend women's rights towards justice. She affirmed that women's public presence, voice and representation has been negated (*Towards a Feminist Theory of the State*, Mackinnon, 285). However her mistake, as Haraway criticizes, was that she considered all men the same with statements like: "Pornography permits men to have whatever they want sexually" (122), this sentence is ambiguous because not all men like pornography or at least they do not enjoy the same kind of pornography. MacKinnon considered patriarchal prejudices as universal and this view impoverished her arguments. Furthermore, nowadays third wave feminists consider pornography made by women as free expression and censoring pornography would imply repressing and neglecting women and men freedom to enjoy subversive and non-normative sexual practices.

Haraway continues her manifesto explaining that the use of the new technologies is going to revolutionize biology, medicine, industry and society. From her point of view capitalist white patriarchy is going to be substituted by the "Informatics of Domination" (Haraway, 161). Posthumans in new technologies will create an environment of exchange and mobility, but at the same time there will be still social discrimination for women and particularly for those in Third World countries:

These developments are neither gender- nor race-neutral. White men in advanced industrial societies have become newly vulnerable to permanent job loss, and women are not disappearing from the job rolls at the same rates as men. It is not simply that women in Third World countries are the preferred labour force for the science-based multinationals in the export-processing sectors, particularly in electronics. [...]The ethnic and racial diversity of women in Silicon Valley structures a microcosm of conflicting differences in culture, family, religion, education, and language (Haraway 166)

Haraway envisages the future as a place where everything will depend on electronics: international corporations, military power, politic processes, bodies in medicine, labour division and even pornography and religious evangelism (Haraway, 165). She concludes with a reflection on the myth of the cyborg as a political identity, she names feminist utopia writers such as Joanna Russ or Octavia Butler arguing that they create our politic imaginary. Haraway mentions ecofeminists warning that they are not adapting to our millenium circumstances:

American radical feminists like Susan Griffin, Audre Lorde, and Adrienne Rich have profoundly affected our political imaginations - and perhaps restricted too much what we allow as a friendly body and political language. They insist on the organic, opposing it to the technological. But their symbolic systems and the related positions of ecofeminism and feminist paganism, replete with organicisms, can only be understood in Sandoval's terms as oppositional ideologies fitting

the late twentieth century. They would simply bewilder anyone not preoccupied with the machines and consciousness of late capitalism (173)

These lines can only be understood if it is taken into account that although ecology is essential, if technological garbage is recycled the trade and the use of these technologies does not necessarily imply an increase of pollution. Cyberfeminism and ecofeminism can converge because the use of the new technologies can be a means of sustainability: computer devices can be recycled and electronic books avoid deforestation. Haraway finishes her manifesto with a sentence which has become popular within feminist theory: "I would rather be a cyborg than a goddess" (181) with which she summarizes her idea that the solution is not a regression to genesis or rebirth but a reconstruction of the human being. The future human being should be a genderless monster, a cultures mosaic, who would speak different languages and have different discourses and not only the phallocentric code.

In the same year of the publication of Haraway's "Cyborgs Manifesto", an Australian women's collective called VNS Matrix (pronounced Venus Matrix) wrote their "Cyberfeminist Manifesto for the 21st Century" (1991). They followed Haraway's ideas: the reinvention of nature and social conventions, the rejection of patriarchal traditions and the acceptance of new multiplicities in sexual relationships in which any sexual choice is possible. They used a subversive language that could not be categorized of female or male. Their artistic works were made by software tools, they were published on the Internet and therefore, any kind of reader, inside or out of the academic environment could have access to them.

We had different background of poetry, video, writing, performance. At that time I was doing Women's Studies. I was very influenced by people like Foucault. We were interested in how to combine popular culture and cyberpunk. We wanted to have fun, being feminists without rejecting pleasure ("Riot Girls Techno Queen", "VNS Matrix" Julianne Pierce n/p)

With this "without rejecting pleasure" Julianne Pierce refers to the sexual content of their works. At this state, many third wave feminists had overcome the battle of sex-positive feminists and anti-pornography feminists and fostered women sexuality: heterosexual, lesbian and transsexual expressing sexual desire and considering the sexualized body as a symbol of freedom. The female body had been objectified in the Media and in every cultural manifestation, VNS Matrix represented women as strong and fearless who were proud of their own bodies as well as celebrated that they were the owners of their bodies. From 1991 to 1997 they presented artistic installations, events and public art works in Australia and internationally. They were some of the first artists to make experiments with new media art, photography, sound and video. They designed panels of graphics of videogames addressed to women: All New Gen and Bad Code. In both of them heroines had to kill symbols of patriarchy to win the game, this was a strategy to vindicate videogames addressed to girls and denouncing gender violence in a satyrical and provocative way. VNS Matrix made Internet art, manifestos and panels of feminist videogames to enter into backgrounds that had been traditionally considered male areas. VNS Matrix were interested in creating spaces where women could empower themselves and stop being discriminated from the symbolic cowboy's cyberspace that William Gibson had illustrated in Neuromancer. Cyberpunk novels supposed the beginning of inflection and crisis in masculine subjectivity. In Neuromancer all characters are cyborgs, female and male are penetrated by technology, by information, by biological implants or by genetic manipulations. For Haraway a cyborg world might be one in which people are not afraid of permanently partial identities and contradictory positionality. "Haraway asserts that some differences are playful and that some are roles of world historical systems of domination" (Steffensen, "Slimy metaphors for technology: 'the clitoris is a direct line to the Matrix"n/p). The objective of VNS Matrix was to subvert the androcentric all together activities on the Internet and looked for a representation of women as strong and active as men.

