Beyond the Digital Diva:
Women on the World Wide Web

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with First Class Honours in Communication Studies

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Declaration

I declare that this thesis is my own account of my research and contains as its main content work which has not been previously submitted for a degree at any tertiary educational institution.

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Carrie Kilpin
Abstract

In the year 2000, American researchers reported that women constituted 51 percent of Internet users. This was a significant discovery, as throughout the medium’s history, women were outnumbered by men as both users and builders of sites. This thesis probes not only this historical moment of change, but how women are mobilising the World Wide Web in their work, leisure and lives.

Not considered in the ‘51% of American women now online’ headline is the lack of women engaged in Web building rather than Web shopping. In technical fields relating to the Web, women are outnumbered and marginalized, being poorly represented in computer-related college and university courses, in careers in computer science and computer programming, and also in digital policy. This thesis identifies the causes for the low number of women in these spheres. I consider the social and cultural reasons for their exclusion and explore the discourses which operate to discourage women’s participation.

My original contribution to knowledge is forged as much through how this thesis is written as by the words and footnotes that graze these pages. With strong attention to methodology in Web-based research, I gather a plurality of women’s voices and experiences of under-confidence, humiliation and fear. Continuing the initiatives of Dale Spender’s Nattering on the Net, I research women’s use of the Web in placing a voice behind the statistics. I also offer strategies for digital intervention, without easy platitudes to the ‘potential’ for women in the knowledge economy or through Creative Industries strategies.
The chapters of this thesis examine the contexts in which exclusionary attitudes are created and perpetuated. No technology is self-standing: we gain information about ‘new’ technologies from the old. I investigate representations and mediations of women’s relationship to the Web in fields including the media, the workplace, fiction, the Creative Industries and educational institutions. For example, the media is complicit in causing women to doubt their technological capabilities. The images and ideologies of women in film, newspapers and magazines that present computer and Web usage are often discriminatory and derogatory. I also found in educational institutions that patriarchal attitudes privilege men, and discourage female students’ interest in digital technologies. I interviewed high school and university students and found that the cultural values embedded within curricula discriminate against women. Limitations in Web-based learning were also discovered.

In discussing the cultural and social foundations for women’s absence or under-confidence in technological fields, I engage with many theories from a prominent digital academic: Dale Spender. In her book *Nattering on the Net: Women, Power and Cyberspace*, Spender’s outlook is admonitory. She believes that unless women acquire a level of technological capital equal to their male counterparts, women will continue to be marginalised as new political and social ideologies develop. She believes women’s digital education must occur as soon as possible. While I welcome her arguments, I also found that Spender did not address the confluence between the analogue and the digital. She did not explore how the old media is shaping the new. While Spender’s research focused on the Internet, I ponder her theses in the context of the World Wide Web.
In order to intervene in the patriarchal paradigm, to move women beyond digital shoppers and into builders of the digital world, I have created a website (included on CD-ROM) to accompany this thesis’s arguments. It presents links to many sites on the Web to demonstrate how women are challenging the masculine inscriptions of digital technology. Although the website is created to interact directly with Chapter Three, its content is applicable to all parts of the thesis.

This thesis is situated between cultural studies and internet studies. This interdisciplinary dialogue has proved beneficial, allowing socio-technical research to resonate with wider political applications. The importance of intervention - and the need for change - has guided my words. Throughout the research and writing process of this thesis, organisations have released reports claiming gender equity on the Web. My task is to capture the voice, views and fears of the women behind these statistics.
Acknowledgements

I would like to thank my supervisor Associate Professor Tara Brabazon for her brilliant advice and feedback in reviewing my work. I appreciate and am very grateful for her patience in dealing with my unconventional approach to this PhD and the numerous other choices I have made in the past three (and four) years.

My parents have been a wonderfully solid presence throughout the writing of this thesis. I do not know where I would be without them.

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The Past in the Present: Positioning Women in Digital Technology

I first read Margaret Mitchell’s *Gone With the Wind* when I was twelve. My appetite for reading was exponential at that age, and I decided that the battered old book I found in my mother’s bookcase one afternoon looked mildly interesting. Until that time, I had little curiosity about the social roles of women. After reading the book, I developed a fascination with the story beyond the narrative. Even at twelve, I was amazed at the restrictive lives women led in the 1800s. From the suffocating corsets and impractical dresses to the belittling attitudes of men towards women, this femininity was a world apart from my own - separated by the barriers of time, space and fiction. Reading that book was the start of an avid interest in history, social customs and gender values.

