Corrupting the Discourse: Cyberfeminist Praxis

By

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Submitted in partial fulfillment of the requirements
for the degree of Masters of Arts

at

Dalhousie University
Halifax, Nova Scotia
July, 2004

Your file Votre référence
ISBN: 0-612-94143-4
Our file Notre référence
ISBN: 0-612-94143-4

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Abstract

While some cyberfeminist collectives are cutting-edge and avant-garde in their practices, others envision a linear or straightforward trajectory of social change. This study involves an examination how social emancipatory theories conceptualize and centralize the term 'praxis.' Subsequent to this is an examination of the websites and web-based projects of three cyberfeminist collectives and one cyber-feminist collective. These case studies examine praxis as the central tenet within cyberfeminist strategies for disrupting and corrupting ideas that computer technologies are men's terrain.

This thesis distinguishes between cyberfeminism, a new form of feminism that focuses on inequality embedded in computer technologies and works to promote women's relationships with technology, and cyber-feminism, a type of feminism that uses the Internet as a communication and information tool for discussing women's situations and inequality without concentrating on inequality within cyberspace and computing.

Computer technologies and the Internet have emerged as important tools in the lives of many people, however they also provide space for dialogue, discourse and exploration. How cyberfeminists, as one of many groups working towards creating social change and equality, creatively and critically combine theory, art, and action on the Internet, illustrate how social emancipatory theories and movements can strategize praxis in imaginative and resourceful ways.

Abbreviations

Information and communication technologies = ICT

Old Boys Network = OBN

Acknowledgements

I would like to express my appreciation to all those people who aided in this research. I would like to thank my thesis committee, Dr Jarman, Dr Apostle, and Dr Thiessen, for their insightful suggestions, meticulous readings, and support of my research. I would like to further express my gratitude to Dr Jarman for the many conversations, persistent encouragement, interest, and guidance. I would like to thank Lori Vaughan and Mary Morash-Watts for their assistance in the SOSA office. In the early parts of this project, Dr Morgan and Dr Nuttall were very helpful in recommending materials. A number of people were kind enough to suggest (or lend) books and readings, and/ or discuss certain aspects of the project with me. Among them were: Dr Lois Jackson, Dr Rusty Neal, Dr Alison Hayford, Dr Graham White, Mary Phillips-Sandy, EDC/ JH, and my SOSA cohort. Finally, I would like to thank my family and friends for their support and encouragement throughout this process. All of you (and your help) are greatly valued.

Chapter 1.0
Corrupting the Discourse: an introduction

"I was born, born in a cage with a hidden key
I was taught, taught to distort, not how to see
The only lesson to learn – set yourself free
The only lesson to learn is how to set yourself free" (Furnaceface 1994)

"Despite all my rage, I am still just a rat in a cage" (The Smashing Pumpkins 1995)

What does it mean to be "corrupting the discourse?" "The discourse" can broadly be interpreted as the stories that weave individual lives into a social fabric; producing and maintaining inequalities between people, while shaping their opportunities. Further, "the discourse" can be described as part of what makes lives different, depending on people's gender, class, education, sexuality, abilities, location, and age. These stories are learned early on, as the meanings become clear of what places on the ladders people hold and how this affects people's actions/interactions/reactions with and to each other.

Within society there are social scripts that formally and informally govern society and people's actions. These social scripts, "the discourse," place people in certain cages, one on top of another and many at the same time. Meanwhile, the windows for movement appear limited when people live inside of these cages. Sometimes, people

may not realize they are caged. Instead, they may think that, if only they work hard enough, there is every opportunity; that there is "equality," and that people are completely free agents who are not affected by anything outside of the power and strength of their minds. At other times, people might think that they are placed in cages, and cynically regard it as "part of life" while going about living with resentment. They might realize that people are caged, but celebrate those cages as part of who they are, and what it means to be in those cages. Finally, there are times when people rage productively and maybe not in a traditional "raging" way, work to break out of their cages to free others so that they too have the choice to stay inside or live outside of their cages. When people fight to change the discourse, to make sure that none of the cages are worse than the others, to try to create greater equality, and develop ideas and new ways about looking at the world and society, they are "corrupting the discourse."

Cyberfeminists are "corrupting the discourse." They work to disrupt the association of men with technology. Cyberfeminists challenge the dominant narratives associated with technology: men created technology to serve their own needs and goals, women are outsiders to technological advancements, and women belong as neither creators nor users of computers and cyberspace.

Cyberfeminists employ a variety of strategies to corrupt the associations of men with technology and that women are incompetent outsiders of computer technologies.

They write about the gendering of technology, why this gendering is disadvantageous to women, and how to get more women involved in creating and using computer technologies. Cyberfeminists provide alternative spaces on the Internet where topics of concern and issues of interest to women can be discussed. Some teach computer skills to women so that women can navigate, use and create computer technologies. Others use art and promote creativity in academic discussions of 'women and technology.'

These cyberfeminist strategies are alike in that they embody *praxis*. Once social inequality is recognized, praxis is the key component in attempts to remedy social inequality. Praxis is the combination of theory and action in efforts to produce greater social equality. Praxis is about "corrupting the discourse" and is central in theories promoting emancipation and, as such, is a necessary central tenet of both Marxist and feminist movements and theories. Praxis involves the process of working towards creating social change. Because change is a process that involves various elements and efforts, from a variety of public and counter-public efforts, its' effectiveness cannot be measured by any single group or effort. There have been discussions on how feminists use praxis (Evans 1979, Matwychuk and Moss 1996, Stanley 1990), but little is known about what cyberfeminists are doing, how they are doing it, and their ways of "corrupting the discourse." This thesis offers a conceptual framework for discussing cyberfeminism (and one that distinguishes it from and defines cyber-feminism) and analyzes how cyberfeminist and cyber-feminist

collectives are employing praxis to challenge male dominance in cyberspace and with computers.

1.1 Broadening the Band

"Democracy comes into being after the poor have conquered their opponents, slaughtering some and banishing some, while to the remainder they give an equal share of freedom and power" (Plato 1964[504BC]: 424).

The issue of social inequality has been a major theme within sociological discourse. Unequal distribution of resources accords some people with greater power, influence, resources, and quality of life, while constraining those outside of the dominant or hegemonic groups. Until recently, social inequality has been most often divided on the axes of race, class, and gender. It has explored the importance of these categories in the distribution of resources and establishment of socio-political agendas. Recent discussions of social inequality have been opened to also include, among other signifiers, affectional preference/s, geographical location/s, abilities, and age.

Most feminist discussions of social inequality are cognizant of the importance of these categories in the allocation of opportunities and resources; that some people are allocated greater opportunities and resources on the basis of which categories they belong. Despite significant discussions of gender, and related inequalities, there remains a group of people who, on the basis of their sex/ gender, are systemically marginalized and less privileged within contemporary society. Advances in

technology, shifting definitions of public/ private spheres, and feminist practices and knowledge have been unable to remedy gender inequality.

Within contemporary society, women continue to be evaluated and treated differently. This is often based on women's difference from men and their supposed lack. Both Sadie Plant and Jacques Lacan go so far as to say that woman is the Other to the (male) default. When men and men's experiences are viewed as the norm, women and women's experiences are seen as outside of representation.

> It takes two to make a binary, but all of these pairs are two of a kind, and the kind is always of one. One and zero make another one. Male and female add up to man. There is no female equivalent. No universal woman at his side. The male is one, one is everything, and the female has '*nothing* that you can see.' Woman 'functions as a *hole*,' a gap, a space, 'a *nothing* – that is a nothing the same identical, identifiable… a fault, a flaw, a lack, an absence, outside the system of representations and auto-representations.' Lacan lays down the law and leaves no doubt: 'there is woman not only as excluded by the nature of things,' he explains. She is 'not all,' 'not whole,' 'not one,' and whatever she knows can only be described as 'not-knowledge.' There is 'no such thing as *The* woman, where the definite article stands for the universal.' She has no place like home, nothing of her own, 'other than the place of the Other which,' writes Lacan, 'I designate with a capital O" (Plant 1997: 35)

Women are not necessarily devalued because they are women. The devaluing of members of the socially and politically signified group "women" is based upon their absence of maleness. The problem is not that they are women, rather, that by being women, they are not men. Society has been constructed, and is maintained, in such a way that those who are placed within the socially constructed category of "men"

possess dominance within the political superstructure, recorded history, existing theories and set values (Belenky et al. 1997[1986]).

Computer technologies possess the potential to transform both communication and systems of storing and retrieving information. The increasing importance of computer technologies has solidified their emergence into what Smith (1987) refers to as a "relation of ruling." As a relation of ruling, women cannot afford to have their social inequality extend over into the realm of computer technologies. Other gains made in eradicating gender inequality may be lost through the social and political reconfiguration occurring with the permeation of computer technologies.

In attempting to eradicate gender and other forms of social inequality, the central concept and strategy within emancipatory movements and theories is praxis. Within the framework of emancipatory movements, praxis is defined as the joining of theory and action or practice. Knowledge unaccompanied by action is, at best, illuminating, while action removed from theory is quite fruitless. "Philosophers have only *interpreted* the world, in various ways; the point, however, is to *change* it" (Marx 1972 [1843]: 109).

In understanding how praxis is used for attempts to produce social change, Williams (1976) states that there are two forms of praxis: practice informed by theory and theory informed by action. These definitions are distinguished from theory without practical implications and practice without a theoretical foundation. Despite the lack

of recent emphasis on a Marxist definition of praxis, praxis continues to be a central feature of emancipatory movements and theories.

Feminism, an emancipatory movement and theory, holds, as a central tenet, the attempt to liberate women from oppressive forces related to systems of domination that work to privilege a select group while marginalizing and oppressing others (namely women). Feminism refers to a variety of theoretical and practical approaches to social, political, and economic inequality that is based on and related to gender/ sex. Feminists do this by merging theory and action in attempts to illuminate and improve the situation of women and gender-based/ gender related inequalities.

Since new information and communication technologies (ICT) have become established as a relation of ruling, and associated with those who 'have,' feminists have joined technological discussions. Some feminists have adapted existing feminist theory, practices, and praxis to suit the unique atmosphere of the Internet and issues related to women and technology. Some, such as Cockburn (1984), Spender (1995), and Stabile (1994), do this within a more conventionally feminist approach. That is, they describe technology as an area where women are under-represented and where women need to be represented in order to even maintain the current levels of social inequality. The proliferation of technologies has significantly affected the lives of many people, including those who use computer technologies and those who assemble the chips.

One of the main statements I assert in this thesis is that there are other feminists, cyber-feminists, like Feminist.com, one of the collectives studied in this thesis, who use technology to communicate with women and provide them with information about issues important in the lives of women. These cyber-feminists are distinctive from cyberfeminists (no hyphen). Cyber-feminists use technology as a tool for reaching out to women about issues important in their material (offline) lives but do not focus on the inequality embedded in the gendering of technology.

Cyber-feminists and cyberfeminists are often viewed as spelling variations of the same thing. However, one of the purposes of this thesis is to differentiate the two terms. Rather than regarding computers as mere apparati, cyberfeminists assert that there is current inequality within cyberspace and the creation and use of computer technologies. They further assert that women need to be represented as producers and users of computer technologies because computers and cyberspace represent fresh landscapes and terrains for women to experience greater equality. Key to cyberfeminism is also the belief that once there is equality in cyberspace, it can be expanded to the rest of the social world.

This distinction is important because one group, cyber-feminists do not focus on technological issues and women's inequality as producers and users of computer technology. Cyber-feminists use this relation of ruling as a method for disseminating

information about non-technological issues and the long-standing issues of women's inequality (for example, abuse and pay inequity). In contrast, cyberfeminists work specifically on women's inequality embedded within technology. They see this relation of ruling as something that women need to be involved in, in and of itself.

I will explore the theories, actions, and politics of one cyber-feminist collective and three cyberfeminist collectives as expressed in their web-based projects. I will explore how cyberfeminist collectives approach issues surrounding women's lower rates of access and participation in cyberspace in ways that treat cyberspace as a new frontier for women, not as a tool leading to the material lives of women. I will also provide an analysis of how cyberfeminist collectives hope to increase the numbers of women who use computers and the numbers of women who actively engage in creating/ producing new technologies and digital discourse. At the most basic level, this thesis offers an alternative narrative to women's relationships with technology, defines cyberfeminism, and differentiates it from cyber-feminism. Further, this thesis discusses how cyberfeminist collectives substantially use 'praxis' to approach these issues.

Cyberfeminists view information and communication technologies (ICT) as advancements embedded in systems of domination and privilege that need cyberfeminist intervention. ICT have thrown wrenches into our experiences of life and how we experience the world. Along with these aspects, they have created a new

environment that needs decolonizing. The advantage of the Internet and ICT, as opposed to women's inequality in the larger society, is that male dominance has not yet solidified. Possibilities for transformation and equality have greater potential in ICT than in other, more established, relations of ruling. Because the Internet and ICT have created new environments in need of feminist intervention, they have also presented the opportunity for more creative, and avant-garde feminist approaches. Just as gender inequality has not yet been irreversibly embedded in ICT, neither are feminist approaches for combating this inequality. It is necessary to explore the strategies, new, old, and revised, that feminists – cyberfeminists – are using in this digital frontier.

1.2 Research Question

This thesis explores the praxis of cyberfeminists through the online projects of cyberfeminist collectives. This project provides understanding in two main areas: it explores cyberfeminists' praxis and cyberfeminists' attempts to re-engender and dis-engender, computer technologies. Emphasis is placed on the collectives' mission statements, manifestos, website organization, and visual presentation, including the use of typography, icons, visual cues, and images as expressed in their projects and explorations of feminist practice, theory and praxis.

This study focuses on four unrelated collectives and, more specifically, on the web-accessible projects of these collectives[1]. The words "web-accessible" and "web-based projects" are preferable to the alternative "websites." The projects produced by one collective are no longer kept in a single website (location) of their own and are found in multiple locations thus problematizing the use of "website."[2]

While at least one collective, VNS Matrix, has formally disbanded, and another appears disbanded, this is not a symbol of failure. VNS Matrix was the first cyberfeminist collective and has influenced succeeding collectives. Further, a sign of practical engagement from emancipatory movements and theories is when the practices and perspectives evolve. For the most part, emancipatory movements and theories only help to promote social change if they themselves progress and go forward. Feminism today is not an exact replica of what it was in 1968, and if it was, it would be a statement that there has been no progress in the advancement of women. Thus, although one collective has officially disbanded and another, OBN, has all but formally disbanded, their members have gone onto form other collective and individual cyberfeminist projects[3].

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[1] Although distinct, members of these collectives sometimes inhabit the same social worlds.
[2] Since VNS Matrix dissolved in 1997, the website that comprehensively housed their projects has not been maintained. Some pages of their original website remain intact. However, many of their projects are now archived in other places.
[3] Julianne Pierce, one of the members of VNS Matrix, went on to co-found OBN. Francesca Di Rimini, also a founding member of VNS Martix, has moved on to a number of personal and collective cyberfeminist art projects. Similarly, some core members of OBN, such as Faith Wilding, have founded SubRosa. SubRosa is a cyberfeminist collective that focuses explicitly on gendered inequality and the implications of new reproductive technologies.

The study of these particular cyberfeminist collectives provides dialogue on the question of cyberfeminist praxis. Through the use of four case studies, the focus is on how cyberfeminist praxis varies. Just as there is no single feminist agenda, this thesis argues that there is no single cyberfeminist agenda or cyberfeminist praxis. The use of case studies permits an in depth exploration of each collective and how their strategies are shaped by the topics they highlight as well as the theoretical perspectives they use.

Cyberfeminism can be seen as a specific and distinctive branch of contemporary feminism, one that differs from cyber-feminism and borrows elements from feminism, technological discourse, and postmodernism. However, it is not a cohesive entity and contains its own subgroups. While all cyberfeminist collectives consider the relationships between women and technology, they are not uniform in the ways they broach and strategize this topic.

The findings of this thesis illustrate that each cyberfeminist collective chooses to employ praxis differently. They focus on diverse issues within the broad topic of women and technology. Each collective concentrates its energies on unique web-based projects. I argue that the data illustrates that each collective organizes its projects on a distinctive theme. Variations in theme occur because each collective focuses on different aspects of the relationship between women and technology,

employs theory differently, and uses various strategies and personifications of praxis. Each of these collectives does employ *praxis* even though they do not use the same strategies or envision the same future (or past) for women and technology. Finally, this thesis demonstrates that their praxis is not the same because the theoretical underpinnings and themes of each collective are not the same. Thus, each collective uses strategies that its perspectives and goals. The ways in which these collectives use praxis, a general concept for social movements, will be studied using Marxist and Neo-Marxist literature. Though cyberfeminists have a particular project, other emancipatory-driven factions could make use of the cleverness cyberfeminists employ.

