

WOMEN AND THE INTERNET: AN INTERPRETATION OF TWO DISCOURSES

by

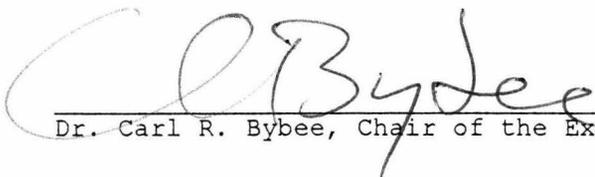
ALAINA M. BAUM

A THESIS

Presented to the School of Journalism and Communication  
and the Graduate School of the University of Oregon  
in partial fulfillment of the requirements  
for the degree of  
Master of Science

December 1995

"Women and the Internet: An Interpretation of Two Discourses," a thesis prepared by Alaina M. Baum in partial fulfillment of the requirements for the Master of Science degree in the School of Journalism and Communication. This thesis has been approved and accepted by:



---

Dr. Carl R. Bybee, Chair of the Examining Committee



---

October 31, 1995

Committee in charge:      Dr. Carl R. Bybee, Chair  
   Dr. H. Leslie Steeves  
   Dr. Julia Lesage

Accepted by:



---

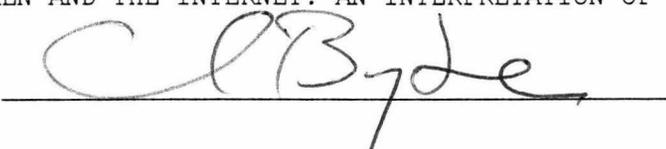
Vice Provost and Dean of the Graduate School

## An Abstract of the Thesis of

Alaina M. Baum for the degree of Master of Science

in the School of Journalism and Communication to be taken December 1995

Title: WOMEN AND THE INTERNET: AN INTERPRETATION OF TWO DISCOURSES

Approved: 

This thesis reviews feminist theories appropriate for a feminist analysis of magazine and feminist texts and uses these theoretical insights as a framework for analyzing how women's under-representation on the Internet is represented in mainstream magazines and women's on-line discourse. The feminist perspective provides the justification for investigating whether magazine texts are functioning strategically to justify men's current dominance of the Internet and women's relative exclusion from this sphere. By comparing magazine and feminist on-line discourse, this study shows how magazines forward a contradictory message about the Internet's potential by claiming that universal access is feasible while neglecting to inform audiences about barriers which stand in the way of women's access. This comparison also reveals that magazines are advancing ideologies about women and the Net which are shaped by gender politics, which are innaccurate according to contemporary feminists and which work against women's participation on the Internet.

CURRICULUM VITA

NAME OF AUTHOR: Alaina M. Baum

PLACE OF BIRTH: Hollywood, California

DATE OF BIRTH: February 10, 1969

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon  
San Francisco State College

DEGREES AWARDED:

Master of Science in Journalism, 1995, University of Oregon  
Bachelor of Arts in English, 1992, San Francisco State College

AREAS OF SPECIAL INTEREST:

Print Journalism  
The Internet

PROFESSIONAL EXPERIENCE:

Graduate Teaching Fellow, School of Journalism and Communication,  
University of Oregon, Eugene, 1994-1995

Freelance Editor, Oregon Daily Emerald, Eugene, Oregon, 1994-1995

Freelance Writer, Oregon Daily Emerald, Eugene, Oregon, 1993-1995;  
Flash, Eugene, Oregon, 1994-1995

Internship, The Food and Beverage Journal, San Francisco,  
California, 1994

AWARDS AND HONORS:

Member of Kappa Tau Alpha National Honor Society  
Member of Golden Key National Honor Society

## DEDICATION

The author dedicates this thesis to her mother, Rita Rosenbaum, who is always quick to offer her sympathetic ear, her skillful pen, her infinite wisdom and her limitless heart.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Significance of the Study.....	1
Examining Magazine Discourse as a Cultural Text.....	6
Examining Feminist On-line Discourse:	
An Additional Cultural Text.....	9
Contextualization of the Research.....	13
The Study.....	18
The Organization of This Work.....	22
II. REVIEW OF LITERATURE.....	25
Introduction.....	25
Previous Feminist Research on Women and Technology.....	25
A Relevant Context.....	26
The Relationship Between Gender Politics and	
Women's Technological Barriers.....	29
How Media Legitimized Women's Exclusion from	
High-Tech Spheres.....	50
Summary.....	59
III. MAGAZINE DISCOURSE.....	63
Introduction.....	63
Methods.....	64
The Articles Selected.....	67
The Representation of Access Issues.....	70
The Representation of Internet Advantages	
and Disadvantages.....	75
The Representation of Women and Gender Issues.....	84
Summary.....	95
IV. FEMINIST ON-LINE DISCOURSE VERSUS MAGAZINE DISCOURSE.....	98
Introduction.....	98
The Feminist Discourse Selected.....	101
Comparing Representations of Women's Access Issues.....	104
Comparing Representations of Internet Advantages.....	111
Comparing Representations of Internet Disadvantages.....	119
Comparing Representations of Women and Gender Issues.....	128
Finding a Rhetoric of Legitimization in Magazines.....	133
V. CONCLUSION.....	139
The Implications for Gender Politics and Magazines.....	139
Conclusion.....	143
BIBLIOGRAPHY.....	145

## CHAPTER I

## INTRODUCTION

Significance of the Study

The Internet is revolutionary because it, too, affects our basic social structure. Unlike any other technology before it, Internet permits many-to-many communication. For the first time in history groups of people spread across the globe can communicate more frequently and easily than people who live on the same block. (Robinson, 1994, 30)

If you turned on your radio, viewed a television program, or picked up a newspaper or magazine over the last few years, you've probably come across opinions like Robinson's about the Internet, an international network of networks that links a computer via telephone and modem to massive amounts of information and people from around the globe. Pervading every channel of the media, Internet enthusiasts like Robinson are saying that this new technology is leading the charge of an Information revolution that promises to revitalize democracy and to improve communication and human relations for "everyone."

Saying that the Internet is synonymous with "universal access" and with "open and critical debate," many of these enthusiasts liken the Internet environment to Habermas' (1989) conception of the ideal "bourgeois public sphere." Habermas' visualizes this sphere as a "body of 'private persons' assembled to discuss matters of 'public concern' or 'common interest'" (Fraser, 1993, 4). He describes it as a place where rational debate about all sorts of public matters would be encouraged and entry to this "public forum" could be open and accessible to all (Fraser 4). Yet, with the exception of the ancient Greek city-states as

well as the British coffee houses and the French "salons" of the mid-1600s, Habermas believes that the "full utopian potential of the bourgeois conception of the public sphere was never realized in practice [because] the claims to open access were never made good" (32; Fraser 5). Now, however, many Net mavens contend that cyberspace<sup>1</sup> is realizing Habermas' vision because the Net fosters critical debate and is open to "everyone."

However, while Habermas contends that these Greek, British, and French public forums were able to maintain universal access, feminist scholars like Fraser argue that even in these cases, access was not open to everyone. These scholars assert that a bias toward males was inherent in the very structure of these so-called "public" forums, keeping Habermas' vision of the idealized, utopian sphere of communication from ever being actualized. For example, in the French salons, the more woman-friendly salon culture was stigmatized as "artificial," "effeminate," and "aristocratic" while the male conversation style was deemed "rational," "virtuous," and "manly" (Fraser 5). Fraser says that Habermas overlooks the fact that part of the reason no public sphere has been able to secure free and open entry is because his very idea of this ideal place is based upon "real" spheres that exempted certain people (5). So despite the "rhetoric of publicity and accessibility," Fraser and other feminist scholars say, that the "official public sphere rested on, indeed was importantly constituted by, a number of significant exclusions" -- against some races, classes and particularly, against women (5).

---

<sup>1</sup> "Cyberspace," "originally a term from William Gibson's science-fiction novel Neuromancer, is the name some people use for the conceptual space where words, human relationships, data, wealth, and power are manifested by people using CMC [computer mediated communication] technology" (Rheingold, 1993, 5).

Ironically, Fraser's argument can also be used to examine a similar contradiction emerging again, that is, the contradiction between the optimism of some Internet rhetoric and the reality of who has access to the Net. Although cyberspace optimists assume that the Internet is universally accessible and geared toward free and open debates, in actuality, certain people are being excluded from this "utopian" public sphere. For instance, several publications are citing statistics indicating that nearly 80 percent of Internet participants are male and that the Internet culture is predominately white as well as younger, more affluent and more educated than the average of American citizen ("Electronic," 1994; Fineman and Tuttle, 1995; "Internalizing," 1994-1995; Marx, 1995). These statistics clearly highlight a certain race, class, and gender bias.

For this study I would like to focus on the issues these statistics raise about this gender bias and to determine if gender politics is at all related to the fact that right now, women are the minority on the Net. While I am not choosing to examine the race and class bias eluded to above, feminist scholars point out that the workings of gender politics are more than just a women's concern. Underpinning the ideology of gender politics is the assertion that at the top of any social hierarchical system in society sits a man, and usually a white man at that. But as feminist scholars observe, these ideologies can result from a number of other influences and social processes that are not always linked to men. Therefore, they argue that gender politics can permeate every class, race, idea, and gender, perpetuating not only discrimination against women, but against other groups of people as well. The Internet itself is not intrinsically a discriminating medium. In reality, it is only an intangible information network that can be tapped into by the use of suitably-equipped computers. However, the

fact that fewer women than men are currently logging onto the Internet prompts us to question whether gender politics is playing a role in this discrepancy.

In addition, because women make up approximately half of the American population, it is equally important to consider the issue of why women aren't as involved as men are with the Internet, the invention that many are calling the "Big Bang" of our times. Much is being made of the tremendous potential the Internet has to revitalize democracy and communication. However, given that the Net is still a male-dominated realm, what is keeping many women from joining in the new information revolution? Is gender politics a determinant of women's barriers to equal access? Feminist scholars have long alerted us to the affects of gender politics on women's traditional devaluation, subordination and oppression in relation to men (Steeves, 1987, 96). Also, previous feminist studies on women and technology have indicated how patriarchal ideologies were used as a tool for marginalizing and preventing women from participating as equal members in computer environments. The history of feminist concern about these types of issues related to women and technology serves to remind us that women's involvement with the Internet should be investigated -- especially if the new technology is going to have as much of a critical impact on society as many Net enthusiasts claim.

Therefore, I think that in view of these statistics and the issues they could imply, it is crucial to discover whether gender politics is at all related to women's limited representation on the Internet today. If Internet mavens are promising universal inclusion within the Internet realm, one would expect that more women would be currently participating on-line. Furthermore, if the Internet is going to play as crucial a role in society as many Net enthusiasts and media rhetoric claim, then

it is imperative that we examine now whether anything is impeding women's headway in cyberspace. So, the most significant issue seems to be, how can the Internet enthusiasts' promise of universal access be achieved in the face of such contradictory statistical evidence?

A method for answering this question of whether this promise of broad and sweeping access can be realized is to examine our own culture. "Culture" can be seen as the site where meaning, and therefore, our social realities are generated, experienced and interpreted (Turner, 1992, 23). As Turner contends, when we are at "our most natural, our most everyday, we are also at our most cultural; that when we are in roles that look the most obvious and given, we are actually in roles that are constructed, learned and far from inevitable" (2). Here, Turner is imploring us to understand that we are not the authors but the subjects of cultural processes -- we are socially produced (28). In other words, as Lacan says, the way we view ourselves, our consciousness, each other and the society around us is actually formed from a repertoire that's given to us by the perceptions, languages and ideologies of others (Turner 28).

So, if this culturally-derived "repertoire" can influence how we perceive our realities, our own subjectivities and our culture, they must likewise influence how we come to see the Internet culture and the access problems that might be developing for women in cyberspace. If the perceptions and ideologies of "others" can invariably determine our own gender roles, then they must also determine the way we consider what role women and men might play in the use, design and management of cyberspace. Therefore, the next question should be, what kinds of cultural processes communicate ideas about the Internet and how can we tap into these ideologies to see how they may be fashioning our outlook of the new information technology? For example, what kind of cultural

analysis can this study perform to gain the most insight into how public opinions about the Net are developing?

#### Examining Magazine Discourse as a Cultural Text

Turner argues that since "ideologies are observable in material form only in the practices, behaviors, institutions and texts in society," cultural ideas and meanings can become accessible to us by examining these material forms (27; 23). As a result, many feminist and cultural studies analyses investigate the "texts" produced by the media -- focusing on media discourse, its definitions of social relations and political problems and on its implication in the production and transformation of popular ideologies (Turner 27).

Similarly, we can also tap into the ideologies that are being generated about the Internet through analyzing the popular "texts" produced by magazine authors. Looking at mainstream magazines as opposed to other magazines can be a way to access a genre that traditionally attempts to be a voice for the nation. Unlike specialized magazines (such as *Business Week* or *Vogue*) which cater to a select audience and focus on a limited number of topics devoted to that audience, the four mainstream magazines used in this study conceivably appeal to all readers and necessarily address a larger range of subjects. Consequently, investigating how national general interest magazines tackle Internet topics can be a way to access the ideologies that are being produced about the technology for a wider, more diverse audience.

Plus, information and discussions about the Net may be overlooked in the unordered, crowded pages of a newspaper while in mainstream magazines, with so few articles to choose from, readers might not inadvertently miss or be more likely to skip an article. Also, while

Internet discussions may be severely edited to fit the typical short format of a television news segment, the nature of mainstream magazines allows for more in-depth discussion of issues. Consequently, examining magazine texts can be an effective method of accessing the opinions and notions being forwarded to mass audiences by a more popular and highly read medium.

Accordingly, through their treatment of the topics surrounding the Internet, magazine authors are producing rhetoric which in turn, generates certain notions and ideas in their readers about the new technology. As Althusser argues, rhetoric is saturated with ideologies which subtly forms and shapes our consciousness of reality (Turner 26). In addition, media play a dominant role in establishing social norms because the ideologies inherent in media discourse operate unconsciously -- we internalize these ideas and take them for granted, never realizing that they are socially constructed (Turner 27-28). If this is the case, then today's magazine authors may be unwittingly working to convince their audiences to absorb a certain view of the Internet world through the visions and conceptualizations they forward in their discourse.

Because the meanings produced by media rhetoric can subtly determine how those who read, watch, or listen to this discourse, unconsciously adopt a certain interpretation of "reality" and of sex roles, feminist scholarship have typically been critical of the way in which ideologies of domination are institutionalized through sexist language in media discourse. As a result, feminists have consistently addressed themselves to the interrogation of the media as one of society's many structures of domination (Turner 5). By unearthing media's meanings, these types of studies attempt to reach an understanding of "the ways in which power relations are regulated, distributed, and deployed within" our society (Turner 23).

Thus, as a feminist analysis, studying current magazine "texts" about the Internet will serve two important functions for determining whether the promise of universal access can be achieved. First, by examining how magazines discourse defines and conceptualizes Internet issues, it can lead us to discover what socially-produced groups of ideas or ways of thinking may have a bearing on how magazine readers may come to envision the "reality" of the Internet -- especially if any of these readers have little first-hand experience and knowledge about the Internet itself and depend on these magazines for their information about the Net (Turner 33).

For example, there's a dearth of women on the Internet (see "Electronic," 1994; Fineman and Tuttle, 1995; "Internalizing," 1994-1995; Marx, 1995; Balka, 1993; Kaplan and Farrell, 1994; Truong, 1993; Doyle, "Women" 1995; Shade, 1993). If magazines define this issue as a non-problem or entirely neglects to discuss it, then an inaccurate impression is formed of the Internet as a utopian public sphere with open and equal access to "everyone." Also, if magazine discourse represents women as uninvolved in the Internet world, then these magazines are unwittingly influencing their readers to see cyberspace as a men's terrain where women don't belong. If this is the case, then the conception that magazine discourse may be building about the new information technology is resting on the same "exclusions" that Fraser says are underlying Habermas' notion of the ideal public sphere. On the other hand, if magazine rhetoric is defining women's limited involvement in cyberspace as a problem, then a different perception is being forwarded to readers -- that the utopian ideal of the Internet sphere is contingent on eliminating women's barriers to accessing the Net.

Secondly, since this study intends to observe whether gender politics is a factor for fewer women than men currently participating

on-line, analyzing magazine "texts" about the Internet can provide an understanding of how power relations are being "regulated, distributed, and deployed" within this media genre and the Internet community (Turner 23).

For instance, if this study reveals that magazine discourse is perpetuating certain female stereotypes -- indicating that they are "unsuited" for the Internet environment and are not active members of the cyberculture<sup>2</sup> -- then magazines may be operating to sway male and female audiences alike to believe that women "don't belong" in cyberspace and therefore, to persuade men to exclude them from these spheres. In this case, the rhetoric may be working strategically to reaffirm gender political ideologies and hierarchies and therefore, to invalidate the promise that "anyone" can participate on-line. In contrast, if these "texts" tell audiences that women are active and dynamic members of cyberspace or that sexist and discriminatory behaviors are impeding women's on-line access, then magazines are communicating a message that transcends the old power structures which are no longer viable in this medium. In this way, magazine rhetoric could work to achieve the promises of universal access by averting exclusionary sexist representations of women and by informing audiences about obstacles that threaten women's access to information networks.

#### Examining Feminist On-Line Discourse: An Additional Cultural Text

Magazine discourse is only one "text" that can be "read" for the socially-produced meanings imparted to our culture. Certainly, magazines are not the only influential cultural product in our society.

---

<sup>2</sup> "Cyberculture" is a term used to describe the collective group of people who use computer mediated communication technologies.

They are only partly responsible for manufacturing our conceptions of "reality," and shaping our subjective values and our society in general. While examining magazine rhetoric can reveal to us some of the meanings surfacing about the Internet, it is equally important to examine extra-textual material to arrive at a text's meaning (Turner 105). Therefore, this study will go beyond merely looking at magazine discourse by investigating the new collection of feminist writing that is just beginning to explore the Internet environment in terms of gender issues. Consequently, tapping into this discourse can benefit this study for three reasons.

First, instead of an analysis based solely on magazine "texts," adding a consideration of feminist research on women's on-line experiences provides this study with an additional kind of discourse which can illuminate what types of Internet issues are being discussed among women on-line. Unlike magazines, which may or may not explore the cyberculture from a feminist standpoint, feminists typically focus on the experiences of women as "locations where the action of oppressive power relations can be examined" (Turner 5). Subsequently, contemporary feminist discourse on women and the Net will provide a feminist perspective on whether or not power structures are surfacing and problematizing women's use of the Net. Plus, this discourse, which consists of research as well as personal perspectives, can give us a closer view of the Internet culture through the observations of feminists who relate their own experiences in the Net world or who document and seek to understand the dialogs, actions and opinions of other women on-line.

Secondly, by comparing magazine perspectives of the Internet to the theoretical and personal perspectives of feminist discourse, it will enable us to examine the accuracy of magazine conceptualizations of

gender and access issues in cyberspace by accessing the insights of those women who may have dealt with these issues or concerns first-hand (Turner 112). Accessing these insights can therefore connect the textual research of media discourse with the Internet audience we're attempting to understand. It will also open up this study to a realm of women's insights which are consistently repressed or ignored in popular media. Therefore, by examining the deliberations found in the discourse of mainstream magazines (which generally reflects the majority view) and in the discourse of feminist writings (which center on an alternative, minority view and which explore the women who are consistently encountering the access problem in process), this study will be able to construct a more accurate picture of what gender and access issues are circulating on and around the Internet domain.

Thirdly, while members of popular culture may not be able to gain control of the production of culture, they can nonetheless control its consumption and the way it is used (Turner 216). So, it will be interesting to discover if women are using and "making over" the new Internet medium to serve their own interests despite the fact that they are the minority on-line. Here, feminist on-line discourse can tell us if the Internet is being used as a method of resistance against the male majority on the Net or as a means of expression considering that feminist thought is consistently ignored in popular media.

For instance, does the Internet provide everyone with an opportunity for a more inclusive social milieu or is it just another culturally restricted sphere of male-dominance and exclusion? Among the crucial questions for new feminist discourse to explore will be if the on-line world can be a place for women to escape or even to resist masculinist ideologies that dominate society. Are women attempting to form their own empowered cyberculture? Or does feminist on-line

discourse show that the Internet is fast becoming another institution so absorbed in traditional gender political ideologies that an unfriendly, even hostile environment exists for women? To answer these questions it is essential to examine how feminist writers and researchers who publish their work on-line present their critical portrait of the Net. Then it will be instructive to contrast this discourse, on one hand, with magazine discourse about the Internet, on the other. In this way, this study can decide whether the Internet benefits and/or presents significant problems for female users in ways that magazine rhetoric may neglect.

Therefore, this study poses the following questions: How is the problem of women's access and other gender topics being framed in four mainstream magazines (*Time*, *Newsweek*, *U.S. News and World Report* and *People*)? These four magazines were chosen because they are some of the most popular general interest magazines in the nation and therefore, may reach and affect a larger and more diverse audience. Discerning how and if magazines represents these issues can tell us what types of magazine-generated ideologies are surfacing about the Net. Such ideological constructs could be influencing magazine readers' perceptions of cyberspace and of women's role within it. How close does the magazine's portrait of the Internet come to representing women's concerns in terms of feminist thoughts on these issues? Answering this question will give us an additional perspective of how feminist writers perceive the new technological environment in terms of gender and access themes and from both theoretical and personal approaches. Exploring these additional cultural determinants of how people perceive the Net environment can also show us whether or not magazines are forwarding an accurate depiction of the Internet to their audiences.

Then, in comparing these different representations of access and gender topics, it is critical to explore what is being left out of either discussion. The comparison is necessary to determine whether magazines are, in fact, neglecting to inform audiences of extant barriers that present a threat to women's inclusion in cyberspace. If magazines are shown to neglect or distort information, such magazine rhetoric may falsely depict the Internet "reality" as a utopian public sphere with equal potential for women and men. If this is the case, then magazines are actually functioning as a strategic social force to help ensure men's dominance of the Internet community and women's exclusion from this new technology.

#### Contextualization of the Research

Before any of these questions can be addressed, a background to this problem is necessarily drawn from a selected review of relevant literature and research. The intent of this study is not only to look at magazine's textual formations in order to read the inherent constitutive cultural codes; this thesis will also examine the cultural contexts in which these texts were produced (Turner 32). In this sense, each text and its context is seen as interrelated; textual meaning is affected by historical, political, social, and economic practices as well as other contextual factors (Turner 128).

Therefore, as a historical background to the current problem of women's limited access to the Net, former feminist research on women and technology will be the most pertinent scholarship for providing the necessary context to this study for several reasons. First, while this study is attempting to understand why this problem is occurring on today's newest technology, previous feminist research shows that these types of access problems to technologies are not at all new to women.

Because this research explores women's troubled involvement with past technologies, this study can benefit and learn from previous feminist insights into why these problems occurred.

Secondly, while this research can provide the relevant context for understanding today's Internet access problem for women, it can also clarify the correlation between gender politics ideologies and similar problems that have affected female technology-users in the past. Thirdly, such research is instructive in examining how magazine rhetoric has functioned in the past to legitimize men's dominant position in technology spheres. These insights can also help in developing a framework for scrutinizing current magazine rhetoric and for analyzing new feminist on-line discourse to ascertain whether gender politics-inspired obstacles coupled with media legitimization strategies are again surfacing.

In order for feminist scholarship to be useful in this study, a few terms need to be explained. "Gender politics" is conceptualized and used here as a synonym of "patriarchy," those influences, ideologies, and processes which work to structure hierarchical systems of power through society that commonly place men or male ideology in a dominant and oppressive position and women and women's ideology in a secondary, subordinate status<sup>3</sup>. However, "gender politics" is preferred here because it avoids, to put a twist on Nathaniel Hawthorn's symbolism, placing the letter "A" on the entire male gender. In other words, this phrase embodies the idea that patriarchy arises out of a number of different influences (economic, political, historical, etc.) and social processes that are not always necessarily linked to men.

Consequently, nearly all "feminist studies" - whether coming out

---

<sup>3</sup> See Leslie Steeves, 1987, for further discussion on how "patriarchy" and "feminist studies" can be conceptualized.

of a liberal, radical, cognitive/psychoanalytic, socialist, or Marxist perspective - aim "to understand the origins and continuing nature of women's nearly universal devaluation in society" and "attempt to explain, explicitly or implicitly, the sources of women's oppression" (Steeves 96; Cirksena, 1988, 18). Previous research on women and technology has done just this. These studies have attempted to pinpoint why women have been subordinated, excluded and discriminated against in the places where they've attempted to use, learn about or work with technologies.

Therefore, in addressing the questions posed by this study, a consideration of feminist scholarship is a useful starting point to look for sites of cultural materialist production. These sites can be seen as abstract places where a culture's ideologies, values, and norms are reproduced, altered and transmitted to that culture's inhabitants. For example, in the site of socialization, the media, parents, teachers, peers, and family members can all act to "teach" a child certain beliefs that subsequently affect how he or she comes to view society and how he or she determines their own role within it. However, this mode of transmitting a culture is a cyclical process in that these "influential" people, practices and institutions are also culturally-determined, affected and influenced by their cultural contexts as well.

Accordingly, feminist scholars have sought to demonstrate what happens to women when ideologies influenced by gender politics find their way into the sites of cultural materialist production and work to reinforce and perpetuate a hierarchical social system that subordinates women.

Thus, feminist research provides the relevant context because it shows how gender politics ideologies relate to women's technological obstacles in the past. Here, feminist studies show how in the sites of socialization, education, and employment, gender politics-inspired

perceptions and representations of women are often linked to the difficulties women face in these realms. In fact, when tapping into former feminist research on women and technology, it becomes clear that subjects of power, gender politics and equal access are not at all new to these explorations of technology. Since the mainstream integration of personal computers into home and work environs (approximately, the last twenty years), feminists have demonstrated a tie between gender politics and the obstacles that surface between women and communication technologies.