We wrote the Cyberfeminist Manifesto for the 21st Century, had it translated into Japanese and Spanish (and later into French, Finnish, Russian, Italian, Dutch) and began infiltrating cracks in the patriarchy, twisting the tender tentacles of power of Big Daddy Mainframe to create a vision of the future which was "technotankgirltopian". We were ignorant of the work of Sadie Plant in the UK who was also constructing a notion of cyberfeminism and when we finally heard of her work. We started pumping out new viri into the mainstream Australian media, describing this new wave of brave new girls, machine queens and their perverse pleasures (Domínguez "An E-terview with Doll Yoko" n/p)

Their main goals were: to dismantle the domination discourses in virtual as in real places, to denounce gender violence acts from all around the world and to enact women's artistic creations on the Internet. These three aims showed a strong influence from Donna Haraway's "Cyborg Manifesto" (1991) and Sadie Plant's *Zeros and Ones* (1997). VNS Matrix were interested in showing women's strength, sexual desire and power, all characteristics that had been attributed to men in patriarchal societies. History has been considered male, while nature has been associated to female. The differences between men and women have been biological. VNS Matrix found their place in technology, where identity does not rely on the body, but on abstract thought.

Cyberfeminist theorists, such as Donna Haraway, Sadie Plant and Zoë Sofoulis, imagine and articulate a different relation between body and machine, and between women and technology. This theoretical trajectory is based less on an hierarchical dualism between dominant megamachines and submissive bodies and more on a transgressive strategy and politics which imagines and constructs a perverse alliance between women and machines (Steffensen, "Slimy metaphors for technology: 'the clitoris is a direct line to the Matrix'' n/p).

VNS Matrix writings had a very paradoxical discourse. Their register was completely colloquial, but their manifestos and artistic works had a highly intellectual academic value. Their writings had an anarchic structure, they supported civil disobedience: plagiarism and hacktivism. They examined the acquisition and application of power and showed interest for international politics against patriarchy.

In 1991 they started by writing their "Cyberfeminist Manifesto for the 21st Century". The manifesto was distributed on street posters around Adelaide, then it was published on the Net and in the end it was known internationally. It was an obvious allusion to Donna Haraway's "A Cyborg Manifesto: Science, Technology, and Socialist- Feminism in the Late Twentieth Century", published during the same year. Haraway's manifesto was serious and academic. She was a professor of Feminist Theory and Technoscience, who had earned a degree in zoology and philosophy. Understanding completely the manifesto required a previous knowledge of socialist feminism, Judith Butler, Catharine MacKinnon, Chela Sandoval, etc. Whereas the manifesto by VNS Matrix did not require any previous

knowledge because the language was very casual and the length was only eighteen lines. However, having read some cyberfeminist literature provides a better understanding and appreciation of this experimental manifesto as it will be seen later. Haraway's "Cyborg Manifesto" was published by Free Association books and on the Internet at the same time. On the contrary, VNS Matrix' manifesto was only on-line and probably due to a general rejection of electronic literature promoted by technophilia and a luddit position, scholars did not pay much attention to a text that looked more like a joke than to a public declaration of women's freedom of speech.

The "Cyberfeminist Manifesto for the 21st Century" had a scandalous language: direct, impulsive, clear and determining. It was characterized by the use of four letters words, the absence of punctuation and capital letters, the absence of discourse markers and lack of coherence and cohesion. Deliberately, VNS Matrix wrote a manifesto anti-norms, "anti-reason" as it is affirmed in itself; it did not respect any linguistic norm either. The only capital letter we find in the text is the first letter "W" of the word "We", and the name of the group in the middle of the text: VNS MATRIX. Humor and parody in the text make allusion to cyberculture. The sentence: "the clitoris is a direct line to the matrix" ("The Cyberfeminist Manifesto for the 21st Century", n/p) has a double-meaning. After the publication of the manifesto Sadie Plant explained the connection between matrix meaning "womb" and cybernetics in *Zeros and Ones*. Matrix is the Latin term for womb, a word that was *hystera* in Greek. In computing science, matrix is a collection of data items that can be selected by indices computed at run-time.