1.3 Chapter Outline

The first chapter of this thesis has outlined the purpose of this study and the questions that it answers. The second chapter, "Casing it Out: methodology," discusses the methodology and theoretical questions used to analyze cyberfeminist collectives. This chapter situates discussions of case studies and thematically oriented content analysis. As well, I discuss how this type of approach is beneficial for the study of historical documents or cultural artifacts including material found on the Internet. Chapter Two also includes an overview of the philosophical, Marxist and Neo-Marxist conceptualizations of praxis, as well as feminist interpretations of the term and applies praxis to feminist theories and movements. Following the discussion of praxis, I establish the importance of using the projects of cyberfeminist

collectives, as opposed to those of individual cyberfeminists. This is accomplished by Sara Evans' 1979 discussion of the importance of collectives in feminist practices. Chapter Two concludes with a discussion of the research sample and a brief overview of how each of the four collectives differently broaches praxis within their web-based projects.

The third chapter, "Discoursing: literature review," reviews relevant bodies of literature. Praxis is located within cyberfeminist literature. I contend that cyberfeminism emerged from increased computerization and both feminist and postmodern theories. Women's relationships with technology are discussed, as are the ways in which feminists and cyberfeminists argue that technology has incorrectly been labeled as the domain and territory of men. Following the discussion of women and technology, there is a general overview of the social aspects of ICT and explores the impact and importance of technology in contemporary life.

In Chapter Four, "Corruptions and New Alternatives: one cyber-feminist collective and three cyberfeminist collectives," I discuss each of the four collectives. The first case study is Feminist.com. Feminist.com is cyber-feminist rather than cyberfeminist, and illustrates how feminist groups can use the Internet as a tool to communicate information to women and to increase women's involvement in feminist events in their communities. Opening with Feminist.com shows how some feminist groups are using the Internet and forces the question "well, what are the cyberfeminists doing?"

Illustrating the strategies oriented towards change that some cyberfeminist groups are engaging in, what follows are three case studies of cyberfeminist collectives: Old Boys Network (OBN), Studio XX and VNS Matrix. Similarly organized as the discussion of Feminist.com, OBN and Studio XX are organized so that discussions of their websites are followed by arguments of what the main theme is within the praxis of each collective's strategies and foci. I argue that the main theme within Old Boy's Network is the fusing of art with theory and activities to make cyberfeminism and technology "fun." I argue that their approach has limitations in that it proclaims open possibilities, but is simultaneously rather exclusionary. In contrast with the cyber-feminist perspective of Feminist.com and the cyberfeminist exclusionary inclusiveness of OBN, Studio XX focuses their cyberfeminist activities on skills transfer and promoting women's development of advanced technological and computer skills, and the importance of women's exclusive spaces in doing this. After introducing VNS Matrix, I use their projects to establish how they centralize the female body with technology and disrupt notions of the body as absent in cyberspace, while reconfirming women's relationships with technology. Luce Irigaray, the poststructuralist feminist philosopher taught by Jacques Lacan in the 1960s, was particularly influential on the work of VNS Matrix. Irigaray's (1999, 1997[1985], 1993, 1985) philosophy celebrates an idea of a natural or essential woman and makes central the female body and the importance of linguistics within theorizing the possible emancipation of women. VNS Matrix uses this theory to place women and the female body central within their projects. Because VNS Matrix views praxis and

cyberfeminism as more theoretical and does not have a specific website, this chapter section involves a more theoretically grounded approach than the other sections.

The fifth and final chapter of the thesis compares and contrasts some of the strategies employed by these groups and discusses how these collectives employ praxis, and the usefulness and importance of their approaches. In addition there is a discussion of important issues that no collective appears to tackle substantially, such as access to technologies and the potential for more conventional approaches, but are important in terms of using computer technologies for feminist principles and fostering the development of equality.

Chapter 2.0
Casing It Out: methodology

"Because they will try to convince us that we have arrived
That we are already there, that it has happened
Because we need to live in a place
Where we are truly alive, present, safe and accounted for
Because we refuse to allow our writing, songs, art, activism and political histories to be suppressed or stolen" (Le Tigre 2001)

"Feminist scholars produce case studies of feminist movement organizations in order to document the very existence of these settings and sometimes to challenge feminists' blindness about particular settings" (Reinharz 1992: 171).

This research consists of four case studies, one cyber-feminist and three cyberfeminist collectives, and a content analysis of each collective's web-based projects. This thesis explores Reinharz' explanation of the importance of researching emancipatory movements. I will be defining cyberfeminism and separating it from cyber-feminism, I will assert that although cyber-feminism and cyberfeminism are often considered the same, they focus on very different aspects of gendered inequality. Further, I demonstrate that cyberfeminism is oriented towards strategizing and challenging the relationship between women and technology, and further that these actions are motivated by a feminist praxis.

The case method allows me to delve into each collective and its practices. I am not attempting to make a statement for all cyberfeminist collectives. Instead, I am using

these four case studies to illustrate the differences and similarities between cyberfeminist collectives.

While the case method is beneficial for this research project, it also makes a larger contribution to feminist sociology. In her compendium for conducting feminist sociological research, *Feminist Methods in Social Research*, Shulamit Reinharz states that the importance of case studies of women's organizations or collectives are much larger than the research itself, which in this case is to differentiate between cyber-feminist and cyberfeminist praxis, argue that there is a place for the variety of cyberfeminist praxes, and assert that the range of strategies used by cyberfeminists is essential for broaching the numerous goals and focus points of cyberfeminist groups. Reinharz argues that sociology as a discipline suffers from the lack of case studies of women's groups and that feminists should be attempting to rectify this lack.

> At least three things were lost because sociologists did not do case studies of women's settings. First, sociology itself contributed to the invisibility of women and the disappearance of women's accomplishments from the historical record. Second, a distorted sociological understanding of women was reinforced because women's groups were not studied and the social forces responsible for women's status were overlooked. And third, sociology invited additional errors because generalizations were grounded in a single sex perspective.
> The first point – that sociology contributed to the invisibility of women and to the disappearance of women's accomplishments – have been voiced with regard to nearly every discipline. Many feminists have complained that we do not have the adequate historical records of the organizations and women's experience of them are necessary both as models for future generations and as the raw data of future secondary analyses, comparative research and cross-cultural studies (Reinharz 1992: 166)

Each case study includes a content analysis of the web-based projects of each collective. This is done to understand and recognize the themes, foci and praxes of each collective. Content analysis, the study of cultural artifacts, is also beneficial for the study of feminist organizations. Reinharz (1992) argues that qualitative feminist sociological content analysis is particularly useful for addressing questions of theory and identifying processes, which are the concerns of this research. This approach allows the research to proceed without interfering with the process. Thus, by choosing to study cultural artifacts the researcher has the opportunity to study the meaning of these projects without altering them. This also means that there is an unobtrusive opportunity to study what is there and what is absent.

> Cultural artifacts have two distinctive properties. First, they possess a naturalistic 'found' quality because they are not created for the purpose of study. Second, they are non-interactive, i.e. they do not require asking questions of respondents or observing people's behavior. Cultural artifacts are not affected by the process of studying them as people usually are. Instead, scholars can examine a written record or some other kind of 'text' without interacting with the people who produced it (Reinharz 1992: 147).

Carney (1972) refers to qualitative content analysis as a theoretically oriented content analysis. Choosing to conduct theoretically oriented content analysis on cyberfeminist praxis means that, as a valuable alternative to attempting to study every cyberfeminist collective, I have chosen a small select sample of cyberfeminist collectives. This purposive sample of four case studies permits contributions by fostering greater depth of study than the alternative of studying more collectives at the expense of

detailed analysis. This encourages a crossing from descriptive content analysis to an interpretative content analysis of the collectives' practiced praxis. This purposive, as opposed to random, sample contains breadth in the style of projects and variation in the types of collectives. Including cyberfeminist collectives with different foci and approaches will better illustrate the contradictions and possibilities under the umbrella term referred to as cyberfeminism.

The projects of the collectives selected as the research sample exist on the Internet as public records, cultural artifacts and historical documents. These documents were printed and later analyzed. For Holsti (1969) theoretically oriented content analysis is reliant on latent, rather than manifest, units of analysis. The choice to use latent units of analysis is valuable for Internet-based research because it takes into account various layers of information that need to be analyzed. In this research, I am studying various layers such as the text, design, and accessibility of the website/ projects and latent content analysis provides the opportunities to qualitatively study these aspects. This approach studies the layers of meaning embedded in the document to emerge, which is often more difficult to accomplish when the focus is on single words as units of analysis. The Internet is a highly visual medium and as such, the visual accompaniment to the discursive presentation is largely influential in communication; both the words and the visual speak to the viewer.

Crotty (1998) and Layder (1993) treat content analysis as essentially a quantitative and manifest method. Manifest content analysis is a more quantitative method. However, for this research, themes and practices are more important than specific words and concepts. Cyberfeminists, to varying degrees, orient their politics around the use of non-normative language and particulars of metaphor, typography, audio, and picture, as well as cultural references and social theory. Counting words will not reach an understanding of the strategies employed by cyberfeminist collectives in their web-based projects, nor will it encourage an understanding of the themes they reference.

The collectives will be referred to in the context of cyberfeminist discourse. Their projects will be discussed as choices of cyberfeminist praxis. The different themes they focus on illustrate the distinctive ways that these collectives approach topics relating to the digital divide and women and technology. The collectives serve as examples bridging the theoretical elements of discourse with the action of doing.

2.1 Template of Analysis

In order to analyze the web-based projects of the four collectives, I developed a template from which to operate my analysis. I noted the visual presentation of the website, the graphics and whether or not plug-ins were needed in order to correctly view the project/ website. For example, had one of the sites required Flash plug-ins, the viewer base would have been affected. Flash may look fancy, but loading the websites in a timely manner generally requires broadband Internet access. Some

websites not only require Flash plug-ins, but the latest version. This further limits the viewing base. As well as looking at those technical aspects and the visual aspects and images, I studied the ways in which the material was presented and the purpose of the website/ project. From studying those elements and the theoretical orientation of the website/ project and what the project was attempting to accomplish (i.e. what was being expressed and what the purpose was of trying to express this position), I developed could identify the projected audience.

2.2 Praxis

In order to understand "praxis," it is important to distinguish it from "practice." Though practice is often used as a synonym of praxis, a Marxist articulation of praxis demands a distinction of the two terms. While it may be linguistically sound to substitute practice or action for praxis, but doing so loses the meaning of praxis. Substituting practice or action for praxis leaves a dangling verb: what is being enacted. In contrast, the term praxis implies political activity.

Within the social sciences, praxis most often refers to theory with practical implications or theoretically framed activities and action. It is associated with Marxism and other theories of and about inequality, such as feminism. Praxis is considered key to emancipatory movements because it combines theory and practice, discourse and activity. It asserts there might not be a purpose to knowledge without a point, nor to action without roots and aim.

2.2.1 Grounding Praxis

"Praxis" originates from Greek mythology. Bottomore (1983) and Weldon (1978) assert that Praxis was an obscure, lost goddess in Greek mythology. In ancient Greece, there was a sculptor Praxis. His speciality was sculpting the human form in motion. Perhaps, it is coincidence that praxis means a form of thoughtful action and that there was also a sculptor with that name who took action and made it timeless in art. However, it is important to note that praxis is a word of historical roots and, perhaps, jumbled origins.

The term praxis has extensively been used in philosophy and has foundations in the work of Plato. While Bottomore (1983) argues in *The Dictionary of Marxist Thought* that Plato used praxis as a general concept denoting movement, my reading of *Republic* (1964[504BC]) found that Plato offered praxis as the key to creating social change and developing a democratic society. Within this political treatise, Plato makes clear that higher knowledge involves not just reason, understanding and belief, but also a fourth level, a perception of the lurking shadows (Plato 1964[504BC]). In order to understand, it is necessary to understand as many aspects of the setting, good and bad, overt and covert as possible.

> It was in order to have an ideal that we were inquiring into the nature of absolute justice and into the character of the supposed perfectly just man, and into injustice and the perfectly unjust man. We were to look at these two extremes in order that we might judge our own happiness and unhappiness according to the standard of happiness and misery which they exhibited and the degree in which we resembled them, but not with any view that they could exist in fact...
> Would a painter, in your view, be less expert because, after having delineated with consummate art an ideal of a perfectly beautiful man, was he unable to show that any such man could ever have existed? No, indeed. Well, and were we not creating an ideal of a perfect State? To be sure.
> And is our theory a worse theory because we were unable to prove the possibility of a city being ordered in the manner described...
> I want to know whether a conception is ever fully realized in action? Must not action, whatever a man may think, always, in the nature of things, have less hold upon the truth than words...
> Then you must not insist on proving that the actual State will in every respect coincide with the ideal: if we are only able to discover how a city may be governed nearly as we proposed, you will admit that we discovered the possibility which you demand; and will be contented (Plato 1964[504BC]: 331-332).

In book V of *Republic*, Plato has his students envision the ideal city. The base for action is in the development of an ideal. This passage illustrates that the accomplishment is not necessarily finding that the ideal exists or even having created it, but actively developing a conceptualization of the ideal, followed by working towards its' development. Plato asserts that without this initial conceptualization, it is not possible to analyze or critique the current situation, nor is it possible to produce change. Thus, it is praxis, the art of theorizing and actively working towards creating change, which is of great value.

Aristotle built upon Plato's use of praxis by arguing that society exists because of the actions of the population.

> Our conclusion, then, is that political society exists for the sake of noble actions, and not mere companionship. Hence they who contribute most to such a society have a greater share in it than those who have a greater freedom or nobility of birth but are inferior to them in political virtue; or than those who exceed them in wealth but are surpassed by them in virtue (Aristotle 1941[350BC]: 1189).

Throughout *Politics*, Aristotle argues that the actions of people should determine their positions within society. Thus, the collective actions of the poor should be able to surpass the protests of the rich and produce social change. The rich should not be able to control the society because of their wealth. Because the poor is the populace, if they are organized and motivated, they should be able to gain power. Although Aristotle writes about action and the acts of working towards social change as critical and crucial, he seems less convinced than Plato that the ideal society could ever truly revolutionize social relations.

Following Aristotle, there was a shift in the way that praxis was conceptualized, and it began to be regarded as a form of practical knowledge. Marx grounded praxis as a practiced knowledge more so than either Plato or Aristotle. Marx provided a return to the ancient philosophical roots of praxis and developed the contemporary notion of praxis as a merging of theory and action in goal oriented theory and theoretically motivated action. Marx regarded praxis as a necessary component for social and political revolution.

2.2.2 Centralizing Praxis in Marxist and Neo-Marxist Social Theory

Using a Marxist framework, praxis can be defined as "theory rooted in and connected to action" (Hayford 1998: ¶1[4]). Marxists have operationalized praxis and more narrowly defined it. Marxists view praxis as the synthesis of the thesis, theory, and its antithesis, action. As a synthesis, neither the action component, nor the theory component reigns dominant over the other, just as neither dictates the direction of the other. Praxis is not only restricted to action that is rooted within a theoretical paradigm, but can also exist as theory aiming to emancipate people from oppressive or dogmatic agendas. Marx argued that theory and action or practice cannot be separated and that there cannot be effective practice without praxis.

> Just as philosophy finds its *material* weapons in the proletariat, so the proletariat finds its *intellectual* weapons in philosophy. And once the lightning of thought has penetrated deeply into this virgin soil of the people, the *Germans* will emancipate themselves and become "men" (Marx: 1972 [1843]: 23).

Further defining praxis and using praxis for producing social change, Habermas (1974: 2) refers to action-oriented theory as "social praxis" and theoretically rooted praxis as "political praxis."

For Habermas, social praxis makes insight possible. Social praxis provides the insights that establish a foundation on which to build political praxis. He postulates

[4] Some Internet sources do not use pages, therefore making it more difficult to reference direct quotations from these sources. There is no uniform way to reference these sources. As a result, I have referenced the paragraph on the webpage.

three components of praxis which work to bridge social and political praxis: the development of theories, the testing of theories, and the selection of strategies that pose the solution of how to effect social change (Habermas 1974). This idea, drawn from Marx, separates theories of emancipatory efforts and movements from theory unrelated to social inequality. "Man must prove the truth, i.e., the reality and power, the worldliness of his thinking in practice. The dispute over the reality or non-reality of thinking which is isolated from practice is purely a *scholastic* question" (Marx 1972[1845]: 3).

Habermas' social praxis is suggestive of Aristotle's conceptualization of praxis. Stanley (1990) refers to this form of praxis, not as social praxis, but instead, within the particular context of feminist praxis, as "the feminist academic mode of production" (Stanley 1990: 4).

Political praxis, Habermas' second form of praxis, only occurs through the development of social praxis. Political praxis aims to overthrow existing institutions and infrastructure. Political praxis exists as the application of social praxis. Political praxis not only succeeds and rests on social praxis, but it also is the praxis that overthrows existing systems of domination and serves as the Marxist "revolutionary praxis." Within a Marxist framework, revolutionary praxis is the only way to produce massive social change.

2.2.3 Synthesizing Praxis

Because praxis exists as the synthesis of action and theory, while being practicable, treating it as a synthesis allows it to exist without either signified or signifier. The division of the literature between 'thinking' and 'doing' praxis illustrates the conflict in attempting to reconcile theory and action. This reconciliation is unnecessary within a Marxist framework that rests upon synthesis of a thesis and antithesis. "Thinking and being are certainly *distinct*, but at the same time they are in *unity* with each other" (Marx 1975 [1844]: 299).