No matter which branch of feminism these scholars base their arguments on (i.e. liberal feminism, social feminism, radical feminism), most agree that these problems occur because gender politics influences the construction of stereotypes depicting women as information-deprived and as lacking the necessary intelligence and desire to utilize technological goods (see Kramarae, "Introduction" 1988; Perkins, 1979; Kirkup and Keller, "Introduction" 1992; Birke, 1992).

Subsequently, feminist scholarship provides illustrations of how these stereotypes lead to barriers between women and past technologies in the sights of cultural materialist production. Reviewing this research before analyzing magazine and feminist texts can help this study form a framework for examining whether similar ideologies are being advanced in these texts. These illustrations will also be useful to this study because they show how ideologies helped sustain a male-dominated hierarchy of technology in the past and can therefore, prompt us to question whether the same types of ideologies can be implicated in causing less women to participate on the Net.

Such illustrations of gender politics influencing the development of barriers between women and technology are significant to this study for another reason. In addition to putting this study into its

historical (as well as social and economic) context by showing the important link between gender politics issues and women in technology, this scholarship also serves as a watchdog. This study is meant to point out the shortcomings in the way popular culture has addressed gender and technology in the past and thus, prompt a consideration of whether these same shortcomings are being repeated in today's magazines. Consequently, previous feminist research indicates that the utopian promises advanced by the media and by producers of new technologies actively neglected women's concerns. Thus, media rhetoric functioned to justify women's further exploitation and to ensure additional competencies and controls for those men who typically organized the system of production and consumption (Kramarae, "Introduction" 5-12).

So, when analyzing the rhetoric about the Internet that magazines advance to mass audiences, feminist scholarship warns us to remember how previous promises about old technologies functioned to legitimize dominant (male) groups. Since the statistics already depict women as the minority on the Internet, this research poses the challenge to search the rhetoric of today's magazines to see whether they are confronting or ignoring this problem. If this study reveals that women's access issues are indeed being addressed, then perhaps both women and men will not only be aware of the problem but will also be in an informed and empowered position to invent alternatives or strategies to circumvent the troubles that occurred with past technologies before they reappear today. If, however, this investigation determines that magazines are ignoring women's access issues, then it is this study's intent to discover if the promises advanced by magazines are actually functioning to legitimize men's dominance in the Internet environment and to rationalize women's under-representation on the new medium.

### The Study

In examining the discourse produced by magazine authors and by feminists on-line, this study will have three points of reference for interpreting this rhetoric. First, feminist studies that document and analyze the history of women's obstacles to technology will be examined. Second, the way in which magazines are discussing the Internet and the gender issues associated with it will be analyzed. Third, on-line discourse produced by feminists will be presented in order to access an additional perspective -- that of feminists who examine, through a personal or research-based approach, the successes or difficulties women may be encountering on-line.

Subsequently, the first point of reference can help us to understand the current access problem with the Internet by providing a historical review of how women have endured similar difficulties in the past. These insights can form a framework for approaching the Internet as another site of cultural materialist production and therefore, for scrutinizing the representations produced by magazines and by feminist on-line discourse about cyberspace. The second point of reference can help us comprehend whether magazines are conceptualizing the issue of women's under-representation on the Net in a way that correlates with feminist discourse which indicates how women are experiencing these problems on the medium itself. The third point can help us decide if magazines are accurately representing women's concerns about the Internet or if they are merely forwarding a portrait of the Net culture that is inconsistent with the feminist conception of reality and with the promises made by optimistic magazine authors and other Net enthusiasts.

By using this framework and these points of reference to interpret magazine and feminist rhetoric, the function of magazines will be determined with respect to the probability of the promise of universal access being realized. On one hand, this study may discover that magazines are functioning to legitimize men's dominance in the Internet environment and to rationalize women's lack of participation in this realm. On the other hand, this study might determine that magazines are functioning strategically to ensure women's inclusion in cyberspace. However, it is my hope that this study finds that universal access and revitalized communication may be possible for "everyone" in the future and that both women and mainstream magazines are attempting to circumvent the shortcomings and obstacles alluded to in previous feminist research. Thus, it is with cautious optimism that I propose the following questions: How has magazine discourse about the Internet framed issues of access and of gender? How close does this portrait come to representing women's concerns in terms of feminist discourse about the Internet? Based on this comparison, what gender issues have been excluded from magazine portraits of the Internet? Is there a rhetoric of legitimization in magazine articles about the Internet? What are the implications for gender politics given that magazine discourse has been framed in this way?

#### Methodology

This study will approach magazine and feminist discourse through a feminist analysis informed by previous feminist research about women and technology. The aim of this study is to look beyond the surface of promissory speculations and opinions so as to uncover other meanings lying beneath the words of these "texts" and to discover what is absent from magazine rhetoric.

Hence, this analysis will begin by reviewing previous feminist research on women and technology in order to provide the relevant context to this study. Thus, these former insights will be instructive for understanding and for deciphering what types of ideologies are being forwarded in magazine and feminist texts and with what implications. Next, this study will explore how magazines define and conceptualize Internet, access and gender issues by reading magazine articles as a cultural text. In other words, this analysis will look at what kinds of promises are being made about the Net, how Internet goods and evils are being framed and how women are being represented. In this way, we can learn what ideologies are being produced and advanced to mainstream magazine audiences.

Finally, this study will compare this cultural text to feminist on-line discourse, looking at this discourse as an additional cultural text. Analyzing this text in terms of the same themes looked for in magazine texts, this analysis will attempt to discover what ideologies are being forwarded to women on-line who choose to access this discourse. Thus, the feminist discourse used here can be seen in the same way as magazine discourse. Both are available to a wide audience via subscriptions, newsstands or doctor's offices, for example, or via Internet subscriptions and both discuss Internet issues. (However, while popular magazines cater to a more expansive audience, feminist discourse is probably only read by a small, elite group of women who not only have the money and the means to Internet access and also know where and how to find this writing despite the chaotic nature of the Net.)

Thus, the intention here is to unmask how technological promises and explanations are being constructed, how they compare to the reality of the Net world and with what consequences for women. As Hall and many feminist scholars argue, although all messages are constructed, messages

frequently fool us into appearing natural because they're encoded with dominant (patriarchal) ideologies and myths that are so widely distributed and institutionalized, we balk at questioning their validity (Turner 90). This is why it is also crucial to crack the codes that infiltrate the messages surrounding the Internet. It is crucial that we make an oppositional reading of these messages in order to see if or how gender politics and power structures are reflected and perpetuated through these codes, ensuring men's control of the Internet environment.

Therefore, a feminist analysis becomes a useful tool for deconstructing language that at face value may seem harmless, but on closer analysis may reveal the elements of a patriarchal power structure at work. Juxtaposing the dominant discourse produced by popular magazines with the minority discourse of feminists upon the Net will be one way to decipher this language and to decide how women's issues with the technology are being regarded. Therefore, this methodology will be important for determining whether sentiments and opinions articulated by popular magazines are working for or against women's inclusion in the Internet revolution.

As a further clarification, it should not be assumed that this thesis is taking an entirely negative or pessimistic stance when it comes to predicting women's future upon the Net. Rather, this study merely proposes to stand between the "technological democrats" and the "critical skeptics" in order to have a more mediated and cautious view in the face of such overly-optimistic and enthusiastic discourse about the Internet.

Technological democrats, according to Mosco (1989) tend to identify with the idea that communication networks, like the Net, will advance the development of democracy directly. They assume that "technologies are responsible for social transformation and can achieve widespread

participation and equality, even in the face of social forces that would preserve the entrenched positions of dominant elites" (Mosco 70). On the other hand, critical skeptics see computers as furthering the unequal distribution of power and as undermining the limited democracy that some now enjoy (Mosco 71).

Since the Internet is relatively new as a mass medium (its popularity only began to grow in the last two years), it would seem shortsighted and naive to conclude with any certainty just what the technology can and will accomplish. While women are still the minority on the Net, many in the media are saying that people are taking to the Net in startling numbers. Certainly, there is the possibility that we are staring into the face of an exciting new democratic era that promises its citizens widespread political participation and universal access to all communication systems. However, there is an equal likelihood that the Internet could be harboring a potential social problem that is just getting ready to unfold. In either case, examining the rhetoric of discourse about the Internet will perhaps provide a sneak preview of what will be possible for women in our society who have yet to be full and equal participants in the newest communication revolution.

#### The Organization of This Work

Chapter I is an introduction to this thesis as discussed above. It describes the purpose of the study, the research questions, the theoretical framework of the study and its significance.

Chapter II sets out the theoretical framework upon which the textual analysis of this thesis is based. It explores previous feminist research since the inception of the computer (roughly twenty years ago) into the daily lives of women at home and in the workplace. It does

this by peering into the sights of cultural materialist production - socialization, education and employment spheres - and arguing how gender politics influenced the establishment of barriers between women and technology. Accordingly, this research provides a perspective that demonstrates how the issues of gender politics and women's access to technology have been linked before and alerts us to how media worked strategically in the past to enable men to control computer realms and to marginalize women in these sites.

This research can also serve as a warning by showing how media misrepresented or ignored women's concerns about technology in the past and thereby, alert us to the possibility that the media could be failing to adequately represent these problems again. In this way, this chapter establishes the historical (as well as economic and social) context of this study and provides a point of reference for reflecting and deliberating about the differences or similarity between today's and yesterday's media representations of access problems with computers.

Chapter III focuses on a broad range of magazine articles from *Time*, *Newsweek*, *U.S. News and World Report* and *People* whose rhetoric discusses issues pertaining to the Internet. This chapter will provide a point of reference for interpreting the meanings this rhetoric conveys by demonstrating how mainstream magazine discourse defines the Internet to mass audiences and treats issues of gender and access. These discussions will be contrasted in the following chapter to the more feminine-conscious and critical interpretation of women's problems upon the Internet according to contemporary feminist writers on-line.

Chapter iv centers on the presentation and comparison of new feminist Internet discourse about the issues regarding women's participation in the Net realm with magazine discourse. This feminist discourse consists of both personal perspectives and more traditional

research. In either case, this discourse focuses on, among other topics, how women deal with access and their minority status in the on-line world. By examining this discourse, this study will attempt to gain another point of reference for how women perceive cyberspace that can then be measured against the representations created by magazines as outlined in the previous chapter.

In addition, this chapter will compare these two discourses according to the theoretical framework described in chapter two. Here, I will compare the representations offered by magazines versus by feminist discourse on the Internet to determine what was being left out of either discussion. The intent here is to determine whether magazines are functioning to achieve the promises of universal access or whether magazines are working strategically to legitimize men's control and dominance on the Internet.

Chapter V will discuss the implications this research spells for gender politics and for women given that the magazine rhetoric has been framed in a certain way. This chapter will also offer suggestions on how to use this research as well as propose ideas for further research.

## CHAPTER II

## REVIEW OF LITERATURE

Introduction

This study seeks to understand why women are currently the minority in cyberspace and how or if magazines and gender politics ideologies are functioning with respect to this issue. This study will critically analyze the "texts" of magazine discourse and of new feminist discourse on women and the Net to determine if there are extant barriers in the way of women's headway in cyberspace. Then, by comparing these two texts of discourse, this study will discover if magazines are forwarding an accurate impression of the Internet environment according to feminist assessments of what is troubling women's Internet access.

However, before we can explore why women are underrepresented on the Internet and how gender politics and magazines are operating in connection with this issue this study must necessarily provide the relevant background to this problem. As Turner argues, a media study must look at the "text" and its context as interrelated -- each text's meaning is invariably influenced and produced out of historical, political, social, and economic practices as well as other contextual factors (Turner 128).

Previous Feminist Research on Women and Technology

Accordingly, there are three reasons why this study's most pertinent scholarship for providing a necessary context to the issue of women's under-representation on the Internet is former feminist research

on women and technology. First, this feminist approach is useful in that it inspires us to look at the macrocosm of other contextual influences that leads to the formation of communication barriers. Secondly, this research can also clarify the correlation between gender politics ideologies and the problems that have affected female users of technology in the past. Thirdly, such research is instructive in examining how media rhetoric has functioned in the past to legitimize men's dominant position in technology spheres.

Therefore, this chapter will first examine the reasons why the former scholarship on women and technology can provide the crucial context for this study. Then this study will explore how feminist studies have linked gender politics to the access problems women have faced in certain sites of cultural materialist production -- socialization, education and the working spheres -- where computers are used. Finally, this chapter will explore how previous feminist scholars have examined the way media have functioned strategically to legitimize men's dominance in the technology domain in the past. Consequently, as I will explain in further detail throughout this chapter, these insights can then help in forming a framework for analyzing current media rhetoric and feminist research on women and the Internet to ascertain if gender politics-inspired obstacles together with media legitimization strategies are resurfacing.

#### A Relevant Context

Feminist scholarship on women and technology provides the relevant information for contextualizing this study because of its investigative focus on the obstacles that women face in the computer realm since the integration of the computer into the mainstream of home and work environments nearly twenty years ago. Feminist studies neither isolate

their investigations from other disciplines nor do they neglect a consideration of how gender politics can influence women's relationships with computers. Hence, a review of feminist literature on women and technology can not only provide the contexts that are crucial to any media study but it can also show how gender politics affects women's problematic relationship with technologies.

After all, no media study could arrive at a credible explanation about why women are encountering problems with the Internet today without reflecting upon the conditions that gave rise to these problems in the first place. As Davies (1988) argues, it would be a mistake to isolate any particular technological invention from the particular circumstances that produced it (33). Subsequently, feminist research offers the relevant starting point for reflecting and for deliberating about these circumstances and conditions.

Since the mainstream integration of computers into women's home and work environments almost twenty years ago, feminist researchers have documented how women are at a disadvantage in the technical domain. No matter what branch of feminism (i.e. liberal feminism, radical feminism, etc.) these scholars embrace, most agree that women's oppressed role in this world correlates with their subordinated status in other areas of society. So in looking for the cause of women's subordination in computer realms as well as in the society at large, feminists recognize the need to survey a wide range of determinants to understand why and how women came to be oppressed. Frye (1992) states that oppressed people are like caged birds, confined and shaped by unavoidable and systematically related forces and barriers that restrict motion in any direction (40). Simply scrutinizing one wire of this cage could never begin to expose how the system works as a whole and how this system cages and confines people.

Therefore, to see why women are "confined" in the high-tech world by the "wires" of discrimination and of limited access, Frye and other feminists stress the need to examine the full spectrum of related forces and barriers that caused women to be persecuted in computer spheres (see Frye, 1992; Turkle, 1984; Hacker, 1990; Creedon, 1993). In their research, scholars like Frye, Turkle, Hacker, and Creedon stress the need to reflect on the economic, social, and historical roots that relate to why ideas and material goods are often exchanged in ways that oppress women. They also seek to clarify why these exchange systems (i.e. the media for the exchange of ideas, the marketplace for the exchange of material goods, etc.) have unequally distributed society's commodities among women and men and why the gender politics-inspired ideologies inherent in these systems have depicted women in ways that typically undermined their power, strength and intellect.

In essence, these scholars suggest that only by first exploring the forces that affect women in the society at large can one begin to comprehend why women face discrimination or inequitable access, as is the case with computers. Consequently, a survey of feminist literature on women and technology over the past two decades reveals that these scholars explore the many factors that help clarify why women end up with relatively little access, status, and power in computer environments in comparison to men. Tapping into this research, therefore, provides this study with essential and requisite information for placing the problem this study highlights -- women's under-representation on the Internet -- into an appropriate historical, economic and social context.

The Relationship Between Gender Politics and Women's Technological Barriers

A review of feminist research can serve a second function for this study by clarifying the correlation between gender politics ideologies and the problems that have affected female users of technology in the past. This research explains how in certain sights of cultural materialist production, the employment of gendered stereotypes and gender political ideologies to typecast women as inept or unsuited for computer-related tasks have problematized women's access and use of computers. As a result, women are often discouraged or excluded not only from high-tech commodities but also from the spheres that use these machines. Therefore, this research can alert us to where and how to look at areas of cultural materialist production, areas where stereotypes, or differential ideas about gender, surface and how these function to limit women's freedom to gain better computer skills, experience and employment.

While most feminist scholars agree that gender politics-inspired stereotypes can problematize women's involvement with computers (see Frye, 1992; Turkle, 1984, 1988; Perkins, 1979; Cottrell, 1992; L.S. Keller, 1992; E.F. Keller, 1992; Machung, 1988; Kirkup, 1992; Chakravarthy, 1992; Hayes, 1989), these scholars diverge in locating where the most notable sights of stereotype production and extension exist. Feminist scholars point to three distinct areas where they argue culturally-derived and gender politics-influenced representations can form and can function to impede women's chances for success and access to the computer world (see Hacker, 1990; Benston, 1988; Cottrell, 1992; Kirkup, 1992; Haddad, 1987; Machung, 1988; Chakravarthy, 1992; Kramarae, "Introduction," "Technology" 1988; Baron, 1987). These are the sites of socialization, education and employment. Before we determine if and what

kinds of obstacles are impeding women's access to the Net, a review of this literature can highlight why and how similar access problems occurred in the past and can demonstrate how great a role gender politics played in the creation of these obstacles.

Subsequently, this review can reveal to us where to look for areas where similar barriers may be forming again and can inspire us to discover if gender politics is at all responsible for these obstacles. Consequently, it is crucial that this investigation reviews the problems that occurred in previous sites of cultural materialist production because these same sites, as well as the sites of the media and the Internet itself, may play a factor in aggravating or resolving women's access problems to the Net.

#### Gender Politics Affects Socialization Process

Many feminist scholars argue that during socialization, gendered stereotypes and learned behaviors determine why women later enter into a problematic relationship with computers (see Turkle, 1984, 1988; Perkins, 1979; Hacker, 1990). This branch of research illustrates how girls can be acculturated to absorb and to demonstrate certain characteristics that place them at a disadvantage when operating the abstract and controlling nature of certain high-tech machinery.

In the cultural sites of socialization, many scholars argue that boys and girls inadvertently learn to embody stereotypical gender roles that are strongly affected by gender politics. According to Creedon, "gender" is the act of naming a person, place or thing and "gendering," the gerund, is the process that begins the moment a baby takes its first breath of cultural pollution" (71). During this process of socialization, our culture unwittingly transmits stereotyped notions about gender which funnel children into two different social groups:

girls and boys. These groups embody "shared cultural meanings" about which behaviors and personality traits society labels and typecasts as belonging to either sex (Perkins 140). Because these meanings, or stereotypes, encompass "old beliefs of patriarchy" that position men as the dominant gender, girls are taught to adopt traits that ultimately reinforce their subordinate role in society (Hacker 123).

In other words, these sexist perceptions about gender are so markedly ingrained in our social stereotypes that as a result, they become structurally reinforced during the acculturation process. During this process, what is classified as male and as female are advanced, reinforced and therefore, preserved by society's "teachers": parents, siblings, educators, peers, media, etc. (Creedon 72). Inspired by gender politics, E.F. Keller says that people project their own romances onto nature about a certain kind of masculinity as embodying competition, conflict and individualism and of femininity as exemplifying cooperation, mutualism and altruism (54). These and other social and psychological stereotypes posit men as the stronger and more powerful sex and women as weak and subordinate to men. Because "teachers" enforce these stereotypes during socialization, "gender differentiation" is thus conceptualized by feminist scholars as a product of social construction based on what gender-distinct and culturally accepted models are "given" to children (Turkle, "Second" 109).

However, E.F. Keller argues that this framing and this vision of male and female culture is illusory, unrealistic, and places females in a disadvantaged position in relation to males (54). When these visions are perpetuated through these models, girls and boys learn to emulate prescribed sex roles. However, young girls and boys may not have started out behaving in accordance with their stereotyped sex role (E.F. Keller 54). Despite this, the stereotyped models imposed during socialization

are so pervasive, so widely recognized and so accepted they still work to encourage girls to conform and to dissuade them from operating outside the traditional behavioral parameters of their assigned gender roles (Perkins 141). In this way, stereotypes retain their effectiveness and ubiquity, despite their inherent gender bias, because girls and boys continue to define themselves and others as members of either social group (Perkins 143).

In due course, gender differentiation functions to limit girls' freedom and ability to acquire, to develop, and to emulate more "masculine" or dominant characteristics that feminist scholar Turkle argues are essential for utilizing and for mastering technologies. Turkle maintains that boys are groomed to acquire traits more conducive to technological systems while women are steered toward learning specific behaviors that make their success with these systems less likely.

For instance, boys are socialized to have more affinity for the abstract and for controlling things such as women, reproduction, emotions, intimacy, sensuality and even themselves (Turkle, "Second" 123). This learned, differential behavior, according to Turkle, explains why many men conceivably feel more comfortable and inclined to enter into the objective and abstract world of science and technology than women. On the other hand, girls are taught to assume the characteristics of negotiation, compromise, and give and take as psychological virtues (Turkle, "Second" 108). Since girls aren't acculturated to embrace the abstract or the need to control, this can problematize girls' involvement with technology. This research is not implying that girls become unable to use computers, because they certainly can and do use them. Rather, it is the particular way females associate with computer systems (for instance, as machines that

facilitate interaction or that can create aesthetically pleasing programs) that is often incompatible with the abstract and controlling nature of computers.

To illustrate this point, when Turkle documents the experience of young people with computers, her insights embody the notion that boys and girl's behaviors differ according to stereotypical sex divisions. Her study demonstrates how young boys and girls enter into two distinct styles of relationships with machines that correlate with their socially-determined gender roles. Boys tend to be "hard masters," seeing the world as something that needs to be brought under control while girls are inclined to be "soft masters" and more likely to see the world as a place they need to accommodate to and that is beyond their direct control (Turkle, "Second" 107). This research, Turkle argues, demonstrates that girls and boys tend to bring their distinct dispositions into their relationship with computers ("Second" 108). The way a person deals with and programs computer systems, Turkle says, is a direct reflection of their unique personality style and the way they deal with the world and with their problems within it ("Second" 105). Her research indicates that men appear to have more affinity for computers because they require a kind of relationship that cuts the subject off from the object and places one far away from the world of emotion and interaction. On the other hand, women feel more of a relationship between subjects and objects and therefore, tend to be inhibited by the abstract, emotionless computer (Turkle, "Second" 116).

In this study, Turkle is acknowledging how behavioral approaches to computers determine girl's level of adeptness and comfort with computer systems. Her research invites us to recognize that it is not necessarily a lack of ability or a lack of skills that makes women's access to technology problematic. Instead, it is a gendered

acculturation process delineated by what socializing institutions, such as the family and media deem to be befitting, seemly conduct for girls and boys that causes females to not relate as well to computers. The "romances" gender political ideologies project about masculinity and femininity perpetuate ideas of boys as being more capable with controlling objects and people while girls are perceived as being uneasy with these types of associations.

When this ideology enters into cultural stereotypes, it is advanced by society's teachers, and is consumed by children, boys and girls inadvertently learn traits that facilitate a successful or problematic interaction with computers. Subsequently, Turkle argues that because computer environments cater to more masculine properties, many girls feel unconfident and unable to operate computer systems as skillfully and as comfortably as boys. While most feminist scholars cited throughout the rest of this chapter do not always agree with Turkle's assertion that gender traits form the most significant barrier to women's computer access, these other researchers often reinforce the same stereotypical sex divisions that Turkle refers to and argue how these divisions can hamper women's success in the computer training and work environments.

These insights can form a useful framework for analyzing magazine discourse and contemporary feminist on-line discourse. For instance, this study will explore whether these discourses implicate the gendered acculturation process in creating barriers to women's Internet access. Do these discourses imply that the gender-distinct behaviors and sex roles learned during socialization cause women to be reticent of operating the Internet system or create other obstacles for them in cyberspace? Does a comparison of these discourses reveal that media are producing gendered notions of women's computer abilities and their role

in the Internet sphere that might perpetuate socialization practices to continue gearing boys toward the Internet and girls away from it?

The answers to these questions will help this study determine whether socialization processes affected by gender politics ideologies are again creating obstacles to women's success with new technologies. Also, the answers will indicate if magazines, as a socializing force or "teacher," are negatively contributing to the kind of acculturation process that teaches gendered behaviors and sex roles that influence girls to have a problematic relationship with technological machines.

#### Gender Politics Affects Education Process

While the previous selection of literature raised questions concerning how stereotypes influenced girls to adopt gender-distinct behaviors that are incompatible with the abstract and controlling nature of technology, a second branch of this research blames women's access dilemma on the computer training environment itself. These scholars posit that stereotypes affected by gender politics inspire erroneous conceptions of technical knowledge as being "masculine" and thereby unsuitable for female students. Consequently, girls may be explicitly or subtly told they aren't meant to learn this knowledge and "don't belong" in computer courses. These scholars also contend that if teachers and peers see technical knowledge as male, this can also create doubts about girls' technical competence, fostering a computer training atmosphere that is unsupportive or even hostile toward girls, and further obstructing their chances to gain technical knowledge and experience.

This branch of scholarship describes how the same process of polarization that ensues in the sites of socialization with differential behaviors also extends to how certain bodies of knowledge are commonly

albeit inaccurately characterized as having masculine or feminine properties and as being more appropriate for male or female students (Hacker 112-113). The cultural stereotypes that form around technical knowledge are certainly no exception to this rule. This knowledge is typecast as more apropos for the male sex, engendering the notion that males are expected to learn about technology and absorb a technological world view (that embodies objectivity, rationality, control over nature, distance from human emotions) while females are not expected to know about technological matters (Benston 15). Furthermore these researchers assert that when those in computer training environments hold these views, girls' computer proficiencies come to be characterized as inferior to boys' technical know-how.

For example, Cottrell explains how the myth that girls are inept with math translates into a similar notion that they're unskilled with computer systems, believed to be strongly-linked to mathematical concepts (72). She says the "explanation for the paucity of women in 'hard' computing professions is the alleged prevalence of math anxiety and mathematical ineptitude in females" (71). This belief stemmed from studies in the 1970s indicating that boys outperformed girls on tests of mathematical ability. However, when this study was repeated in the 1980s, new investigators found that when variables such as math course experience were factored out, sex differences actually disappeared (Cottrell 72). Cottrell thus points out the fallacy of linking mathematics and technical ability to gender stereotypes by explaining that it was the girls' level of experience during education and not an intrinsic lack of skill that accounted for the difference in test scores. More significantly, she explains, computers are not inherently mathematical. In fact, most computer work involves the manipulation of information and communication with people -- skills that women, as

Turkle demonstrates, are socialized to have. However, if males are increasingly being represented as the computer "experts" as society gets more technical, these scholars argue that it will be more and more difficult for women to overcome these stereotype-induced barriers to technical training.