The use of misspelling and a discourse lacking cohesion was also intentional and significant in VNS Matrix writings; their aim was to change the codes as they declared: "corrupting the discourse" (VNS Matrix n/p). They tried to find their own use of language, this reminds to French feminists support of a feminine language in the second wave when Hélène Cixous, Monique Wittig, Luce Irigaray, Chantal Chawaf, and Julia Kristeva theorized about the existence of an *écriture féminine*, affirming that there was female difference in language. These French feminists considered that not only women could have this kind of *écriture féminine* but also some male authors. "In her polemical, passionate essay "The Laugh of the Medusa" (1975), Hélène Cixous coined the phrase *écriture féminine* to designate nature of women's sexuality, thought and imagination" (Holmes 216). VNS Matrix on the contrary, do not use a "feminine" style, they use blasphemy, irony and humor in response to the traditional idea of women as "feminine subjects".

Use of irony and blasphemy as feminist weapons are techniques that Judith Butler will vindicate subsequently. "As Judith Butler lucidly warns us, the force of the parodic mode consists precisely in turning the practice of repetitions into a politically empowering position. Parody can be politically empowering on the condition of being sustained by a critical consciousness that aims at the subversion of dominant codes" (Braidotti "Cyberfeminism with a difference" 112). According to Iñaki Martínez gender parody can be useful to evaluate the efficiency of this rethorical strategy to resignificate the political side of it: "As a subculture, parody, more than suggesting a revolutionary program, an alternative—which is what characterizes counterculture—recodifies cultural signs" (Martínez, Translated from Spanish by Maya Zalbidea Paniagua, 30).

The main ideas of VNS Matrix manifesto are: the defense of art made by women, the incorporation of women's participation on the Internet and the elimination of the patriarchal

discourse to create a new one. "Cyberspace in VNS terms is re-appropriated from a symbolic order of masculine rationalist high-tech domination and recoded as feminine" (Steffensen "Slimy metaphors for technology: 'the clitoris is a direct line to the Matrix'" n/p).

In 1996 VNS Matrix published the "Bitch Mutant Manifesto", a text full of technophobic connotations. It resembles more a poem than a manifesto due to the inversion of word order, metaphors, irony and symbolism. Cyberspace is represented as a futuristic place with atomic winds, "where code dictates pleasure and satisfies desire" ("Bitch Mutant Manifesto", n/p) A place in which what exists on the Internet is what really exists and governs the individual's interests. There is a strong criticism about the fact that undeveloped countries cannot use the new technologies: "So what's the new millennium got to offer the dirty modemless masses? Ubiquitous fresh water? Simulation has its limits. Are the artists of oppressed nations on a parallel agenda? Perhaps it is just natural selection?" ("Bitch Mutant Manifesto" n/p). In the end of this digital text there is another allusion to Haraway's Cyborg Manifesto because it is stated that a rebel child is born from the patriarchal society. Patriarchy is personified by "Big Daddy Mainframe": "The net's the parthenogenesis bitchmutant feral child of big daddy mainframe" ("Bitch Mutant Manifesto" n/p). Big Daddy Mainframe as Julianne Pierce explained to me symbolizes patriarchy ("Personal Interview with Julianne Pierce by Maya Zalbidea Paniagua" 2010, n/p). Also this "Bitch Mutant" is born from parthenogenesis as Haraway's cyborg symbolizing a modern kind of reproduction: artificial insemination. Definitely in this second manifesto VNS Matrix express the importance of hacktivism for cyberfeminists to penetrate into the World Wide Web to corrupt inequality. They claim: "We are the malignant accident which fell into your system while you were sleeping. And when you wake we will terminate your digital delusions, hijacking your impeccable software" ("Bitch Mutant Manifesto" n/p).

The last projects by VNS Matrix were 3-D graphics of videogames for girls: *All New Gen* (1995) and *Bad Code* (1996). Both criticized patriarchy and capitalism. In *All New Gen*, the mission is to sabotage the databanks of the insidious Big Daddy Mainframe, which represented the abuses of power of sexist white rich men. *All New Gen* is assisted on her mission by the DNA Sluts, a band of sexy renegade Sheroes; along with ferals, data deviants, cortex crones and code warriors. In the game there are sexual acts that represent new sexualities and subjectivities in heterosexual, homosexual and bisexual relationships.