Uranicki (1965) understood the problem in focusing on the reconciliation of action and theory as a problem of privileging and primacy. He argued that attempts to reconcile praxis results in assessing the importance of each theory and action. By assessing the importance of each, discussion disintegrates into an issue of privilege. It then becomes necessary to conceptualize which should be privileged and which is only secondary to the project. Thus, the answer to the problem of praxis is not to view praxis as a reconciliation of practice and theory but as a *fusion* of discourse and action. While reconciliation implies compromise, fusion implies a direct merge.

2.2.4 Feminist Praxis

There are as many different definitions of feminism as there are feminists. Mitchell et al. (2001) have each of the contributors in their book *Turbo chicks: talking young feminisms* include his or her definition of feminism. Each contributor's definition was

different, thus representing the diversity of feminisms. For the purposes of this work, feminism will be defined as sets of emancipatory movements and theories that challenge status quos and work in various forms and degrees, using a variety of strategies to illuminate and eradicate the social, political and economic inequality of women that is entrenched in the lives of the world's women.

In keeping with this definition, feminism can be described as being about thinking and doing. At its very roots, it is about recognizing, acknowledging, and theorizing systems of inequality, domination, and oppression and somehow working to elucidate and/ or change those systems. Feminisms use a compendium of theoretical perspectives to understand the situations of women and strategizing remedying gender inequality.

What many branches of feminism have in common is an understanding that, in many areas of social life, women have been accorded fewer opportunities, and that the lives of women have been affected by unequal distributions of power. Within feminism, praxis is a key component. Many types of feminism not only discuss the current social structure and social inequality but also work towards creating a more equal society.

Feminists have centralized the Marxist concept of "revolutionary praxis" in their attempts to counter and dismantle systems of male dominance. Matwychuk and Moss

(1997), Weedon (1997), and Stanley (1990) argue that feminists, in particular, have a vested interest in praxis in order to bring about social changes that would render gendered social inequality obsolete. In organizing for goals of producing social change, feminists need to negotiate the space that translates theory, ideas, and conceptualizations into innovative and creative concrete activities and actions.

Ferguson (1993) asserts that there are three types of feminism: praxis, cosmic and linguistic. She asserts that praxis feminism differs from the other two types because it focuses on collective organization rather than on autonomous individuals. I disagree with Ferguson by arguing that praxis is an essential part of feminism and that her cosmic and linguistic feminisms both employ praxis. However, these types of feminists do so differently than praxis feminists. Rather than focusing on linear or straightforward strategies of promoting social change, cosmic and linguistic feminists first attempt to offer different ways of thinking. I contend that this activity in itself embodies praxis.

Ferguson's definition of praxis feminism promotes the understanding that praxis is a central tenet within feminist discourse and activity.

> Praxis feminism is a subject-centred discourse that privileges the female speaking subject. It seeks a proper understanding of women's lives, and of the world women and men inhabit, in the words that women have to say. The possibilities for political change that it embraces are generated out of women's words and women's worlds (Ferguson 1993: 69)

In this context, "privileg[ing] the female speaking subject" does not mean adopting the standard standpoint feminist view that women can better understand the world because they experience the world through systematic disadvantage. It means that, rather than focusing on male experiences and attempting to understand female experiences from that, feminism must focus on the situations of women. Feminism and praxis both centralize subjectivity. By being active participants, feminists develop new understandings of the social world and alternatives to the current social world. Thus, there is potential for feminism, as a set of emancipatory theories and movements, to create changes in the lives of women as a group, and also within the lives of individual women.

2.3 Choosing Collectives

There certainly is no shortage of individual cyberfeminists who are independently disrupting the dominant discourses of women and technology and offering alternatives to the dominant discourse in their one-woman-armies. These women often subvert and challenge stereotypes about women's incompetence with technology, while claiming their own space on the Internet for their own websites and blogs[5].

[5] Blogs are webpages with frequently updated entries of short information. The term "blog" is derived from weblog (web-log) and is sometimes used interchangeably with "online journal." Because they require only short entries, and are quite casual in style, they are becoming increasingly popular for people of all ages. In fact, during the Liberal leadership race in autumn 2003, Paul Martin kept a blog detailing his experiences on the campaign trail.

However, and not to undermine the efforts of these cyberfeminists, collectives are, in many ways, an integral part of Marxist praxis. Marx (1972a [1845a] 1972b [1845b]) asserts that in revolutionizing social relations, it is necessary for the proletariat to actively unite many individuals to work for change, as opposed to having individuals each labouring in isolation, working towards emancipation. Because of the importance of collectives and collaborative efforts in Marx' understanding of praxis, and because his ideas of praxis are the theoretical foundation of this thesis, it is necessary to consider collectives and their strategies for creating change.

Feminism, like Marxism, recognizes and encourages the movement of groups of people actively using praxis in attempts to achieve their social goals. The heart of the second wave feminist movement arose from the civil rights and new left movements of the 1960s that were largely influenced by Marxist ideas for change. From these beginnings, feminism itself also valued the importance of collective efforts in creating social change.

> Thus the women's liberation movement was initiated by women in the civil rights movement and the new left who dared to test the old assumptions and myths about female nature against their own experience and discovered that something was drastically wrong. And they dared because within these movements they had learned to respect themselves and to know their own strength. They could do so because the new left provided an egalitarian ideology, which stressed the personal nature of political action, the importance of community and cooperation, and the necessity to struggle for freedom of the oppressed. They had to dare because within the same movement that had [given] them so much they were simultaneously thrust into subservient roles – as secretary, sex object, housekeeper, 'dumb chick' (Evans 1979: 212-213)

Evans (1979) argues that women informally linked together to discuss their personal experiences as women and to find the common threads in their stories. These groups, where women were able to discuss their experiences, became a means for "spreading the word" and getting other women to question their 'personal' experiences and to frame them more sociologically as 'political' issues

> The qualities of intimacy, support, and virtual structurelessness made the small group a brilliant tool for spreading the movement. Anyone could form a group anywhere: an SDS [Students for a Democratic Society] women's caucus, a secretarial pool, a friendship circle, a college dorm, a coffee klatch. Each small group – and soon there were thousands – created a widening impact among the families, friends and co-workers of its members (Evans 1979: 215).

Just as small groups or collectives were helpful in disseminating feminist ideas for the second wave, cyberfeminists too have recognized the positive aspects of working together. Through group efforts and group consciousness, not only are members supported by each other and able to build on the skills and knowledge of each other, but they are also capable of mobilizing greater numbers of people. While second wave feminists may have had to form groups from those women sharing geographical space, the Internet and cyberspace allow cyberfeminists to form groups of interested participants regardless of the geographical location of each member. Cyberfeminist collectives possess the technological skills needed to use computer technologies for corrupting the discourse and to promote the efforts of their groups. Cyberspace permits the development of praxically-oriented groups through its unique strategies for uniting likeminded people and disseminating information.

2.4 The Research Sample

The research sample I selected is from the population of cyberfeminist collectives with projects either in English or translated into English[6]. Because of language barriers that cannot be overcome during the time frame of this thesis, projects written only in Russian, German and Dutch cannot be considered despite their influence in cyberfeminist discourse. I limited the sample solely to collectives. Websites and web-based projects produced by individual cyberfeminists and cyber-feminists were excluded.

The population of English based cyberfeminist collectives is rather small, and consists of roughly 10 collectives. I selected three collectives based on their interests and diversity. I wanted to have cyberfeminist collectives that focused on different issues and used a variety of strategies. There are approximately 35 English cyber-feminist collectives (excluding those directly affiliated with feminist groups, magazines, and associations). I chose Feminist.com, a cyber-feminist collective that is not an offline organization. This group effectively uses the Internet as a tool, and does not explicitly focus on equality embedded in technology and cyberspace.

[6] One collective, Studio XX, has both French and English versions of their website and the two mirror each other. Another collective, OBN, has projects in both English and German on their website. I will only be referring to the English pages of these websites and their English projects.

I first became acquainted with online feminism in 1998 and started practicing cyberfeminism in 1999. I am a member of many online feminist groups, developed a few feminist websites and blogs, and in 2001 created a (largely) defunct cyberfeminist collective. I have maintained three of the websites and continue to be involved in cyberspace as an individual cyberfeminist. My experience within online feminism and cyberfeminism helped me to exhaust the population. I also performed many Internet searches for "cyberfeminism" and "cyberfeminist." From one site, I linked to another, and from that another. Through these various sources I found dead ends, dissolved websites, disbanded collectives and the four collectives studied in this thesis.

The collectives selected for this research differently broach feminism and their own cyberfeminist agendas. Cyberfeminism is not uniform and each collective offers its own perspective of the relationship between women and technology, and gendered social inequality. Each collective explores a specific interest and type of cyberfeminist discourse. Through my analysis of these collectives, I found that not only do the collectives have varied interests, but they also approach praxis in different ways.

Through my analysis of the web-based projects of cyberfeminist collectives, I found that each collective uses praxis differently in relation to its focus, issues, and goals. Each collective produces different projects and work on fundamentally different subjects related to the encompassing frame of "women and technology." It became

clear to me that there is no singular cyberfeminist praxis to be extracted from the data.

This thesis is an exploration of the four themes that emerged from the four collectives studied in this thesis. Feminist.com, the cyber-feminist collective, uses the Internet as a tool for disseminating information relevant to the material aspects of women's lives. By contrast, I found that these cyberfeminist collectives treat cyberspace as a new place or landscape in need of feminist intervention. Studio XX is focused on building and developing women's skills with computers and programming, while encouraging women's participation with computer technologies. The Old Boy's Network creates alternative discourse about cyberspace and what it means to be connected by blurring the distinctions between cyberfeminist theory and art, thus making both more styled and sophisticated. Finally, VNS Matrix destabilizes the association of men with technology by placing women as central figures within technological discourse and re-centralizing women's connections to technology. All four themes involve activity and action.

Each is concerned with challenging existing discourse about women and technology. These collectives work to corrupt the gendered technological discourse that renders women outside the equations of computer technology creator and users. I have used the word "corrupt" in the title and throughout this thesis because it is not only a useful description but plays on the term "corrupt file;" a file that was once thought to

be fine but is now no longer treated as such by the system. These collectives' strategies for dealing with "women and technology" differ and they work on challenging and corrupting specific parts of the dominant stories on the gendering of technology. Each collective approaches cyberfeminism differently because they are shaped through different feminisms and feminist theories.

It is critical to understand how theoretical perspectives can differently influence activities and praxis. Because praxis is rooted in, and combines, theory and action, praxis is affected by the theoretical perspective/s that supports the projects. Theoretical perspective also influences not just approach to efforts to create social change, but the issues that are deemed needing social change.

Chapter 3.0
Discoursing: literature review

3.1 Cyberfeminism

There are often discrepancies and a lack of consensus within specific theories and movements about what the theory or movement is exactly, what it is working towards and how effective it is in achieving or working to achieve those goals. At that point, the movement or theory has become large enough that it encompasses a wide array of perspectives and practices. If that is the case, then cyberfeminism has arrived as an umbrella term, sometimes used overzealously, and one of which there are many sub-groups. Exacting a definition of cyberfeminism is increasingly difficult. Cyberfeminism resists definition and cyberfeminists are more inclined to offer its anti-theses rather than confining it within a single definition or operational concept[7]. Sollfrank (1998: ¶1) states that part of her "cyberfeminist strategy" is refusing to answer questions asking for definitions of cyberfeminism. I think that despite the resistance to box cyberfeminism into a definition, a definition of cyberfeminism needs to be erected. Cyberfeminist groups have fundamentally different approaches to technology and its importance for women. Cyber-feminists use geographically bound feminist frameworks while employing the Internet and cyberspace as tools for

[7] The Old Boys Network (OBN) compiled a list of cyberfeminist anti-theses. Their complete "100 Anti-Theses of Cyberfeminism" can be found at http://www.obn.org/cfundef/100antitheses.html.

communicating feminist dialogue. They do not treat computer technology and cyberspace as a specific area that also needs feminist intervention. In contrast to the notion that the Internet is a tool, cyberfeminists are attempting to create a new type of feminism, cyberfeminism, that is not geographically bound, in order to discuss the importance of the new locations and spaces cyberspace has created for women to play and work with. While they also use the Internet as a tool, they focus on the inequality embedded in technology and technological discourse. For cyberfeminists, computer technologies are not merely a medium for communicating about social inequality; these technologies are regarded as possessing and fostering social inequality in and of themselves.

In this section of the literature review I wish to establish that there is currently no real consensus about the central principles/ tenets of cyberfeminism and that a variety of perspectives are considered cyberfeminist. I want to offer a more concise definition of cyberfeminism, and the term cyber-feminism as more fitting for some of the material currently considered cyberfeminist. I will trace the roots and foundation of cyberfeminism, and I will argue that Donna Haraway's "A Manifesto for Cyborgs" is only one element of the foundation of contemporary cyberfeminism. Haraway's approach is only one way to study the relationship between women and technology and other approaches, such of that of Sadie Plant, are also very helpful.

Haraway (1996) argues that the development and proliferation of computer technologies has been largely speared by U.S. militarism. Though U.S. militarism is intrinsically involved in the development of computer technologies as a relation of ruling, and it is important to recognize this element, I want to concentrate on an alternative story of the advancement of computer technologies. Plant (1997, 1995) asserts that women's history with technology existed before the U.S. military started to promote the development of computers in the 1940s. Plant argues further that women's relationships with technology need to be reclaimed by and for today's women.

> Like everybody else, I had bought the story that computing had emerged from the worst, most obvious kinds of masculine desire and patriarchal organizations. When at first I found that a Victorian teenage girl (Ada Lovelace) had effectively invented the first computer, or certainly written the first computer software, it was obviously an amazing discovery. It immediately seemed to me that this fact in and of itself completely changed the whole picture.
>
> To then learn that she did this partly by noticing the possibilities of the Jacquard loom, the most advanced automated machine at the time, gave the history of computing a relation to weaving, one of the most denigrated, neglected, and also very female practices. Weaving hasn't been considered an art or a science, but of some kind of in-between practice that has never been given much credit. So not only did we now have a young female figure at the beginning of the history of computing, but also a connection that could be traced back to the most basic kinds of weaving. Weaving then began to emerge as, perhaps, the most basic kind of technology (Plant cited in Kroll 1999: ¶5-6).

Although the origin of computer technologies does not necessarily restrict the possibilities of them, this alternative version of computer technologies demonstrates that it is not a mere possibility to get more women involved with technology, but that

it is something that was once the case and can be again. Haraway's argument that computerization progressed through the advancements of male academics working for the U.S. military to assist in Cold War intelligence is often the starting point for discussions of computer technologies. Ada Lovelace, working with Charles Babbage[8], developed the first computing machine in the nineteenth century. This changes the narrative about the history of technology and for whom and for what purposes it was developed. As such, choosing this narrative and history has many implications for women and computing. Following the theory outlined by Haraway and the narrative that cyberfeminism developed as a result of her "A Manifesto for Cyborgs" means that computers are rooted in the attempt to secure male power not only over citizens but other nations and, most basically, over all "others." Computers then seem not only male but also as tools designed to encourage and support a particular state's control, as Haraway (1996) asserts computers and the Internet were developed by the U.S military to aid in intelligence operations during the Cold War. Placing women inside of this equation is less than ideal. If it is understood that a young woman from her study of the loom, a disparaged and gendered invention, helped to develop the first computer, and certainly its' software, the history of technology is not rooted in power and state control but in an area where women have a great history.

[8] Babbage is often solely credited as the creator of the analytical machine. Lovelace's recently discovered notes, as well as new interest in the subject, have found that her work explains the analytical machine and concepts of computer programming. For a more detailed analysis see Baum (1986) and Wooley (2000).

What follows in this chapter is an application of Plant's theory. Plant opens the doors for women to design and use computers and software applications. She states that if we support the hopefulness of her theory about the history of women in computing much of the battle over increasing women's participation and comfort with computers is fixable. "Almost the only obstacle to getting women involved with the technology was somehow this deep-seated conviction that the whole history of it, the whole significance of it, was peculiarly male" (Plant cited in Kroll 1999: ¶8).

As well, in this chapter, I place women's experiences with computers in the forefront, illustrating the history of women and computing, not only from the loom, but also women's involvement as computer programmers in the 1940s and 1950s. I discuss the contemporary period as one in which these histories of women and computing have been ignored and denied. While this thesis in and of itself provides a political history of cyberfeminism, this literature review also provides one of cyberfeminist discourse and the history of the relationship between women and computing. This history provides the foundation for the section on cyberfeminism in the literature and the differences between cyberfeminism and cyber-feminism.

3.2 Weaving Women with Technology

The discussion of women and technology must begin with the loom. Weaving and plaiting serve as the basis for virtually all other technological creations. The connection of computers, computer languages and even the Internet to weaving are much more than symbolic. It is not a coincidence that part of the Internet is referred to as the "World Wide *Web*." Mary Flanagan, co-editor of *Reload*, designed [Phage], a multimedia project, that illustrates the weaving and webbing of viruses, language and programming in a visual form so that we can 'see' the ways that machines mutate and multiply the materials they work with and create from. Not only is the webbing and weaving symbolic of the loom, but the project "with its viral process, creates a feminist map of the machine" (Flanagan, No Date, accessed on 09/04/04)[9].