So while Cottrell attempts to demystify and discredit these stereotypes of "masculine" computer knowledge and of female technical incompetence, feminist scholars say that mathematics, science, engineering and computer-related fields are still depicted as male realms in which women are not viewed as knowledgeable nor as welcome (L.S. Keller 14). Indeed, feminist scholars state that teachers and boys can thus become powerful agents of socialization by unthinkingly collaborating to construe science and technology as an area of masculine endeavor and by excluding girls -- and the girls soon take the hint (Whitelegg, 1992, 179-184). When technical knowledge is continually gender-typed as "male," those who may consciously or unconsciously agree with this characterization commonly discourage and deny females equitable access to technology training (Cottrell 72). Furthermore, by perpetuating these ideas, educators and peers indicate to females as well as to others that girls should be excluded from learning high-tech knowledge, deemed "inappropriate" for female students.

In this case, teachers and peers' methods of excluding girls can emerge in several ways. For instance, some feminist scholars argue that when those in the educational realms discourage girls from learning about computers, this can instill in girls a perception of the technical training atmosphere as hostile or unfriendly to females and therefore, can coerce girls away from a computer education. Peer approval, interpersonal support and peer culture, especially during the formative years can have a significant affect on female participation in

educational programs (Lewis 271). Therefore, a lack of encouragement may lead girls to doubt their chances for success in computer training atmospheres.

For example, a National Science Foundation study found that a lack of encouragement from counselors and teachers was a major factor for reducing women's interest in science and technological careers (Lewis 272). In addition, Cottrell points to a study showing how teachers were more likely to call on boys to answer questions or to use computers. These teachers also responded more quickly to boys' requests and were more likely to take over and complete a task in response to girls' questions (72). Lewis states that these behavioral biases can often wittingly and unwittingly deter girls from enrollment and achievement in high-tech learning fields (272). Even if girls are interested in learning about computers, behaviors like these can extinguish their desire to participate -- in presence or in spirit -- in computer classes and can persuade them to believe they're not as competent as their male peers.

Harassment by peers and teachers in computer training environments can also operate to exclude females from these areas. For instance, at one U.S. high school, the Educational Testing Service found that many boys told girls they were stupid to dissuade girls from signing up for after-school computer courses (Lewis 271). In addition, the lack of female role models throughout computer courses and departments may further communicate the idea to girls that they are outnumbered, that using computers is simply not a female endeavor and that females don't belong. For example, Cottrell cites that women only account for seven percent of computer science and engineering department faculty and only thirty percent of tenured professors in these fields are female (71). In

fact, these fields are often hostile to women as a result of how few women are in them.

Evidently, these feminist scholars explain that discouragement, harassment and a lack of female role models contribute to girls' belief that computer training environments are only open and friendly to boys, further curbing girls away from entering technical courses and departments. Spertus (1991) argues how "people's behavior is often subconsciously influenced by stereotypes that they may not even realize they have" (75). Here, teachers' taken-for-granted attitudes and perceptions about girls' computer abilities can create a "hidden curriculum" that hinders girls' access to a computer education.

These negative influences, scholars argue, are indicative of the nature of the institution in which they exist. If the school does nothing to deter patronizing or suggestive behavior, that behavior appears to be countenanced (Cottrell 74). If schools don't provide a supportive environment, technical settings become hostile and girls end up experiencing invisibility (they're ignored, interrupted, not consulted), patronizing behavior (they're "talked down" to, tasks are taken over), suggestive or obscene behavior (that is unwelcome or viewed as inappropriate by the females to whom it is directed), outright harassment or discrimination (Cottrell 74). Ultimately, these behaviors form the greatest obstacles to girls' inclusion and involvement in high-tech education. As a result, few girls are able to acquire the requisite experience and skills that ensure their success in future high-tech domains.

Consequently, for this study's focus on women and the Internet, these insights can form a relevant framework for questioning whether magazines or feminist on-line discourse imply how similar problems influenced by gender politics are problematizing women's access to the

Net. For instance, do magazines and contemporary feminist discourse indicate that there's a gendered notion of the Internet as a male realm and that this notion contributes to females being discouraged or harassed from learning or participating in "real" and "virtual" Internet environments? Does either discourse refer to this notion and these behaviors as a barrier to girls and women's Net access?

The answers will enable this study to determine whether gender politics-inspired notions of the new technology and of women's technical abilities are reemerging and complicating female's attempts to learn about or gain experience on the Internet. The answers will also indicate whether the Internet, the newest site of cultural materialist production, is perceived as hostile or unfriendly to female users and hence, discouraging more girls and women from Internet training and access. A comparison of the discourses produced by magazines and by contemporary feminist writers will also allow this study to ascertain whether magazine representations of the Internet environment and of women within it are, according to feminists, inaccurately conveying the Net as a male realm that female's "don't belong" in and hence, contributing to the discouragement of females from Internet training and access.

#### Gender Politics Affects the Work Environment

While many feminist scholars agree that the most significant source of women's barriers to technology are the sites of socialization and education, another branch of research describes how the most substantial difficulties for female computer-users arise in another site of cultural materialist production: the workplace. Here, they say, women are confronted with the effects of gender politics and cultural stereotypes that can impede their success, satisfaction and progress in their

working environments. However, while there is some overlap, these scholars' arguments diverge in three directions.

One argument says that the most damaging computer obstacles result when producers and managers, subscribing to contrary notions about women's intellect and ability, exhibit sexist behaviors in the working sphere, making that sphere appear unfriendly or even hostile toward women. The second argument is that these producers "feminize" and devalue certain technical jobs enabling them to use and to manipulate women as a cheap source of labor. As a consequence, these jobs become grueling and oppressive to women, discouraging women from becoming more involved or from gaining the requisite knowledge and experience for utilizing the Net. The third argument suggests that when gender politics' influences and stereotypes function to discourage or to force women out of technology-producing spheres, the resulting technology will most likely be designed by men, reducing the likelihood that women will be comfortable or prone to using these tools.

According to the first argument, women's obstacles to technology are created in the working sphere when producers and managers exhibit sexist behaviors based on gender politics-inspired perceptions of women. These types of behaviors surface in a variety of ways with severe repercussions for women. For example, in a study of two fields intricately involved with technology -- science and engineering -- the National Research Council ("NRC," 1994) found that female employees commonly faced paternalism, sexual harassment, allegations of reverse discrimination, aspects of male-oriented corporate culture, different standards for judging women and men's work, a lower salary relative to their male peers, inequitable job assignments and limited opportunities for advancement, especially into management positions (1-17).

The council explains that these kinds of behaviors and biases may be part of a systematic problem wherein males have limited perceptions of the roles of women and are not accustomed to seeing them as reputable sources of information. When women are treated these ways, feminist scholars say women clearly recognize that they are perceived by their male managers and colleagues as unintelligent or as naturally unsuited or unwelcome in high-tech spheres. For example, all of the women interviewed in the council's study agreed that female managers were interrupted more often and their recommendations were more frequently ignored (28). In Turkle's investigation, one computer programmer, or "hacker," explained, "Men can't have babies, so they go and have them on the machine. Women don't need the computer, they have them the other way. Why do you think people call ideas brainchildren?" ("Second" 235). Laden with sexist overtones, these types of remarks characterize women as intrinsically unqualified or resistant to using computers and subtly communicate to women that they are unwelcome in many high-level occupations.

Also, producers and managers often exclude women from high-tech spheres by telling them that they "lack" the requisite characteristics to operate computers, like bodily strength or intellectual capacity -- attributes men are assumed to have (Kirkup and Keller, "Introduction" 2; Birke 75). As many scholars argue, not only is this sexist but the attributes they describe as necessary for using computers are not as significant as they would like women to believe. For example, one feminist study indicates that when technical companies hired women, some working environs were considered to be "inappropriate" for them because physical strength was assumed to be a necessary attribute while it was really a technological competence and persistence that was important (NRC 21). These narrow-minded beliefs about women and computers

completely disregard how computers allowed a number of handicapped people to become eligible for the job market! In another case, Turkle described how one hacker called computer programming "masochistic" and a "male world." Because this world is preoccupied with winning and submitting oneself to increasingly violent tests and because, as this hacker puts it, women are "not into" this type of behavior, Turkle explains how women come to see this world as particularly male in spirit and unfriendly. ("Second" 210).

Incidents like the ones described above lead many feminist scholars to conclude that when women begin to view their working environment as unfriendly or hostile, they may feel encouraged or forced to migrate away from high-tech occupations and positions of power (NRC 49). In fact, women who are seeking these kinds of jobs may already be at a disadvantage. According to the National Research Council, companies already have stereotyped preconceptions of their model candidate that embody a predilection for replicating the existing working force's attributes (NRC 19). Since there is already a dearth of women in these fields, one would expect that these attributes are probably those of men. But even if more women are hired into these "non-traditional" fields they could still be prone to sexual harassment "because they may be perceived as 'barging into' an area where women 'don't belong'" (NRC 23).

Consequently, these perspectives can instruct this study to consider whether magazine discourse and contemporary feminist writings on the Net indicate that similar gender politics-influenced notions influence some men to bring forth attitudes, behaviors, and discourses into working spheres that use the Net or into the Net environment itself. For instance, do these discourses imply that men's actions, perceptions, and dialogs are biased against women's involvement in the

Internet domains and that this creates obstacles to women's Net access? Are women harassed on-line, subtly told they "don't belong" or are their contributions to Net discussion groups ignored, silenced or devalued? The answers will tell us whether gender politics-influenced behaviors, such as sexism and discrimination, are reoccurring on the Net and whether these texts frame these behaviors and perceptions as a problem for women's Internet access.

The second argument as to why women encounter obstacles to accessing certain technologies and the work associated with them states that it is because producers and managers subscribing to the aforementioned stereotypes will "feminize" and devalue certain technical work. These scholars say that the producers and managers who hold limited perceptions of women's technical skills and abilities, will oftentimes perpetuate these notions by deterring women from entering high-level technical fields and by relegating them to low-level positions (NRC 49).

In this way, high-tech jobs that offer a better salary and higher status, like computer programming and engineering, come to be seen as "masculine" along with the technologies involved within them. On the other hand, the technical fields that women are traditionally employed in are deemed "feminine" and reap little status and little pay. Here, sexism is seen as the first form of social hierarchy. "Valuable tasks are taken by men; detail work is left to the women" (Hacker 75). In other words, gender politics affect the formation of a negative representation of women's computer competence which in turn causes people to consider women as unsuitable or unqualified for the more esteemed technical professions.

When this occurs, this research argues that women are encouraged to remain in less "important" computer vocations while men become groomed

for high-level and managerial positions in the technology fields (Haddad 43). And because these vocations are not considered as important, producers and managers tend to devalue this work, ascribing them smaller paychecks and lower ranks. Paying women less money, bestowing their work with a lower status relative to men's work and dissuading them from entering more esteemed technical vocations seems to correlate with the way women are represented in our society as subordinate to men and as occupying roles that are not considered valuable.

Subsequently, the consequences of labeling behavior and work tasks as "male" and "female" can become problematic for women interested in pursuing high-tech careers. In fact, women may feel forced or discouraged from occupying even low-level technical positions because the work offers few rewards and many disadvantages (NRC 49). Indeed there are certain "feminized" jobs that utilize technology where women have a dominating role such as in nursing, midwifery, food preparation, clerical professions and in the textile industry (L.S. Keller 29). However, feminist research indicates that the technologies linked to these fields also become gender-typed as "feminine" and hence, the jobs associated with them often become devalued and reap less status and pay. So, while research on clerical jobs (secretaries, bookkeepers, typists, bankers, etc.) demonstrate how women become quite skilled at a variety of computer tasks and hold a supreme position in their field, their work still becomes feminized, socially devalued, underpaid, and highly routinized (Machung 62; Kirkup 274; Chakravarthy 229).

Plus, when new office technologies were integrated into these "feminized" fields they actually led to poorer conditions for women. In fact, the places in the economy where women have been able to find employment are the same places that are easiest to computerize (Smith and Balka, 1988, 87). However, even though technology was promoted

and publicized as increasing the number of jobs in the economy, this research indicates that it really only did so for men (Haddad 43). In contrast, because few of the new computer jobs in the clerical fields offered training, many women of single-head households who needed these jobs out of economic necessity were displaced (Smith and Balka 86). Even when women's jobs were secure, the electronic monitoring and increased supervision that accompanied the introduction of these technologies resulted in the establishment of arbitrary production standards and were used as a basis in disciplining or even terminating employees who couldn't "keep up" with production (Haddad 43). Because clerics were pushed to meet a computer-monitored quota, automation limited clerics' time for interactivity, threatened their job satisfaction, led them to feel controlled by their computer and made them feel isolated in a room full of people (Machung 63-63). In another example, one researcher found that working-women in Silicon Valley were paid wages so low, some even qualified for welfare (Hayes 23).

This research suggests that when women must endure the adverse effects of "feminized" and devalued jobs, the likelihood of them venturing into high-level technology careers are slim. As Kirkup notes, few women are involved in innovative technology developments at home or in the workplace and new technical jobs are unequally occupied by men (Kirkup 267). The exclusion of women from skilled trades is no longer legal, Kirkup says, but an implicit association between masculinity and financial rewards for "skilled" work still remains. In addition, if women experience unsuitable and inequitable treatment in low-level technical spheres, this research shows that they will be discouraged from remaining or entering these fields or will be dissatisfied with their work. For example, in 1986, only 15% (about 700,00) of the employed science and engineering labor force was female despite the

higher amount of women getting degrees in these fields (NRC 6). Also, 90 to 95% of new technology employees in Silicon Valley were white men from a small number of elite universities (NRC 31).

Accordingly, the insights from this feminist research will form a useful framework for analyzing magazine and feminist on-line discourse. This branch of research cautions us to recognize whether these texts indicate that gender politics' notions of the technological environment are again leading to the classification of the Internet as a male sphere and if this is posing problems to women interested in any form of Internet participation. This study will attempt to discover whether there are gender politics notions of the Internet environment in magazine texts and whether these notions correlate to the problems threatening women who are attempting to use, to work with, or to purchase Internet systems.

Because the influences of gender politics and sexist stereotypes result in fewer women being inducted into technology-producing fields, a third argument asserts that the technology itself can become an obstacle to women. Here, there is some overlap with the last two arguments that said hostile working environments and job classifications leads to disproportionately few women in positions of power. However, this argument states that the consequence of fewer women in these and other high-level positions translates to less women deciding how communication technologies will be designed and reproduced (Kirkup 267-271). When this happens, technology becomes "gendered" as "masculine" and subsequently, this ensures that more men and less women will purchase and use them.

Thus, when more men are put in charge of manufacturing and designing technology, these tools become more suitable for men and less sympathetic to women's computer tastes and styles. This research argues how this can inevitably lead to a "gendering" process, where new

technologies come to bear the sexist, classist imprint of their predominately male designers (Kramarae, "Introduction" 12). As Whitelegg says, personal computers still retain the gendering of its predecessors (181). When these tools become gender-typed as "male," these scholars maintain that women are excluded from the "technique" and the physical principles by which these machines operate (Benston 16). After all, technologies aren't just a collection of machines that suddenly emerge; rather, machines are selectively developed to ensure a certain social hierarchy by those, usually, white males who own, manage and select them with their own logic and own interests in mind (Hacker 87; Benston 17). In fact, Chakravarthy claims that new technological innovations will always have an inherent gender bias which affects the distributions of costs and benefits between women and men (227). Therefore, feminist researchers assert that the dearth of women in positions of power within the production process translates into more men deciding what kind of electronic communication will be designed, how it will be designed and therefore, who might be more inclined to use them.

Drawing an analogy to sports, Weinberg states the problem of gendered technology well: "Obviously, if one sex designs the contests, which are reflected for the degree to which they showcase certain skills, then that sex will tend to excel in those contests" (qtd. in Lewis 281). Evidently, researchers say that men are usually the ones who design computer games. As a result, these games perpetuate the competitive image of computing with themes of wars, battles, crimes, destruction and male-oriented sports (Kiesler et al., 1985, 457). Kiesler says that when she and other researchers examined computer games in a typical store, they found 28 men and four women illustrated on the covers (457). Educational software is not immune from this gender bias

either. Cottrell cites a study that found when educators were asked to design software for generic "students," they designed games -- exactly as though the students were boys (Cottrell 73). Furthermore, because main characters are male and sex roles are stereotyped in many computer games, using games to achieve computer literacy is found to discourage female involvement. As a result, this type of software is often criticized for perpetuating sexist attitudes that alienate females (Lewis 275).

Feminist scholars therefore argue that with more and more computers and software being designed by men, it decreases the chances that the products will be built with women's computer tastes and interests in mind. The task here isn't to assume that gender is monolithic and that men are omnipotent and powerful enough to construct the world the way they want it. Rather, the research can lead us to question how male power and gender is constructed through stereotypes and gender politics to exert a strong affect upon technologies (Baron 62). Accordingly, these feminist scholars maintain that females are disinclined to buy and to use certain technologies since these devices are built to favor masculine needs for abstract, competitive or violent themes and programs, ignoring women's tastes for interaction and their disdain for these themes.

In this sense, scholars suggest that we should think of technologies as social relationships which are organized and structured by technological systems and which allow or encourage some kinds of interactions and prevent or discourage other kinds" (Kramarae, "Introduction" 2). Technology can thus be seen as a "language" for action and self-expression with consequences for which gender will be able to use this language. Men's control over technology and their adherence to a technological world view has consequences for language

and verbal communication and create a situation where women are silenced (Benston 15).

The insights gathered from this feminist research can help this study determine whether gendered technologies correlate with the reasons women are currently the minority on the Net. For instance, does magazine or feminist discourse imply that the Internet is becoming a gendered sphere that is more geared toward male interests, styles and tastes? The answer to this question will tell us if the discourses generated by magazines and by feminists on-line reveal that gender politics ideologies are again contributing to the gendering of the new information technology and whether this "gendering" creates obstacles to women's use of the Internet systems.

#### How Media Legitimized Women's Exclusion from High-Tech Spheres

While examining the optimistic rhetoric that flourishes around former technological innovations, feminists have been skeptical of this glossy "promise" discourse because they argue that these promises are often used by media to advantage some and to disadvantage others. Consequently, the third function this feminist literature review can serve is to alert us to the strategies media rhetoric devised in the past to legitimize men's dominant position in the high-tech realms and to rationalize women's unequal access or outright exclusion from those realms.

These scholars say that media were inadvertently working to invalidate their own promise rhetoric which declared that computers could benefit "everyone," could, by design, enable universal inclusion in computer environments, and could "liberate" women from their cumbersome home and work tasks. Despite the utopian flavor of these

hopes, they were ultimately impossible to attain. For this research cautions us to recognize that when media depict women as incompetent with technologies or forward the perception that women don't encounter discrimination or discouragement in technical realms, media are unintentionally perpetuating the conditions that confirm men's supreme standing in computer spheres and that impede women's access and success in these spheres. In effect, these conditions keep media rhetoric's promises of "universal inclusion" and of liberation from coming to pass.

While media promise rhetoric embraced the hopeful and optimistic sentiments of early computer innovators, feminist researchers assert that their vision of what computers could accomplish was too idealistic and unattainable. These inventors believed that computers could be used as a tool for enhancing democracy, for increasing political participation for "everyone" and for "liberating" women from their traditional home and work-related tasks. The computer hobbyists of the 1950s who were responsible for the birth and the development of the computer believed in a more radical populism, "one that viewed personal computers as anti-corporate tools and as a franchise for democracy in the Information Age" (Hayes 17). They challenged the tendency of using technology to form an information elite and foresaw a "software-based technoculture organized around the outlawed libertarian principles about free access to information" (Ross, 1991, 84-88). They boasted that computers would create "limitless opportunities" for all and would "liberate work, shopping and homemaking from drudgery" (Hayes 17).

Borrowing from these utopian visions, media discourse and advertisements typically promoted the idea that using computers could liberate one from homemaking tasks, from monotonous and grueling work, from isolation, and from depending on the limited sources of the media and the government for social and political news (Kirkup 267). The

computer, which was once a symbol of big corporations, institutions, and money, was now recast by the media into the image of an instrument for decentralization, community and personal autonomy (Turkle, "Second" 172). Optimistic futurists predicted dramatic social effects and thought that society would be radically transformed for the better by information technology (Kirkup 267). Media rhetoric portrayed computers as enabling anyone to work at home, to save on transportation and energy costs and even to sign up for home-based computer courses (Turkle, "Second" 172). Hence, people's relationships with computers became a depository of people's longings for a better life "where relations of power would not be veiled, where people might control their destinies, where work would facilitate a rich intellectual life" (Turkle, "Second" 173).

Although this rhetoric didn't always name women directly, broadcasting that computers would save "everyone" from the "drudgery" of homemaking and shopping tasks implies that they probably were attempting, at least in part, to reach a female audience. In addition, by saying that "everyone" would benefit from new technologies, media promises implied that both genders could reap the rewards computers offered. Plus, survey data showed that women had more leisure time available than men; hence computer companies saw women as a market for entertainment and consequently, directed advertisements their way (Lewis 271).

However, despite the appeal and seductiveness of these promises, scholars say that they were unattainable. They argue that the computer in and of itself is not capable of transforming the conditions that problematize women's relationship with computers. Media rhetoric may have emphasized the power of the computer to magically transform women's condition for the better. But Turkle argues, nobody and no thing could

ever facilitate a political revolution or change human relations by simply retreating into the world of things. As she explains, "People will not change an unresponsive government or intellectually deadening work through an involvement, however satisfying, with a computer in the den" ("Second" 175).

Apparently, a computer can't transform human relations on its own and it is in human relations where feminist scholars discover the basis of women's troubles in the computer world. Kirkup argues that innovative technologies had yet to be used to restructure established sexual divisions of labor or unequal gender relations (281). Indeed the previous section of feminist literature summarized that when these relations are affected by gender politics and by stereotypes, women's involvement and roles in computer environments becomes problematic. Therefore, these scholars suggest that if the media's computer promises are ever to come about, we would first need to clear the road of any biases or prejudices that stand in the way of women's success or entry in high-tech environments.

In spite of this informed advice, media, in their grand vision of the computerized future, failed to alert audiences to the damaging effects of gender politics and gendered stereotypes in these environments. In fact, media rhetoric functioned to perpetuate these biases and myths and, in doing so, presents those in the sites of cultural materialism with the proverbial artillery to discriminate against women. In this way, researchers argue that media operated to support "ruling class ideologies" through a re-defining process and through the circulation of new definitions (Perkins 140). So while media defined new technological innovations through glossy and appealing promises and optimistic language, feminist scholars maintain that this discourse actually unconsciously functioned strategically to legitimize

men's supreme status in high-tech fields and to rationalize women's under-representation in these sights. According to these researchers, media rhetoric achieves this outcome in several ways.

First, in the "purported interest of 'objectivity,' current basic journalism and mass communication texts erase gender" (Creedon 77). This point is distressing because media tells us what is news, what is reality and is our primary validating institution. (Creedon 74). So we also rely on media to tell us if and why women run up against barriers in computer environments.

"Erasing" gender issues from discussions in effect silences women and the media's ability to inform mass audiences about the troubles they endure in high-tech spheres. Subsequently, neglecting to report about gender issues functions to legitimize men's domination and manipulation of women in these spheres. For example, when female-workers in Silicon Valley suffered miscarriages and bore babies with birth defects, public sentiments regarding computers were so favorable, women's voices were never heard and no one listened to their complaints (Hayes 25). Magazines avoided any obvious conclusions about what occurred and diffused responsibility for the atrocities by taking corporate denials at face value and concluding that the dangers were no longer there (Hayes 78). Without bringing to the public's attention that women were being threatened in these sights, managers could continue keeping women in dangerous working environments, using them as a cheap labor source.

This research argues that failing to alert mass media audiences to gender issues in high-tech environments typically enables men to discriminate against and to subordinate women without check as well as to ensure men's place at the top of the technical pyramid. For instance, if women's computer concerns aren't reported, how will media audiences learn that these problems exist? And why would socialization,

education and work institutions change their ways to accommodate women's computer styles, tastes and needs if they don't even know these changes are desired? And how can women be convinced that there's a place for them in the computer world if media rhetoric doesn't discuss women's technological accomplishments, interests and difficulties? Ultimately, when media avoid in-depth coverage of these issues, discriminating and discouraging behaviors against women are never brought to task and are therefore, silently condoned.

The second way media worked strategically to legitimize and to rationalize men's higher and women's lower status in high-tech fields, is by portraying women in stereotypical gender roles, influenced by gender politics. Although media rhetoric may claim that computers can advantage "everyone" and improve women's condition, on a more subtle level this rhetoric seems to be reinforcing the same negative female stereotypes that instigates the creation of technological barriers. So while media forecast that "everyone" can join in the Information revolution, they unintentionally promote the same gendered stereotypes that are used as an excuse to keep women away from computer-related endeavors.

For example, while housewives were represented in advertisements as having more leisure time for buying and using computer software, Kirkup argues that because women typically have less disposable income than men, women were unable to afford the investment expensive computer hobbies demanded. In addition, when media claim that new technologies can free women from the toil of work, homemaking and shopping, this communicates the idea that women still occupy traditional, oppressive roles in society that they need to be "saved" from. Rather than representing technology as tools to increase female independence from the work and home environments, this rhetoric reflects the notion that

women's "natural" roles are as shoppers, housewives and workers of grueling jobs. In this sense, it seems that computers aren't really promising women that they can leave their traditional gender roles but rather that women can be relieved from the difficult nature of the tasks these roles demand. More importantly, representing women in this way forwards the perception that women weren't meant to play a crucial role in high-level technology environments, reaffirming the myth that women are inept or unsuited for computer-related tasks and more suited for house and low-level technical work.