Five years after the publication of The "Cyberfeminist Manifesto" online, Rosi Braidotti published another essential constribution to cyberfeminist theory, her essay: "Cyberfeminism with a difference" (1996) in which she insisted on the feminists' disapointment of virtual reality in which sexism was still present, "this new technological frontier will intensify the gender-gap and increase the polarization between the sexes" (Braidotti, p.112) Rosi Braidotti analyzed the use of irony and parody of Riot Grrrls as a feminist strategy:

The ironical force, the hardly suppressed violence and the vitriolic wit of feminist groups like the Guerrilla or the Riot Girls are an important aspect of the contemporary relocation of culture, and the struggle over representation [...] The riot girls want to argue that there is a war going on and women are not pacifists, we are the guerilla girls, the riot girls, the bad girls. We want to put up some active resistance, but we also want to have fun and we want to do it our way. The ever increasing number of women writing their own science fiction, cyberpunk, film scripts, 'zines', rap and rock music and the likes testifies to this new mode (Braidotti 113)

The following publication about cyberfeminism was Sadie Plant's Zeros + Ones, Digital Women + The New Technoculture in 1997 in which she defended the importance of women's historical contribution to technology revolution. Sadie used the figure of Ada Lovelace to vindicate the importance of women's contribution to the new technologies. Lord Byron's daughter was the inventor of the first analytic machine which was the first example of the future computer programming. Ada's mother was a mathematician and became an analyst. Ada invented the first analytic machine able to do mathematical operations before being ordered by the user. She knew she was a prophet and her discovering was going to change arithmetic's methods, but she could not develop her machine completely. She worked with Charles Baggage, an engineer, and they created the machine. Nevertheless, they could not finish because of lack of funding, advertising, Baggage's eccentricism and Ada's health problems. Posthumously her discoverings were recovered and used for the invention of hardware (Plant p. 10-15). Sadie Plant criticized Freud's cynicism affirming that women had made poor contributions to inventions and discoverings in our civilization. According to Plant when Freud was looking at his daughter Anna weaving, he thought of her as "bound to weave a costume for a masquerade... an actress, a mimic, an impersonator, with no authenticity underneath it all" (Plant 25). According to him the only technique that women had invented was knitting. He made this assumption looking at his daughter knitting. Due to these ridiculous ideas about women's deficiencies, Sadie Plant emphasizes how Gilles Deleuze and Félix Guattari considered that Freud was wrong with regards to women's psyche. The volume that Plant was probably referring to was Anti-Oedipus (1972) in which they criticize that Freud's concept of family consists of the traditional and sometimes repressed model of mother and father. Deleuze and Guattari argue that underneath the pseudo-opposition between family (composed of personal subjects) and the social world, lies the relationship between pre-individual desire and social production. Plant dedicated a chapter to Socrates' theory of the soul. For him, the soul was something that distinguished men from the rest of species and women, because only men had soul.

According to Plant, Freud affirmed that women were empty, they did not enjoy sex. Freud referred to women's sexuality in a negative way, according to him they suffered "penis envy" on his *Three Essays on the Theory of Sexuality* (1905). Jacques Lacan symbolised woman as the "no-total, no-one", for him she did not have any place except the place of the Other, that he called O. Sadie Plant played with this idea saying that in computing science man is the one, represented by 1 and woman is the zero, 0.

Sadie Plant persuasively shows how women have always been inextricably involved with technology. Using the telephone operator as an example, she argues that women have traditionally comprised the laboring core of networks of all kinds, particularly the telephone system. From the power loom to typewriting, even to the discovery of computer "bugs," Plant categorizes technology as a fundamentally female object. She argues that women are intelligent machines, that the robotic is feminine, that the zero--the nothingness of binary code--has always been the 0-ther, the female (Galloway n/p)

Plant described the dichotomy of cyberspace with regards to freedom and equality. Like Donna Haraway she commented on the Internet's utopia as a place that could be a new beginning, far from the claws of patriarchy. "Cyberspace is the purest of the virgin isles, it is a reality designed according to human specifications, ready for a never ending colonization process" (Plant p. 179). However, cyberspace has continued reflecting a sexist reality: the presence of women as sexual objects in advertising and the sexual exploitation of children

(especially girls) in pornographic websites. Men still have the highest working positions in new technological industries while women keep on suffering a precarious situation in Western countries and other Eastern ones where technologies are developed such as in China, Taiwan, Thailand, etc.