"The computer emerges out of the history of weaving, the process so often said to be the quintessence of women's work. The loom is the vanguard site of software development" (Plant 1995: 46). Sadie Plant argues that computers, and the analytical machines of the 1800s before them, employ the process of weaving countless patterns, looping back to the loom, converging nature and intelligence in age-old ways "just as the Jacquard loom weaves flowers and leaves" (Ada Lovelace describing the looping of algebraic patterns on the analytical machines she invented with Babbage, cited in Plant 1995: 50). Thus, Ada Lovelace, the teenaged daughter of Lord Byron,

[9][Phage] and Flanagan's other projects that use weaving are available for downloading at http://www.maryflanagan.com/mediaproject.htm.

designed the first computer software by understanding the method of the Jacquard loom in weaving patterns onto materials.

Plato (1964[504BC], when developing the conceptualization of the ideal society, asserts that women should not be overlooked as consistently inferior to men, as women are superior in at least two areas: weaving and making pancakes. In his lecture on femininity, Sigmund Freud (1973[1933]) states that weaving has been women's sole contribution to invention and discovery. He continues on to state that the unconscious motivation for women developing the art of weaving is that weaving and plaiting were not truly created as they imitate the maturity of pubic hair and that "the step that remained to be taken lay in making the threads adhere to one another, while on the body they stick to the skin and are only matted together" (Freud 1973[1933]: 167).

Plant (1997, 1995) argues that rather than interpreting Freud's comments as disparaging, women need to celebrate this assessment of women's technological creation. Weaving, she argues, is the basis for all other discoveries.

> Weaving has been the art and science of software, which is perhaps less a contribution to civilization than its terminal decline. Perhaps weaving is even the fabric of every other discovery and invention, perhaps the beginning and the end of their history. The loom is a fatal invention, which weaves its way squared from the data set. It seems that weaving is always entangled with the question of female identity, and its mechanization an inevitable disruption of the scene in which woman appears as the weaver (Plant 1995: 56).

Women claiming ownership of the creation of weaving and the loom is greater than the two inventions themselves. These inventions symbolize the merging nature and culture, provided the basis for succeeding technological inventions, and provided manufactured cloth, a staple of many societies. Weaving fostered the development of further changes, many of which have been used by men as their agents in propelling inequality. If Freud's argument that women have been exempt from any kind of cultural invention other than the loom is correct, this is, indeed, a huge contribution. The loom not only propelled advances in manufacturing but also laid the foundation for the Babbage/ Lovelace analytical machine and its' software, the precursor to all computers and computer programming. This history, of the loom and its connection to the analytical machine and subsequently to the computer, has often been lost in narratives about the development of technology. References to women have been taken out and, in turn, technology has been claimed as the creation, product and tool of men.

> Like woman, software systems are used as man's tools, his media and his weapons; all are developed in the interests of man, but all are poised to betray him. The spectacles are stirring, there is something happening behind the mirrors, the commodities are learning how to speak and think. Women's liberation is sustained and vitalized by the proliferation and globalization of software technologies, all of which feed into self-organizing, self-arousing systems and enter the scene on her side (Plant 1995: 58).

3.3 History of Women and Computing

Mid-twentieth century computer programming was seen as women's work. ENAIC (Electronic Numerical Integration and Computer), the main computing branch of the U.S. government, primarily employed women as programmers during 1942-1955 (Fritz 1996; Goyal 1996). These women had degrees in mathematics, sciences, and physics. Despite their educational backgrounds, which today are still considered to provide the foundation for good computer programmers, women were thought to be better programmers because of the "type" of work it was. Computer programming was seen as tedious and boring work that combined hand calculations, telephone operating and secretarial typing. It was also underpaid. "Women were often stereotyped as being good candidates for programming. Programming requires lots of patience, persistence and a capacity for detail and those are traits that many girls have" (Goyal 1996: 37).

Over time computer programming was regarded as a more sophisticated combination of mathematics and science, and even the small percentages of women with degrees in those subjects were considered unqualified. The increased profile of computer programming, and the increased importance and perceived complication associated with programming, pushed women out of these jobs. However, the numbers of men involved jumped along with salaries, prestige, and opportunities for advancement. In the 1940s, virtually all computer programmers were women, while during the last twenty years, the number of female computer programmers has remained constant,

fluctuating slightly around 25 percent. However, the number of computer science degrees awarded to women has been sliding since the mid-1980s (Balfour 2002 and Woodka 2001).

The importance and relevance of computers and computer technologies in the contemporary period cannot be denied. Computers are no longer regarded as atypical objects and the subject of science fiction novels and comics. Computer technologies have seeped into the everyday consciousness of people and have become an area in need of feminist intervention. Because computers are a locus of power, it is extremely important to destabilize notions of men and technology, technology as men's tools and toys and to increase women's access to, skills about, and interest and involvement in and with computers.

Dale Spender (1995) argues now that so much of our information and communication relies on computer technologies, women's involvement is imperative. It is necessary that feminists work to decolonize the Internet and computer technologies in order, not only to promote women's equality but also, to prevent women from becoming less equal than we currently are.

> There is nothing optional any longer about computer involvement. The electronic medium is the way we now make sense of the world, and this is why women have to be full members of the computer culture. Women have to take part in making and shaping that cyber-society, or else they risk becoming the outsiders: they will be the information poor (Spender 1995: 168).

3.4 Women and the Proliferation of Computer Technologies

Some theorists of women and technology reject Plant's approach and instead argue that the numbers of women who use computers tell a story about the relationship between women and technology. I think that these figures, and the theories that have arisen from them, do not necessarily need to reject Plant. Rather, they can be used to illustrate how men have taken ownership of technology, and have made women outsiders in creating/ using technology, even though it was women's technological invention (the loom) that allowed the development of the technology succeeding it.

Stabile (1994) argues that feminists have been among the last people to accept technological advances and overcome technophobia. Considering that ICT have been developed primarily in the interests of both the military and men, there is fear that advances in ICT could be used to further marginalize women. Cockburn (1985) argues that men have possessed virtually all vehicles of power, from state organization to control over women's bodies. She asserts that the taxonomy women's skills have been placed in (those outside of relations of ruling) do not include having women play a significant role in technology and technological development (Cockburn 1985).

Statistics on women's involvement with computers vary in each region and each year. Women's participation with computers has increased since the early 1990s (Shade 2002, 1998; Scott et al. 2001; Spender 1995). Scott et al. (2001) report on women's

use of the Internet. Their finding is that American women are the most well-represented women in cyberspace; in April of 1995 they accounted for 17% of Internet users and by April 1998 that percentage had jumped to 41%. However, in Europe women's percentage of Internet users was 7% in April 1995 and in three years had risen to 16%. These same researchers argue that only 5% of Internet users in Japan and the Middle East are women (Scott et al. 2001).

Although the percentage of female Internet users has increased, women are less likely to work in information technology and to take computer science now than fifteen and twenty years ago. Balfour (2002) states that in 1984 women represented 37% of North American students enrolled in computer science courses. However, the number of women taking those courses has declined annually since then and by 2005 is expected to plummet to just 16%. Woodka (2001) states that the percentage of women earning computer science degrees in 1986 was 37% but that by 2001 it had dropped to 25%. While women's enrolment in computer science has dropped, women currently receive about 60% of all undergraduate degrees (Woodka 2001).

Statistics Canada (2003b) documents that the number of women enrolled in engineering and applied sciences at Canadian universities rose 20.2% between 1997/1998 and 2000/2001, while the increase in the number of male students was 6.9%. However, in terms of absolute numbers, the number of men taking computer science continued to increase faster than the number of women. The percentage

increase of women is larger because the numbers of women enrolled in engineering and applied sciences is much lower than that of men. Women composed just under 21% of students enrolled in engineering and applied sciences in 1997/ 1998 and in 2000/ 2001 that number had increased to 23%. Unfortunately, there are no statistics specific to computer science.

Woodka (2001) asserts that women represent 46% of the U.S workforce, but only 30% of information technology workers. Statistics Canada (2003a) reports that in 2001 women represented just 25% of information technology workers. While women are represented as workers and students, women are drastically under-represented in computer technology-related fields and educational programs.

Within computer science PhD granting university departments in Canada, women are also under-represented as faculty. Davies et al. (2003) state that at computer science PhD granting universities in Canada in 2001, women represented only 16.5% of assistant professors and 7% of full professors. There is also a lack of female role models as high technology workers for women and girls. Though Statistics Canada's (2003a) document found that women represent 25% of information technology workers, Davies et al. state that women represent only "16% of the high-tech scientific workforce" (Davies et al. 2003: 2).

While there is no real consensus on why women are under-represented in computer technology related fields, and why these numbers have dropped since the 1980s, many theorists and writers including Cockburn (1985), Spender (1995), and Woodka (2001) note that girls are less likely to be encouraged to explore with computers and develop technological skills. They argue that it is imperative to get girls involved with computers as youngsters. Looker and Thiessen (2003) found that while boys and girls have similar access to computers at home and at schools, boys use computers more, and are much more comfortable and confident doing so. It's unclear if the Barbie™ computer[10] would have interested girls in developing skills in an area typically thought of as the domain of boys or if it would have confirmed stereotypes that "real" technology is for boys. The Barbie™ computer was taken off the market after just a couple of months. Therefore, it is not possible to evaluate the effects of explicitly gendered computers.

Girls are often under-estimated, even when they do have computer skills, and sometimes are treated as novices even when their skills and knowledge is comparable or better than that of their boy counterparts. Furger (1998) argues that this occurs, in part, because of a still unshaken image of the computer proficient as both male and

[10] In 1999 toy giant Mattel introduced and aggressively advertised boys' and girls' gendered computers to the North American market. Parents were encouraged to buy, and children to want, Hot Wheels™ and Barbie™ computers. As well as being stylistically oriented towards girls, the Barbie™ computer came with far fewer educational and skills oriented games. Goldhawk (1999) stated that the Hot Wheels™ computer was equipped with 12 educational programs of 20, while the Barbie™ computer only six.

socially awkward, an image that, while slowly changing, is one that many parents and teachers resist wanting to impose on girls. Gender inequality related to computer technologies is grounded in youth and thus carries into adulthood. The issue of women and computing contains a paradox: girls have fewer role models using, exploring, and excelling with technology, and this may be related to the decreased involvement of girls with computers, but women often don't have confidence in their computer skills because, as children, they did not receive the same encouragement as boys.

While mentors and encouragement of girls to explore with computers may transform some technologically based gender inequality, class and access to computers work alongside attitudes in gendered technological inequality. Class is an important factor in determining who has access to computers and who possesses technological skills, and it means that women are in a particularly precarious location. White et al. (2001) and Spender (1995) similarly argue that the double poverty experienced by many women limits the relationships women are able to develop with technology. Being financially poor poses a limitation to accessing ICT, for many women and being time poor means that many women who have the financial means to access ICT, may not have the time to acquire the necessary technological skills or the time to participate in ICT. White et al.'s (2001) female participants were concerned over the costs of computer systems and frustrated by the pressures to have top-quality (i.e. more

expensive) systems that require constant hardware upgrading and new software products.

3.5 Social Aspects of New ICT

> "It feels so 80s
> Or early 90s
> To be political
> Where are my friends (get off the internet)
> I'll meet you in the street (get off the internet)
> Destroy the right wing (get off the internet)
> I'll meet you in the street (get off the internet)
> This is repetitive
> But nothing has changed
> Am I crazy
> Where are my friends" (Le Tigre 2000)

> "As I have said many times: the future is already here; it's just not very evenly distributed" (William Gibson cited in NPR's "Talk of the Nation" 1999)

The 'digital divide' has left certain people with less power. Those who do not have access to and/ or do not participate in the use of computer technologies find themselves left behind and without power. Computer technologies have become more important and central to information gathering, communicating and knowledge production. This has made computer technologies a way for the global elite to keep in touch and disseminate information. Thus, those without computer access and skills find themselves marginalized in another devastating way.

Personal computers have become everyday objects for many people. Computers are used for day-to-day information gathering and communication. In particular, the

Internet connects people to a wealth of information and fosters easy and relatively inexpensive communication with offline friends and family, as well as with strangers known only through the Internet. Computers and the Internet have become the primary mode of information gathering and communication for a growing number of world citizens.

Initially, computer technologies were seen as the domain of computer scientists and social scientists did not accord much time or attention to their study. However, there became a need to understand how computers were affecting the social world and, alternatively, how the social world was affecting computers. Currently, the sociology of the Internet and the study of the social aspects of information and communication technologies is a rapidly expanding area of academic inquiry.

Social theorists of information and communication technologies (ICT) have been critical of the approach to ICT taken by technophiles and economist pundits who argue that ICT will produce greater global equality and improve the lives of all people. Patterson and Wilson (2000) are skeptical that there will be dramatic and positive effects produced by expansion of ICT or that the South, in particular, will benefit from increased technological infrastructure. Shade (1998) argues that further investigation into claims that ICT will create good jobs and accelerate the trend towards a knowledge-based economy needs to occur before feminists can blindly support technological advancement. Ho et al. (2002), Patterson and Wilson (2000),

and Shade (1998) similarly argue that relying on the market alone to level access to and participation in ICT is an ineffective strategy, and that there needs to be state intervention and sponsorship in democratizing access to ICT.

State intervention is seen as essential in the democratization of access because, despite drops in costs associated with computer hardware/ software and accessing the Internet, there continues to be a digital divide that separates those with access to ICT and those without access. Calhoun (1998 cited in Ho et al. 2002) argues that the Internet and access to ICT does not produce a new, radical democracy that empowers the weak and poor, but rather digital infrastructure enhances existing power structures.

3.6 Women in Cyberspace

Important to the discussion of cyberfeminist praxis is the overview of discussions about women in cyberspace. The collectives focus their activities on web-based projects and, indeed, the projects I have used as data for this thesis are exclusively web-based projects. Discussing women in society would be a normal part of a feminist discussion of the situation of women, and thus, I think it is critical to discuss what it means to be a woman in cyberspace. These collectives are working towards increasing the numbers of women creating, producing, and using technology. They are also trying to change the perception that technology and computers are toys of men and boys.

Cyberspace can, in some ways, be regarded as the remedy for the inequality of women. Without women's bodies, and thus being seen as women, women are able to fight the constraints of being the Other. Women's bodies are sometimes seen as the root of women's marginalization. Thus, it would seem that if women could escape their bodies, they might be able to eradicate gender inequality.

Despite being a location where women can escape the constraints of being seen or viewed as women, within cyberspace the body becomes even more critical in its absence. There are often few visual, tactile, or audio based clues and cues of identity in cyberspace (Fredrick 1999). This leads some cyberfeminists to play with the idea of stable or fixed gender identity. They may portray themselves as men or assume multiple embodiments in order to experience male privilege. Although those who practice this strategy may find it liberating, it is problematic in that it confirms male privilege and further marginalizes women's experiences and being.

Within cyberspace, where the textual is privileged over the tactile, gender is treated as a free-floating entity without an internal core or bodily base. Gender is seen as little more than play and performance and, as such, a commodity that can be traded and upgraded.

> The inner truth of gender is fabrication and if a true gender is a fantasy instituted and inscribed on the surface of bodies, then it seems that genders can be neither true nor false, but are only produced as the truth effects of a discourse of primary and stable identity (Butler 1999: 174).

Because they view gender as phantasmatic, some cyberfeminists adopt gender-switching as a form of cyberfeminist praxis. For these women, playing in cyberspace provides an idealized version of the public sphere that does not exist outside of the Internet. Within increasingly postmodern cyberfeminist ideologies, political signifiers of "'women' and 'men' (or young and old, or white and black) have lost any meaning... It is up to the individual to be whatever s/he desires – including donning the body/ies s/he wishes to appear in" (Klein 1999: 202).

Nineteenth century female authors such as Mary Ann Evans (George Eliot), Armandine Aurore Dupin (George Sand), Charlotte Bronte (Currer Bell), Anne Bronte (Acton Bell), and Emily Bronte (Ellis Bell) sometimes portrayed themselves as males in order to have their work taken seriously and published. Similarly, some contemporary cyberfeminists portray themselves as men so that they are no longer singled out in cyberspace as women or feminists. This allows women and feminists to experience cyberspace as male and non-feminist and thereby being part of the dominant groups. Feminists often experience harassment in cyberspace for providing counter-hegemonic discourse (Fredrick 1999). Because women are less likely than men to be using new technologies, women in cyberspace continue to be given more attention than men. Often this attention is both negative and unwanted. "On-line

women attract and get more attention, whether because of, or in spite of their smaller numbers. 'Real-world' men quickly notice this fact and appropriate it for their own advantage" (Stone 1995: 120). In addition to avoiding unwanted attention and harassment, cyberfeminists may want to portray themselves as men in order to understand male entitlement and take some of the entitlement reserved for men.