For instance, as the previous section of literature discussed, when educators and peers subscribed to the notion that technical knowledge was not suited for girls, they discriminated against girls' involvement in technology subjects (Kirkup 275). If women are only going to grow up to become housewives, shoppers and workers of low-level jobs, why would they need to learn how to operate technological systems? Accordingly, Machung argues, "Anything that denies access to computers, that makes computers ... hard to use, that keeps certain groups from learning the skills to use computers, works to concentrate power for those who can buy technology and the people to run it" (qtd. in Smith and Balka 87). Ultimately, this research maintains that "those" who buy technology and the people to run it are men.

The third way media unintentionally functioned to legitimize and to rationalize women and men's differential treatment in computer spheres is by painting a portrait of these spheres as "male-only." Thus, media works to confirm the myth that women "don't belong," are unsuited or are incompetent in these sights. For example, Lewis argues that media are sending subliminal messages and perpetuating stereotypes that women aren't part of computer environments through the dearth of female role models in textbooks, advertisements and magazines (269). This

researcher investigated four large-circulation computer magazines and found that media were depicting a world in which men primarily sell, use, and write about computers (269). She says that this does little to counter the tendency of women and others to view the computer as a male thing. Also, while computer companies advertised their computer games to women, masculine themes discouraged females from using them (Kirkup 272).

Although computer software and equipment was marketed to "everyone," with less women being encouraged to stay in the vocations that produce and design technology, feminists argue that more and more technology became gender-typed as "male" tools. For example, the mass of computer games that rested heavily on male themes or characters are evidence of how computers came to be associated with men (Lewis 269; Kirkup 272). Consequently, some feminist scholars contend that if new technologies are designed according to the whims and fancies of men -- the dominant social groups in our society -- then this will furnish men with an advantage over women in technical spheres. Gendered technologies can therefore be used for the reaffirmation and restructuring of women's domination since they pave the way for men to purchase and to use them with greater ease (Kramarae, "Introduction" 12).

Therefore, by failing to call attention to subjects concerning women's computer involvement, media promise rhetoric functioned to reaffirm and to perpetuate the conditions that gave rise to women's barriers to technology to begin with. When discourses perpetuate these negative characterizations of women and neglect to shed light on women's concerns and issues in the technology world, media promise rhetoric unwittingly functioned to legitimize men's dominance and to rationalize women's exclusion and under-representation in the sights of cultural materialism.

By forwarding these negative stereotypes about women and by not presenting the concerns women have in the technical world, media promise rhetoric unwittingly provides the "teachers," producers, managers and male users of technology with the proverbial artillery to legitimize men's dominant position and to rationalize women's exclusion and limited representation in the sights of cultural material production. Even if they are helpless reflectors of the status quo, media are still partly to blame for the barriers that arise between women and technologies. As the previous section of literature demonstrated, when gendered stereotypes and gender politics ideologies were reinforced by the prominent and influential people in socialization, education and working environments, women were discouraged, discriminated against and denied access to computers. Thus when media do nothing to alert its audience to these biased behaviors, it is in effect perpetuating the negative stereotypes and ideologies that instigate these types of behaviors. In this way, the media functions to allow and to sanction discriminating actions against female computer users and to reaffirm that men should be the chief users of these technologies.

Consequently, these insights can lead this study to investigate current magazine rhetoric to see whether similar strategizing practices are occurring. For instance, are magazines, on the one hand, forwarding utopian-like promises that say "everyone" can access and benefit from the Internet while, on the other hand, neglecting to mention the obstacles that threaten women's inclusion in cyberspace? If so, then magazines could be strategizing to justify men's dominance of the Internet domain and to rationalize women's exclusion from this sphere. Or are magazines alerting its readers to the barriers that are troubling women's Internet access and arguing that these impediments need to be removed before any promises of benefits or "universal access" can be

achieved? If this is the case, then magazines could be working to ensure that women are included in the new information revolution and that, therefore, the promises of universal access and the benefits of the new technology can be achieved for women as well as men.

#### Summary

This review of feminist literature on women and technology serves three functions that are essential to this study's exploration of the reasons women are currently under-represented on the Internet. First, it places this problem in its proper context by providing a historical background and by discussing how social, economic and gender political factors influenced the creation of similar obstacles for female computer-users in the past. Consequently, this review provides a way to look at the Internet without severing it from the conditions that gave rise to how it is advertised, discussed, purchased and used today.

Secondly, this review alerts us to where and how we can look for sites of cultural materialist production. We saw how gender political ideologies were often directly responsible for creating barriers between women and technology in the former sights of socialization, education and employment. This research can now inspire this investigation to look at two sites of cultural production -- magazines and the Internet -- to see whether the same kinds of gender political influences are consistent with women's limited representation on the Internet. In doing this, it can be determined whether the same problems that arose in previous sites are befalling the Internet and the media right now.

For example, are magazines inadvertently depicting the Internet as a "masculine" medium? Do women feel uncomfortable operating the new computer system? Are women enduring sexist and discriminatory behaviors when they use the Net? If the answers to these questions are "yes,"

then this research cautions us to recognize that gender politics may be contributing to women's limited access to the Internet.

Thirdly, this feminist research alerts us to the roles media rhetoric have played in the past to legitimize men's supreme position in computer realms and to rationalize women's exclusion from these sights. Previous feminist research indicated that media functioned in the past to ensure men's dominance of the computer realm and women's relative exclusion in three ways: by not alerting audiences to the gender politics-inspired obstacles that impeded women's access to the male-dominated computer realm, by forwarding utopian-like promises and portrayals of the new technology that were actually geared toward men (see Hayes, 1989; Kirkup, 1992; Turkle, 1984), and by advancing gender politics-influenced representations of women as technically inept, as absent from the computer domain, or in stereotypical gender roles (see Creedon, 1993; Kirkup, 1992; Lewis, 1987). In other words, by not alluding to the negative effects a male-dominated hierarchy and gender politics ideologies elicited for women, the media actually served to strategically reinforce, perpetuate and justify these same conditions which impeded women's headway in the computer realm. Thus, this research can prod us to analyze the discourse from today's magazines and from contemporary feminist on-line to see if there are similar strategies developing to ensure that less women will be part of the Internet revolution.

This study can use these insights as a point of reference for determining if magazines are operating in the same way as in the past by examining how today's magazines and new feminist discourse on-line frames and conceptualizes issues of (1) access, (2) the advantages and the disadvantages of the Internet, and (3) gender (including how these discourses represent women). Focusing on these three issues can be an

effective way of utilizing the feminist insights as a framework for determining if gender politics correlates with women's current access problems and for ascertaining how magazines are functioning in relation to these problems.

For example, we can question whether rhetoric about the Internet in today's magazines is similar to the "promise" rhetoric in past media discourse. We can also look at how magazines are currently defining the problem of women's under-representation on the Internet or at whether they are focusing on this problem at all. This investigation will subsequently compare and contrast the discourse produced by magazines and contemporary feminists on-line to determine the extent to which magazine representations of the issues surrounding women and access live up to feminist assessments of these issues. Is anything being left out of either discussion? Are current access problems being reported? The answers to these questions will then help us to assess the validity of any optimistic Internet rhetoric forwarded by today's magazines.

In short, it is the purpose of this analysis to examine if magazines are ignoring the concerns that threaten women's access to the Net, are forwarding utopian promises of universal access and of the Internet's benefits that neglect women's concerns and interests, and if mainstream magazines are perpetuating negative stereotypes of women and their technical abilities. If this is the case, then today's magazines may be unwittingly operating once again to ensure that the potentials and advantages of the new medium will apply primarily to those men who use, own and control the system. On the other hand, if this analysis finds that mainstream magazines are defining women's unequal access as a problem, are informing audiences of any obstacles to women's use of the Internet, and are positively depicting women's role in cyberspace, then today's mainstream magazines are functioning to maintain the optimistic

promises many Internet enthusiasts articulate (such as universal access) for women as well as men.

## CHAPTER III

## MAGAZINE DISCOURSE

Introduction

Previous feminist research indicated that the way media discourse frames issues surrounding technologies and women can significantly affect how audiences come to see the technology domain and women and men's roles within it. This research found that in the past, media discourse painted an idealistic and hopeful portrait of the access capabilities and benefits that new technologies could extend to women. However, excluded from this portrait was a recognition of the gender politics-determined behaviors and practices -- such as harassment and sexism in areas where women needed to learn, to gain experience, or to work with technologies -- that were threatening women's access and use of high-tech tools.

Consequently, feminists didn't merely argue that the media's promises were illusory. They also maintained that because this discourse represented women in traditional gender roles, as absent from the computer domain, and as technically incompetent, the media were also reinforcing and perpetuating the gender politics-inspired stereotypes that lead to women's access barriers. As a result, the media unwittingly operated in the past to legitimize male hegemony of technological power and to rationalize women's exclusion from the technology realm. So, the question now is are today's media operating in the same way? Is the media's version of Internet "reality" working for or against women's inclusion in cyberspace?

### Methods

Before these questions can be answered, it is essential to examine how, in general, magazine discourse defines and conceptualizes the Internet. Subsequently, the goal of this chapter is to use these feminist perspectives as a framework for uncovering the magazine-generated meanings in discourse about Internet access issues, the pluses and minuses of the new medium, and gender issues (including the representation of gender). Accordingly, this investigation will determine whether magazine discourse is recognizing women's underrepresentation on the Internet as a problem, is alerting audiences to women's access barriers, is forwarding any utopian-like promises about the Internet's potential and is representing women as intelligent and active members of cyberspace.

As it was discussed in the introduction, mainstream magazines as opposed to other magazines traditionally attempt to be a voice for the nation. Unlike specialized magazines which cater to a select audience and focus on a limited number of topics devoted to that audience, the four mainstream magazines that will be used in this study conceivably appeal to all readers and necessarily address a larger range of subjects. Consequently, investigating how national general interest magazines tackle Internet topics can be a way to access the ideologies that are being produced about the technology for a wider, more diverse audience.

Plus, information and discussions about the Net may be overlooked in the unordered, crowded pages of a newspaper while in mainstream magazines, with so few articles to choose from, readers might not inadvertently miss or be more likely to skip an article. Also, while Internet discussions may be severely edited to fit the typical short

format of a television news segment, the nature of mainstream magazines allows for more in-depth discussion of issues. Consequently, examining magazine texts can be an effective method of accessing the opinions and notions being forwarded to mass audiences by a more popular and highly read medium.

Thus, by examining how magazines discourse defines and conceptualizes Internet issues, it can lead us to discover what socially-produced groups of ideas or ways of thinking may have a bearing on how magazine readers may come to envision the "reality" of the Internet. Judging from the review of previous feminist literature, an awareness of these meanings, or ideologies, appears to be critical for understanding whether obstacles related to gender politics ideologies are reemerging and for ascertaining whether this media genre is once again perpetuating gender politics ideologies or, conversely, forwarding a conception of the Internet that may work strategically to achieve women's Net access.

However, at this point, the intent is not to critically analyze this discourse but to provide -- through an overview of how mainstream magazines present Internet, access, and gender issues -- a point of reference for later analyzing how magazines are operating. Before this study can definitively judge whether magazines are working for or against women's headway in the new information revolution, a comparison of the magazine's portrait of the Internet with that of recent feminist on-line discourse, another point of reference, is essential. By comparing magazine content with cases and illustrations of women's Internet experiences in chapter four, a more comprehensive understanding can be gathered about whether magazine discourse is accurately representing the issues and problems women encounter on-line, according to feminists who've studied women's Internet involvement or been

involved themselves. This comparison can then yield the information needed to establish whether or not magazines are unwittingly functioning to further or to hinder women's inclusion in cyberspace.

Therefore, by applying our framework (formed out of the insights from previous feminist literature) in this and the following chapter onto these two points of reference -- magazine rhetoric and feminist Internet discourse -- this study will be able to understand how four mainstream magazines are functioning in the context of the promises or criticisms they advance about the Internet and in terms of access, gender, and legitimization issues.

In this chapter, Internet articles from *Newsweek*, *Time*, *People* and *U.S. News and World Report* will be examined to determine how mass audiences of these magazines are being informed about the Internet and about women's place within the Internet community. Because this community has expanded at such an explosive rate and because related information and statistics about the Internet are so new, this study selected recent magazine articles, dating from November 1994 to July 1995. Choosing more recent articles I believed might increase the chances that magazines would be discussing the recent statistics that indicated women are under-represented on the Net.

In addition, I selected the twenty-four articles used in this study by running a search on the Lexis/Nexis database. After selecting a timeline of about nine months, I briefly reviewed the articles highlighted by the database and chose only the articles which focused on the Internet as a topic of discussion. In other words, since I am trying to access the ideologies that are being formed and advanced to audiences by magazines, I chose not to include articles which only referred to the Internet briefly and in passing. As a result, I found

twenty-four articles. However, it is possible that some articles were overlooked by either the database or myself.

To facilitate a better understanding of how magazines discuss these issues, I will examine the discourse according to three main criteria: how media frame access issues, how media rhetoric defines the advantages and disadvantages of the new medium, and how this discourse represents women on the Net and other gender issues.

#### The Articles Selected

However, before examining this discourse, I would like to provide a brief overview of the twenty-four magazine articles that will be used in this study. After gathering these articles it appeared that the magazines emphasized the following five themes: highlights about Internet sources, discussions about where the new information revolution is taking society, the political potentials of the Net, features on people involved with new information technologies, and arguments for or against censorship.

Accordingly, nine of the media articles selected in this analysis mainly focus upon the features and highlights of different Internet sites. The first four articles lean toward entertainment-related subjects. So, in "Cyberchat," author Meers (1995) announces the opening of two Internet home pages devoted to a rock festival and a rock and artist as well as tells about how a female comedian was kicked off of America Online for using obscenities. Quittner (1995), in "Radio Free Cyberspace," tells how radio broadcasters are taking their shows to the Internet and Reed (1995), in "Cyberchat," writes about Internet sites devoted to the hit T.V. show Melrose place and the O.J. Simpson trial. Lastly, "Byting the Hand" (1995) is about Huyler's cybercartoon NetBoy and its overwhelming popularity in the cyberculture.

The second group of writings about Internet sites comprise five articles which focus on the profitable or convenient business potentials of the Internet. Thus, Meyer (1995) writes about interactive shopping sites that will appear in three dimensions in "Surfing the Internet in 3-D" and later, in "Rupert's New Road to the Internet," (1995) he questions whether Murdoch's News Corporation will use MCI's investment of two billion to create a profitable on-line business. In "Betting on Virtual Vegas," author Quittner (1995) describes how on-line casinos are circumventing U.S. gambling laws and providing Internet users with chances to win "big." Hafner (1995) says in "Online on a Shoestring" that "anyone" can easily "open up shop in cyberspace" and points to the examples of people who've started successful on-line Bulletin Board Systems (BBSes). In Kobe's (1995) article, "Playing Catch Up in the Cyber Race," the focus is on Japan's determination to take the competitive lead over the U.S. in turning the Internet into a profit-making medium for business.

An additional five articles in this analysis focused on the enthusiasm, complaints, debates or questions related to where the new information revolution may be taking society. Some authors question whether the future will be optimistic or gloomy, usually ending with a comment that typically means "we'll just have to wait and see" [as in Zuckerman's (1995) "Now a Word From Cyberspace," Flynn's (1995) "Which Future Will Computers Take?" and Levy's (1995) "TechnoMania"]. In another article, "The Luddites are Back," author Levy (1995) harshly criticizes the pessimistic views of some anti-technologists who have a dark opinion of the digital revolution. In contrast, author Leo (1995) in "Life Among the Cyberfolk" says that members of a technology conference conveyed thoughts and predictions about the future of technology which embodied a "nothing will ever be the same" theme.

The only article that mentions women's under-representation on the Net and looks at the political potentials of the new medium is Fineman and Tuttle's (1995) "The Brave New World of Cybertribes." In addition, only two articles can be described as being features of specific people. "Mine, All Mine," written by Elmer-DeWitt et al. (1995), takes a hard look at the achievements of Microsoft's founder and chairman Bill Gates and questions whether he'll indeed be able to get a "piece of everybody's action" (read, money) on-line. Dougherty and Grant's (1995) "Cyber Surfer" is a feature on a female freelance computer journalist who wrote a book about cyberspace.

The last seven articles used in this study center on censorship issues (which includes discussions about free speech and pornography). Parshall's (1995) "Snapshot" is a brief, one paragraph article which announces the passing of the Internet indecency bill in the U.S. Senate. While two articles look at the negative implications of pornography on the Net, the topic usually turns into an argument against on-line censorship and for free speech [in Quittner and Ratan's (1995) "Vice Raid on the Net" and Sussman's (1995) "Hate, Murder and Mayhem on the Net"]. Levy (1995), in "Indecent Proposal: Censor the Net," strongly argues against Internet censorship and criticizes congress's "misguided" attempt to censor the Net. Both Elmer-DeWitt (1995) in "Snuff Porn on the Net" and Grogan (1995) in "Terror by E-mail" tell how a college student was arrested for posting a sex-torture story of a fellow female student on-line and say that his story raises questions about the limits of free speech. In another Elmer-DeWitt (1994) article, "Censoring Cyberspace," he shows a college campus's attempt to ban sex-related sites from its on-line services prompted student protests.

The Representation of Access Issues

Before this study can determine whether or not magazine rhetoric perpetuates or legitimizes men's dominance in the Internet community and/or rationalizes women's relative exclusion, this study must first look at how magazine discourse describes access issues, especially the issue of women's proportionately limited involvement with or access to the Internet. In this way, it can be determined whether magazines find women's limited involvement as a problem, a non-problem or neglects this issue entirely. It can also decide if magazine discourse is defining any barriers to Internet access and especially if these barriers are framed as posing a threat to women's Net participation and to the promise of universal access.

So, to understand how magazines represent Internet access issues and particularly, how these issues pertain to women, I will examine how magazine discourse tackles three access issues: what kinds of people have access, whether or not these people are representative of the American public and who can potentially have access.

While knowledge about actual numbers of Internet users remains vague (estimates range from 25 to 40 million users), one *Newsweek* article does give some insight into the "kinds" of people that make up the Internet community (Meyer, "Ruperts" 62; Fineman and Tuttle 30). In a telephone poll of 752 adults, conducted by Princeton Survey Research Associates, Internetters<sup>4</sup> were asked about their race, gender, class and political party preference. The authors of the survey conclude that the Internet culture is neither democratically nor universally distributed.

As this article says, "Despite the phosphorescent hype in the trade

---

<sup>4</sup> "Internetters" and the similar term, "netters," are used to describe Internet users.

magazines, cyberspace still has a rather empty feel" (30). This poll revealed that only 13 percent of Americans say they've ever gone 'on-line' and also indicated that Internet inhabitants were "younger, more educated and more affluent than the country's general population" (30). The results also showed that there was a greater proportion of white men on-line (30). Unfortunately, Fineman and Tuttle's article does not provide any data on what percentage of the 452 polled were women (nor do they say how many were white, of a certain income bracket, etc.).

These findings lead the authors to say that "cyberspace may be everywhere in America, but it's not yet representative of it" (30). In the same paragraph these authors explain why this may be the case, citing among other findings from the *Newsweek* poll, that there is a greater proportion of white men on-line. In this article, Fineman and Tuttle are questioning whether the Net can replace "real" voting booths and whether it can become an effective medium for politicians seeking to reach and sway voters. (30). Therefore, by raising women's lack of participation on the Net as an issue, Fineman and Tuttle appear to be connecting this problem to the larger discussion about the political potentials of the Net. However, the authors' concern about the lack of women on the Net is short-lived since they bring the issue up only once and then never elude to it in their discourse again.

Instead, the authors devote the rest of the article to emphasizing how the poll respondents were found to be unequally divided in their political affiliations and more inclined to side with the GOP. Evidently, the poll also found that while 24 percent of those 452 surveyed felt that using the computer system for "instant votes" could improve our democracy, 65 percent thought our democracy would not be improved "because people who vote by computer don't represent the full range of interests in our society" (30). Consequently, the authors seem

to assume that cyberspace is not a reflection of the "full range of interests in our society" mainly because there's an unequal proportion of Republicans on-line (30). Therefore, these authors are implying that the "representation" problem has more to do with the unequal representation of political views on the Net rather than with the unequal representation of women.

Despite this sentiment, some like Rickard ("On-line on a Shoestring") argue that people who have on-line access are still representative of the society at large. Rickard, the editor of Boardwatch Magazine, says that BBSes (bulletin board systems on the Internet -- virtual forums, whose format mimics the office bulletin board, created for discussions on a range of topics from politics to cooking to sex) cater to approximately 18 million people "from punk rockers to Jewish grandmothers and everyone in between" (Hafner 73). Rickard clearly believes that these numbers reflect the full diversity of the American public.

While it is problematic to determine exactly how many people participate on the Internet and what they are like (with the exception of the above *Newsweek* article), most magazine rhetoric seems to be eminently clear about who can "potentially" have access if they desire to. Some articles note the obvious fact that people must have at least a modem, some software and a computer before they can be a member of the growing Internet culture, while others avoid the issue of necessary equipment entirely (Quittner, "Betting" 63; Hafner 73; Fineman and Tuttle 30). The emphasis, however, is that "anyone" can come aboard and succeed.

For example, in one article about on-line gambling, the author says that "with a modem and a computer and some way to exchange the money, anybody can put up a neon sign on the World Wide Web -- the multimedia

portion of the Internet" (Quittner, "Betting" 63). "Like most of the wonders of cyberspace," the same author states in another article, "access to the new programming is limited to those computer users who have a direct connection to the Internet and have the software necessary to reach the multimedia offerings of the World Wide Web" (Quittner, "Radio" 91). In a feature about a married couple who started their own on-line newsgroup on home repair, author Hafner also says that "with a PC and a few extra phone lines, anyone can open shop in cyberspace" (73).

Here, the general assumption seems to be that with the right equipment, you have everything you need to jump onto the Information highway. For example, Hafner quotes another newsgroup entrepreneur in this article who says that "there's such a general awakening as to how to use a modem, everybody's starting to do it now" (73). However, most of these Internet articles are featuring quotes by people who are intricately and directly involved in cyberspace. For example, in Hafner's article, four out of the five people quoted as saying that the Internet is potentially accessible to "anyone" are system operators of on-line newsgroups. Obviously, they may have a slanted perspective about how "easy" it is to use a modem and a computer since they're involved with this equipment every day.

Given the fact that only around 40 million Americans access the Internet, perhaps there are a number of other people who do not find that owning the right equipment guarantees that they will be able to log onto the system. In addition, having the disposable income to spend on computer equipment may also be keeping many of the system. However, because magazine discourse does not reflect the opinions of those who do not yet have Internet access, we can only guess as to why they have not become a part of the cyberculture. In addition, magazine discourse does

not mention how money, time, energy, training, or computer experience could be necessary to use the new medium.

Therefore, the majority of the discourse persists in forwarding the "promise" of universal access by saying that "anyone" and "everyone" can jump on the Infohighway so long as they have the correct equipment or the desire to do so. However, the question seems to be whether all the magazine hype of "everyone" implies a false inclusionary democracy and universal access in the Internet community since "everyone" clearly doesn't translate into proportional representation by women, people of color, people of lower incomes, etc., according to at least one Internet statistic found in Fineman and Tuttle's article, "The Brave New World of Cybertribes" (30). Although these authors refer to the lack of women on the Net, they pose the unequal reflection of political beliefs in cyberspace as creating more of a "representation" problem than the fact that women are the minority on-line.

Furthermore, even though other magazine articles indicate that a barrier to accessing the Net is not having the necessary equipment to use it, the discussions do not highlight the fact that women traditionally have less disposable income than men to spend on technological equipment. Plus, those who seemed to feel that owning this equipment was the only prerequisite to Internet use were typically highly proficient at using and working with the new technology already. Consequently, this discourse neither emphasizes women's lack of representation on the Net as a serious obstacle to access nor does it refer to how economic factors, among others, may be the most significant reason for why the cyberculture does not yet reflect the nation.

These findings will be compared in the next chapter to feminist on-line discourse about women and the Net. This will enable us to understand whether contemporary feminists agree with this assessment of

the access issues and the predicaments women are facing on the medium itself or whether there are other obstacles to women's access that magazine discourse does not elude to.

#### The Representation of Internet Advantages and Disadvantages

An important aspect of looking at how magazines depict the Internet to mass audiences is to see how this discourse frames the benefits and drawbacks of the technology. By noting what advantages or disadvantages media authors say will confront the Internet user, it can be determined whether magazines are forwarding a promise rhetoric, are more skeptical about the Net's potentials, or are eluding to women's access issues in their dialogues. Accordingly, to accomplish this I will examine magazine discourse in terms of how it presents the pluses and minuses of Internet resources specifically and then how it defines the benefits and disadvantages of actual Internet use.

Magazine discourse about the Net's present advantages appears to advance some utopian-like promises to mass audiences through the way Internet resources are described. In other words, when magazines indicate to readers that the Internet contains a veritable treasure-trove of resources, the tone of the discourse is "utopian" in that the magazine authors almost sound as if they are giving a sales pitch. Through highly positive, optimistic and enthusiastic discourse, these magazine texts seem to embody the futuristic sentiment that Internet resources are going to "change the world."

Consequently, the implied promise seems to be that a virtual glut of useful information, valuable services and entertaining diversions -- all located, like never before, in one, singular medium -- awaits any on-line adventurer who wants to "surf" the Net. Thus, the discourse's underlying message about the benefit to using the new medium is that

Internetters can acquire a cheap, first-class ticket to a whole other world of exciting opportunities that on-line participants can explore, sight-see, converse and purchase in without ever having to leave their chair. As one *Newsweek* article puts it:

Everyone knows about the World Wide Web. It's the coolest place in cyberspace, the fastest-growing part of the Internet ... Want to check out what's showing at the local museum? Preview Reebok's latest sneaks? Just type a few straightforward commands or click on a highlighted word or picture. (Meyer, "Surfing" 68).

Subsequently, magazine authors are saying that the Internet's most beneficial features are its resources, which can be devoted to entertainment (including pornography), financial advice, business and political developments, free software opportunities and public debates.