Sadie Plant's Zeros and Ones engages with Western philosophy's reliance on binary sexual difference – which renders the "eternal feminine" as either inscrutable or invisible – and the erasure of women's activities in history. She views the multiple, layered, and relational "nature" of computer technology as complementary to women's contributions to the sciences, which developed from complex and often hidden/erased positions. (Melzer, p. 21)

While Plant's book was being read, simultaneously the cyberfeminist women organization OBN (Old Boys Network) celebrated the first international cyberfeminist conference in Kassel. Their aim was to write a definition of the cyberfeminist school of thought but they did not want to enter into taxonomies, therefore they wrote the 100 Anti-Thesis of Cyberfeminism. Among these anti-theses we would like to emphasize eight sentences that have a special intention: "cyberfeminism is not ideology, cyberfeminismus ist nicht postmodern, cyberfeminism is not exclusive, cyberfeminism is not anti-male, cyberfeminism ist keine theorie, cyberfeminisme n'est pas une pipe, cyberfeminismo no tiene cojones, cyberfeminism has not only one language" ("100 Anti-Theses" Old Boys Network). The first aspect that draws our attention is the use of different languages as well as different registers in the same text, something that conventionally would be considered non-academic or inappropriate. The reason for this mixture of languages is explained in the last sentence, "cyberfeminism has not only one language", this statement echoes Haraway's idea of the loss of an old patriarchal language. "Cyborg politics is the struggle for language and the struggle against perfect communication, against the one code that translates all meaning perfectly, the central dogma of phallogocentrism" (Haraway 177). OBN website is still online and the most famous cyberfeminist texts have been filed for their preservation and for the Internet users free access. On the first page of the website it is written: "The mode is the message-the code is the collective!" (OBN n/p) which may be an allusion to Marshall McLuhan's famous expression: "The medium is the message" meaning that the form of a medium embeds itself in the message, creating a symbiotic relationship by which the medium influences how the message is perceived. OBN support feminism in which the form creates meaning and the code is created collaboratively. The term code has two meanings, one is the conventionalized set of principles and in Computer Science the code is the system of letters and symbols. OBN claimed for the use of the new technologies to improve women and men interconnections and the disruption of feminists on the established system to transmit proequality messages, create new moral "codes" by "coding", this is, writing computer programs.

It is interesting to remark that cyberfeminism wanted to break with traditional feminisms. Donna Haraway's "Cyborg Manifesto" supposed the beginning of a new postfeminism that critiziced old feminist beliefs such as: women and men are opposites or women of color are different from white women. Haraway believed in Chela Sandoval's theory of oppositional consciousness:

"Chela Sandoval (1984), from a consideration of specific historical moments in the formation of the new political voice called women of color, has theorized a hopeful model of political identity called 'oppositional consciousness', born of the skills for reading webs of power by those refused stable membership in the social categories of race, sex, or class" (Haraway, p. 155) The last most important theoretician of cyberfeminism is Sandy Stone, Donna Haraway was her professor. In "Will the Real Body Please Stand Up?" (1991) Stone analyzed the models of gender in cyberspace, in which each user can change gender constantly:

A woman who has appropriated a male conversational style may be simply assumed to be male at that place and time, so that her/his on-line persona takes on a kind of quasi life of its own, separate from the person's embodied life in the "real" world (Stone, p. 82)

Stone terms this phenomenon: "Schizophrenia as Commodity Fetish". According to Stone individuals lose their flesh in cyberspace, the Platonic idea of the soul's jail would disappear in virtual life, but all the same, gender differences remain. Stone senses that the concept of body is old and Cartesian, and therefore women and minorities are not interested in the disappearance of the body. On the contrary, feminists, as we have seen are interested in their visibility in public spaces.

In 1999 Faith Wilding and María Fernández founded a collective called subRosa. In subRosa official websites interdisciplinary feminist artists combine art, social activism and politics to explore and criticize information intersections and bio-technologies of women's bodies, lives and jobs. María Fernández in "Is Cyberfeminism Colorblind?" (2002) questions the absence of color women in the international conferences in previous cyberfeminist meetings. According to Fernández in the First International Cyberfeminist Conference celebrated in Hamburgo on December 2001 it was proclaimed that RAWA members, a group of Arab cyberfeminists participated at the end of the conferences. Suspiciously, RAWA members were not invited to come before their intervention and they missed previous panels and debates. The organizing committee used the excuse of the English language, arguing that those previous conferences were in English, but later it was discovered that RAWA members spoke English. Apparently, as María Fernández indicates the cause of this discrimination might have had something in common with September 11th events (Fernández n/p).

In order to eliminate separatism and discrimination of White Western feminists and color and Eastern feminists María Fernández and Faith Wilding founded Subrosa with the aim of opening a space where relevant topics could be debated by color women. The main subjects discussed by Subrosa deal with race, literature, digital art and assisted reproduction (or artificial fecundation). Present day they keep on organizing workshops and cyberfeminist conferences.

4. Cyberfeminism as international activism

Nowadays cyberfeminists use the Internet as a useful tool to denounce gender violence cases in the world: domestic violence, genital mutilation, incest, sexual traffic, children exploitation (whom most of them are girls), immigrants in pornographic websites, etc. At this point I would like to show the cyberfeminist practice, its international impact and its positive results in women's visibility and some rights achievements.