Cyberfeminist practices of gender performance subvert notions of natural and essential gender identity in cyberspace. However, these praxes do little to dismantle gender inequality or the gender schemas that work to marginalize women. Cyberfeminist gender identity play offers contradictions to stabilized gender identities. The problem with assuming male personas in order to feel entitled and empowered in cyberspace is that, despite working for individual women, the status quo that values men and male agency is reaffirmed and unquestioned. This strategy does not alter the situation of women as a group, nor does it alter the marginalization that women encounter. It allows individual women the opportunity to interlope and experience male privilege. Perhaps most problematic is that whether it is cyberfeminists who textually embody themselves as men, or portraying themselves as men, it is the men, whoever they may be, who retain power, dominance, authority, and agency. In cyberspace, because men outnumber women, participants are assumed to be men unless they have chosen a handle that sounds feminine. This confirms the notion that men are the Default, or norm, and women's position as the Other.

The collectives studied in this thesis do not subscribe to women's artful self-portrayal of men in order to get ahead as real-life women in cyberspace. Gender-switching in cyberspace is more of an individual rebellion than a group or collective effort. Further, arguing that in order to be successful in cyberspace, women must become men, is not helpful to the long-term project of increasing the numbers of women who are confident in producing and using computer technologies. These collectives reach out to women as women, and OBN to anyone who is willing to self-identify as a woman, to embrace the digital frontier. VNS Matrix, like Sadie Plant, goes so far in their projects as to argue that technology and women are historically and fiercely joined.

3.7 Background of Cyberfeminism

While many discussions of cyberfeminism begin with an overview of Donna Haraway, and attribute her 1985 "A Manifesto for Cyborgs" as laying the foundation for cyberfeminism, such an approach is ahistorical. It is not the cyborg, nor the chimera, that provided the foundation of cyberfeminism or to women's relationships with technology. Women have had a long but relatively unknown history with computers and their development and application. When the story starts in 1985 at the time that Haraway forecasted that the 'informatics of domination' had potential for women's freedom and emancipation from being the Other and that second sex, the long history of women and technology is lost.

In the collectives researched for this thesis, cyberfeminists understand the relationships of women and technology as grounded in the development of the loom. Sadie Plant, a British philosopher, based her work theoretically in that of Luce Irigaray. I recognise that it may seem unfathomable to use a Lacanian feminist perspective of technology to discuss 'praxis,' a Marxist term. And further, that some may find the perspective of a self-described socialist feminist such as Haraway more fitting. Haraway argues that technology has made all people the same. "By late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short we are cyborgs" (Haraway 1997 [1985]: 503). However, we are not all chimeras and we are not all the same. New technology and the development and proliferation of computers have not produced equality and the eradication of differences. In contrast, Plant argues that initially, women were tied to technology and efforts should be taken to try to reaffirm the relationships between women and technology. Plant argues that though there is inequality, women are 'naturals' with technology. As well, she confirms women's long history with technology, while asserting that if women can work effectively, technology can be used to free both themselves and technology from being men's pawns.

Haraway was one of the first feminists who recognized the potential of technology for transforming social relations, and argued that women needed to find a place within technological discourse, creation and use. Haraway stressed that defining and

using a socialist cyborg feminism is necessary in countering the 'informatics of domination.' She asserted that the 'informatics of domination' arose from technological advancements and work to further marginalize both the poor and women (Haraway 1997[1985]). Haraway offered a perspective of women and technology that was rooted and immersed in technology, combined with a pragmatic excitement about technologies. This combination led cyberfeminists to weave women, feminism, technological discourse, and postmodernism to form a new branch of feminism and new theoretical paradigms and practical strategies approaching the topic of women and technology. However, in the early 1990s when computers started to become more pronounced tools in offices, schools and homes, cyberfeminists challenged Haraway's approach to technology and women's inequality.

Contemporary cyberfeminism was developed in the mid 1990s, at a time when personal computers and the Internet both started to seep into the homes and lives of millions of people. Both Sadie Plant in England and the cyberfeminist collective VNS Matrix in Australia independently used the term "cyberfeminism" to describe the new form of feminism they were theorizing and practicing. They viewed this as a new type of feminism that concentrated on the interplay of women, technology, and feminism. Though working independently, both Plant and VNS Matrix were significantly affected and influenced by poststructuralism, Lacan, Freud, French feminism and, in particular, the work of Luce Irigaray. They used Lacanian or French

feminism as a theoretical base when attempting to counterbalance the male-dominated construction of ICT and male-dominated participation in cyberspace.

Plant connects women to computers by stating that both are used as men's tools, in men's interests. Plant's argument is that technology will overthrow systems of male dominance and privilege because women's abilities to knit, weave, and patchwork make them superior software engineers and computer programmers (Plant 1995). Increasing women's involvement in engineering and programming would allow women and technology to work together, through their similar historical purpose and past, to use the tools they possess in destroying the system/s of dominance that oppress them.

Plant uses Irigaray's essential woman to argue that the essentialized woman will overthrow male domination in cyberspace and male technological dominance. Though Lacanian feminism was most influential for early cyberfeminists, more recent cyberfeminists have been critical of this approach because of the ways that it essentializes both women and men. Luckman (1999) has been quick to critique Plant and to assert that the most important possibility created by the Internet is the possibility to escape, rather than reclaim or valorize, the concept of the essential woman.

3.8 Defining Cyberfeminism

Though some cyberfeminists, such as Fernandez and Wilding (2002), argue that defining cyberfeminism immediately narrows the pool of possible cyberfeminists, I think that it is necessary to define this new type of feminism. Fernandez and Wilding state that leaving the term undefined "attract[s] women from diverse backgrounds and orientations, particularly young women unwilling to call themselves feminists" (Fernandez and Wilding 2002: 18). While some cyberfeminists resist defining the term, or offer anti-theses of cyberfeminism, I think that certain contentions can be made. Firstly, feminism and feminist ideology is central to cyberfeminism. Secondly, as the four collectives illustrate, cyberfeminism is a branch of new feminism that is also influenced by technological discourse, postmodernism, and cyberspace

Cyberfeminists use cyberspace and computer technologies to reconstruct perceptions of both women's relationships with technologies and women. Spender (1995) argues that cyberfeminist representations of women replace traditional notions of women's inferiority with technologies. Images of incompetent women attempting to navigate in cyberspace are replaced with images of capable women successfully maneuvering in the digital frontier. Wilding (1998a) argues that coded and stereotyped representations of women and technologies are rendered obsolete through cyberfeminist practices. These representations are replaced with multi-vocal, recombinant, and hybrid images.

Cyberfeminists include a variety of women and approaches for increasing women's access to and comfort using computers. As Luckman states, "cyberfeminist exemplars include artists, designers, writers, academics and software developers, as well as other women for whom information technologies – and particularly the Internet – have become a central part of their everyday lived feminist politics" (Luckman 1999: 37). Like most other groups consisting of people from many backgrounds, with diverse specializations, they have different foci and strategies for achieving their goals.

3.8.1 Cyber-feminism

Feminist.com, the first case study, is an example of cyber-feminism rather than cyberfeminism. While this will be explored further in that case study, I think it is critical to separate cyberfeminist literature, which is what I will be exploring in this thesis, from cyber-feminist literature. When initially researching cyberfeminism, the breadth of material claiming to be cyberfeminist astonished me. Fernandez and Wilding (2002) state that one thing that draws otherwise non-feminist women to cyberfeminism is that it sounds sexy. Similarly, Luckman (1999) asserts that cyberfeminism is a popular label because it sounds avant-garde. "Cyberfeminist discourse gives voice to a particular 'woman with attitude' spirit within computer culture. This modern hip, sassy, post-feminist approach to life in a wired world holds substantial currency for many young women" (Luckman 1999: 37).

What was most disconcerting was finding articles, books, and book chapters on 'cyberfeminism' and reading them only to find that they were not about combining a feminist stance within cyberspace (as opposed to one mediated by cyberspace), corrupting notions of male dominance with and power over technology. Instead, they support using cyberspace as a *tool*, not as a *landscape* in need of feminist intervention in and of itself. While this alternative approach is equally as viable and important as cyberfeminism, I am merely stating that their subject matter does not necessarily fall into the definition of cyberfeminism I have exacted. I propose that the type of feminism that uses the Internet and cyberspace only as a tool be referred to as cyber-feminism.

Cyber-feminism can be seen as a form of feminism that embraces feminist and women's use of technology to discuss women's offline or material situations (not technologically based). This approach distances itself from the landscape of cyberspace, thus illustrating the significance of the hyphen between cyber and feminism. The hyphen is used to illustrate that though these feminists are using technology, their feminist philosophies are not embedded in and with technology and women's marginalization within technological discourse.

Chapter 4.0
Corruptions and New Alternatives: one cyber-feminist collective and three cyberfeminist collectives

Each of these collectives, Feminist.com, Studio XX, Old Boys' Network, and VNS Matrix, through their theoretical orientations, focuses differently on issues relating to gender inequality and women and technology. In this chapter I will be presenting information about one cyber-feminist collective and three cyberfeminist collectives. Each collective will be studied independently and their projects/ websites will be analyzed using the template established in Chapter Two.

Feminist.com, the first collective studied in this thesis, is an example of a cyber-feminist approach. They use their website to concentrate on providing information to women that relates to women's lives offline, in their homes, communities, workplaces, and other livelihoods. Feminist.com uses computer technology and the Internet as a tool for communicating and information storing. They assume that their viewers have access to computers and the skills/ confidence to use them. They do not broach the inequality that is currently embedded in technology.

Studio XX works to help women develop greater computer skills and comfort with design and production. They assume that in women-centered spaces (filled with

equipment, teachers and training) women can develop skills and confidence with computers. Studio XX stresses that once more women are involved in using and creating the digital landscape, it will become a more balanced place where women are represented and feel at ease.

The Old Boy's Network (OBN) argues in favour of women's involvement in creating alternative discourse. They merge art, (academic) writing, and theory to create projects that promote the fun women can have while creatively and theoretically corrupting and creating the discourse. They create their own equivalent of an old boy's network. Their network supports and encourages work similar to their own creatively critical projects.

VNS Matrix, like Sadie Plant, uses a perspective derived in part from Irigaray. Their projects embed women with technology. VNS Matrix' confrontational manifestos and images disrupt ideas that technology is a male space. As "the virus of the new world order," they provide alternative narratives that centralize women and women's bodies with technology and sabotage "big daddy mainframe" (the idea that computers and computer technology are the tools of patriarchal militarism).

4.1 Feminist.com
http://www.feminist.com

In 1995 notable American third wave feminists[11], among them Amy Richards, Ophira Edut and Tali Edut, formed Feminist.com. As well as having a core body of members of the group, they also have a board of directors consisting of many famous feminists. Though they are essentially a third wave feminist organization, their advisory board consists of many notable or "famous" feminists. The members of the advisory board are diverse and there is a representation of feminists across various professions: authors, musicians, actors, media icons, a Cherokee Chief, and editors.

The advisory board is also diverse in that, although the board's members are American, they are from a variety of ethno-racial groups. Amy Richards, vice-president of Feminist.com, has her former employer Gloria Steinem on the advisory board. As well, actress and fat activist Kathy Nijamy and feminist author Eve Ensler (*The Vagina Monologues*, 2000) are also members of the advisory board. These women are not known as "cyberfeminists." Despite this, the President and Vice-President of Feminist.com wrote a chapter on cyberfeminism in Robin Morgan's *Sisterhood is Forever* (2003), the follow up to *Sisterhood is Powerful* (1970) and *Sisterhood is Global* (1984).

[11] Third wave feminism is a sub-category of feminism that is generally thought of as being produced and practiced by women born in or after 1960. For further discussion of third wave feminism see Baumgardner and Richards (2000), Findlen (1995), Heywood and Drake (1997), Mitchell et al (2001), and Walker (1995).

They use cyberspace to connect primarily young women (Richards and Schnall 2003) to basic information about feminism and women's issues. Unlike some of the other collectives, they do not use sophisticated theory, metaphors or an elaborately designed website to encourage cyberfeminist discourse. In fact, fostering cyberfeminist discourse is not part of their agenda. Feminist.com focuses on using technology as a tool to connect women to information and each other. They believe knowledge and connection provided in cyberspace has the potential to bring about change in the offline situation of women.

> As we went on-line to check e-mail or surf favorite sites, it's easy to forget we're a part of a social transformation affecting how we live our lives. But as we appreciate the Internet making our day-to-day existence easier – how we shop, communicate, search for information – we need to recognize and take advantage of its enormous potential for creating social change (Richards and Schnall 2003: ¶2)

While there is not an established criterion by which to judge whether or not a website and feminist collective is a cyberfeminist collective, from my earlier definitions, Feminist.com is a cyber-feminist collective. Feminist.com provides information and links on topics that are important to women such as health, work, child custody, pay inequity, activism, feminism and upcoming feminist events. For this collective, the Internet is a medium for communicating information and knowledge with a broad base of women who might not otherwise have ready access to the content. In doing so, women become more comfortable using technology. Ideas that women do not belong in cyberspace are destabilized through these practices.

4.1.1 The Website: http://www.feminist.com

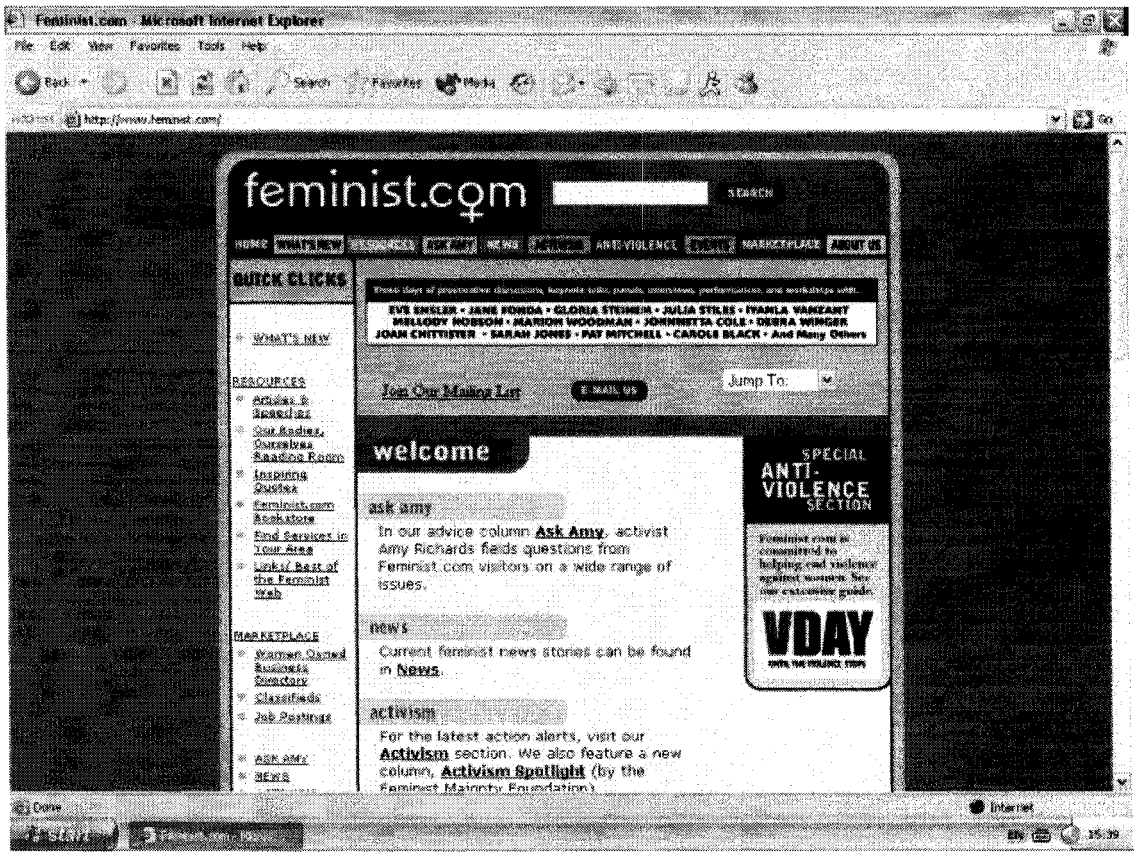

Figure 1: Screenshot of the Feminist.com website.

Feminist.com's website extends information about issues important in the lives of many women. They have an extensive website of information and one with capacities of reaching a broad and large viewer base. In contrast to the often highly theoretical discussions and relatively obscure cultural references present in the projects of other cyberfeminist collectives such as OBN and VNS Matrix, Feminist.com emphasizes what hooks (2000) refers to as feminism for everybody. Feminist.com provides an introduction to feminism, as theory, action, and praxis. In their section on activism,

they provide examples of ways that their viewers can become active. However, they do not presuppose that everyone who comes to their website is a feminist.