As many magazine authors say, hordes of entertainment-related information and services -- such as rock concert information, music, photographs, art displays, video clips, games, radio shows, "virtual" sex and gambling, to name a few -- are just waiting for an on-line visitor (Meers 37; Quittner, "Radio" 91, "Betting" 63; Quittner and Ratan 63; "Byting" 89; Meyer, "Rupert's" 62; Fineman and Tuttle 30).

Even information on where to find a prostitute or pornography is available on-line, according to some magazine discourse. For example, Brandy's Babes, "The World's First Cyber Brothel" is an "entertainment" resource on the Net (Quittner and Ratan 63). Since this article ("Vice Raid on the Net") describes Brandy's brothel in the context of an argument for free speech and against censorship, the implied message is that there is nothing inherently wrong with offering virtual sex on the Internet, that it should not be censored, and that the brothel is easily accessible. For instance, Quittner and Ratan write that the brothel's literature is "pretty hard to miss if you're on-line -- the Babes hang

out in a public 'chat' zone and, if you're lucky, will accompany you to a private place where you can swap dirty messages"; Internetters can also view the "babes" photos which are updated every six minutes (63).

Financial advice and services on the Net can also offer Internetters and businesses the advantage of satisfying their shopping and financial needs from their home or office chair, according to some magazine discourse. MCI Communications Corp. has begun offering interactive shopping on the Internet in the form of "open 'storefronts' on the World Wide Web" where surfers can "potentially order socks or check out new cars from the comfort of their computer terminals" (Meyer, "Rupert's" 62). MCI also lets their subscribers, who are mostly businessmen, "download information tailored to their interests, from stock quotes to specialized news" (Meyer, "Rupert's" 62).

According to some magazine discourse, another benefit of using the Internet is that it can offer, with just a click of a button, immediate access to timely public affairs and government-related information and in more detail than found in traditional television and radio news broadcasts. For instance, as an alternative to C-Span, authors Fineman and Tuttle write in their article, "The Brave New World of Cybertribes," that there are places on the Internet where on-line participants can access legislation (at the Library of Congress "home page"), 120 government agencies, former senators Rudman and Tsongas, the 'Contract with America,' a Gingrich fan club, Whitewater updates, profiles of the First Family (including one on Socks, the Clinton's cat), or take a virtual tour of the White House (30).

Some magazine discourse implies that an advantage of linking to on-line public discussion forums (called BBSes, or bulletin board systems) is that these forums can offer free software (for shareware libraries, news, games, and bookstores) or can provide a virtual place where

Internetters can, at any time and with complete confidentiality and secrecy, discuss and debate issues with other Netters with like-minded interests (Reed 37; Hafner 73; Fineman and Tuttle 30).

On the other hand, while most magazine discourse charges that Internet resources are beneficial, other media articles imply that this "glut" of on-line data can have its drawbacks. "Many are shocked by what's on-line," writes author Sussman in "Hate, Murder and Mayhem on the Net" (62). He says that "the yellow-brick road to a dazzling future of instant information and global interconnection is now a dank pit of sleaze, murder and terror" (62).

For example, some media authors explain how "easy" it is to acquire off the Internet things like bomb recipes, hate speech, pornography, secret spy codes, pamphlets about suicide methods, and even "The School Stopper's Textbook," which teaches students "how to blow up toilets, short-circuit electrical wiring and 'break into your school at night and burn it down'" (Sussman 62; Elmer-DeWitt, "Censoring" 102).

However, while some authors do note that some people may get offended by the subversive material on the Net, they also define this as an insignificant problem considering that one can access this material more easily in the "real" world. For example, Sussman writes that one can access gigabytes of graphic, sexual pictures and sophomoric conversations about sexual tools and techniques "though hardly as easy to find in cyberspace as in an adult bookstore or the adult section of many video shops" (62). As he puts it, "Travel in cyberspace is elective, so not accessing offensive material is the best defense, as is closely monitoring children's on-line activity" (62). (I will talk more about how media discourse frames the issue of Internet pornography later in this chapter in terms of gender issues).

Thus, the positive and negative attributes of the Net are framed in terms of what one can access. If an Internet user decides to access the "good" resources -- such as the various entertainment, pornographic, and financial offerings -- Internet use is seen as advantageous. When the Internet is used, on the other hand, to access resources that are potentially harmful -- like bomb recipes, which could endanger the lives of others if used -- then Internet use is seen as a disadvantage.

However, despite the statistics indicating how women have relatively less access to the Internet than men, media authors never consider whether access may become a disadvantage in itself. In other words, both the promises about useful resources and the warnings about harmful ones are completely irrelevant to the scores of women who, perhaps, haven't yet used the new technology, do not know how to access these materials, or are prevented from accessing them because of other factors such as a lack of disposable income or sufficient computer training. In addition, except for in the case of one article that briefly mentions a women-oriented on-line newsgroup (which I will refer to later), magazine discourse never refers to Net resources that may be beneficial or useful for women, specifically. Similarly, media do not allude to whether there are any on-line sites or services that are disadvantageous to women.

Consequently, in the next chapter's comparison of magazine discourse to contemporary feminist on-line discourse, it will be determined if feminists perceive the Internet's resources in the same way or if they conceive of different advantages and benefits for women on-line that this discourse does not consider.

Aside from the advantages of accessing teems of resources, magazine authors also say that Internet use, in general, can be beneficial. Here, these authors contend that utilizing Net resources can facilitate

"better" communication among individuals, improve political debate, and improve financial gain. Although this rhetoric seldom articulates explicitly how the Internet "improves human relations" or "revitalizes democracy" or "enriches business or the economy," the messages are certainly implied by the positive, optimistic and hopeful way this medium conceptualizes the Internet's advantages.

One clear advantage, according to some magazine discourse, is the ability of the Internet to "forget" geography, race and gender, enabling people to communicate without the usual hang-ups of distance, bias or prejudice. As Fineman and Tuttle say, "call them cybertribes: bands of like-minded citizens 'threaded' together instantaneously, specifically, globally, sometimes obsessively -- eager not just to find and reinforce each other, but to influence real events." Apparently the Internet can be a powerful tool for shaping or changing not only people's opinions but the state of affairs. In addition, author Levy writes that this ability to link people together "anonymously" can help to "amplify the voice of the displaced," or under-represented (Levy, "Luddites" 55). While the under-represented are often silenced or ignored in face-to-face conversations or debates, poll-taker McKeon says that in cyberspace, "you are what you care about" (Fineman and Tuttle 30).

Other magazine discourse suggests that the Internet can improve political debate among citizens and politicians. Similarly, these authors indicate that the Internet can be a forceful tool for shaping and transforming political opinions and forces. For example, Fineman and Tuttle write of one on-line user who inspired the assembly of a "De-Foley-ate Congress" campaign on the Net, finding many supporters and donors who shared a dislike of the Washington congressman, the then Speaker Tom Foley (30). "Foley might have lost anyway," these authors write, but this one Netters effort "helped spread the notion of the

Speaker's vulnerability -- and brought help from national Republicans" (30). Fineman and Tuttle also write how there is an "exhilarating, do-it-yourself feel" to serious political causes on the Net (30).

Environmentalists, for example, can mine for rich veins of research and those on all sides of the abortion debate can go to virtual forums to discuss issues (30).

In many cases, the magazine rhetoric suggests that there are many financial advantages to using the Net, from opportunities to "get rich quick" (such as from on-line gambling services) to improving business management and efficiency ("Betting" 63; Kobe 66). For example, with the introduction of computers and networks, author Kobe writes that over the last decade, white-collar productivity increased and efficiency improved through corporate restructuring, which swept out entire layers of management "with information technology sometimes helping to fill the gap" (66). Besides the advantages the Internet can provide businesses, the Microsoft Network's commercial on-line service also makes "it easier for people ... to do everyday transactions over the networks -- pay bills, order from catalogs, check bank balances" (Elmer-DeWitt et al. 46). While this service makes it simpler for its clients to conduct business, the article also says that it bolsters the income of the Microsoft and other corporations.

In contrast to this optimistic version of Internet use, some magazine discourse is more critical or pessimistic about the benefits of Internet use. However, this rhetoric does not allude to women's limited representation in cyberspace as a problem or a disadvantage for women. Rather, more skeptical magazine authors tell their readers that a disadvantage of Net use is that it is transforming our laws too quickly, failing to inspire "intelligent" political debate and isolating us from

one another and our communities (Levy, "TechnoMania" 24; Fineman and Tuttle 30; Flynn 67).

For example, Levy asks the question: just when did the information revolution, which he calls the "Big Bang" or our time, start spinning out of control? ("TechnoMania" 24). He writes that while the revolution has just begun, no one is unaffected by the new technology and "it is already starting to overwhelm us" ("TechnoMania" 24). Referring to the Internet, he writes:

It's outstripping our capacity to cope, antiquating our laws, transforming our mores, reshuffling our economy, reordering our priorities, redefining our workplaces, putting our Constitution to the fire, shifting our concept of reality and making us sit for long periods in front of computer screens while CD-ROM drives grind out another video clip. ("TechnoMania" 24).

While some magazine discourse indicates that Internet use can improve communication and political discussions, other magazine authors argue that Internet forums are not necessarily "the preserve of enlightened Athenian debate" or representative of the views and opinions that characterize the rest of the nation (Fineman and Tuttle 30).

In the article, "Which Future Will Computers Create?," author Flynn reviews and compares two bestsellers: Stoll's Silicon Snake Oil and Negroponte's Being Digital. In presenting Negroponte's optimistic and futuristic promises about what electronic services on personal computers will some day be able to do, Flynn never questions the validity of his forecasts. Instead, she simply questions the relative usefulness of some of his savvy predictions. For instance, she questions whether anyone will want electronic butlers and whether personalized newspapers will keep her in the dark about information she did not previously program into the service as useful.

However, when she reviews Stoll's more pessimistic version of the Net's potential, she scrutinizes, criticizes and downplays most of his arguments. In this way, Flynn stops short of presenting Stoll's criticisms of the Internet as a real concern. For example, she writes that Stoll's doubts "go too far" (67). "He loses me," she says, "when he writes that computer networks 'isolate us from one another and cheapen the meaning of actual experience [and] work against literacy and creativity" (67). Flynn also downplays Stoll's pessimism about the Internet's ability to facilitate communication. "Electronic communication augments other experiences; it doesn't replace them," she writes (67). "The info highway certainly has been oversold, but where else can nonjournalists expose their ideas to millions of people?" (67).

Consequently, while Flynn devotes equal space to reviewing both Stoll and Negroponte's works, she appears to make a more serious attack against Stoll's "gloomy" outlook of the Internet's potentials. Her criticisms of his book imply that his opinions are just wrong. In contrast, while she does not wholeheartedly agree with Negroponte's optimistic forecasts, Flynn never questions the accuracy or plausibility of his predictions. Rather, she seems to share Negroponte's futuristic view of what new technology will bring -- even if she questions the relative usefulness of the electronic services Negroponte forecasts.

According to magazine discourse about Net use, some authors imply that the ability to use the Internet to facilitate communication, improve political debate and improve financial gain are significant benefits to using the medium. Other magazine authors indicate that disadvantages of Internet use are that it's transforming our laws too quickly, failing to inspire intelligent and rational debate and isolating us from each other and our communities. However, these disadvantages are not posed as a serious concern to magazine audiences.

For instance, in Flynn's article, she discounts Stoll's argument that the Internet perhaps does not facilitate communication.

In comparing these insights with those of feminists who've published their insights or research on-line, it will be determined if feminists consider these pluses and concerns as significant for women or whether these feminists feel that there are other benefits and drawbacks to women's Net use that this discourse does not consider. For instance, while Flynn felt that Stoll's criticisms were too pessimistic and gloomy, feminists may find that there is some justification for what Stoll said.

#### The Representation of Women and Gender Issues

To examine whether magazine rhetoric is working to ensure men's control of the Internet environment and women's exclusion from this sphere, one must first explore how the media is conceptualizing and defining issues related to gender. This can tell us whether magazines are depicting women as second-class citizens in cyberspace. Are magazines forwarding positive images of women as people and as Internet citizens? Also, are magazines discussing women's access issues in the context of their discussion of gender topics? Are mainstream audiences being informed or alerted about any problems or obstacles to women's equal access to the Net?

To discover how women are being represented as Internet users and to determine whether women's minority status in the cyberculture is reflected in magazine discourse, I will examine this discourse in terms of how it frames women's access issues, how it represents as people and as members of the cyberculture and how it frames other gender issues.

### Women's Access Barriers

With only one exception, the issue of women's access to the Internet is not discussed in the magazine discourse reviewed. This exception, a *Newsweek* article entitled "The Brave New World of Cybertribes," cites a poll of 752 respondents which found "a greater proportion of white men" on-line (Fineman and Tuttle 30).

Unfortunately, no details were provided in terms of the ratio of women to men responding to this poll.

In this article, women's under-representation on the Net is posed as a problem for those who believed that the Internet could be an effective political tool and resource rather than as a threat to women's Internet participation or to the realization of the promises of "universal access." This article uses the survey's results to indicate that cyberspace is not yet representative of America and therefore, should not be considered the prime place to further our democracy or to set up virtual voting booths (Fineman and Tuttle 30).

As a side note, media discourse neglects to explain why so few women are on-line or why Internet inhabitants are younger, more educated and more affluent than America's general population. In addition, no other article mentions any other statistics that delineate the proportion of male and female Netters or discusses any other problems that stand in the way of women's access to the Internet, such as lack of income or computer experience

### Women Internetters, Authors and Sources

Overall, magazine discourse mentions women only sparingly. However, a few rare articles do discuss some of the experiences and accomplishments women have enjoyed on-line. Yet, when women's

characterizations in this discourse are compared to those of men in similar articles, women's accomplishments are subtly portrayed as less significant than men's. In addition, the magazine discourse tends to depict these women in traditional, stereotypical roles -- as wives, girlfriends, or as sexual objects -- while men are portrayed as powerful "conquerors" or "masters" of the new technology.

For example, one *People* article, titled "Cyber Surfer," features Herz, a female author, and describes her experiences of writing a book on the "trackless wilds of the Internet" (Dougherty and Grant 111). The article begins, "Night after starry night, as glamorous hordes of models and their hangers-on cruised the nearby strip of fashionable cafes and art deco hotels ... J.C. Herz sat alone in her tiny apartment" (Dougherty and Grant 111). The article describes how she spent seven months exploring the inner reaches and bizarre spots in cyberspace and tells how she became "infatuated" with her initial Internet "forays" (111).

"Venturing into the virtual backfence of the Net's myriad discussion groups," these authors write, Herz "found raging debates over issues such as: Are Baywatch's David Hasselhoff and philosopher Douglas Hofstadter the same person? Does Barney the Dinosaur deserve to live?" (111). Dougherty and Grant also say that Herz has been computer savvy since childhood ("I wasn't like a little hacker girl, though ... I was into punk rock and wore too much black eyeliner") and has never been intimidated by cyberspace; as Herz puts it, "Any kid will tell you what a computer is ... it's a toy" (111). The authors also quote a review by satirist Leyner (author of Tooth Imprints on a Corn Dog) who describes Herz as the "most adorable writer in America" (111). In the last paragraph, the authors say that Herz is "between boyfriends" and a

color photo depicts Herz lying on a bed with a female friend sitting beside her.

To see how women's representations in magazine rhetoric compares to men's representations, it is necessary to look at how men's Internet activities and accomplishments are presented in the magazines. This can highlight whether magazines use different language, photos, captions, symbology or imagery based on the sex of the person described. Accordingly, this study will look at the only other feature article (out of the articles used in this analysis) which focuses on the Internet achievements of one person, a male. Entitled "Mine, All Mine" on Bill Gates, the founder and chairman of Microsoft, this article describes Gates as "very, very rich and powerful" and says that by achieving the "American Dream" through "intelligence, ruthlessness and hard work," Gates now dominates the new technology (Elmer-DeWitt et. al 46). As opposed to Herz, a photograph shows Gates holding a piece of lightning in his hand while the caption reads, "Master of the Universe Having Conquered the World's Computers" (46).

Consequently, when one compares these two characterizations it appears as though Herz's accomplishments are represented in a more trivialized and frivolous fashion than Gate's computer feats. Sure, Gates may have reaped a high status in this society for his success in the computer industry but Herz is also being commended now as an accomplished and successful writer. So, while Gate's is described as the "Master of the Universe," Herz is portrayed as an "adorable writer" and as trading in her hacker gear for punk rock and make-up as a young girl -- as if she couldn't simultaneously be a female hacker and a typical adolescent (Elmer-DeWitt et al. 46; Dougherty and Grant 111). While Gate's is represented as "conquering the computer," Herz is quoted as saying she sees the computer as a toy. In addition, Gates is

depicted as rich, powerful, and ruthless which is all symbolized in the picture of him holding a lightening bolt (Elmer-DeWitt et al. 46). Meanwhile, Herz's article portrays her as living in an area that's crawling with "glamorous hordes of models," as being "between boyfriends," as being "infatuated" with her initial Internet "forays" (as if she had a sexual attraction to the Internet) and as laying down on a bed with a girlfriend (Dougherty and Grant 111).

In another article, titled "On-line on a Shoestring," by Hafner, another female Internet user is depicted as the wife of a husband and wife team that began a Internet newsgroup on home repair. The couple are sysops (system operators, or hosts) of this newsgroup, called HouseNet (Hafner 73). What is interesting about this article is that of the seven people quoted, only two are women and more significantly, both of these women are described as running BBSes with their husbands. The article also mentions a number of other BBSes including one named ECHO which is "noted for its discussions of art, women's issues and multimedia publishing" (Hafner 73). Surprisingly, this is the only article in this analysis that mentions an Internet resource devoted to women or women's issues.

Other similar examples of women's representations can be found in the magazine articles that occasionally used women as sources or referred to women in their discourse. Here, women involved with the Internet are depicted as wives, as girlfriends, as sex objects and in once case, as a foul-mouthed rebel. For example, author Leo reviews a conference on Technology, Entertainment and Design which his wife, "a dual-citizenship cyber-American herself," has been attending for years (Leo 26). In another feature on NetBoy, a cybercartoon, the author writes that creator Huyler's girlfriend is a writer and a computer programmer ("Byting" 89). In an article devoted to the issue of

ensorship, it begins with a quote from one of Brandy's Babes from the "World's First Cyber Brothel" who says, "We are going to try new things related to computers and sex ... Brandy's girls just want to have fun" (Quittner and Ratan 63). Another brief piece in *People* writes how Comedian Cho was kicked off America Online for "repeatedly using obscenities as a regular user, a violation of the AOL membership agreement" (Meers 37).

This review of magazine articles also found that few women are quoted as sources or are authors of this discourse. In brief, of the 24 articles I reviewed for this exploration of magazine discourse, approximately 14 women versus around 64 men were quoted in these articles. Also, the majority of the authors of magazine discourse in this study are male (around 28 males compared to approximately 3 female authors). Except for the few references noted above, most of these 14 female sources are quoted in magazine articles about pornography, a gender issue which I will discuss below.

#### Pornography as a Gender Issue

The only gender issue magazine discourse discusses is pornography in the context of arguments for and against Internet censorship. While it may be argued that this is not really a gender issue, I believe that because most of this discourse involved a discussion of salacious women's images, pornographic sex, sexual harassment and sex crimes, the topic as related to the Internet has everything to do with gender -- in fact, both genders. Therefore, this study will explore how magazines defines and frames the issue of censorship in terms of gender. Seeing how magazines frame these issues is relevant to this study because it highlights a new aspect of technology. This is the first time pornography has been available to the masses uncensored and

unrestricted. Previous feminist research on women and technology do not connect pornography with computer use because it wasn't an issue yet. Here, it is necessary to show how it is now becoming an issue -- at least for magazine authors. Whether it is also an issue in feminist on-line discourse we have yet to see.

In early July, of 1995, a brief paragraph in *U.S. News and World Report* announced the news that the Exon bill, or the Communications Decency Act of 1995, was passed by the Senate (Parshall 12). (If passed by Congress, the Act would make it a crime to transmit "'obscene, lewd, lascivious, filthy or indecent' images, E-mail, text files and any other form of communication on-line") (Quittner and Ratan 63). Parshall's article reads, "In America, pouting sex kittens continued to multiply in cyberspace as Dr. Gingrich delivered them from a Senate-passed bill that would outlaw 'indecent' on the Internet" (12). But before this news became official, mainstream magazines discussed and deliberated about what kinds of sexually explicit material are available on-line as well as the negative and positive consequences of censorship.

When the magazines discuss the issue of censorship, they also tell their readers what kinds of sexually explicit materials are accessible on the Net. For example, Quittner and Ratan write how the newsgroups alt.sex, alt.sex.bestiality.barney and alt.sex.woody-allen all have sexual fare and how a Penthouse "home page" on the World Wide Web features frontally-nude cyber-pinups (63). "Sex in all its on-line incarnations flourishes on the Internet," writes Sussman, who says that sophomoric conversations about sexual tools and techniques as well as pictures of sexual activities are all accessible on-line (62). A Carnegie Mellon graduate student conducted a survey about sex on the Internet last year and found that 450,620 pornographic images and text files had been downloaded 6,432,297 times in six months in America alone

(Quittner & Ratan 63). "It doesn't hurt to offer a little smut," writes one female author about BBSes (Hafner 73). However, she does go on to say that many sysops complain that they have little choice but to offer "adult" files -- ranging from people in lingerie to hard-core pornography -- because when they remove them, there are usually outcries from BBS users (Hafner 73).

In this way, the debate about censorship becomes centered around arguments about whether pornography should be available to Net users and what implications this could have. Here, many magazine authors argue against the idea of censoring sexually explicit pictures and text because it violates American's First Amendment rights of free speech (Quittner and Ratan 63). For example, Herz, a female author of a book on the Internet, opposes any ban on free speech, even if it's a ban on any extremist groups who might use the Net. "'If you limit their speech, you just make those people feel more persecuted and paranoid,' she says. 'They might as well be on the Net so you can see what they're talking about and keep tabs on them'" (Dougherty and Grant 111). Another author writes:

Yes it is true -- some of us who have participated in the explosive growth of the Net might have been turned off by some of the scatologies and tasteless excesses. But anyone who has spent time using this new form of communication also understands that this is a minor annoyance compared with its positive aspects. The most exciting of these is the Net's unrestrained freedom of expression. (Levy, "Indecent" 53).

In arguing the case against censorship, many magazine articles cite the case of a young university student who wrote and published a sex-torture story on-line to emphasize the importance of free speech. In this case, Baker, a University of Michigan student, created three short stories in early December, of 1994, which he published via the Internet; one story vividly described the sexual torture and murder of an actual

women, his fellow student (Levy, "TechnoMania" 24). One article holds that Baker's sex-torture story landed him in the middle of the latest Internet debate pitting a "writer's First Amendment guarantees of free speech against a reader's right to privacy" (Elmer-DeWitt, "Snuff" 69). While Baker is now facing 5 years in prison because of the subsequent ruling that he violated the limits of free expression, most magazine rhetoric frame his "violation" in the context of an argument for free speech and against the censorship of pornographic photographs or literature.

In contrast to these magazine authors who argue that censorship would violate the free speech amendment, other authors are opposed to censoring the Internet because they believe that it would be impossible and inappropriate for the government to enforce. It would cripple the entire network, writes one author, which would be too high a cost for solely attempting to silence pornographers and speech offenders (Levy, "TechnoMania" 24). Zuckerman (1995) writes that Congress might have good intentions but that censoring the Internet would be like having censored the telephone in earlier times because it made it easier for men and women to talk to one another (84). Government's role, he says, shouldn't be to control the emerging world of the Internet (which he notes would be like the "medieval guilds trying to control the Industrial Revolution"); rather, their role is to ensure freedom and prevent monopolies from rising to the detriment of our communities and nation (84). Consequently, Zuckerman says that the marketplace, and not a government agency, is where the "necessary calculations of costs, investment and returns should be made" (84).

Others agree with Zuckerman that enforcing a local smut ordinance on the decentralized, unbounded Internet would be impossible. One article says that some say it would be "akin to ordering dandelions to

quit floating their spore. How do you control a decentralized network of more than 50,000 interconnected networks? How do you censor information when it flows down infinite paths among 30 million computers?" (Quittner and Ratan 63). Even the idea of censorship, these authors write, is grounded in a great ignorance about the Net and how it operates. "People who find erotic or other material abhorrent don't really need government help to avoid seeing it ... Travel in cyberspace is elective, so not accessing offensive material is the best defense" (Sussman 62).

However, some magazine authors recognize the positive sides to passing a law to censor the Net because they consider it a problem that pornography is so rampant and highly accessible in cyberspace. Yet, the issue of censoring pornographic material on the Net is not discussed as a concern for women but rather as an issue for parents who want to protect their children from subversive and sexually explicit material. As Senator Exon, the Nebraska Democrat who actually sponsored the bill, says, "I want to make the information superhighway as safe as possible for kids" (qtd. in Quittner and Ratan 63). One source was quoted as saying that there is a "legitimate interest to make it possible for parents to control the upbringing of their children and not have it all screwed up by invaders from cyberspace" (qtd. in Quittner and Ratan 63). "Even staunch defenders of free speech," Quittner and Ratan write, "admit that cyberspace has red-light districts unsuitable for young Elroy Jetson. And there's no bouncer to keep out minors" (63).

However, many authors say that if parents (or perhaps they mean "mothers") closely monitor their children's on-line activity, the reality of censorship can be avoided (Sussman 62). For example, one source admits that nobody wants their kids accessing pornography but this doesn't mean that it should be dealt with in a way that cripples

"one of the best communication successes in decades ... I'm not going to close down a beautiful city park because periodically some idiot comes to the corner and shouts obscenities" (Levy, "Indecent" 53).