Before the OBN International Conference in Kassel, in 1997, in the IV Women Worldwide Conference in 1995 in Beijing the First International Cyberfeminist Practice took place. As the Spanish cyberfeminist journalist Montserrat Boix informs, a group of 40 women from 24 countries provided formation and support to 1.700 users in 18 languages (Boix n/p). Women from all places of the world followed on-line debates and projects of the conference without needing to leave their houses in real time. The same year numerous cyberfeminists created a website called FACES, it is an international website for women of the media and Computer Sciences: artists, programers, theoreticians, designers, curators and Djs, among others, in the diversity of the digital field (FACES n/p).

Present day feminists inform about conferences and meetings on women in the new digital environment and other gender issues in social networks, blogs and digital newspapers. Women use new technologies to find information about their citizen rights, to help each other to find a job position, to subscribe in feminist associations, vindicate gender and social injustices in their personal blogs, publish their artistic or literary works with feminist content -without needing to be accepted by publishing houses or institutions which may show no interest in women's issues-, etc. We can also find online statistics of the number of women who are presidents, scientists, writers, artists and composers in the world, the number of victims of gender violence, femicide, etc. Cyberfeminism is growing up and we count with numerous women websites in the world. Some cyberfeminist theorize, others create art and literature, others are Internet activists, others are hacktivists -they enter into public website as hackers to dismantle media lies- and others organize workshops and activities that improve women's participation in cyberspace, which has become one of the public spaces more visited in the 21st century.

New technologies are used as empowering weapons in Western as well as in Eastern countries. An interesting example: in 1999 a women group in South Asian created "The South Asian Women's Forum for Men and Women" (South Asian Women's Forum) this website is still working nowadays and the information it includes is updated. In this website we can read opinions of women and men about nowadays issues in the South Asian world such as: new fertility options, children's rights — in 2006 a law banned children younger that fourteen years from working — etc. One of the main researchers of women websites in South Asian is Radhika Gajjala, interested over all in discussions about Third World women. Annapurna Mamidipudi collaborates too, researching on socio-cultural and economic structures to have access to emerging technologies.

As far as African cyberfeminism is concerned, it is important to emphasize the website *allaafrica.com* and in which there is information and women's publications about education, equality and gender. Another example of African cyberfeminist website, French speaking in this case is *famafrique.com* which visibilizes feminist actions by women organizations. In Latin America in 2009 EFLAC (Encuentro Feminista Latinoamericano y Caribeño) (The First Feminist Latin American and Caribbean Meeting) was celebrated, cyberfeminist issues were discussed. Other Latin women websites are : *Red de Modemmujer.org* and the blog: generoconclase.blogspot in which Hispanic speaking women vindicate equality by means of news and articles about Pastún women's hell in Pakistan, Palestine conflict, femicide, the international success of the feminist comic "Persepolis" by Marjane Satrapi, etc. In Brazil there is a feminist consolidated activist group: *Feminismo Negro Na Internet* empowering feminist actions, it is called Feminismo Negro and it includes useful information about racial and gender equality.

Basically in every country of the world women have created thousands of websites to promote women's participation in the new technologies in the last few years. There is a website on women and education for North and South Koreans *sookmyung.ac.kr*. Other cyberfeminist sites: in Russia *tac.spb.ru*, in Belgium *ada-online.be* the Canadian Women's

Internet Association: *womenspace.ca*, and numerous international websites in English language: *webgrrrls.com*, *feminist.com* etc. Besides, there is a wiki about gender studies: *wikigender.org*. The most recent cyberartists concerned with gender on the World Wide Web are the so-called *genderchangers.org*, a recent group which started in 2007 and organized their last workshop in 2010. They define themselves as women and women-identified gender minorities. "We belong to various generations and speak many different languages. What we share is a desire to shape the world we live in. As activists we make conscious choices about the technology we use" (*gengerchangers* n/p).

With regards to Spanish cyberfeminism it may be interesting to highlight: *e-mujeres.net* and *mujeresenred.net*, and Montserrat Boix blog with updated information on the most recent news on feminism and free software It also includes information about what she calls social cyberfeminism. Social cyberfeminism is about "joining women forces as the only possibility to reach the necessary empowerment to change the structures of patriarchy and achieve a more equalitarian world" (Montserrat Boix, Ana de Miguel, "Los géneros de la red: Los ciberfeminismos", n/p. Translated from Spanish by Maya Zalbidea Paniagua). In Mujeres en Red femicide cases are denounced such as the assasinations of women in Ciudad Juárez, campaigns for Afghan women or the situation of immigrant women all around the world.