> People searching for 'custody' or 'unequal pay' or even 'female roadsters' can be virtually introduced to feminist resources without having realized that feminism was what they needed, after all. They get the chance to grasp their connection to feminism without first having to confront and overcome their biases against it. The process itself demystifies feminism (Richards and Schnall 2003: ¶9)

Feminist.com appears to be designed for providing information to people who have limited knowledge about feminism. Richards and Schnall (2003) state that the majority of women who visit their website are between the ages of 18 and 25 and are not likely to have backgrounds in feminist theory or activism. For example, in their "Ask Amy" section, website visitors can submit their questions about feminism to Amy Richards. Recent questions that Amy has been asked, include "What exactly is feminism" (October 2002/ May 2003), "Have there been any cultures where men and women shared power equally" (October 2002/ May 2003) and "Can you help me find information on men vs. women in the workforce" (March/ September 2002). From the type of questions asked in the "Ask Amy" column, ranging from the above to questions relating to women's representation/s in the media and those about various famous feminists, it becomes apparent that the site attracts hits from the general public and what are likely undergraduate students looking for help finding information for term papers on gender-related topics.

Like other many other web-based organizations attempting to have a mass-based appeal, Feminist.com presupposes women's computer access and basic technological skills. They claim that they reach a diverse group of people, and while I think that this is the case, they also are inattentive to the people without computer access or the skills to use computers.

> Feminist.com's constituency is as diverse as the women's Movement itself. Teenage girls visit from Pakistan, adult men write from Texas, women seek out resources to help themselves and others... Many are working class people living in isolated places in the U.S. (and the world)... Some go on-line from work, some from home, some from public venues like their local library (Richards and Schnall 2003: ¶6)

They do not focus on the ways that technology is gendered, or the ways that some people are more restricted from having computer access and skills. Instead, they focus on the Internet as a democratizing tool with possibilities for reaching millions of people.

In keeping with the democratization of information, their website is crowded with many links and information on a wide range of topics. The design is simple and bright. The navigation is relatively simple and easy. Sometimes finding information is tricky because of the amount of information and the ways that it is compartmentalized. It takes some time to go through each section and subsection to find information on a particular topic. To aid in this, they have a search feature

enabling viewers to search their website for the various pages mentioning a particular term.

Feminist.com has links to many external websites and events. However, these links are only to events that they sanction as woman-friendly and/ or feminist. There are many different kinds of feminist events and activities, while the Feminist.com links are only those events they support. Many websites link to other websites or events that they think are suitable. While this is normal practice, Feminist.com claims that one of their goals is to provide information to people about women's issues and feminism, when people may have little or no previous understanding of those topics. It seems that they are only willing to provide viewers with the information that their executive and board of directors agree with as part of their cyber-feminist praxis.

This means that although they may be providing information to those with little previous information on the topics, they are providing a very specific feminist view, and one that some feminists do not agree with. As well, they provide links to events and materials that their executive and board of directors profit from, thus making their dissemination of information and feminist events personally profitable to some feminists. For example, their website (Figure 1, page 70), features a banner advertisement for an Omega conference on feminism. The first and third speakers mentioned in the advertisement are Feminist.com advisory board members Eve Ensler and Gloria Steinem. While it is not uncommon for certain groups to promote

their own activities, it is problematic for them to do so under the guise that these are not events or books without ties to the collective.

4.1.2 Cyberfeminism and Cyber-feminism

Feminist.com does not explicitly focus on women's relationships with technology. Instead, Feminist.com is grounded in women's lives and uses the computer as a tool for communicating information about feminism. They do not use or regard cyberspace as a new area or sphere for women to become involved in, or one that provides truly unique opportunities for women.

While distinguishing between cyberfeminist and cyber-feminist may seem to be little more than word play, these terms and the people they represent are different in the ways that they broach technology, the ways that feminists use technology, and in envisioning a computerized future. The words cyberfeminism and cyber-feminism are often used interchangeably. I argue that these words describe two separate entities and can no longer be used interchangeably. While 'feminism on the Internet' may appear to be a logical definition of cyberfeminism, cyberfeminism differs from feminism on the Internet, or cyber-feminism.

Cyberfeminism lacks a geographical base from where projects are centred and originate. Feminist organizations, such as the National Action Committee, the National Organization of Women, and The Third Wave Foundation, all have

websites, and cyber-feminist agendas. Their bases in geographical, tangible, touchable, and visitable space, activities centered in these places and their focus on using the computer and the Internet as a tool for expressing their non-technological centered ideology makes them cyber-feminist. Though Feminist.com is not an offline organization in the same way that these organizations are, their goals are similar and the reasons why they are using the Internet are also analogous; the Internet is a *tool* rather than a set of *locations* that have their own systems of inequality already embedded in them. While cyber-feminists may not discuss being geographically bound, these groups have roots in space and time and the world outside of computers. The world off the Internet is considered the primary location for their cyber-feminist praxis. Their websites and web-projects are set to *complement* their offscreen activities, they are not meant to *be* their activities. This contrasts with cyberfeminists, who focus on equality embedded in technology and cyberspace.

The hyphen between 'cyber' and 'feminism' indicates an attempt to merge but keep separate and distinct the two entities composing the term. Cyberfeminism, as a single word, suggests a fusion of feminism and technology. Merging 'cyber' and 'feminism' means that the components mutate to form a single entity. Cyberfeminism is web-based. Within cyberfeminism there is no tangible space that reigns supreme and no location or set of locations where activities are concentrated. The Internet serves as the vehicle for this form of feminism. Though cyberfeminists are cognizant that there is a world outside, or beyond, the computer, and place an emphasis on the body, their

feminist theories and practices are focused on the web, are web-integrated, and privilege neither feminism nor technology in their merger.

Finally, cyber-feminists, like Feminist.com, use technology as a *tool* for creating social change in the material realities of women's lives. Cyberfeminists see cyberspace as a new *area* for women to be engaged. For cyberfeminists, cyberspace is seen as a different place and one in which women have great potential for overcoming inequality because that inequality is not yet solidified (Wilding, 1998a, 1998b). Feminist.com, and other cyber-feminists, use cyberspace as a medium for information and communication, similar to a more interactive brochure, book or poster. The capacities of the Internet for communicating reflexively with other people and for being a different area with different rules and possibilities for women are neglected within approaches like that of Feminist.com. Cyberfeminists, on the other hand, are more likely to see cyberspace as an area where women can take up more space and where women do not necessarily have to be secondary. Feminist.com uses a conventional third wave feminist activism mediated by technology. They approach the issue of women and technology with a modern-rationality and view social change as linear.

4.1.3 Main Theme

Cyberfeminist approaches that focus on the offline body are those projects that discuss women's bodies in terms of women's experiences. For example, Feminist.com provides links for women who have experienced/ are experiencing violence, eating disorders, and pregnancy. This collective chooses not to focus on the online self, instead offering information that women might otherwise have difficulty accessing. Feminist.com sees the potential of cyberspace to provide information that can help women to recognize inequality, empower themselves through recognizing that some personal struggles are often political issues, and make choices that might help to change their lives.

One of the implications of this approach is that it uses cyberspace as one medium that can reach the general public. The possibilities open to women in cyberspace are not broached as anything other than a source of information for women in their offline or "real" lives. This cyber-feminist approach is extremely helpful in promoting information gathering. Though this and other cyber-feminist approaches do not appear to deal with technology, it does promote dialogue on topics important to women. Having spaces for information of interest to women and relating to women's lives can have an effect on how women use and regard technology.

Having a website with information on topics related to women's lives and feminism (which is intrinsically related to women's lives), the Internet is seen as a place without

having women-specific information. Combining feminist approaches and using the Internet itself as action or practice, the possible influence of the Internet and how the Internet can impact material lives can be more apparent. The Internet is not only sets of spaces, as cyberfeminists often treat it, but it is also a tool that can be used to reach a broad base of the population. It is important to recognize that the Internet is both, and that feminists, cyberfeminist, cyber-feminist or feminist, are cognizant of the many capacities of the Internet. Women's lives and cyberspace are connected. Feminist.com shows that it is important cyberfeminists do not lose sight of the Internet as a tool.

4.2 Old Boys Network
http://www.obn.org

Feminist scholars and artists interested in developing interdisciplinary schemes to approach issues of women and technology formed the Old Boys Network (OBN) in 1997. OBN is primarily based in Europe and, more specifically, in Germany. By infusing feminist praxis with postmodern imagination and playfulness OBN attempts to interest and excite viewers in the possibilities of cyberfeminism and to find their own cyberfeminist practices. The academic papers on cyberfeminism for downloading are critical theoretical elements of the discourse of cyberfeminism. Posters and short films are present along side academic papers in novel ways to explore women's relationships with technology. As an alternative to developing a

collective politics, OBN is intent upon drawing a base of increased numbers of women interested in technology, but caters to women interested in creatively fusing theory and art.

OBN's projects, activities, and events presuppose a certain level of theoretical training and interest in cultural studies. They assert that anything is possible within cyberfeminism. The undercurrent of their projects is an underlying desire to involve creative women with computer skills and postmodern theoretical inclinations to develop their own cyberfeminist discourse and strategies. Thus, they are also making a statement that not everything/ anything is possible within the OBN cyberfeminist agenda; only everything/ anything that pushes the boundaries of creativity and playfulness while never being too serious or falling into 'modernist' seriousness. OBN is clear that 'boring' is not the Old Boy style.

The Old Boys Network attempts to dismantle the association of technology as the tools of dominant 'boring' men that promote their 'boring' interests and agendas. By referring to themselves as the "Old Boys Network" they re-appropriate the social networks characterized as male. Traditional old boys' networks are the informal ways that male acquaintances work to help each other professionally. Though these networks are not necessarily male, they are often thought of as male. It is not that these networks actively try to keep women and other men out, but they use their connections to help out and promote each other, thus making things easier and

networking less cumbersome. They use their connections to save the time and effort that is involved with accessing the formal channels of getting whatever it is that they need; outsiders often need to spend much time and effort to achieve the same networks that an Old Boy possesses.

This Old Boys Network uses the idea of the old boys' networks to design a more formal creation for helping women to network. OBN states that "every member of the OLD BOYS NETWORK is required to call herself a woman," but in keeping with their postmodern and playful position, they conclude, "(without consideration of the biological base of this intelligent life-form)" (OBN http://www.obn.org/inhalt_index.html FAQ: ¶13). This fosters the development of women's cyberfeminist networking as an alternative to breaking into the informal, but insidious, networking of men involved with technology.

On their frequently asked questions page, OBN answers the question "what is an Old Boys Network?" with the following:

> Normally, the term Old Boys Network is used as an idiom, a metaphor to describe an informal interrelation of men [here to be understood as synonyme for human beings of male sex]. In this case, the Old Boys of one Network all went to the same elite school/college/university.
>
> The concern of an Old Boys Network is to support and obtain support for individual careers. Older boys in a powerful position help younger ones and stabilize their own position that way. They exchange information, and every single Old Boy profits from the success of another Old Boy.

> It should be noted that dictionaries, particularly those which went into print before 1997, might not contain some important new meanings regarding the term. Nowadays, Old Boys Network' may also be in use for: a cyberfeminist network, a brand for cyberfeminist activities, a dangerous cyberfeminist virus... [errors in original] (OBN http://www.obn.org/inhalt_index.html FAQ: ¶5-7).

An Old Boy's network, cyberfeminist alternative or otherwise, while helpful for linking women with other cyberfeminists, is problematic because it relies on a kind of elite jockeying that is not available to everyone. If an old boy's network included and welcomed everyone, it would no longer be a network as it would simply be everyone, nor would it have any benefit as those connections would not be exclusive. Thus, OBN fosters the development of ties that link cyberfeminists; its strength implies that these ties are not available to everyone, or even all cyberfeminists.

4.2.1 The Website: http://www.obn.org

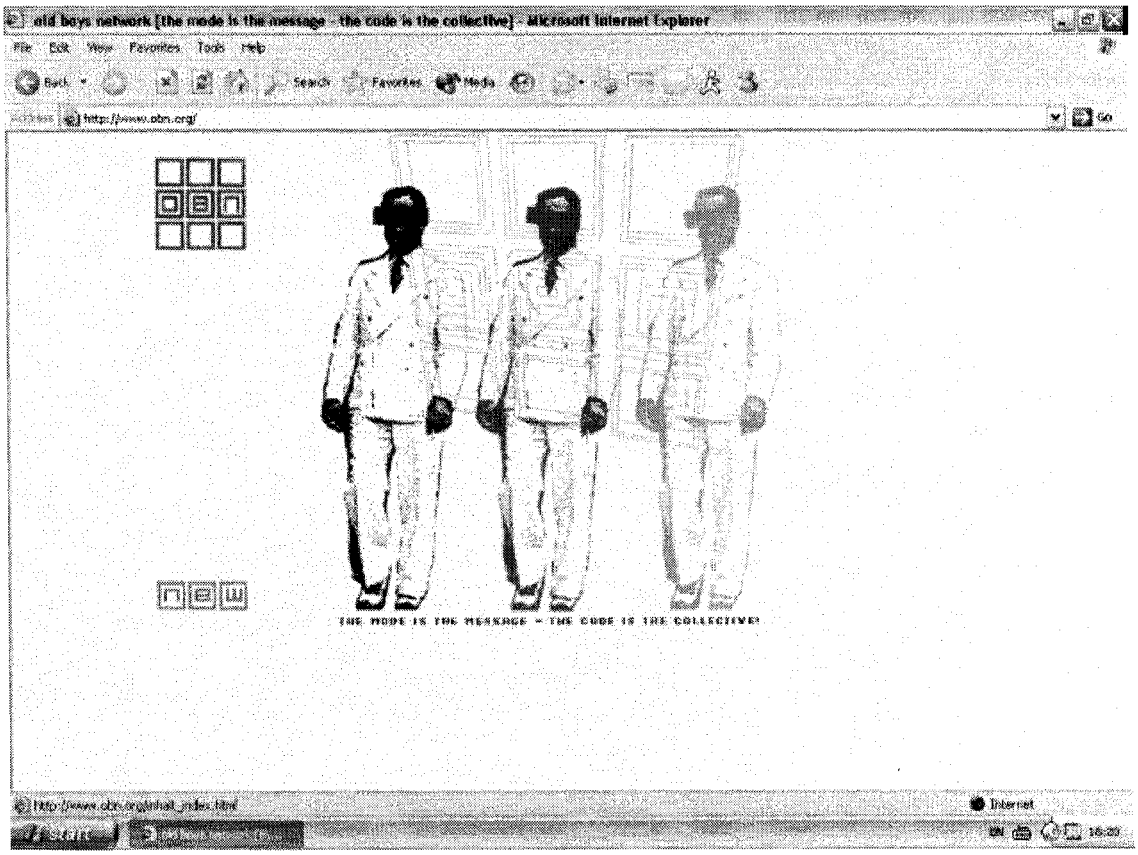

Figure 2: Screenshot of The Old Boys Network (OBN) main page

The main page of the OBN website contains three faceless white men wearing white suits. They blend into the crisp white background. The men's eyes are covered with black strips. The men are interchangeable and, in fact, all three are the same image with some minor changes. The first man and his suit are outlined in black, the second in bright pink, and the third in a lighter pink. Superimposed behind the men are faint blocks with the letters OBN. The text at the bottom of the page reads: "the mode is the message – the code is the collective!" This can be interpreted as meaning that

people communicate in modes and methods that have meaning, and that the ways this is done, and by whom can be crucial in creating alternative ways of thinking and doing.

The main image is flanked on the left side of the screen by two other images. The top left image is similar to the one superimposed behind the interchangeable suits. It consists of nine blocks outlined in black and the three boxes in the middle row each contain a letter together spelling "OBN." The bottom image consists of three blocks and in each block is a letter, together spelling "new." All three images link to the same page, which provides the links to subsequent information and various projects.

4.2.2 Main Theme

OBN combines artistic practices with theory and politics, illustrating that cyberfeminism does not need to be only one of these things and, by combining all three, can employ creative praxis. OBN's praxis fuses art, theory, and politics and demonstrates that praxis does not need to only include theory and action, but that art and artistic practices can be a way of making both theory and politics more exciting. They use applications of theory that creatively stimulate their viewers. Their activities focus on the influences of theory when it is expressed in more imaginative ways.

OBN's cyberfeminist practices are about creating dialogue and encouraging women to resourcefully and critically explore the possibilities of cyberfeminism and women and

technology. OBN does not adhere to a script or definition of cyberfeminism. Rather, they promote personal definitions and explorations of cyberfeminism.

> Every member has agreed to find a personal position in response to the question: What is 'Cyberfeminism', based on her scientific or artistic work. Each will have agreed to share and support the efforts which will contribute to the potential of this term on an international level.
>
> With regard to its contents - the elaborations of 'cyberfeminisms' - our aim is the principle of disagreement! (OBN http://www.obn.org/inhalt_index.html ¶16-17)

By clearly stating that each Old Boy develops her "personal position," they are articulating that there is no over-arching, dominant OBN position that members need to adopt as a formal or informal condition of their membership. Members are expected to develop their own ideas. They are not encouraged to rely on the group to provide members with a "party-line." As well as having her own personal position, each member is expected to be actively creating and practicing because it is expected that her position is "based on her scientific or artistic work." These statements about position and work assert that the Old Boys should possess a personal praxis. Each should have her own way to combine theory and practice resourcefully in ways that she appreciates and values. OBN's praxis is the idea of having each member creatively and critically explore her own ideas and work, deciding each for herself how she defines cyberfeminism, what cyberfeminism means to her, and how she goes about forming her cyberfeminist practices.