In summary, media discourse neglects to explain why so few women are on-line or why Internet inhabitants are younger, more educated and more affluent than America's general population. In addition, no article mentions any statistics that delineate the proportion of male and female Netters or discusses any other problems that stand in the way of women's access to the Internet. This assessment of access issues will be compared and contrasted to feminist discourse about women's Net experiences. In this way, it can be decided whether feminists imply that magazines are downplaying women's under-represented on the Net by framing the issue as merely a "representation" and "political" problem or that magazines are neglecting to inform audiences of any access barriers that feminists say are impeding women's inclusion in cyberspace.

In addition, it appears that magazines represent women in stereotypical gender roles and as virtually absent from magazine discourse and from the Internet realm. In chapter four, this portrayal will be compared to the way contemporary feminist writers on-line depict women's roles in cyberspace to ascertain whether magazine discourse is positively and/or accurately representing women, according to these feminists.

In magazine article discourse about pornography, this discourse did not recognize any other issues pertaining to gender except for the topic of pornography. Here pornography emerges as a theme within the context of arguments for and against censorship or free speech. Thus, it will be interesting to see if this issue arises in feminist discourse in the same way or if it appears at all within this discourse. Plus, in light

of the fact that it's a new topic to the subject of women and technology, it will be important to see if pornography or the idea of limiting people's rights to free speech is considered an important issue to women on-line or is seen as a new obstacle to women's access or enjoyment of the Net. Also, the comparison of magazine and feminist discourse can tell us if there are other gender issues that are being discussed by women on-line that are not being addressed by magazine rhetoric.

#### Summary

By gathering up the findings from this chapter, this study can now answer the first question posed in the introduction of this thesis: How has magazine discourse about the Internet framed issues of access, of the Net's benefits and drawbacks, and of women and other gender topics.

This analysis of magazine discourse found that when addressing the issue of access, magazine authors alert audiences to the fact that women are disproportionately represented on the Internet in comparison to men. However, this topic is not posed as a threat to women's access or to the achievement of "universal access." Rather, magazine discourse frames women's limited presence on the Net as an indication that the Internet community is not yet representative of the American nation and thus, as an obstacle to those who felt the medium could be used as an effective political resource. The discourse offers no explanation as to why there are fewer women in cyberspace and does not mention if there are any obstacles impeding women's access to the Net. The media does, however, explain that a prerequisite (consequently, the only prerequisite according to this discourse) to accessing the new medium is owning the proper technical equipment. Ironically, magazines do not explain what may be keeping women from acquiring this equipment. Given that women

have traditionally earned less than men in the work force, it is surprising that this explanation is not given in this discourse to explain why less women are on the Net.

In conceptualizing the Internet's benefits, magazine authors imply that a significant advantage of Internet use is "anyone's" ability to tap into resources devoted to entertainment (including pornography), financial advice, business and political developments, free software opportunities and public debates. Here, these authors intimate some utopian-like promises about the Internet's offerings through descriptions that utilize optimistic, praiseworthy and "sales pitch" rhetoric and that imply that cyberspace can facilitate better communication, improve political debate, and improve financial gain.

In contrast, other magazine authors are more pessimistic and wary of the Internet's potentials. A few articles maintain that it is idealistic to consider that the Internet merely provides "useful" information because the Net also makes it easy to acquire illegal, harmful and subversive material. Also, some magazine discourse indicates that a disadvantage of Internet use is that it's transforming our laws too quickly, failing to inspire rational debate and isolating us from our communities. As a side note, magazine discourse does not clarify whether there are any drawbacks for women attempting to use the Net. In fact, in all cases, when magazine discourse focuses on access issues and on the Internet's pluses and minuses, the rhetoric was inherently gender neutral.

In examining how today's magazine discourse represents women, as discussed above, women's limited representation on the Net is hinted at but not in terms of it being a significant problem for women's access or for the achievement of "universal access." In addition, in the scant amount of articles that feature women as subjects of interest or as

informational sources, these women are commonly depicted in stereotypical gender roles and their accomplishments or roles in the Internet community are trivialized. In contrast, magazines seem to praise men's efforts in the Internet world and depict them as leaders and "masters" of the new technology. In addition, because few women are quoted or are authors of this discourse, magazines appear to be, perhaps unwittingly, portraying women as absent or as uninvolved in the new information revolution.

The only gender issue discussed by media discourse was the topic of pornography. Here, the topic was mainly discussed in terms of arguments against censorship and for free expression or vice versa. Some magazine authors align themselves with those who are for censorship, framing the issue of pornography not as a problem for women but as a problem for parents who wish to protect their children from seeing subversive material on-line.

## CHAPTER IV

## FEMINIST ON-LINE DISCOURSE VERSUS MAGAZINE DISCOURSE

Introduction

If this investigation into women's under-representation in cyberspace only analyzed the magazine discourse presented in the last chapter, it might be assumed that there are virtually no obstacles to Internet access, no problems or disadvantages for women seeking to be a part of cyberspace, and few drawbacks, in general, to using the new medium. According to most media rhetoric, access to the Internet can be simply accomplished as long as one has the inclination and the proper equipment to use it.

However, it would be shortsighted to unquestionably accept magazine representations of Internet issues as accurate without comparing it to at least one additional perspective. Therefore, this thesis will challenge the validity of magazines' assessment of Internet issues by comparing and contrasting magazine texts with the texts of contemporary feminists on-line.

This does not necessarily imply that the feminist view of the Internet is any more or less reputable than the magazines' view. Rather, because feminists have traditionally had a more vested interest in unmasking the social and power structures which function to oppress women in society and because this study seeks to understand whether gender politics is linked to men's current dominance of the Net, feminist insights can offer an alternative and relevant consideration of women's access problems. Plus, this discourse can provide this study

with insights that mainstream media (as well as other professional organizations and academic disciplines) consistently ignore, as if the very concept "feminist" legitimized its perpetual absence from dominant culture.

Therefore, to access these alternative perspectives, I sought to get to the very medium that this investigation focuses on: the Internet. Here, many feminists are finding a safe and comfortable space to share their criticisms and views about their position in society and their place upon the medium itself. On the Net, many women have created sites that are becoming receptacles for feminist discourse similar to the way a specialized magazine becomes a source for specific readers and information. At these sites, anyone who happens to link to these sources while surfing the Net can access feminist discourse consisting of research, personal perspectives and technology-related conference transcripts which, among other topics available, focus on women's experiences on the Net. And whether they are written from a personal or theoretical perspective, much of this discourse attempts to understand where women's place can be in the new medium and what role gender politics may play in situating their position.

Accordingly, I chose to look at all the feminist discourse that I could find on the subject of women and the Internet. After many hours of scavenging and searching through teems of information that's scattered throughout the new medium, I found nine feminist texts which will be analyzed and seen as an additional cultural text for purpose of this thesis. In this way, this study will tap into a relatively new branch of discourse that reflects a minority view that is not accessible in popular media. In addition, this discourse is not even available via the traditional avenues where women go to find feminist writings, such as women-oriented magazines and books. Like a specialized magazine,

this discourse is targeted to a very specific, small and select audience: the minority of women who are on-line and who know where and how to find this discourse!

Thus, learning from feminists, who describe their own involvement on the Net or who've observed women's first-hand experiences with the Internet culture and the access barriers they've encountered, will widen the perspective of this analysis to incorporate an additional point of reference for interpreting what women's role may be in cyberspace. Consequently, accessing feminist insights can offer additional ways of seeing how this problem of women's limited involvement is being framed not only for feminist audiences but for women and men who may obtain this research via the Net.

Therefore, this chapter will be separated into two sections. The first section will pose the following questions: how does the magazine portrait of Internet access issues, the Internet's advantages and disadvantages and Net-related gender issues compare to women's concerns as represented in feminist on-line discourse. Further, based on this comparison, what gender issues have been ignored in the media's portrait of the Net? Bearing in mind the insights of former feminist researchers, this section will compare and contrast magazine discourse with the way contemporary feminists conceptualize access issues, the Internet's advantages and disadvantages, and women's role in cyberspace.

In doing so, this comparison will elucidate if obstacles related to gender politics (whether they be magazine, culturally or technically-generated) are reemerging and/or if magazine assessments of the Internet is both valid and fair according to today's feminists. In the second section, the framework of previous feminist insights will be applied to the conclusions formed from this comparison to judge how magazines are functioning with respect to gender politics and legitimization issues.

In this way, it can be decided whether magazines are unwittingly working toward or against women's continued involvement in cyberspace.

#### The Feminist Discourse Selected

As discussed above, the discourse used in this analysis incorporates feminist writings that vary from qualitative studies to media articles to personal perspectives. In this way, this study can gain a wider glimpse of how various feminists are interpreting, observing or experiencing the Net environment.

This analysis will seek to read contemporary feminist writings about the Internet as another socially-produced "text." Similar to how magazine texts were examined in chapter three, investigating how this discourse conceptualizes and frames Internet, gender and access issues can convey to us what kinds of ideologies feminists are forwarding about the Net to those women (or men) who access this literature on-line.

Accordingly, this chapter will "read" the only feminist texts that I could find on-line which related to women and the Internet. The nine texts consist of three qualitative studies; two papers which summarize keynote talks given at technology conferences; one paper which summarizes issues which "need to be addressed" according to one women's networking group; one article written from a personal perspective; one article written after the author conducted a survey on a women's on-line newsgroup; and one book containing articles, outlines and transcripts of or about lectures given at a colloquium on women and information technologies. Except for the last resource mentioned, all feminist texts were accessed via the Internet (see bibliography for access instructions or Internet addresses).

The first of three qualitative studies used in this analysis is titled "Weavers of Webs: A Portrait of Young Women on the Net," by

Kaplan and Farrell. By investigating a small community of adolescent women, this study examines why women "seek electronic spaces, what they articulate as their aims, expectations, and desires, [and] how women make their electronic communication practices meaningful to themselves" (1). This study illuminates that these women persist in finding computer networking unproblematic and enjoyable despite men's current dominance of the networking culture.

The second qualitative study, "Women's Access to On-line Discussions About Feminism," by Balka, examines the "use of computer networks by individual women and women's groups who use this technology to either discuss feminism or facilitate feminist organizing" (1). This researcher finds that the success of appropriating computer networks for feminist purposes will largely depend on the extent to which women's access is addressed by future Internet users (1).

The third qualitative study used in this analysis, "Cross-Gender Communication in Cyberspace," by We (1993), examines whether computer mediated communication helps women and men communicate more effectively. Using anecdotes from a survey she conducted over on-line forums, she finds that cross-gender communication is just as problematic in virtual forums as it is in face-to-face exchanges because the gendered communication styles women and men learned during socialization problematizes their on-line interactions.

"Gender Differences in Computer-Mediated Communication: Bringing Familiar Baggage to the New Frontier," by Herring (1994), and "Gender Issues in Computer Networking," by Shade, are both papers which summarize keynote talks given at two different computer conferences. The first paper indicates that women and men have recognizably different styles of communication which consequently, complicate their Internet interactions with one another in on-line forums. Shade's paper alludes

to a number of gender politics-related obstacles (e.g., sexual harassment on-line) which she feels are connected to why women are under-represented on the Net.

In "Gender Issues in Online Communications," author Truong refers to some issues which the members of Bay Area Women in Telecommunications ("BAWIT," a women's group devoted to furthering women's involvement and success with on-line communications) feel need to be addressed -- such as how women's lack of income or technical expertise can cause them to have less access to Internet technologies. Consequently, Truong raises many of the same issues Shade refers to in her paper.

Taking a more personal approach, Neutopia (1994) describes in her article, "The Feminization of Cyberspace," how she has used the Internet as a powerful tool for feminist empowerment. However, she also describes how some men are waging a "war against the feminist voice" since she has often been silenced, criticized and blocked from on-line discussions when she has posted her feminist views to male-dominated forums.

Having noticed on an Internet newsgroup one day that Doyle was asking female Internet users to send her e-mail about the experiences they had on-line, I contacted her to see what kind of responses she received. What I got in return were two articles she has written entitled "Women and the Internet" and "Internet: The Good, The Bad and the Ugly." The first article describes the positive and negative experiences women have encountered on-line while the last article uses these opinions to establish what is the best and the worst of cyberspace. Doyle found that on the good side, the Internet seems to harbor a sense of community and improves communication possibilities. On the bad side, Doyle says that some women find the technology

confusing and or complain that they are subject to personal attacks or harassment.

Finally, the only text in this analysis which wasn't accessed via the Net is a book titled Women, Information Technology and Scholarship, edited by Taylor, et al. Derived from the proceedings of a colloquium of the same name, this book discusses ways in which new communication technologies like the Internet can be structured and used in ways which can be beneficial and equitable not just for women but for everyone (WITS 7).

#### Comparing Representations of Women's Access Issues

In comparing and contrasting the representation of Internet access issues generated by media and by new feminist discourse on women and the Internet, both texts concede that women are the minority in the on-line world and that the Net environment is not yet representative of American society. However, the texts are not similar in the way they frame the implications of women's under-representation. For example, only one article refers to the fact that men currently dominate the Net and this article poses this as a problem in terms of the political potential of the Net. In contrast, feminists consider the implications of this problem for women specifically, saying that because few women are on-line, this may indicate that other factors are jeopardizing women's inclusion in cyberspace.

As a result, feminists question whether promises of universal access can be maintained. In addition, feminist writers disagree with the magazine authors' assumptions that "anyone" can access the Internet once they acquire the right equipment. Instead, these researchers assert that owning the technical tools are not enough to ensure women's equal participation on-line. The cost of the system, the effects of

sexism and discrimination during socialization and education, and having insufficient time to learn Internet skills all present additional barriers to women's purchase and use of the Net, barriers which magazine discourse does not address.

Feminists agree with magazine assessments of the Net environment as neither being demographically nor universally distributed (Fineman and Tuttle 30). Like magazine authors, feminists also find that members of the "virtual" population are far less diverse, being more highly educated and more affluent than the average person in the "real" society and that women are the minority in cyberspace (Balka 8-11; Truong 2; Shade 3). As Doyle writes, some surveys show that 85 to 90 per cent of Internet users are men ("Women" 1). Also, in looking at the figures circulating on various electronic discussion lists regarding women's representation in several commercial Internet servers, Kaplan and Farrell discovered that women made up only 10 per cent of CompuServe subscribers, 15 per cent of America Online subscribers, 15 to 18 per cent of WELL subscribers and 30 per cent of Prodigy subscribers (2).

However, women's under-representation in cyberspace is not framed in feminist discourse in the same way as it is in magazines. Magazine authors Fineman and Tuttle conceptualize this issue as more of a political problem than a problem for women or for the hopes of universal access (30). Ironically, most magazine authors still say that the Internet can be potentially accessed by "anyone."

In contrast, feminists say that the issue of women's limited on-line involvement should be the axis upon which all other feminist discussions about Internet issues revolve. Contrary to magazine discourse, which picks up the subject of women's unequal distribution on the Net and almost immediately drops it, feminist discourse conceptualizes this problem as a critical obstacle not just to women's

success on the new medium but also to the achievement of universal access. As researcher Balka writes in "Women's Access to On-line Discussions about Feminism": "Perhaps the greatest issue faced by the women's movement with respect to the adoption of computer networking technology is access" (20).

Commonly described by media authors and other Net enthusiasts as a communications medium that can be "shared by all," feminists say that in theory, the Internet ought to be accessible to a wide range of women (Balka 2). Consequently, it appears that most magazine rhetoric assumes that equal and open access is already a reality and not merely something that Balka says "ought to be."

Similarly, as shown in chapter three, magazine authors claim that "anyone" can potentially access the Internet provided they have the right equipment to do so, and therefore, anyone can enjoy the perks that access brings with it. However, feminist authors identify important impediments to access that magazine discourse does not refer to. While computer networking obviously starts with access to both the hardware and the software to support on-line activities, a point that magazines neglects and that feminist scholars make clear is that the cost of acquiring the necessary equipment makes Internet access differentially more troublesome and unfeasible for many women (Quittner, "Radio Free" 91; Hafner 73; Shade 3).

For example, Truong emphasizes that "on average, women's salaries are 40 per cent lower than men's, leaving women with less disposable income for computers, modems, software, on-line services and any additional phone charges," (2). Casal, who was once an assistant sysop (systems operator) of the now defunct "Men and Women's Issues" section on the CompuServe Information Service, agrees with Truong that cost was a significant factor in determining women's access to CompuServe's

discussion group. She says that several female users dropped out of the group because money became tight in their households or because they moved to new areas where they couldn't afford the long-distance access fees (Balka 13). Truong argues that as "the nets become increasingly commercialized, they further establish class differentiation between those who can afford the luxury of participating in on-line systems and those who cannot" -- and it already appears that proportionately fewer women than men can afford the luxury of being on-line (4). Apparently, income is one of the most significant factors named by these feminists in determining who can have access. This point is not made by magazines even though at least two authors acknowledge that Internet participants are mostly men and are more affluent than the average American. Thus, only feminists make the connection between women's Net access and income.

Yet even when women have the means to afford the machinery and the access to Internet services, some feminist authors stress that this still does not guarantee "everyone" access. These scholars assert that additional barriers to access occur because parents, the popular media, educators, etc., unknowingly pass on stereotypes shaped by gender politics to girls as part of socialization and education. For example, women may resist using the Internet because, from a very early age, they are not encouraged to use technical machines or to assimilate technical knowledge (Balka 18). Instead, girls and women are socialized by the "teachers" of society to believe the cultural stereotypes which assume that computers are predominantly a male tool and that women are too incompetent to use them (Truong 2-3; Doyle, "Women" 1; Kaplan and Farrell 4).

Unlike magazine discourse, which does not address the implications of socialization and education practices on women's Internet use, some

contemporary feminist discourse implies that gender politics-inspired behaviors and stereotypes are still linked to problems women face while accessing, learning about, or using high-tech tools. As previous feminist research on women and technologies have found, when girls encountered discrimination, gender differentiation and skeptical inferences about their technical abilities during socialization and education, they perceived technical machinery and knowledge as "male" and saw high-tech environments as unfriendly or hostile toward women (see Creedon, 1993; Turkle, 1984; Hacker, 1990; Benston, 1988; Kirkup, 1992; Whitelegg, 1992; Lewis, 1987). Previous studies show that women also became reluctant to use computers because as girls, they were steered away from learning about technologies during education and taught to emulate behaviors during socialization that didn't mesh with the abstract nature of computers (see Turkle, 1984; Cottrell, 1992; Lewis, 1987).

Some feminists are now pointing to the same explanations to account for women's lack of technical experience or for their reluctance to use the Internet. These feminists say that the dearth of women on-line is directly attributed to the fact that girls don't receive enough training in and experience with computers during primary and secondary education (Ebben and Kramarae 15). Even when females attempt to learn about technologies they often encounter strong resistance from teachers and mentors who encourage them less than males and who give more value to male students' questions and needs more than female's (Balka 18; Truong 3). Consequently, males typically acquire the skills needed to operate computer tools while many females remain non-technical (Truong 2).

These explanations essentially parallel the finding of previous feminist researchers who speculated that when girls experienced patronizing and discriminatory behavior by teachers and peers, were

encouraged less than boys, were ignored when they attempted to ask questions and were faced with the assumption that girls just "don't belong" in computer realms, females were kept from getting the technical experience and skills needed to operate new technologies (see Cottrell, 1992; Kirkup, 1992; Whitelegg, 1992; Lewis, 1987). However, this discourse is not implying that women lack the intellectual capability to handle the use of technologies. Rather, it indicates that women are forcibly dissuaded from gaining the necessary technical skills.

Some contemporary feminist discourse offers some evidence of how negative cultural stereotypes about women's technical abilities are invading on-line environments and consequently, troubling women's involvement in Internet-related activities and employment. For instance, Truong writes that invitations to sysop gatherings are typically addressed "Dear Sir" and include "your wife is welcome" (3). She also finds that many customers ask for a manager when they hear a female voice on a technical help call; and in technical fields, "both men -- and women themselves -- often assume that women do not perform as well as men" (3). These examples demonstrate how engendered stereotypes consistently reinforced in society, can convince many that females are neither technically capable nor welcome in cyberspace. Consequently, some feminists are saying that such social conditioning contributes to the limited numbers of women on-line and to the problems encountered by women who have graduated to high-tech employment (Truong 2; Balka 18).

Therefore, Balka writes that it is a tacit assumption that "potential computer network users will be able to manage the negotiation and purchase of a computer system to meet their networking needs, and further be able to set the equipment up and have it function in a home environment" (18). She contends that the accessibility of the equipment and the existence of a network to call does not necessarily ensure that

all potential users will be able to access the Internet (20). Evidently, feminists are saying that some women were unable to learn the skills needed to effortlessly use the new technology. Accordingly, Truong argues that the "technical expertise required to establish access to on-line systems, and the interfaces users encounter when they get there can be significant deterrents to on-line participation for non-technical users" (3).

Contemporary feminists suggest another explanation for why there are less women in cyberspace than men and that magazines overlook. Women often lack the time needed to become sufficiently familiarized with the Net. Because many women play the double role of full-time worker and homemaker, they may lack the time or the energy to practice or experiment with the new information technology (Balka 19; Doyle, "Women" 1). Truong says that while "more women are in the workplace, they often are still primary caretakers for their children, and in a majority of households, women bear the brunt of household chores" ("Internet" 2). Furthermore, learning to use the Internet, according to Doyle, is "still a trial-and-error procedure that rewards people for hours of persistent experimenting" (2). But if women spend a disproportionate amount of their time and money on job, children, and house-related tasks, how can they afford the "hours" needed to learn how to navigate the new system? Thus, an additional deterrent to on-line participation may be attributed to the roles women must play in today's society (Truong 2).

To conclude, a comparison of magazine and contemporary feminist texts on women and the Internet indicates that both discourses agree on only two points: that women are the minority in cyberspace and that this implies that the cyber-community is not yet representative of the larger American population. However, magazine discourse never addresses

women's under-representation as a problem and never connects this issue with the obstacles women face when purchasing, learning about, or using the Net. In contrast, feminists emphasize how the total cost of Internet access, how the effects of sexism and discrimination during socialization and education, and how many women's lack of sufficient "navigation" time all present obstacles to women's "easy" access of the Net.

Accordingly, it appears as though some of the same obstacles that disrupted women's access to technologies in the past are reemerging within today's Internet culture. New feminist discourse also illustrates that today's media are creating an inaccurate and distorted picture of women's access issues by not alerting audiences to the difficulties female Netters are experiencing and by not framing women's under-representation on the Net as a serious challenge to the promise of universal access. In doing so, the magazine hype that "everyone" can participate on-line implies a false inclusionary democracy since barriers to women's access clearly still exist resulting in a Net that is as yet hugely unrepresentative and overwhelmingly male.

#### Comparing Representations of Internet Advantages

In comparing the different portraits of the Internet's advantages formed by magazines and by feminists on-line, I discovered few similarities and many discrepancies between the two discourses. On the one hand, a minority of feminists agree with the magazine authors who claim that a benefit of Internet use is better communication and facilitated access to useful resources. On the other hand, contemporary feminist discourse differs from magazine discourse by evaluating these benefits in terms of their specific usefulness to women.

These benefits for women are more evident in women-oriented newsgroups on the Net. Unlike male-dominated forums, feminists write that these on-line sites typically promote a more congenial atmosphere not just for women but for the discussion of women-oriented topics as well. Here, feminists indicate that women can, in theory, escape the kinds of discouraging behaviors they face in male-dominated realms, can use the Internet as a tool for empowerment, and can locate resources devoted solely to their needs and interests. However, some feminists do note that the same obstacles that plague women's interactions in male-dominated forums can still invade women's forums and consequently, complicate their use of these discursive spaces.

However, except for a brief allusion to a women-oriented newsgroup in Hafner's article, magazine discourse does not inform the public about women-oriented sites. Conversely, it appears that these feminists ignore the value of other advantages media rhetoric claims the Net will have, for example, for businesses, for interactive shoppers and for those seeking to use the Internet to make money.

Paralleling some magazine discourse, some feminist discourse implies that the Internet can foster better communication and can facilitate equal access to on-line resources. However, given that this scholarship is written from a feminist point-of-view, it is not surprising that these authors frame Internet benefits in terms of what advantage they confer to women.

Accordingly, these feminists say that the Net can enable female Netters to overcome the traditional hierarchical barriers in society that in the past limited women's access to technologies. For example, in We's study of women and men's on-line interactions, one female Netter says, "I feel that I have more control over my communication environment, on-line, and yet without being denied access to the

resources and opportunities ... In the networld, we have access to all the same resources that the men do" (We 6). While in past technological environments, men held a virtual monopoly over high-tech equipment and resources, this statement shows that Internet resources are equally available to men and women.

Another feminist praises the ability of the Internet to improve communication specifically for women. Feminist Neutopia predicts that editors will no longer have a centralized control over the printed word or be the all-powerful controllers of literature since in cyberspace, the "poetess" can post a message along side a literary giant" (1). Consequently, Neutopia argues that the Net enables anyone to self-publish and therefore, provides women like herself with a place to proclaim their empowered feminist views.

Several contemporary feminists concur with the magazine authors who claim that the Internet augments communication because it "erases" gender and consequently, the prejudices and biases that typically plague face-to-face conversations between women and men (Levy, "Luddites" 55; Fineman and Tuttle 30). For example, Tannen writes that computer mediated communication in schools can positively "effect the ways in which males and females converse, and can open up more opportunities for cross-gender communication ... on-line, social status and gender become less obvious differences" (qtd. in Shade 1). In Kaplan and Farrell's ethnography of a group of young women's experiences on-line, one woman said that the "absence of social cues (appearance, for example) and of immediately perceptible power differentials (gender, age, and so on)" created a more comfortable social space for herself and people like her (10). Kaplan and Farrell also say that the Internet allowed these young women to cross social boundaries and meet people that they would not normally be able to talk to, like business professionals and university

professors (14). Farrell says that on Internet discussion forums, "there are no preconceived ideas about who you are" (11).

Contemporary feminists find that women-oriented newsgroups and lists do more for women than merely improve communication and enable equal access to information. These feminists indicate that women can also, in theory, escape the kinds of discouraging behaviors they face in male-dominated realms, can use the Internet as a tool for empowerment, and can locate resources devoted solely to their needs and interests.