Present day feminists use the new technologies as a means of communication, sharing information and free publication. On the Web all kinds of feminisms, -especially those which are the most recent such as ecofeminism, postcolonial feminism and trans feminismcan be found as well as other feminist activisms and theories which do not belong to any specific category. Most women and men who work on gender issues have similar interests: the eradication of patriarchy, gender violence and femicide. In cyberfeminist websites intersubjectivity works among feminists to promote the idea that every woman is different from all the others and therefore the only way a feminist can agree with other feminist is by sharing emotions. In Electronic Literature, New Media art and cyberfeminist projects the writer and participant on a work on line shares the same feelings of the writer and can even express them by writing a comment in some open hypertexts, Websites and blogs. This way, intersubjectivity represents a comprehensive emotional, intentional/motivational, reflective and behavioral experience of the other (López-Varela Azcárate 126). Although there may be a regression on feminist theory and activism and there is a current struggle among different feminist perspectives (conservative and progressive feminist ideologies, some feminist theories are based on studies of women and men while others are focused on queer theory, etc) women connected to the World Wide Web can create international groups easier than never before and are able to get information about feminist studies and political working groups which organize manifestations, strikes, social events and local assemblies.

5. Benefits of teaching cyberfeminist hypermedia

In a feminist hypertext there are some crucial differences which allow readers to find multiple entrances (and exits) through links and lexias. This multilinearity produced by links and lexias makes possible qualities which cannot be possible in linear writings. Those characteristics are beneficial in a gender studies environment because they offer: multiple voices and a decentering potential which erases hierarchies in discrepancy about gender matters or among different feminist streams. In *Towards a Vector Model of Hypertext Narrative* (2002) Ingrid Hoofd affirms that a hypertext "has links/trails that can work as a metaphor,"

and that explicitly can visualise a 'stiching together' of what has been 'ruptured in societal discourses'" (Hoofd n/p). In texts about society's restrictions on gender the form of a hypertext illustrates how the self, as well as the hypertext, is fragmented and the reader needs to 'stitch together' the metaphors to understand the content. After the changing models of writing of postructuralism and postmodernism present day readers have to face the fact that there is not only one "truth" but multiple ones and gender cannot be defined on the traditional patriarchal code. Hypertext's multilinearity allows contradictions in the text that eliminate the simple oppositions of male and female, black and white. The multilinear nature of hypertext allows the layering of different voices and perspectives within one text. The importance of biographies and multiplicity of voices are not exclusive notions of hypertext, modernist and postmodernist fiction and nonfiction already exemplified multivocal novels. Mikhail Bakhtin writes about the dialogic, polyphonic, multivocal novel, which he claims "is constructed not as the whole of a single consciousness, absorbing other consciousnesses as objects into itself, but as a whole formed by the interaction of several consciousnesses, none of which entirely becomes an object for the other" (Bakhtin 18, quoted in Landow 56). Bakhtin considers the Dostoyevskian novel as a polyphonic literary form, a hypertextual fiction in which the individual voices take the form of lexias.

The multivocal novel is not something unique to hypertexts. Last few years feminists have written multivocal novels like Toni Morrison's *Beloved* (1987). A high percentage of feminist fiction and nonfiction is based on women testimonies: Alice Walker's *The Color Purple* (1982), Margaret Atwood's *Surfacing* (1972), Lee Maracle's *I Am Woman* (1988), etc. Nevertheless, feminist fiction in a hypertext counts with a series of elements which can illustrate equality messages in an innovative and powerful way: visual modes, images in motion and flashing graphics. A variety of typographies, colors and images in hypermedia reflect a particular mood and transmit a semiotic value. Multiple endings in hypertext fiction invite to the reader's reflection and can also be used as a feminist strategy to make the reader wonders how personal experiences are influenced by gender oppression, or on the contrary by gender subversion and freedom to choose a determinate kind of behavior and lifestyle. Besides, hypertext cyberfeminist fictions are written in a global environment and use a discourse which corresponds to present day gender and sexual issues: racism, femicide, immigrant women's issues, AIDS, transgender issues, etc. Thus, as Strickland claims: "E-lit is the mode of literature appropriate to new social conditions" (Strickland "Born Digital" n/p).

Collaborative authorship is being used more in hypertexts than in linear or/and printed texts and it benefits authors specially when a subject needs to be reinforced by multiple points of view to accomplish credibility, this is the case of gender matters which are treated by not only Western feminist authors but also other women from different ethnic origins and also men and transgendered people, such as in Shu Lea Cheang's *Brandon* (1998) and Francesca da Rimini's *Dollspace* (2007). In *Hypertext 3.0* George Landow claims that in a hypertextual environment, the figure of the author actually comes closer to the figure of the reader, because the reader becomes a more active co-producer of the text. Landow shows how both Roland Barthes and Michel Foucault problematise the modernist concept of the author. This concept closes off the text and plays down collaboration. Foucault, who coins the term 'author-function' to show how this concept is actually a mechanism of power in a (group of) text(s), argues that an author/writer is not just somebody who writes, but that the concept is highly socially and historically constructed. This author-function economically and culturally both exerts power and allows for empowerment. Foucault's critique allows Landow to theorise a much more multiple concept of the author, and this in turn potentially dramatically changes power structures academic scholarship, allowing for explicit collaboration. Furthermore, since in hypertext the boundaries between inside and outside the text get more blurred, which Landow also relates Derrida's idea of decentralising and to his notion of intertextuality of a text, 'the' author automatically gets moved away from its central position in the text/the field of (academic) writings, to become (just) a 'node in an information network' (Landow 129).