In keeping with the theme of disagreement and contrariness, OBN focused on creating a list of 100 anti-theses of cyberfeminism at the First Cyberfeminist International conference in 1997. The list of anti-theses includes entries in English, French and German illustrating that even within one project, cyberfeminism is not restricted to any one language. It is deduced from the list of anti-theses and their website that cyberfeminism is necessarily fun and avant-garde. It is clear that although cyberfeminism has many possibilities, being creative or "hip" is imperative. After all, as their seventh anti-thesis proclaims, "cyberfeminism is not boring."

Though the list was created in attempts to keep open the possibilities of cyberfeminism, it is also rather restrictive in that it treats cyberfeminism as "fun" theory that must be avant-garde. Many of their anti-theses do not seem to inform people of the purpose/s of cyberfeminism and some proclamations may seem rather inconsequential:

> 86. cyberfeminism is not supporting quantum mechanics
> 87. cyberfeminism is not caffeine-free
> 88. cyberfeminism is not a non-smoking area
> 89. cyberfeminism is not daltonist
> (http://www.obn.org/reading_room/manifestos/down/anti.rtf)

The mischievousness of the list takes away from the serious entries and sets up cyberfeminism, despite all of their protests, as an exclusionary fragment of feminism, one that pokes fun at more serious feminist approaches. OBN promotes and

encourages a cyberfeminism that suits only those individual women confident and capable of leading a creative and critical personal praxis.

On their page of links to other cyberfeminist websites (and websites of potential interest to cyberfeminists), OBN further establishes the openness and the possibilities of cyberfeminism.

> the following linklists are considered as a collection of ressurces for old boys networkers. this does not necessarily mean the linked sites, projects, networks, groups, persons are cyberfeminist or cyberfeminists. some of them call themselves cyberfeminist. some are being called cyberfeminist. some call themselves feminist. some are being called feminist. some state they deal with women and technology. some state they are considered for people calling themselves "women". and so on.
> hence: what makes a project/person/network/site cyberfeminist? what is a cyberfeminist project/person/network/site?
> what is cyberfeminism? who is a cyberfeminist? how does cyberfeminism look/sound/smell/feel like?
> how cyberfeminist do you want to be today?
> decide yourself! [errors in original] (OBN, http://www.obn.org links)

This discussion of the labels that could be assigned to any of the links illustrates that there is no individual or group that defines what is to be classified as cyberfeminist, nor is there a governing body of cyberfeminists. However, this kind of limitless approach is itself exclusionary because it is really of interest to few outside of feminist circles.

OBN's approach can be successful in involving imaginative women already knowledgeable in discourse of women and technology and cyberfeminism. Their

praxis may encourage those women to develop their own approaches to cyberfeminism, and to challenge associations of technology as the domain of particular men. They encourage creative and intellectual women not only to develop personal approaches to cyberfeminism, but to also have fun exploring the intersections of theory, art, action, and politics.

However, this approach focuses on theoretically sophisticated women with computer access and skills. OBN expects these women to explore and challenge male technological dominance. It concentrates on having a select group of women to claim territories in cyberspace. At the same time, they fail to consider other women (and men) who may not have the interests in theory, postmodernism, art, or even access to computers. For people without computer access and skills, and even those cyberfeminists who are more interested in 'serious' matters (like the digital divide), OBN holds little or no currency. Similarly, OBN does not lend itself well to women who would want to be part of a cyberfeminist collective without having to steer the direction of their individual cyberfeminisms. Their perspective is not promising for women who want to belong to a group that creates projects together. Rather than focusing on collective ventures, the 'collective' is used as a network of individual cyberfeminists and promotes individual action as the key to corrupting the discourse.

4.3 Studio XX: http://www.studioxx.org

Studio XX is a Montreal based cyberfeminist collective that formed in 1995. They offer training in digital technologies and new media art that foster new relationships among women and technologies. Studio XX uses a variety of creative projects critically assessing the social aspects of ICT. One of the strengths of Studio XX is that they attempt to share computer and web design skills.

Cyberfeminism becomes more inclusive and there are greater numbers of women comfortable using digital technologies through the sharing of knowledge, skills, and equipment. Studio XX' approach rests on a combination of traditional radical and liberal feminisms. They are radical because they offer training by women and for women rather than encouraging women to enrol in mixed sex computer courses. Their approach is liberal in the sense that they do not have a plan as to what feminist practices of praxis are necessary once mass numbers of women develop advanced technological literacy. Their rather liberal assumption is that once more women become involved with/ in the creation, development, work, and play of ICT, that ICT will become dis-engendered and a more equal environment for women.

The Studio XX website is bilingual. Because they are based in Montreal and offer computer space and design lessons to women, having their website and all of the pages available in both English and French means that their website and materials can be accessed by more women.

They offer memberships, courses, art exhibits, artists in residence (virtual and in-house), and laboratory space. Studio XX runs a collective committed to training women and offering a place for women's cyberfeminist artistic visions and creativity.

> [Studio XX is] committed to providing digital technology training and instruction to women at all levels of experience, both artists and non-artists. It is the Studio's goal that women not only use these technologies, but are a defining presence in cyberspace (http://www.studioxx.org)

Studio XX passes forward skills, thus training women to feel more comfortable creating some of the material and art in cyberspace. They provide the women they train the opportunity to create cyberfeminist discourse and pass those skills to other women. Studio XX is actively working to increase the numbers of women with computer skills through their courses and computer access by having affordable computer laboratory fees. They are broadening the band.

4.3.1 The Website: http://www.studioxx.org

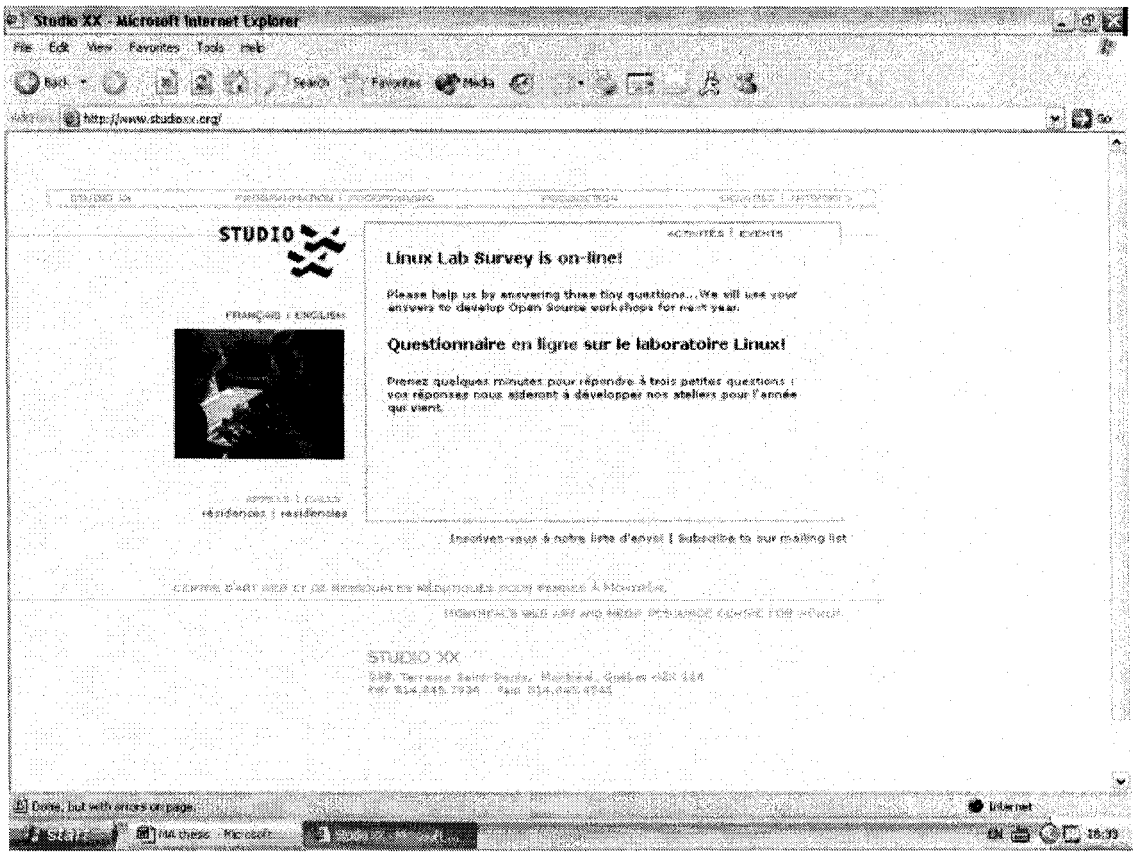

Figure 3: Screenshot of the Studio XX main page

Studio XX regularly updates and changes the main page of their website. In approximately the last twelve months, their main page has changed at least three times. Their regular updating keeps the page consistently interesting. However, it made it more difficult for my analysis to be kept up to date. The above screenshot was taken from their website on 28/06/04 (and is different from when I first analyzed their website in the spring). As well as providing the in-depth analysis of their website as it existed in April 2004, I will also describe the current design.

Their current website design of their website appears minimalist and clean. The white background is offset with a grey tape style navigation bar. The main focus of the page seeks feedback from potential program users. Studio XX recently opened a Linux laboratory and are asking for feedback about the type of workshops women would like their organization to offer in the upcoming season. By placing this front and center on the main page, rather than hidden away in a link or on an interior page, they are stating that they are most interested in offering the workshops that women are interested in or would find most informative. Like all of their links and information, it is provided in both English and French.

The image on the left half of the center screen changes every few seconds and in total there are eight images. The first is an exterior shot of their building while the subsequent seven shots illustrate the kinds of activities taking place inside their studio. Other than an image taken outside of a room with a single woman inside the room using a single computer, all of the images are of more than one woman. There are images of women socializing in the studio, one of a group of women using a group of computers, and the image captured in the above screenshot of three women collaborating together. The images show an area where there are many women working on interesting projects and using computers. The images centralize the experiences of women using computers and make them the norm.

Previously, the Studio XX main page opened with a crisp white background and, in the centre, a box flashed with a series of images. When the cursor moved over the image, its name read "Cyprine animation." Each image was on the screen only for a fraction of a second and included: an eye with a shaped, thin eyebrow; a dancing female silhouette; a picture of the world; a nipple; and a group of worlds with a group of nipples. The images are grainy and shift colours; the essence and idea of technology underlies all of the images.

The symbolism behind this digital and transforming collage is apparent. The collage combined elements of seeing, the female body, the world, the idea that there are many women and many worlds with a dancing female silhouette whose arms are outstretched; she is taking up space and rejoicing. There are at least three themes present in this collage: firstly, that under the umbrella world, there are many worlds, just as under 'Woman' there are many women; secondly, that technology provides a framework for seeing and experiencing the world that were previously impossible; and thirdly, that women can use and create technologies, freeing themselves and opening up many worlds.

The interior pages of the website have remained constant throughout the year and are available in both English and French. The navigation bar is at the top of the page and the background is aqua and the text box white. The website addresses the collective's

mission and initiatives and is kept up-to-date with their openings for residencies and upcoming workshops.

As well as helping them to communicate with women who might be interested in attending their workshops, Studio XX reaches out to women outside of Montreal. They organize an international semi-annual conference, have a mailing list, and showcase cyberfeminist art on the website. Studio XX provides space and resources for artists in residence as well as virtual residencies for cyberfeminist artists and those female feminist artists wishing to further develop their technological skills. Their website contains a collection of further links ranging from general Internet art sites, women's organizations, Internet activist websites, and feminist online resources.

4.3.2 Main Theme

The main theme in the praxis of Studio XX is providing women the tools, skills and space to use and create digital technologies and doing so in ways that are creative and fun. They run small workshops, with a maximum enrolment of six students, at a variety of levels. They offer a range of courses that suit women with different interests in skill development. Included in their workshops are *Intro Internet*, a five hour Saturday afternoon workshop that teaches effective Internet use skills, *Animation*, a five hour workshop that teaches flash graphics, and many different website development workshops using a variety of platforms.

Not only is Studio XX actively encouraging more women to become involved with and comfortable using technology but they are also striving to overcome class barriers that often work to keep women from developing technological skills and knowledge. Studio XX offers affordable workshops and skills training. For example, their four and five hour workshops are $50.00 (CAD) and private tutorials are available for $35.00. They also offer 18-hour workshops and laboratory time for working on the projects for $225.00.

By providing a variety of workshops, as well as tutorials tailored to individual needs, in both French and English, Studio XX combines theories of women's marginalization and under-representation in the use of computer technologies with those theories that argue for the creation of a space exclusive to women to develop their computer skills. Women's exclusive space to learn and explore may allow some women to take greater risks, and ask more questions than they would feel comfortable doing in a mixed sex environment. The exclusive space also makes real Studio XX' commitment to support women and technology.

Studio XX treats women's inequality with technology as rooted in women's under-representation among those with computer access and skills. They argue that with space for women to use computers and develop computer skills, inequality rooted in technology will no long exist. They make the statement that this inequality is based in under-representation, and can be overcome once women are an equal presence in

cyberspace. In order to improve the situation for women and technology, they offer spaces for women to engage and explore with computers. The exclusive women's only space allows women the opportunity to play with technology in a woman-centered environment. Studio XX showcases women's digital art, and as a result helps to normalize the association of women with technology. This fosters the development of more women demanding space in the cyber-frontier.

4.4 VNS Matrix

Formed by four women in Adelaide, Australia during the summer of 1991, VNS Matrix is considered the first cyberfeminist collective. While VNS Matrix, and their projects, are not well known outside of cyberfeminist circles, they remain the most influential and cited collective within cyberfeminist writing. Until they disbanded in 1997, VNS Matrix created highly confrontational projects, relying on phallic, vulvic, and explicitly sexual metaphors in order to sabotage and subvert "big daddy mainframe." They combined art, computer games and an Irigarayian feminist approach to tackling issues related to the gendering and desexualizing of technology. For VNS Matrix, women can use their common strengths and the power of the female body to destabilize notions associating men with technology and thereby create women's own alternative approaches to technology.

4.4.1 Main theme

By theoretically grounding their work in that of Irigaray, they centralize the body through metaphor. Focusing on metaphor, a particularly innovative strategy of subverting and challenging ideas related to women and women's relationships to technology, means that the body needs to be centralized in cyberspace to contradict discourse that treats the body in cyberspace as insufficient and meaningless. In their attempts to counter male dominance and reclaim devalued aspects of "women's culture," their projects and metaphors are often contained within poetic language, using language and libido to approach sex/ gender and technology. Among VNS Matrix' materials are two poetic manifestos, "Cyberfeminist Manifesto for the Twenty-First Century" (1991) and "Bitch Mutant Manifesto" (1996), as well as images and written text from their 1994 computer game "All New Gen."

Sadie Plant (1997, 1995) connects women to computers by stating that both are currently used as men's tools, and have been supported in male interests. Plant argues that technology will eventually overthrow systems of male dominance and privilege because women's abilities to knit, weave, and patchwork make them superior software engineers and computer programmers. Thus, women and technology can together, through their similar historical purpose, use the tools they possess in destroying the system/s of domination that oppress them.

Early cyberfeminist collectives, such as VNS Matrix, focused their practices on the female body. Cyberspace is often regarded as sets of locations resting on codes, bits and bytes. When cyberspace is associated with systems and programs, it is separated from humans and the body. Active from 1991 to 1997, VNS Matrix was largely affected by two interplaying issues: women were extremely under-represented in cyberspace and cyberspace was seen as both absent from and a rejection of the body.

Figure: 5: VNS Matrix (1991) "Cyberfeminist Manifesto for the Twenty-First Century." It is reproduced on over one hundred websites. (http://www.sysx.org/gashgirl/VNS/TEXT/PINKMANI.HTM).

Within 1991's "Cyberfeminist Manifesto for the Twenty-First Century," VNS Matrix combined visual images with poetic language, both laced with overt sexual imagery. In their own words, they are "terminators of the moral code/ mercenaries of slime/ go[ing] down on the altar of abjection/ probing the visceral temple we speak in tongues/ infiltrating disrupting disseminating/ corrupting the discourse" (VNS

Matrix 1991). Central to their cyberfeminist practice is "disrupting" and "infiltrating" the discourse about technology that leads people to assume that computers are men's territory and that technology is intrinsically neutral and unsexed (the neutral and unsexed are often associated with men, while sex is associated with women; a relic of the association of men with culture and women with nature).

By stating "we are the modern cunt/ we see art with our cunt/ we make art with our cunt/ we are the future cunt," VNS Matrix symbolizes the essential woman and her role in overthrowing technology. They consistently refer to her sex and all that she is as 'woman' as her tool for praxis. Female sexuality and the female body are integral to their cyberfeminist process for promoting women and technology. Both sexuality and the body are seen as things that women need not abandon, even though associating sexuality with women has historically helped to foster ideas that promote gender inequality. Rather, they focus on female-centered sexuality and the female body as tools that can aid in challenging and de-stabilizing dominant stories that technology is unsexed (and therefore rendered male) and men's terrain. They refer to themselves plural as "cunt" singular and the cunt itself as a mode in which women can create.