Some feminist discourse indicates how networking through women's discussion groups can be a tool for feminist empowerment. Many women are taking to the Net to create, as Ebben and Kramarae call it, a "cyberspace of our own" (qtd. in Shade 8). Catering to the research needs of female scholars and to the informational needs of the random female user, the audiences and topics range from list to list -- from "MEFEM, a list for female medievalists; to WISENET, a list for women in science and engineering; to the South Asian Women's List; to WMST-L, the Women's Studies List" (Shade 8). Using these resources as an instrument for power, Shade describes how Mexican Women's groups found that networking facilitated their work in fighting NAFTA and how one computerized BBS system in Montana, called Big Sky Telegraph, is being utilized to connect together the geographically dispersed directors of the various Montana women's centers (8).

Therefore, many feminists maintain that women's forums also provide female Internetters with the unique opportunity to find information devoted to their interests and to debate about issues of direct concern to them (Balca, 1993; Taylor et al., 1993). For example, many women find that in women-oriented lists they can discuss subjects like pregnancy, child care and sexual harassment because of the congenial atmosphere characteristic of these forums. In contrast, Balca says that

women who debated these kinds of topics in male-dominated groups grew frustrated when men focused the discussions around taken-for-granted assumptions; also, women were often treated as stupid and their arguments deemed absurd by men (7).

But perhaps the most significant benefit of using women's groups named by contemporary feminist writers is the possibility for women to surmount the typical difficulties they face in male-dominated discussions groups and in accessing the technology, in general. It has been suggested by many feminists that the idea of women-only lists and conferences can be a means to "counteract harassment and monopolization of postings by men" (Shade 7). Borg, the founding member of *Systers*, a private discussion list for female computer professionals, says that the "different conversational styles of men and women prohibits an egalitarian nature" (qtd. in Shade 7). However, in an all-female forum, Borg says that the "likelihood that an underpowered minority is keeping otherwise inaccessible information from the large empowered majority ... seems small indeed" (qtd. in Shade 7). In Herring's exploration of lists devoted to women's issues, she also found that women were rarely harassed by men and that these lists stimulated cooperative, polite exchanges (2). Similarly, Balka finds that women's groups supported women's contributions in a more hospitable way than was seen on male-dominated lists (Balka, 1993).

Feminists also find that women's groups allow women to transcend the traditional barriers that impede their access to technologies, like insufficient training and support. For example, the Women's Bulletin Board System, anticipating that potential users might lack the knowledge required to use a computer network, provided extensive support through on-line help, hard-copy help, and in-person help (Balka 6). Also, NirvCenter, a Toronto organization that runs a computer network for non-

profit groups, recruited women's groups by offering women-only discussion areas and by offering training and demonstration sessions to "demystify" the technology (Doyle, "Women" 2). In this way, the barriers that kept women from learning about or using technologies in the past, as mentioned in the previous feminist literature, could potentially be averted today if these types of services continue to be provided.

While this research sounds heartening, other feminists point out how men often come to dominate some women-only groups and as a result, disrupt the harmonious nature and success of these forums. Although women-only groups are idealistically or hypothetically reserved for women, Shade says that "given the relative insecurity of electronic identity, and the fact that electronic personas can be easily spoofed, such segregation is difficult to control" (18). Consequently, Kramarae and Taylor find that "even the women-only boards aren't respected by men who cross-post to the women from other boards" (55). For example, moderators of a newsgroups called soc.women noted that disagreements between women and men on it have led to an environment that is "too hostile" and women's topics and concerns are often not taken seriously (55).

However, most of these feminists imply that the Internet can indeed improve communication for women, promote equal access of resources and provide women with discursive spaces that cater to their interests and discursive styles. As previous feminist research indicated, women were discouraged from or denied access to high-tech tools because their computer styles were not highly valued and because their technical competence was questioned (see Kirkup, 1992; Whitelegg, 1992; Cottrell, 1992; Lewis, 1987; NRC, 1994; Turkle, 1984; Birke, 1992). However, these contemporary feminist authors are saying that in women's forums,

membership is often restricted to women. As a result, they provide a relatively safe space for women to debate issues without having to feel that they may confront sexist or discouraging behaviors by men.

Apart from the feminists who say the Internet fosters communication and provides equal access to information, feminist discourse is remarkable in not mentioning any of the additional advantages magazines claim the Internet offers potential users. For example, feminist discourse does not refer to how the Net can improve business efficiency and production, how purchasing can be made easier through interactive shopping or how business transactions can be simplified via on-line financial services. Plus, feminists do not address the entertainment-related sites of pornography in their discussions of Internet advantages. However, just because these advantages aren't recognized in feminist discourse does not mean that feminists perceive these pluses as extraneous or impractical for women. Rather, I can only guess why feminists do not alert their audiences to these so-called perks of Internet use.

With this in mind, I would speculate that many women would not consider access to these financial, shopping, entertainment and business resources as worthwhile. For example, I would doubt if many women would find "Brandy's Babes'" on-line brothel and pornographic photographs to be a benefit of using the Net. Plus, I would be surprised if many women would refer to this brothel as an example of why the Net should be protected from censorship, as discussed in one media article (Quittner et al. 63). In addition, many women might not find it to their advantage that corporations are improving their productivity and efficiency by replacing employees with new information technology (as Kobe indicated in his media article, "Playing Catch-Up in the Cyber Race"). Not just previous feminist scholars but lots and lots of male

and non-feminist research over the past couple centuries make the point about how the introduction of new technologies has often translated into job losses and unsatisfying work conditions for low-level, female workers (see Smith, 1988; Haddad, 1987; Machung, 1988; Hayes, 1989; Kirkup, 1992).

In conclusion, a comparison of how contemporary magazine and feminist texts represent Internet advantages indicates that some feminists concur with the magazine authors who feel that the Internet fosters "better" communication and equal access to on-line resources. Some feminists and female Netters do in fact find that the anonymous nature of the Net enables some women to communicate more effectively with men and to have their opinions treated with the same respect accorded to men's views. Thus, on the surface it might appear that these findings contradict former feminist research which indicated that when men controlled technologies, it has negatively affected women's interactions in technical environments and created a situation where women are "silenced" (Kramarae 2; Benston 15).

However, while the authors of this feminist discourse say that anonymity can prevent women's Net involvement from being questioned or blocked, I would argue that it is a little troublesome if women's communication potentials are only enhanced because these participants keep their gender a secret. Are women's voices only listened to and are women truly empowered if they need to mask their femininity? As discussed in chapter three, magazine author Levy said that the Internet's ability to link people together anonymously can help to "amplify the voice of the displaced," or under-represented ("Luddites" 55). However, how are the displaced and the under-represented going to reap more status or power if the other Internet participants don't know who they really are when they speak out on-line? I would argue that

women, and other under-represented factions in our society, would benefit more if their identity was revealed along with their views.

#### Comparing Representations of Internet Disadvantages

As noted in the previous section, some feminists maintain that the anonymous nature of the system benefits women because it makes Internet discussion forums "safe," functional and enjoyable for women. Feminists find that in women-oriented Internet sites, women's opinions are rarely censured, criticized or blocked from discussion, that the forums provide an additional means for female empowerment, and that they also offer women the same chance as men to access information and resources on-line. These opinions are consistent with the magazine articles which imply that through "erasing" gender and amplifying the voice of the displaced, use of the Net facilitates better communication within the cyber-community (Fineman and Tuttle 30; Levy, "Luddites" 55). However, most feminists feel its unlikely that these optimistic assurances can ever be maintained.

Instead, most feminists on-line charge that the Net cannot "erase" gender because behavioral differences between male and females are engendered during socialization. In this case, these feminists agree with previous feminist researchers of women and technology who found that when society's teachers unconsciously accepted sexist, cultural stereotypes about what behaviors are deemed "appropriate" for each gender, girls were influenced to adopt behavioral traits which caused them to associate with computers differently than men (Turkle, 1984; Hacker, 1990).

Similarly, Lakoff argues that "girls and boys literally learn different languages as they grow up. Girls are taught a more passive voice and boys emerge from their 'rough talk' stage with a more

forceful, active voice (qtd. in We 2). Tannen also argues that more girls tend to engage in a "rapport" style (cooperative, intimate, inclusive, less direct, avoids arguments and confrontations) while more men use the "report" style (information giving, confrontational) (qtd. in Shade 5; qtd. in Truong 1). While she admits that these different styles are perhaps, stereotypical, she finds that the "rapport" style is characteristically and more typically a female method of communication (Truong 4).

Just as Turkle argued in the review of previous feminist scholarship, contemporary feminists assert that because girls and boys are taught to emulate two different styles of communication behaviors during socialization, this predicts that they will also behave differently during social interactions in computer mediated communication (1984; Herring 5; We 2). Thus, many feminists find that the differences men and women demonstrate in "real" conversations persist when they join in on-line debates. For example, in examining discussion lists from on-line forums, Susan Herring found evidence of these two styles of communication:

The female style takes into consideration what the sociologist Erving Goffman called the "face" wants of the addressee to feel ratified and liked (e.g. by expressions of appreciation) and her desire not to be imposed upon (e.g. by absolute assertions that don't allow for alternative views). The male style, in contrast, confronts and threatens the addressee's "face" in the process of engaging him in antagonistic debate. (Herring 4).

Herring found that while men represented themselves in discussion lists as confident, authoritative, confrontational, and threatening, women were generally supportive (showed expressions of "appreciation, thanking, and community-building activities that make other participants feel accepted and welcome") and exhibited attenuation ("hedging and expressing doubt, apologizing, asking questions, and contributing ideas

in the form of suggestions") (3). Consequently, some scholars assert that as in the "real" world of communication, in cyberspace, women more often exhibit Tannen's "rapport" style while men take on the "report" style (Kaplan and Farrell 7-10).

Therefore, these feminists emphasize how computer mediated communication cannot neutralize gender, contrary to what some magazine authors and even a few feminist writers claim (Herring 1). As Turkle says, "the computer has no inherent gender bias. But the computer culture is not equally neutral" (qtd. in Kaplan and Farrell 3). The persistence of these two conversational styles in on-line forums are evidence of the fact that gender follows women into the on-line community and sets a tone for their interactions there -- "to such an extent that some women purposefully choose gender neutral identities, or refrain from expressing their opinions" (Truong 2; Shade 6). Similarly, Shade contends that because cyberspace is not a gender-free space, many women prefer posting to women-only discussion lists (Shade 6). But why are women trying to "escape" their gender by hiding behind neutral identities? And why does this gendered environment discourage women from remaining in public discussion lists?

As these feminist researchers explain, gender differences complicate women's involvement in on-line forums because men's learned, antagonistic communication style makes women feel uncomfortable and because women's more supportive style is not valued by men. This antagonistic style is commonly called flaming, a popular term variously defined as "the experience of strong negative emotion" or the use of derogatory, obscene, or inappropriate language and personal insults (Herring 5).

Consequently, if women don't hide their identities or if their gender becomes apparent, often their voices in Internet forums will be

criticized, suppressed, or silenced by flaming. Thus, feminists find that while such antagonistic practices are considered "normal" or implicitly condoned by men, many women are discouraged from further Internet involvement because they are not comfortable using or tolerating this type of behavior. Accordingly, feminists charge that when they or other women experience flaming, which often appears in the form of sexual harassment, they often come to perceive the on-line atmosphere as unfriendly or even hostile, dissuading many from remaining in cyberspace.

Therefore, these feminists seem to agree in part with the few magazine authors who express some skepticism about the Net's communication potentials (Fineman and Tuttle 30). Magazine authors are doubtful of these potentials because they find that many Internetters feel that on-line discursive arenas fail to inspire an intelligent or rational style of communication (30). However, these feminists do not frame their dubiousness in the same way. Rather, upon finding that flaming poses an obstacle to women's discussions on the Net, feminists feel that the Net's inability to foster "intelligent" debate should be the least of women's worries. Instead, feminists consider that flaming practices become a serious impediment to women's interest in using the Net, while magazines, in their portrayal of Internet disadvantages, fail to note how these discursive behaviors are forestalling women's increased access.

Feminist scholar Herring says that the popular explanation for "flaming" advanced by researchers of computer mediated communication (CMC) is that it is a by-product of the medium itself:

The decontextualized and anonymous nature of CMC leads to "disinhibition" in users and a tendency to forget that there is an actual human being at the receiving end of one's emotional outbursts. (Herring 5)

However, Herring argues that this explanation overlooks the fact that gender may be a possible influence on behavior, that it is virtually only men who flame, and that, according to a survey she conducted on Internet politeness, women express a stronger dislike of flaming (5).

So, rather than conclude that men are deliberately trying to be rude to women, Herring suggests an alternative explanation for flaming which also happens to correlate with contemporary feminist Tannen's findings on gendered communication styles, and with previous feminist researchers Turkle and Creedon's findings on the same topic. Their research indicates that when girls are taught to emulate structurally reinforced models of behavior during socialization, these styles subsequently follow them into the communication and computer environments, often complicating their discussions and their use of technical tools (see Shade, 1993; Creedon, 1993; Turkle, 1984).

Similarly, Herring claims that the reasons more men than women flame and the reason flaming is less tolerable to women is that males assign a greater value to "freedom from censorship, forthright and open expression, and antagonistic debate as a means to advance the pursuit of knowledge" (6). Women, on the other hand, come to place a higher value on the consideration of the wants and needs of others, as expressed by one female Netter:

If we take responsibility for developing our own sensitivities to others and controlling our actions to minimize damage -- we will each be doing [good deeds] for the whole world constantly. (Herring 6)

Just as Turkle explained in the feminist literature review, this statement shows that women may be more concerned with the relationship between the subject and the object during conversations than men are (116).

However, because women and men are taught to have these different notions of what constitutes appropriate behavior, women might think that the adversarial behavior is rude (Herring 5). Meanwhile, men who behave adversarially might think otherwise and may not value the supportive and attenuated behaviors of women in on-line forums (5). Therefore, since more men post to on-line discussion lists and since women are still the minority in the Internet community, the male majority in these forums tend to favor men's conversational styles more than women's styles and tend to demonstrate this opinion through discriminating against women's voices on-line (see Shade, 1993; Taylor et al., 1993; Herring, 1994; Balka, 1993; Neutopia, 1994; We, 1993; Doyle, 1995; Kaplan and Farrell, 1994). Similarly, Shade maintains that because social conditioning makes women uncomfortable with direct conflict, females tend to feel intimidated by men's discursive practices in on-line forums and, as a result, tend to avoid participating (7).

Men also flame men. However, while men may perceive flaming to be a normal characteristic of debates, feminists maintain that this practice becomes a serious disadvantage for women inclined to use Internet forums because it leads some women to feel as though flaming is a direct attack on them, causing many to pull away from further discussions (Truong 4). Truong found an example of this demeaning type of communication involving women on a newly created electronic bulletin board in the Bay Area. She says that a conference began on this board with the posting of a comment comparing women to pets that occasionally need to be put to sleep (4). In another example of flaming, one woman said that she was ostracized and blocked from public dialogs by men after she expressed her feminist beliefs (Neutopia 3). As Truong says, "Since women tend to use language differently than men do, these highly aggressive language patterns may be even more of a barrier to our

participation [on Internet forums]" (4). Thus, a "newbie," according to Doyle, can be "permanently scarred by being flamed for an innocent, but stupid, query" ("Internet" 4).

Yet, despite some women's aversion to flaming, men currently dominate the Internet and its discussion forums. And since more men are in charge of writing the rules of network etiquette, or "netiquette," the discursive practice of flaming is generally condoned (Herring 7). After analyzing the content of netiquette rules from six on-line discussion lists, Herring discovered that there is a striking lack of proscription against flaming (with the exception of a few women-oriented lists) even though it is "one of the most visible and frequently-complained about 'negatives' ... about the Internet" (7). While these lists even implicitly authorized flaming in some cases, Herring remarks that these are behaviors that "female survey respondents say intimidate them and drive them off of lists and newsgroups. Can the Internet community afford to tolerate behaviors that intimidate and silence women?" (7). Consequently, Herring concludes that Internet cultures are not "separate but equal"; rather, she says that "the norms and practices of masculine net culture, codified in netiquette rules, conflict with those of the female culture in ways that render cyberspace ... inhospitable to women" (8).

Therefore, it appears that the effects of gender politics are again troubling women's access to technological environments. Previous feminists researchers noted that women frequently faced sexist and hostile behaviors in high-tech education and working realms that were dominated by men. This led women to feel intimidated, discouraged, or forced out of these spheres. A vicious cycle was established, with fewer women learning about or working with technologies, high-tech tools would continue to be designed and reproduced by men. Consequently,

these highly technical tools would largely reflect men's logic and interests and women would be less inclined to purchase or use them (see NRC, 1994; Kirkup, 1992; Kramarae, "Technology" 1988; Benston, 1988; Lewis, 1987; Chakravarthy, 1992; Hacker, 1990; Cottrell, 1992; Whitelegg, 1992; Baron, 1987).

In the practice of flaming, women on the Internet face the same sorts of derogatory behaviors and "gendered technologies" that have emerged in the technical realms of the past. However, men do not recognize that women are discouraged by flaming when they devise Netiquette rules. Thus, this behavior is silently condoned. In addition, flaming and the implications of flaming on women's Internet involvement is also not discussed in magazine discourse.

Feminist writers also say that another form of flaming which is not addressed by magazines and which is complicating women's involvement in Internet forums is sexual harassment. While men also receive the kind of derogatory, confrontational, and hostile messages typical of flaming, only women appear to be sexually harassed. Many women, according to this discourse, are complaining that various newsgroups and environments convey a hostile attitude towards women, one of sexual harassment. This can be "subtle, such as personal questions directed to a woman; or blatant, such as women receiving sexual propositions via e-mail" (Shade 6). One woman said that in response to her postings, a man sent her e-mail<sup>5</sup> calling her a "hairy legged feminazi" and making innuendoes about the probable deficits in her personal life (Shade 6). Depending on their tone, Truong says these sorts of messages are analogous to obscene phone calls or whistles in the street (5). What's more, she says, is that these messages may be "experienced repeatedly by the same women

---

<sup>5</sup> "E-mail" is the popular term for electronic mail, mail which can be sent and received via any computer which is connected to a modem and the appropriate electronic software.

because there tend to be fewer women on most systems" (5).

These insights show that sexual harassment is another factor in discouraging the few women who are on-line from further participation in electronic forums. This discourse also implies that the Internet is not a gender-neutral space, as many magazine authors and some contemporary feminists argue. Internet, like technological environments of the past, strongly mirrors gender politics. As is shown in the review of former feminist research, the highly technological fields of science and engineering are historically disproportionately male. Women in these work environments commonly confronted sexual harassment and were perceived as "barging into" an area where they "didn't belong" (NRC, 1994).

Previous research indicates that these behaviors and biases may have been part of a systematic problem wherein males have limited perceptions of the roles of women and are not accustomed to seeing them as sources of information (NRC 1-17). In today's electronic environment, female Internetters, according to feminist discourse, are again experiencing this historical tradition of harassment and are similarly treated as if they aren't welcome in on-line conversations. As was true in the past, contemporary feminists make the obvious point that when women perceive the technological environment as "too hostile," this becomes a serious deterrent to their Internet involvement.

In summary, the comparison of feminist and media discourse about Internet disadvantages reveals that feminists do not connect the drawbacks magazines associate with Internet use with the difficulties women encounter on-line. While magazines represent the Internet's capacity to transform our laws too quickly, to isolate us from each other and our communities, and to provide subversive material as

negative side effects of Internet use, feminists do not identify these as critical issues.

Instead, feminists find that the most detrimental side effect to women's use of the medium comes in the form of flaming, which acts as a strong deterrent to women's comfort with and access to the new technology. These insights also reflect the unfortunate fact that some of the historical obstacles delineated in previous feminist research are resurfacing in today's Internet environment. Formerly, it was found that high-tech realms became hostile and unfriendly to women because sexist and exclusionary practices inspired by negative female stereotypes and gender politics ideologies discouraged female involvement. Again, it appears as though contemporary feminists are witnessing the persistence of these same behaviors in on-line forums with the effect of discouraging women from taking part.

#### Comparing Representations of Women and Gender Issues

This comparison of magazine discourse and contemporary feminist texts on women and the Net finds that while magazines barely address women's under-representation on the Net as a noteworthy topic, feminists instead place this "problem" at the center of their discussions about the Internet. Furthermore, new feminist discourse shows that the lack of women on the Net is evidence of the fact that women's access to and enjoyment of cyberspace is negatively influenced by other factors such as socialization, the cost of equipment, and flaming. In addition, although women are seldom depicted in magazines as active members of cyberspace, as authors of Internet discourse, or as sources of information about the new medium, feminists, on the other hand, portray women as intricately involved with the technology.

Consequently, because magazines do not refer to women or women-oriented Internet sites in their discourse, the public may not realize that, according to contemporary feminists, women are highly active in the new technological environment. New feminist discourse reveals that women are staking a claim in the production, use and management of the technology through women-oriented discussion forums.

While these topics are not eluded to in magazine discourse, conversely, feminist discourse does not address the topic of pornography whatsoever. While the topic is not addressed here, I would speculate that it appears elsewhere, probably in feminist discourse that is specifically devoted to the discussion of pornography issues.

In contrast to magazine discourse, feminists find that women's minority status on the new medium is an important indicator of the fact that women are facing serious obstacles to Internet access. Accordingly, all of the authors of the feminist discourse used in this analysis regard women's under-representation as central to their discussions and in doing so, they question why women are unequally distributed on the medium in ways that magazines entirely neglect.

Therefore, while magazines never explore the possible reasons behind the proportional lack of women on the Net, contemporary feminists search for an explanation. As was discussed above, feminists find that women are confronting gender politics and socialized, sexist behaviors in the form of antagonistic messages, sexual harassment and exclusionary notions about women's technical competence. Thus, many women come to feel inhibited or dissuaded from attempting to learn about, work with, or access the Internet. Consequently, these discoveries imply that women today are once more facing the same sorts of obstacles related to gender politics that have spelled trouble for women who sought to access technologies in the past.

In the earlier presentation of magazine discourse with respect to the portrayal of women, it was also discovered that women are rarely depicted as active members of cyberspace, as authors of Internet discourse, or as sources of information for Internet articles. Magazines seldom refer to the accomplishments and activities of female Netters except in their capacity as wives, as girlfriends, and as sexual objects (see Leo, 1995; "Byting" 1995; Quittner and Ratan, 1995; Meers, 1995).

Although one magazine article features a female author of a book about the Internet, the woman is portrayed as "adorable" and as a sex object. For example, this article subtly refers to her "infatuation" with the Internet in terms of a sexual attraction (see Dougherty and Grant, 1995; Elmer-DeWitt et al., 1995). In addition, the article portrays her Internet accomplishments as frivolous and insignificant in comparison to the way the achievements of men are described in similar articles. Despite the magazines' lengthy discussions about the beneficial resources upon the Net, in only one case do the magazines refer to the presence of a women-oriented discussion group called BBS Echo (see Hafner, 1995).

⇒ Audiences may assume after reading these articles that women are simply not involved in cyberspace except in very limited numbers. However, new feminist discourse informs us that women are in fact finding a niche in cyberspace through women-oriented discussion groups where female membership often outweighs men's and where access is often restricted solely to women. In fact, this discourse finds that women's forums can be a safe, comfortable place where women can feel empowered, can access resources and commentary devoted specifically to women's interests, needs, and concerns, and can often escape the usual communication setbacks caused by flaming. Some discourse even indicates

that the moderators and staff of several forums offer its users training and support, helping some women overcome the barriers of insufficient education and experience that often prevents them from using technologies.

This feminist discourse charges us to recognize that although there are still relatively few women on the Net, some women are persisting and staking a claim in cyberspace despite the stereotypes, barriers to entry and the problems women find on-line. For instance, Kaplan and Farrell's study of young women on-line indicates that many women are actively and confidently pursuing Internet activities even though they recognize that these activities are commonly characterized as male endeavors (6).

In fact, these feminists argue that they did not find among any of these girls a trace of the "computational reticence" that Turkle claims affects girls who've been socialized to assume behavioral traits that make them awkward or intimidated by technical tools (17). Instead, Kaplan and Farrell say that these girls have "rearticulated their relations to technologies, transforming what the wider culture codes as male into a tool they themselves identify with characteristically female traits and capacities" (17).

This comparison of magazine and new feminist discourse also reveals that while feminists perceive issues related to women's access and women-only groups as the most significant gender topics, magazine authors are more concerned about discussing pornography, in the context of a debate for or against Internet censorship. Yet, why do feminists not find pornography to be a critical issue in this discourse?

While the topic of pornography does not emerge as a theme in feminist on-line discourse used in this analysis, I suspect that discussions about pornography on the Net might be found in more recent feminist discourse devoted specifically to this issue.

However, a more significant point that this comparison highlights is the fact that magazines neglect to inform audiences about women's on-line resources and women-oriented groups. Since I can only speculate as to why this is the case, I would argue that because most of the media discourse was authored by men and because men do not perceive flaming as a problem, I would contend that they are more interested in discussing the importance of safeguarding free speech -- even if it was to the extent of preserving people's rights to be hostile in on-line forums, to provide access to photographs that are degrading or offensive to many women, and to publish stories on the Internet that describe the rape and torture of a woman.

In conclusion, despite the initial optimism of new feminist authors who've explored the pluses and minuses of women-only groups and women-related resources, this research still cautions us to recognize that substantial threats to women's enjoyment, access and success in these realms do exist. Therefore, it appears that in some cases, some of the same obstacles influenced by gender politics that emerged in previous technical environments, are reappearing in cyberspace today. Still, according to other feminists, it seems that women's forums provide female participants with a way to avoid the negative implications of gender politics. Despite the obstacles, women appear to be persevering by means of actively becoming a part of cyberspace. In either case, magazines do not alert audiences to the existence of women's resources and lists on-line and hence, do not accurately represent women and other gender issues which demonstrate that women are indeed making cyberspace into a "place of our own."

Finding a Rhetoric of Legitimization in Magazines

In the past, former feminist scholars argued that media forwarded idealistic, utopian promises about how new technologies could benefit "everyone." However, because gender politics-inspired obstacles have persisted and have hindered women's access to computer-related spheres, feminist scholars indicated that these promises were unrealizable. Therefore, women could not enjoy the "goods" that magazine authors supposed claimed were available to all.