From a feminist perspective Ingrid Hoofd sees these features as positive for all kinds of feminisms. The concept of the decentered self/author, together with the proliferance of the information technologies, can allow feminist theory to take up a more fruitful hybrid notion of (nomadic) subjectivity. Furthermore, the potential lessening of hierarchies between academic texts and the foregrounding of collaboration, that together with the hybrid space of the internet tends to blur the distinction between the public and the private, are of great value to constructing a more inclusive account of feminisms (Hoofd n/p).

Feminists have always been interested in making public what is private to transform the idea that "a personal case", like for example a victim of gender violence cannot be considered an exceptional case when it is statistically found that it is a common tendency. At the beginning laws to defend women who suffered domestic violence were addressed against husbands. Later feminists showed that not only housewives but also many other women needed to be protected from aggressions by boyfriends or other male partners. Gender violence was developed during the second wave of feminism to determine that private personal cases should be publicly spoken to protect victims and educate the population that violent acts were not only physical ones. And that intangible also worked to bring these issued into public attention. Feminist autobiographies hold onto the reality of oppression and challenge the unified, rational subject of the humanist tradition. Feminists reject essentialist and universalist ideas of the "self" and raise the voices of the "selves" and "subjects-in-process", subjects relating to the social and historical world. This term, "subjectin-process" was coined by Julia Kristeva (1984) and means that the individual subjectivity is in a continuous process of differentiation and there is not a unified self. What happens when one subjective state is shared by two or more individuals?

The fragmentation of feminist hypertext fictions counters the idea that texts are unified and self-containing. Readers of feminist hypertexts need to read several times the hypertexts, reflect on their content and need to spend some time and even research to figure out the text's meaning, and often there is not one single correct meaning. The gaps in the text create ambiguity and open doors of possibilities of meanings. Differences in interpretation are part of the process of textual reception, a process which involves the reader's own position as well as that of the author(s) of the text. Susan Sullivan, professor of literature, uses feminist hypertexts for teaching precisely because of its fragmentation and celebration of subjectivities. According to her:

Hypertext makes use of these strategies, as the text is fragmented and contains different types of information, emotional and conceptual, personal and social, historical and current, official and unofficial, rational and unconscious. These different types of information are connected in hypertext trough juxtaposition, either within one page, as in collage, or through linked pages, as in filmic montage (Sullivan 36)

Hypertexts do not offer only one discourse like it happens in most of traditional narratives. In a hypertext each character speaks in the first person, generally addresses the reader and makes rhetorical questions to induce the reader to create his/her own answers. Anonymity can also be an advantage of hypertext writing. Ingrid Hoofds considers hypertext as a genderless kind of writing, George Landow calls this phenomenon "Erosion of the self" and "reconfiguration of the author". Sometimes the gender of the writer is completely unknown, like the case of famous electronic literature authors and critics whose abbreviated names do not designate a male nor female identity.

Teaching feminist electronic literature permits the instructor and student to update gender issues and discuss them taking into account that this medium permits rearranging the hypertext, better organized analysis of intertextuality, studying through association and connections which is the way human brain works and using dialogue in class and at home. George Landow affirms that "technology always empowers someone. It empowers those who possess it" (335). It is our responsibility to use it in a useful way, not to follow patriarchal codes, but to share information and promote non-sexist works as cyberfeminists promote.

6. Conclusion

Cyberfeminism is evolving in different spheres. It started as cyborg feminism, science fiction creatures of the Cyborg Manifesto by Donna Haraway and it is becoming a tangible and visible reality because virtual life is going beyond all the frontiers to get real. An example of how cyberfemism is improving communication, collaboration and activism among feminists is the case of the Integral Law of gender violence in Spain in 2002 thanks to cyberfeminist movements ("Hackeando el patriarcado: La lucha contra la violencia hacia las mujeres como nexo. Filosofía y práctica de Mujeres en Red desde el ciberfeminismo social" Boix n/p). Women still need to fight in order to obtain the same rights and socio-economic status as men, especially in countries like Iran, where cyberfeminism is penalized with imprisonment. For this reason it is essential to find new ways to eliminate inequality and discrimination against women, opening up new horizons and spaces.

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