There are at least three interpretations of this body-centered discussion and using a term that has particularly derogatory connotations for women. This strategy explores horizontal rather than vertical relationships and the possibilities within horizontal

relationships. Steffenson (2003, 2002) argues that VNS Matrix' focus in "Cyberfeminist Manifesto for the Twenty-First Century" is politicizing in that it celebrates women's sexuality on women's terms rather than within a male dominated discourse. Certainly VNS Matrix is indebted to Irigaray's (1997[1985], 1985) theory of female sexuality that focuses on women for women's plural sexuality and separates that sexuality from men. "Woman always remains several, but she is kept from dispersion because the other is already within her and is autoerotically familiar to her... She herself enters into a ceaseless exchange of herself without any possibility of identifying either" (Irigaray 1997[1985]: 125). For Irigaray, and likewise for VNS Matrix, women's sexuality is omnipresent Steffenson (2003) describes this sexuality as a horizontal relationship and as necessary in VNS Matrix' cyberfeminism.

> The cunt-signified scenarios are not deployed as sites for the production or reproduction of maternity or symbolically inscribed motherhood for women. They are redeployed as a site for the construction of libidinal pleasures – in sex, in horizontal rather than Oedipal (vertical) relationships, in technological production, in sexy technology – a feminized and post-feminist erotics of technocultural production (Steffenson 2003: 222).

Finally, employing this strategy to essentialize womanhood serves to accentuate the similarities among women. This creates a sense of sisterhood among women similar to some second wave feminists' positions, such as Robin Morgan's, while also using Irigaray's poststructuralist focus on the sameness among women. By using the plural "we" and the singular "cunt," they are articulating that despite differences among women, there are some similarities, particularly among women's bodies, and that

women ought to focus on those similarities for "sabotaging Big Daddy Mainframe." Further, this strategy brings women together by the sameness of sexuality as if all women share a single body and bodily experience. The differences among women are made smaller by focusing on commonalities.

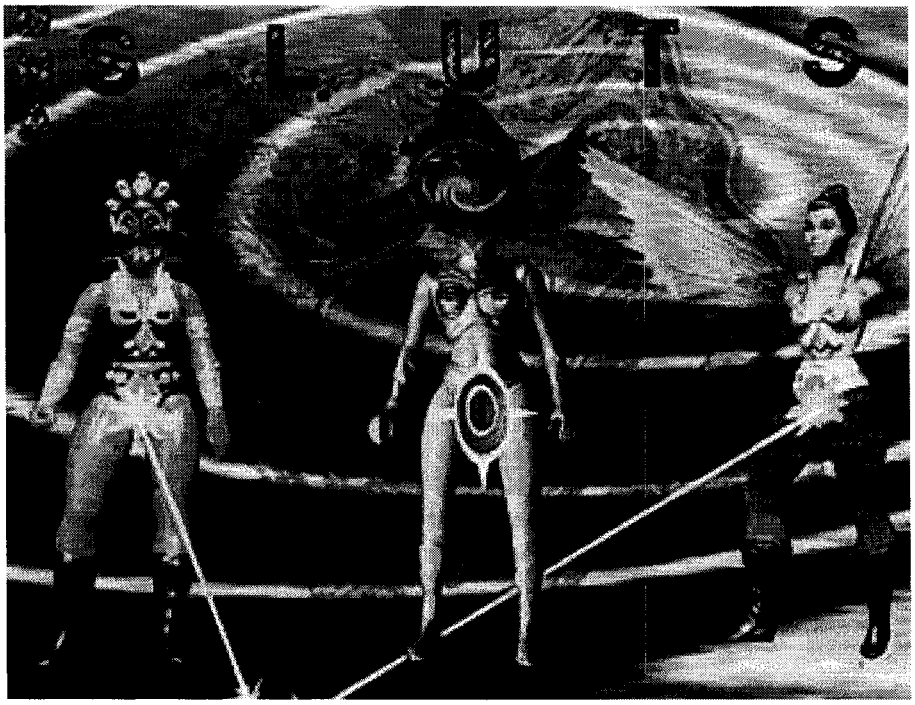

Figure 6: VNS Matrix (1994). This is an image of the DNA Sluts from the CD-ROM "All New Gen" (http://ensemble.va.com.au/array/steff.html).

Interestingly, and very Irigarayian perhaps, is how they focus on women's sexuality and bodies without comparing women to men or using a male centered view. At times, they use a vulvic centered view. This vulvic centeredness can be seen as a direct comment on the more commonplace phallic centered views. With the exception of Big Daddy Mainframe and his son Circuit Boy, they focus exclusively on

women and even when discussing those men, they do so without focusing on their sexuality. In their game "All New Gen" (1994) the women, called "DNA Sluts," resemble both Hindu goddesses and mainstream videogame vixen Lara Croft, from the game *Lara Croft: Tombraider* (the adventures of Lara Croft have been made into two studio movies starring Angelina Jolie). The DNA Sluts are sexy, large breasted and muscular women scantily-clad in Wonderwoman-esque leotards, high boots and accessories. Distinctively female, they appear strong, capable and even threatening. Their clitorises possess great capabilities and detonate potent and lethal laser beams. It is their powerful clitorises that "infiltrate" and "penetrate" Big Daddy's mainframe and "go down on the altar of abjection" his systems have created. The phallus of Circuit Boy, the son of Big Daddy Mainframe, who symbolizes any male computer programmer and worker who has bought into the dominant discourse of technology, cannot compete with the powerful clitorises of the DNA Sluts. In one image, his penis is morphed into a mobile telephone and used by the DNA Sluts. The powerful clitorises dismantle the phallus of the son of Big Daddy Mainframe, the person most evident in furthering the patriarchal rule of Big Daddy, and by using it against him, they show that indeed, quite literally, the master's tools can be used against him and all that he has created.

Explicit references to the female body, vulvic and phallic imagery and discourse are represented as powerful in VNS Matrix's projects. The visual accompaniment of the "Cyberfeminist Manifesto for the Twenty-First Century" (Figure 5, page 97) has text

that is centre justified within a round object and is surrounded by 20 vaginal ellipses. The manifesto symbolizes the clitoris, "the clitoris is a direct line to the matrix," by being in the circular centre, much like the tip of the clitoris on the female body. Further, the manifesto is located within the symbolic clitoris and is the direct line to VNS Matrix, just as it is often argued that the clitoris is the most direct route to women's sexual arousal. The vaginal ellipses guarding the clitoris of the manifesto are surrounded by what Breeze (1999) refers to being either pubic hair or branching tendrils. However, upon viewing a sharper image of the manifesto, it is clear that extending rays support the vaginal ellipses. Thus, the symbolic vaginas radiate light and power, while protecting the potent clitoris, possessor of power and, in this case, the manifesto.

The essential and natural woman is represented as powerful through the text, large clitoris and pubic hair extending from the vaginal ellipses as rays surrounding the manifesto. This power is transformative because the rays of pubic hair are extending somewhere to something and to do something. Woman is no longer a mere mirror or subordinate being. She is an agent of her own, independent from male power and the vertical relationships present in male dominated society.

Further, the use of the pubic hair rays extending from the vaginal ellipses are a direct statement made from Freud's statement that the only technology that women developed was weaving and that weaving was not a true invention as it was a re-

creation of pubic hair; only unique in that rather than simply extending from the body and appearing matted together, the material self-adheres. With the vaginal ellipses in VNS Matrix' manifesto the pubic hair is not weaved and the ray-likeness is important as it illustrates positive female energy and the differences between the female body and the development of weaving and the loom as a true invention. Like the DNA Sluts use their genitals for their power, the art of weaving, even if developed through the attentiveness of the matting of pubic hair, was used to develop the loom, and from that the computer which can be used as a tool of power and used against men, like Circuit Boy's own penis, for creating a more equal society.

The use of metaphor and reliance on sexual metaphor and the female body makes VNS Matrix' projects seem lighthearted and fun. They use praxis in a very poststructuralist way; VNS Matrix is arguing that women have a vested interest in technology and that sex/ sexuality is not absent in technology. By focusing on women's bodies and sexuality as central to all things that women do and as the force by which women have strength and power, women can reclaim technology and "corrupt the discourse" that currently treats women as inferior players in creating and exploring the digital landscape.

Chapter 5.0
Corrupting and Constructing the Discourse: conclusion

Cyberfeminism, and the activities of cyberfeminists, have a place within contemporary feminism and within discussions of emancipatory movements in general. Though their efforts are focused on gender and technology, the creative ways that they practice praxis, and the ways that cyber-feminists use the Internet as a tool, provide a way of practicing that may be helpful for other social movements to adopt. New technologies have offered alternatives to the possibilities of praxis. While computer technologies have provided new locations in need of feminist intervention, they also provide spaces for social change and greater merging of theory, action, art and creativity.

Cyberfeminists actively struggle to free women from the cages that render them outsiders to technology. Cyberfeminists attempt to destabilize notions of women's inferiority with technology by offering their own narratives, strategies of increasing women's involvement, and by trying to make cyberspace a more woman friendly space.

The collectives' strategies are varied and while one collective studied in this thesis has formally disbanded and another has all but formally disbanded, this is not a measurement of the failure of these collectives or their practices. Plato (1964[504BC]) asserted that praxis is a process and Marx (1975[1845], 1975[1844], 1972[1859], 1972[1845]) argued that over time praxis would create social change. As a process, praxis changes and evolves as new issues arise and new ways of broaching them are approached. Though particular cyberfeminist collectives may no longer be active, their members have gone on to new projects and groups (both with each others and new people). The development of new collectives and projects is a statement that cyberfeminists care committed to cyberfeminist praxis. And further, that they are both corrupting and constructing discourse simultaneously and in dynamic ways.

It is central to cyberfeminist praxis and the success of cyberfeminism to corrupt the discourse. Cyberfeminists challenge the association of men with technology and provide alternative associations. A critical step in this is denying the ahistorical approaches to technology that treat computers as the terrain of men. Viewing computers as tools invented, programmed, and used by men initially for militarism, and currently expanded to nonmilitary purposes (but still largely designated as men's apparatus), reaffirms the male experience as the default and women's experiences as the Other. Women have not been located outside of the technology equation since

the development of technology. Positioning women on the outside means that treating technology as fundamentally male is damaging to cyberfeminist goals.

In the section on women and girls' involvement with computers, I argue that while the numbers of women using the Internet are higher than in the past, the percentage of women gaining technical training in computers is plummeting. There is a critical need to increase the number of women using, producing and working with technology. One of the ways to successfully interest girls and women in computers is to reach them as youngsters. Girls with regular computer access, encouragement, and mentors are more likely to formally use computers as adults. Ada Lovelace, the teenaged daughter of Lord Byron, helped to create the first computer and certainly the first computer software and is the ultimate role model for women and girls who think that computers are toys for boys (and men). If more girls and women were aware of the historical link between women and computing, from Lovelace, as a "famous" female computer programmer, through to the ENAIC programmers of the 1940s and 1950s, would give them role models that illustrate that women and technology are not simply a new match.

As Reinharz suggests, feminist case studies are often about telling the stories that were not told because women's histories have been suppressed; the history of women and technology and the strategies of contemporary cyberfeminist collectives are stories that need to be told. Cyberfeminists are employing praxis and strategizing

change. However, critics, such as Luckman (1999), excoriate them for being too concerned with being avant-garde and post-feminist to work towards feminist goals.

This thesis has explained how cyberfeminists are not simply employing a sexy term, "cyberfeminism," and content only on having fun. Cyberfeminism is, in part, about having fun, while trying to advance a cause. Technology can be fun and that is part of the message that these collectives are expressing. Women can use technology for creative and fun purposes; computers are not merely boring tools for boring work; and women can use them for changing the stories, adding new ones and otherwise corrupting the discourse through art, music, disseminating information, blogging, or creating historical and cultural artifacts.

While the projects and websites of the three cyberfeminist collectives may appear, to varying degrees, as not fitting within a traditional concept of praxis and feminist praxis, I have traced the origins of the word praxis and shown that their projects and websites use a Marxist and feminist praxis to promote their goals for changing the current dominant discourse surrounding the gendered aspects of technology. As well as challenging the current themes, these collectives, each in their own ways, work to encourage and foster women's relationships with technology and technological discourse that involves women and feminist ideas. And, they just so happen to do so in ways that make technology appear fun.

Cyberfeminist collectives are not all the same, nor do they have the same goals and methods for achieving those goals and distributing their messages. On their own terms, they use praxis in ways that corrupt and construct the discourse. These strategies differ depending on the theoretical perspectives of the collectives and, from these, what they are trying to accomplish.

Cyberfeminists may appear to be having fun at the expense of serious political activity that has the potential of constructing new dialogue around technology and women. However, these collectives illustrate that there are many ways to go about working towards enlightenment and social change. While VNS Matrix may have relied too heavily on non-normative language to advance their cyberfeminist agenda, perhaps their "Cyberfeminist Manifesto for the Twenty-First Century" does offer a summation of cyberfeminist praxis.

This thesis has differentiated between cyberfeminism and cyber-feminism through definitions and examples of their activities. The differences between Feminist.com, the cyber-feminist collective, and the other three collectives have been demonstrated through the analysis of the cyber-feminist website which treated computer technology and the Internet as a tool for disseminating feminist information. Cyberspace provides an excellent forum for cyber-feminist groups because it is increasingly accessible and is cheaper for an organization than printing brochures or pamphlets. The Internet can also reach a larger number of people. As Richards and Schnall

(2003) point out, it can mean that women from various places in the world can access information about violence against women, parenting, or women's health issues. Those who may be resistant to feminist ideas may also find cyber-feminist websites through Internet searches or hyperlinks, which means that there is a potential for attracting more people to feminist ideals. In many ways, cyber-feminism works as a new form of consciousness raising; it reaches out to people who may be searching for a name to their situation, in a fashion similar to how women "fell into" the feminist movement of the late 1960s and early 1970s.

While Feminist.com reaches out to what may potentially be a very large audience, cyberfeminists are much more specialized and reach out to a more targeted audience. Indeed, one of the most fundamental differences between cyber-feminism and cyberfeminism is the inclusivity of cyber-feminism and the more exclusive nature of cyberfeminist collectives. All three of the cyberfeminist collectives use art as central to their projects and intrinsically connected to their views of the future of women and technology and cyberfeminist discourse.

While art is not necessarily exclusive, the artistic projects of these collectives tend to appeal to particular women already interested in cultural studies and art. Their practices of using art and advanced digital imaging creates an environment that is fun for women, and encourages further discussion, while illustrating the factors they think

are important in their cyberfeminist praxis. In contrast, the straightforward and somewhat awkward website of Feminist.com is inviting in its stylistic simplicity.

Studio XX offers skills-based training for women so they have the skills to create digital art. Again, this maintains the idea that in order for women to have something of value to contribute in cyberspace, they need to be artistic and create of software or art. While increasing the numbers of women involved in these aspects of cyberspace is indeed worthwhile, it is also important to increase the levels of access and participation of women as users. When cyberspace is more intimidating it is more likely to keep some women from exploring the digital landscape.

The projects of OBN and VNS Matrix are the most esoteric of the sample. OBN actually creates an alternative old boy's network. The problem with this is that it is just as exclusionary as the more traditional old boy's networks that it mocks. There is great irony when they state that they are inclusive and that anything can be cyberfeminist. However, the material on their website advocates a certain highly theorized, creative, and academic cyberfeminism that rests largely on what Braidotti (1998) referred to as "the politics of parody" involved in cyberfeminist discourse.

Similarly, with their cunt-deployed metaphors and scenarios, VNS Matrix may focus on horizontal rather than vertical relationships, but perhaps not horizontal across all women. Their approach is largely the result of French feminist philosophy, which is

often recognized as some of the most impenetrateable and esoteric feminist writing. This means that their audience is restricted to those with significant cultural capital. The sexually laden imagery and use of language that some people would label "offensive" is likely to alienate some women who might otherwise be interested in cyberfeminist endeavors. Thus, the price for being edgy and avant-garde may be that there are fewer people joining in challenging and disrupting the gendering of technology. The groups, and their projects may then be considered fringe, outside of the mainstream and, therefore, seen only as playful rather than a serious alternative to existing discourse.

While issues of social inequality continue to loom over participants in society, cyberspace provides a new landscape and one where these structures of inequality are less firmly established. There is a need for cyberfeminist intervention in cyberspace in order to challenge this inequality before it becomes increasingly solidified. Cyberfeminist collectives, as well as individual cyberfeminists, are working to break themselves and other women out of some of the cages of social inequality. Computer technologies and cyberspace, though currently locations where inequality also exists, may provide some of the keys for getting women out of that place of the Other. Even the cyber-feminist collectives are using computers and cyberspace as a tool, and as a tool, they are recognizing the potential of cyberspace as a key to creating greater equality. Cyberfeminists are even more certain that cyberspace and computer technology are new areas that need not replicate other structures of inequality. If

cyberspace and technology can be developed into more equal spaces, that equality can be extended into our neighbourhoods, communities, and societies.

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