Consequently, feminists maintained that media functioned strategically to ensure men's control and use of technological tools in three ways: by neglecting a consideration of these pertinent issues related to women's troubled access, by depicting women in stereotypical gender roles, and by contributing to the notion that the technical realm was a "male" world where women "didn't belong." By using this previous feminist research as a point of reference for interpreting the results of the above comparison, it appears that today's media are operating in the same three ways to legitimize men's dominance and to rationalize women's relative exclusion from the Internet realm.

While today's magazines are indicating that the Internet can provide universal access, can foster improved communication and can offer free and open access to useful information and resources, a review of new feminist on-line discourse reveals that these promises are as idealistic and as unrealizable as the promises media made about new technologies long ago. For example, in the past, media rhetoric commonly embraced optimistic predictions, implying that new technologies could be used as a tool to enhance democracy, to increase political participation, and to liberate women from their traditional home and

work-related tasks (see Ross, 1991; Hayes, 1989; Kirkup, 1992; Turkle, 1984).

However, previous feminist research indicated that these predictions couldn't be achieved for women because too many obstacles problematized their access to technological tools, education, and employment, obstacles which these scholars subsequently showed were linked to gender politics. Similarly new feminist discourse demonstrates that gender politics-related barriers are again connected to women's access difficulties. Yet, by erasing gender, by perpetuating negative stereotypes of women and by depicting cyberspace as a male realm, magazines are ensuring that these barriers will continue and as a result, perpetuate men's dominance of the Internet.

In the former feminist research, Turkle argued that in order for the public to realize that gender politics was influencing the formation of barriers to women's success and inclusion in high-tech spheres, people obviously needed to be informed about what these obstacles were. However, in the past, Creedon and other feminists argued that in the purported interest of objectivity, media texts ignored gender-related barriers and "erased" gender (77). In doing so, media failed to alert audiences to the sexist behaviors and biases that women endured in technical environments. Consequently, media functioned to silently condone these discouraging and discriminatory behaviors and as a result, legitimized the practices men used to secure their dominance of the technical realm.

Similarly, today's magazines are "erasing" gender by failing to inform audiences about how the cost of Internet access, how the effects of sexist behaviors and stereotypes, and how women's lack of time is contributing to women's under-representation on the Net (see Truong, 1993; Balka, 1993; Doyle, 1995; Kaplan and Farrell, 1994; Ebben and

Kramarae, 1993). In addition, magazines do not make audiences aware of how the persistence of flaming and of sexual harassment on the Net is discouraging women from participating in on-line forums (see Shade, 1993; Herring, 1994; Truong, 1993).

Through detailed discussions about the issues that magazines neglect to address, contemporary feminist discourse shows that access is not as unproblematic and as open as the magazine authors might portend (Hafner 73; Fineman and Tuttle 30). Thus, it appears that magazines' and the optimists' promises of universal access are currently unachievable. It also seems that magazines are again functioning to ensure men's control of the technical realm by not telling audiences about the problems that need to be resolved before women's access and universal access can be achieved.

However, considering that magazines are not our only source of information, the responsibility of informing the public about women's Internet barriers could be shared by concerned feminists. While feminist discourse does inform readers about the obstacles which currently threaten women's Internet access, the discourse is difficult to locate in lieu of the vast and chaotic nature of the Net. While some female Netters may happen upon these findings, others may not be able to locate this relevant and pertinent discussions. Plus, the majority of women in society who have not yet logged onto the Internet do not have the equipment to acquire this research. However, in some cases it does appear that these feminists are making a concerted effort to reach audiences that are not solely Internet-based. For example, some feminists indicate that their writing was based upon lectures or discussions that occurred during conferences devoted to women and technological topics.

Previous feminist research also indicated that the media worked to legitimize men's hierarchical control of technical realms by depicting women in stereotypical gender roles. Rather than referring to computers, for example, as tools for female independence and empowerment, media rhetoric instead reflected the notion that women's natural roles were as shoppers, housewives, and workers of grueling jobs (see Hayes, 1989; Kirkup, 1992; Turkle, 1984).

Similarly, today's magazines appear to be portraying women as involved with the Internet only in their capacity as wives, as girlfriends, and as sexual objects (see Leo, 1995; "Byting," 1995; Quittner and Ratan, 1995; Meers, 1995). As former feminist scholars indicated, representing women in this way functions to reinforce negative stereotypes about women's "natural" roles and about their technical capacities. As both the former and new feminist research implies, these sorts of characterizations continue to influence the "teachers" of our society to dissuade girls from absorbing a "technological world view," from learning about technologies, and from seeing themselves as having just as much of a right to pursue technological activities as men (see Shade, 1993; Creedon, 1993; Turkle, 1984; Hacker, 1990). In addition, these stereotypes are also shown to contribute to the incidence of flaming in the on-line world as men may not perceive of women as valuable sources of information and hence, as welcome in Internet forums (see Herring, 1994; Shade, 1993).

Therefore, by representing women in stereotypical gender roles, magazines are in fact functioning strategically to reinforce the perception in their audiences that women don't belong in high-tech spheres, that women still belong in "natural," traditional gender roles (as wives, housewives, etc.) and therefore, that men are better suited for Internet-related activities.

However, new feminist discourse clearly demonstrates that the Internet can be a site for women and for women's empowerment because of the existence and popularity of women-oriented Internet resources. Significantly, magazine discourse never informs its audiences to the presence of these women's sites or to how these sites can become a place where women can avoid the common trappings of the obstacles gender politics helps to create, like sexual harassment, flaming, etc. So, given magazines' reluctance to portray the Internet as a tool for women's empowerment, this medium is still working to ensure that technical power will be concentrated in the hands of men now and in the future.

Another way in which media can reinforce male technological domination is by portraying the technical environment as a male world where women "didn't belong." As previous feminist research indicated, the dearth of female role models in media advertisements and discourse sent a subliminal message to media readers that women weren't part of the computer environment (Lewis 269; Kirkup 272). Lewis argued that by depicting a world where men primarily sell, use and write about computers did little to counter the tendency of both women and men to see technology as a male thing (Lewis 269).

In today's magazine discourse, it appears that a similar message is being communicated. After reviewing this discourse, on the surface it would appear that women have little to do with cyberspace unless their boyfriend or husband is involved or unless they appear in an on-line pornographic photo or in Brandy's Babes' Internet brothel. Few women are quoted as sources in these articles and even fewer are represented as authors of this discourse. However, new feminist discourse clearly shows that women are indeed staking a claim in the use, management and production of cyberspace through women-oriented Internet sites.

Feminists describe how these sites can offer women a place to feel empowered, to find information devoted to their interests and needs and to overcome the traditional obstacles of harassment, of flaming, and of other difficulties caused by men's monopolization of cyberspace (see Shade, 1993; Balka, 1993; Taylor et al., 1993; Herring, 1994; Doyle, 1995; Kaplan and Farrell, 1994).

However, in their discourse about the Internet's advantages and about gender issues, magazines do not consider the impact these sites may be having on women and on the information revolution, in general. In fact, only one article made a reference - a short, quick reference - to a women-oriented resource (see Hafner, 1995). Instead, magazine discourse mainly reflects upon the benefits of other Internet sources like the financial, entertainment-related, and political software that's available on the Net.

Consequently, because magazines are not alerting audiences to the presence of Internet sites that may be of more interest to women, it would appear as though mainstream magazines are again portraying the technical world in terms of their own, male interests. Thus, media are again functioning to instill in its consumers the assumption that the Internet environment is a "male" realm in which women "don't belong," even though women are in increasing numbers very much a part of cyberspace.

## CHAPTER V

## CONCLUSION

The Implications for Gender Politics and Magazines

This thesis has found that gender politics is still exerting a significant influence over media practices. By not alerting audiences to significant female-related issues about the Internet, by forwarding traditional or sexist representations of women and by depicting the technological environment as a male realm, magazines are again functioning as a gender politics agent -- legitimizing men's dominance of the new Internet technology and rationalizing women's relative exclusion from these realms.

So, despite their optimistic promises of universal access and eager predictions about the Internet's benefits, magazines are unwittingly functioning to condone and perpetuate sexist behaviors and socialization practices that could eventually, impede women's Internet participation. For example, without informing the public about the types of sexist behaviors women are encountering on-line, the media are -- perhaps unwittingly -- condoning this conduct. So if men, for example, are ignorant to the fact that flaming irritates women, specifically, and discourages their Internet involvement, some men may assume that their antagonistic discursive style is acceptable or favorable by everyone in on-line forums.

Also, when magazines continue to portray women as uninvolved in cyberspace and present the Internet as a male world, previous feminist research has shown that this convinces society's "teachers" that females

aren't meant for technological endeavors. Therefore, these influential people might continue feeling justified in dissuading girls from technological education and pursuits.

However, whether or not magazines are functioning to support gender politics behaviors and practices, contemporary feminists have been very clear about the fact that women are making headway on the new medium. Transforming the Net into a tool for feminist empowerment, women are finding their way into cyberspace regardless of barriers like discrimination or inadequate training which some feminists insist are standing in the way of women's access to the Net. In addition, recent media reports are indicating that women are rapidly joining the cyberculture in greater and greater numbers every day.

Consequently, given this information and given the findings of this thesis, what are the implications for gender politics and for magazines? It appears that by legitimizing men's dominance in cyberspace, magazines are not necessarily preventing women's access but definitely slowing down the process. Women are obviously using the Net to suit their own purposes by, for example, forming women's discussion groups and lists on-line. However, if magazines continue to be influenced by gender politics and persist in influencing others with notions that ensure male hegemony of technological power, the destructive myths and stereotypes about women's technical competencies will continue to be perpetuated by media and as a result, continue to work against women's inclusion in cyberspace.

Therefore, I would argue that it's high time the media push themselves into the twentieth century. Old habits of writing may die hard. Yet, if mainstream magazines insist on depicting technologies as male tools and continue portraying women in stereotypical gender roles, I would be very surprised if their female audiences don't eventually --

if they haven't already -- move on to reading more feminist-sensitive discourse. Plus, depicting women as involved with the Internet only in their capacity as wives, as housekeepers or as sex objects does not only convey the harmfully inaccurate notion that these are the only roles women can fulfill in society and on-line but also angers the women, like myself, who do not fit into these neat stereotypes.

Consequently, to stop embracing gender politics ideologies and therefore, to stop legitimizing men's dominance of cyberspace or of any other societal sphere, I would argue that magazine authors need to start regarding women as equal members of their audience, of cyberspace and of society, in general. If magazines changed their traditionally "objective" format to incorporate topics that suited women's interests and concerns as well as men's, perhaps magazines could begin working toward women's inclusion in cyberspace by alerting audiences to women's achievements and resources on-line and to the obstacles that trouble women's access. This would help raise more awareness in the public about what helps and what hinders women's progress in cyberspace.

Magazines could also begin to recognize that men are not the only people who are logging onto the Internet and thus, could reflect this view in their discourse by using more women as informational sources in Internet articles. If magazines worked toward balancing the number of men versus women used as sources in these articles, this would not only function to dispel the myth that women are not actively involved in technological realms. It would also inform audiences to the plain fact that women can be just as technically astute and capable as men. As one of society's influential "teachers" during socialization, magazines would then be working toward reinforcing the notion that women can play an integral role in cyberspace. Thus, if magazines discontinue perpetuating the sexist and problematic stereotype that women "don't

belong" in high-tech realms, they could also stop functioning to exclude women from the cyberculture.

Finally, if magazines could begin regarding women as equal members of society, perhaps they would also be working towards women's progress in and equal access to all social spheres and not just the ones that are involved with technologies. Perhaps if magazines hired more female authors to cover Internet topics and events for their publications, they might also increase the likelihood of more women's concerns and issues being addressed. As more and more women take to the Internet, it would seem wise for mainstream magazines to start reaching out to their female audiences not only to preserve their own interests but also to stimulate more awareness of women's issues in the public.

Furthermore, through further research and community outreach, feminists can also work toward dispelling the traditional sexist stereotypes and myths that function to impede women's progress in cyberspace. Since the Internet will continue to grow and impact the everyday lives of both genders and since media such as magazines act as primary validating institutions in society and as chief sources of information and news, it is crucial that feminists continue to study if and how media have a hand in the discouragement or subordination of women in cyberspace.

After all, the only way to dissolve the myths and ideologies inspired by gender politics and reinforced by media such as magazines is through education, awareness and action. Consequently, feminists should continue to pursue active and supportive roles in Internet-related activities. For example, women interested in balancing the male-heavy scale on the Net should continue to participate in conferences on women and technologies; should mentor female students in computer courses or departments; should post to or manage women-oriented newsgroups; and

should help with on or off-line Internet support groups for women. In this way, women who are already astute with the Internet can help other women come to understand that they are not alone in cyberspace and that there are receptive and congenial atmospheres for women to learn and discuss issues pertaining to their lives or to Internet technologies.

### Conclusion

Often the most valuable of research is more research questions. The following are some key issues that I feel need more systematic research from a feminist perspective: the implications of on-line pornography for women; the differences in women and men's on-line behavior and language; the effects of flaming behavior and sexual harassment on computer mediated communication between genders; and the use of the Internet for feminist purposes. In addition, I believe that there is a great need for feminists to conduct more surveys on women and men's experiences on the Net.

This research can serve as a watchdog -- alerting us to how magazines and gender politics functioned to secure male hegemony of technological power in the past and warning us to not let the same occur with today's Internet environment. This can be done by challenging magazines and other media to recognize gender issues, alert audiences to women's access obstacles and to forward more hospitable and consequently, more accurate representations of women involved in cyberspace. This can also be accomplished by taking an active role in virtual and real Internet environments as mentors, teachers, newsgroup managers and participants, etc. Consequently, I believe that if we heed these warnings and learn from the mistakes media made in the past, we can all work toward making the Internet environment not only into a

feminist "cyberspace of our own" but also into a more open and equitable environment for everyone.

## BIBLIOGRAPHY

- Balka, Ellen. "Women's Access to On-Line Discussions about Feminism." Electronic Journal of Communications/ La Revue Electronique de Communication. Feb. 1993. INTERNET.
- Baron, Ava. "Contested Terrain Revisited: Technology as Language." *Kramarae* 15-29.
- Benston, Margaret Lowe. "Women's Voices/Men's Voices: Technology as Language." *Kramarae* 15-29.
- Birke, Linda. "In Pursuit of Difference: Scientific Studies of Women and Men." *Kirkup and Keller* 75-76.
- "Byting the Hand." People. 13 Mar. 1995: 89+. LEXIS/NEXIS.
- Chakravarthy, Radha. "Science, Technology and Development: The Impact on the Status of Women." *Kirkup and Keller* 224-229.
- Cirksena, K. "Politics and Difference: Radical Feminist Epistemological Premises for Communication Studies." Journal of Communication Inquiry. Nov. 1988.
- Cottrell, Janet. "I'm a Stranger Here Myself: A Consideration of Women in Computing." Learning from the Past, Stepping Into the Future, Proc. of a Conference of the 1992 ACM SIGUCCS User Services Conference, Cleveland, Ohio. New York: The Association for Computing Machinery, 1992: 71-76.
- Creedon, Pamela J. "Framing Feminism -- A Feminist Primer for the Mass Media." Media Studies Journal. Winter/Spring 1993: 69-80.
- Davies, Margery W. "Women Clerical Workers and the Typewriter: The Writing Machine." *Kramarae* 29-41.
- Dougherty, Steve, and Meg Grant. "Cyber Surfer." People. 12 June 1995: 111+. LEXIS/NEXIS.
- Doyle, Mary. "Women and the Internet." Letter to the author. 17 May 1995.
- Doyle, Mary. "Internet: the Good, the Bad and the Ugly." Letter to the author. 17 May 1995.
- Ebben, Maureen, and Cheris Kramarae. "Women and Information Technologies: Creating a Cyberspace of Our Own." *Taylor et al.* 15-27.
- "Electronic Word." Wired. Dec. 1994: 43-50.
- Elmer-DeWitt, Philip. "Censoring Cyberspace." Time. 21 Nov. 1994: 102+. LEXIS/NEXIS.

- . "Snuff Porn on the Net." Time. 20 Feb. 1995: 69+. LEXIS/NEXIS.
- Elmer-DeWitt, Philip, David S. Jackson, and Suneel Ratan. "Mine, All Mine." Time. 5 June 1995: 46+. LEXIS/NEXIS.
- Fineman, Howard, and Steven A. Tuttle. "The Brave New World of Cybertribes." Newsweek. 27 Feb. 1995: 30+. LEXIS/NEXIS.
- Flynn, Mary Kathleen. "Which Future Will Computers Create?" U.S. News and World Report. 29 May 1995: 67+. LEXIS/NEXIS.
- Fraser, Nancy. "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy." The Phantom Public Sphere. Ed. Bruce Robbins. Minneapolis: University of Minnesota Press, 1993. 1-32.
- Frye, Marilyn. "Oppression." Race, Class and Gender. Eds. Margaret L. Anderson and Patricia Hill Collins. Belmont, CA: Wadsworth Publishing Co., 1992. 37-46.
- Grogan, David, Shawn L. Ramirez, and Glenn Garelik. "Terror by E-Mail." People. 6 Mar. 1995: 59+. LEXIS/NEXIS.
- Habermas, Jurgen. The Structural Transformation of the Public Sphere. Trans. Thomas Burger with the assistance of Frederick Lawrence. Cambridge, MA: The MIT Press, 1989.
- Hacker, Sally L. Doing It the Hard Way: Investigations of Gender and Technology. Eds. Dorothy E. Smith and Susan M. Turner. Boston: Unwin Hyman, 1990.
- Haddad, Carol J. "Technology, Industrialization, and the Economic Status of Women." Wright 33-57.
- Hafner, Katie. "Online on a Shoestring." Newsweek. 6 Mar. 1995: 73+. LEXIS/NEXIS.
- Hayes, Dennis. Behind the Silicon Curtain: the Seductions of Work in a Lonely Era. Boston: South End Press, 1989.
- Herring, Susan. "Gender Differences in Computer-Mediated Communication: Bringing Familiar Baggage to the Frontier." Keynote talk at panel entitled Making the Net\*Work\*: Is There a Z39.50 in Gender Communication? American Library Association annual convention, Miami, June 27, 1994. INTERNET. [gopher://gopher.inform.umd.edu/00/EdRes/Topic/WomensStudies/Computing/Articles%2bResearchPapers/gender-differences-communication](http://gopher://gopher.inform.umd.edu/00/EdRes/Topic/WomensStudies/Computing/Articles%2bResearchPapers/gender-differences-communication)
- "Internalizing Technology." American Advertising. Winter 1994-1995: 8-15.
- Kaplan, Nancy, and Eva Farrell. "Weavers of Webs: A Portrait of Young Women on the Net." INTERNET. [gopher://gopher.inform.umd.edu/00/EdRes/Topic/WomensStudies/Computing/Articles%2bResearchPapers/ArachnetJournal/kaplan](http://gopher://gopher.inform.umd.edu/00/EdRes/Topic/WomensStudies/Computing/Articles%2bResearchPapers/ArachnetJournal/kaplan)

- Keller, Evelyn Fox. "How Gender Matters, Or, Why Is It So Hard To Count Past Two." Kirkup and Keller 42-61.
- Keller, Laurie Smith. "Discovery and Doing: Science and Technology, An Introduction." Kirkup and Keller 13-32.
- Kiesler, Sara, Lee Sproull and Jacquelynne Eccles. "Pool Halls, Chips, and War Games: Women in the Culture of Computing." Psychology of Women Quarterly. Sept. 1985: 451-462.
- Kirkup, Gill. "The Social Construction of Computers: Hammers or Harpsichords?" Kirkup and Keller 267-281.
- Kirkup, Gill, and Laurie Smith Keller, eds. Introduction. Kirkup and Keller 1-12.
- . Inventing Women: Science, Technology, and Gender. Cambridge, MA: The Open University, 1992.
- Kobe, Edward W. Desmond. "Playing Catch Up in the Cyber Race." Time. 6 Mar. 1995: 66+. LEXIS/NEXIS.
- Kramarae, Cheri. Introduction. Kramarae 1-14.
- Kramarae, Cheri, ed. Technology and Women's Voices: Keeping in Touch. New York: Routledge and Kegan Paul, 1988.
- Leo, John. "Life Among the Cyberfolk." U.S. News and World Report. 20 Mar. 1995: 26+. LEXIS/NEXIS.
- Lewis, Linda H. "Females and Computers: Fostering Involvement." Wright 269-282.
- Levy, Steven. "Indecent Proposal: Censor the Net." Newsweek. 3 Apr. 1995: 53+. LEXIS/NEXIS.
- . "The Luddites Are Back." Newsweek. 12 June 1995: 55+. LEXIS/NEXIS.
- . "TechnoMania." Newsweek. 27 Feb. 1995: 24+. LEXIS/NEXIS.
- Machung, Anne. "'Who Needs A Personality To Talk To A Machine?': Communication in the Automated Office." Kramarae 62-81.
- Marx, Wendy. "Where the Boys Are, Women Aren't." Interactive Media and Marketing. 20 Feb. 1995: 12.
- Meers, Erik Ashok. "Cyberchat." People. 12 June 1995: 37+. LEXIS/NEXIS.
- Meyer, Michael. "Rupert's New Road to the Internet." Newsweek. 22 May 1995: 62+. LEXIS/NEXIS.
- . "Surfing the Internet in 3-D." Newsweek. 15 May 1995: 68+. LEXIS/NEXIS.

- Mosco, Vincent. The Pay-Per Society: Computers and Communication in the Information Age: Essays in Critical Theory and Public Policy. Toronto: Garamond Press, 1989.
- National Research Council. Women Scientists and Engineers Employed in Industry: Why So Few? -- A Report Based on a Conference. Washington, D.C.: National Academy Press, 1994.
- Neutopia, Doctress. "The Feminization of Cyberspace." 1994. INTERNET. sender: news:mont.cs.missouri.edu; from: neutopia@titan.ucs.umass.edu
- Parshall, Gerald. "Snapshot." U.S. News and World Report. 3 July 1995: 12+. LEXIS/NEXIS.
- Perkins, T.E. "Rethinking Stereotypes." Ideology and Cultural Production. Eds. M. Barrett, P. Corrigan, A. Kuhn, and J. Wolff. New York: St. Martin's Press, 1979. 135-159.
- Quittner, Joshua. "Betting on Virtual Vegas." Time. 12 June 1995: 63+. LEXIS/NEXIS.
- . "Radio Free Cyberspace." Time. 1 May 1995: 91+. LEXIS/NEXIS.
- Quittner, Joshua, and Suneel Ratan. "Vice Raid on the Net." Time. 3 Apr. 1995: 63+. LEXIS/NEXIS.
- Reed, J.D. "Cyberchat." People. 13 Mar. 1995: 37+. LEXIS/NEXIS.
- Rheingold, Howard. The Virtual Community. Reading, Mass.: Addison-Wesley, 1993
- Robinson, Deanna Campbell. "The Revolutionary Internet." New Telecom Quarterly. Third Quarter 1994: 30-38.
- Ross, Andrew. Strange Weather: Culture, Science and Technology in the Age of Limits. London: Verso, 1991.
- Shade, Leslie Regan. "Gender Issues in Computer Networking." Talk given at Community Networking: the International Free-Net Conference. Carleton University, Ottawa, Canada. Aug. 17-19, 1993. INTERNET. Available via anonymous ftp. at alfred.carleton.ca: pub/freenet/93;conference/leslie\_regan\_shade.txt
- Smith, Judy, and Ellen Balka. "Chatting on a Feminist Computer Network." Kramarae 82-97.
- Spertus, Ellen. "Why Are There So Few Female Computer Scientists?" Cambridge, MA: MIT Artificial Intelligence Laboratory, 1991. INTERNET. Available via anonymous ftp. from ftp.ai.mit.edu, as womcs\*.ps in the pub/ellens/mget directory.
- Sussman, Vic. "Hate, Murder and Mayhem on the Net." U.S. News and World Report. 22 May 1995: 62+. LEXIS/NEXIS.
- Steeves, Leslie H. "Feminism Theories and Media Studies." Critical Studies in Mass Communication. June 1987: 95-135.

- Taylor, H. Jeanie, Cheris Kramarae, and Maureen Ebben, eds. Women, Information Technology and Scholarship. Illinois: The Board of Trustees of the University of Illinois, 1993.
- Truong, Hoai-An. "Gender Issues in Online Communication." Paper Presented at Third Conference on Computers, Freedom, and Privacy. Burlingame, CA, March 1993 (in conjunction with BAWIT -- Bay Area Women in Telecommunications). INTERNET. gopher://gopher.inform.umd.edu/00/EdRes/Topic/WomensStudies/Computing/Articles%2bResearchPapers/gender\_issues\_online
- Turkle, Sherry. "Computational Reticence: Why Women Fear the Intimate Machine." Kramarae 41-61.
- . The Second Self: Computers and the Human Spirit. New York: Simon and Schuster, 1984
- Turner, Graeme. British Cultural Studies: An Introduction. New York: Routledge, Chapman and Hall, Inc., 1992.
- We, Gladys. "Cross-Gender Communication in Cyberspace." INTERNET. Electronic Journal on Virtual Culture. Article available via anonymous ftp. to byrd.mu.wvnet.edu; login: anonymous; password: users' electronic address cd/pub/ejvc; type EJVC.INDEX.FTP; get\_THE\_ELECTRONIC\_JOURNAL\_ON\_VIRTUAL\_CULTURE\_ISSN 1068-5327
- Whitelegg, Liz. "Girls in Science Education: Of Rice and Fruit Trees." Kirkup and Keller 178-212.
- Wright, Barbara Drygulski, ed. Women, Work and Technology: Transformations. Ann Arbor: University of Michigan Press, 1987.
- Zuckerman, Mortimer B. "Now, A Word From Cyberspace." U.S. News and World Report. 10 Apr. 1995: 84+. LEXIS/NEXIS.