Several years later, I began collecting Victorian photographs as a hobby. My interest extended beyond the ornate costumes and hairstyles captured in the fading sepia of the carte-de-visites; I also speculated about the stories and lives hidden behind their (unsmiling) faces. I wondered what it would have been like to live a life oppressed by men to such an extraordinary degree, particularly compared to the lives of contemporary women. In *Gone With the Wind*, Scarlett broke many of the rigid gender restrictions of that time by running her own wood mill business. The scorn she attracted was great. A woman who displayed intelligence and independence was discredited, dismissed and
ridiculed not only by men but also by other women who were accustomed to the rigid rules of a patriarchal society. Scarlett was inspirational to my twelve year old self.

Margaret Mitchell wrote *Gone With the Wind* in 1936 when women’s lives were being shaped amid crushing changes to the industrial and economic system and deteriorating hopes about a new world order after the First World War and the Treaty of Versailles. Helen Taylor, author of *Scarlett’s Women*, wrote: “It is clear why the critics, readers and film-goers of the 1930s and 40s would see ‘survival’ as a powerful theme in GWTW, and would select that recurrent motif as appropriate to Scarlett’s progress.”¹ Feminism, Fordism and Post-Fordism have each remade Scarlett’s femininity.

The introduction and proliferation of digital technology in the latter years of the twentieth century is, in retrospect, an important moment of change, critique and fragmentation in the history of women. The proliferation of technologies such as computers, the Internet and the World Wide Web offers new sites for women to challenge restrictive languages, roles, rules and behaviours. In writing this thesis, I explore how computers and the World Wide Web may contribute to the liberation of women. Does this new digital medium provide a mechanism to broaden the opportunities and roles for women, or are the restrictive attitudes of Scarlett’s fictional past still carried into behaviour and values? Through this thesis, I ponder what happens when Scarlett’s women go digital.

Introduction

Women in the World Wide Web

Figure 1. This advertisement is for a Compaq “Pocket PC”.

A Computer for Women?

Figure 2. These two pictures came from an email circulating ‘comic’ images.
Technology is a facilitator for social and economic change, but we rarely pause to consider the inequalities and injustices either perpetuated or created in the digital semiosphere. Only when viewing images such as those commencing this chapter, which affiliate women’s lives and experiences with ironing and lipstick, must we name, claim and ponder how such campaigns could not only be developed, but be considered relevant, marketable and funny. Why must the statement ‘A Computer for Women’ be followed by a question mark? These images have emerged out of an unchecked and uncritical ‘appreciation’ of technology and its audience. This thesis pauses the media cycles of this accelerated culture to ask the most basic of feminist questions: what about the women?

The three images in Figure 1 and Figure 2 trace a troubled relationship between women and computers. They are not isolated examples, but part of a wide ranging digital (gender) divide. Linking devices such as an iron and powder compact with femininity degrades and trivialises women’s competence and experience with technology. The Compaq advertisement for example, garnered much criticism for its presentation of a women’s computer for cosmetic rather than intellectual purposes. In 2001 it was the recipient of a DisGraceful Award - an incentive and rebuttal organised by a group of professional women who target sexist advertisements in the technology industry.¹ In the Apple Macintosh ‘joke’ picture, the iron is used to signify all women. As a traditional symbol of domesticity, connotations of the iron bind women to the traditional roles of housewives and mothers. It signifies that the practices of women’s life and livelihood are situated in the home, not the workplace. The picture comparing an iron and ironing board to a computer in Figure 2 is built on similar assumptions. A ‘girls’ computer is

characterised as a common household item - a tool which traditionally signifies the tethering of women to the home. This ‘joke’ also highlights and reinforces the lack of confidence women supposedly feel in operating (non-domestic) technology. In each of these images, women are represented as inept and subordinate in the digital discourse.

My specific target of investigation is the World Wide Web. This digital application has expanded significantly in the past decade, becoming part of popular culture. As a medium which is increasingly embedded in everyday life, the gendered assumptions and usage of the Web requires focused attention. Rita Tehan tracks the growth:

Another way to think about growth in Internet access is to compare it to other technologies from the past. It took 38 years for the telephone to penetrate 30% of U.S. households. Television took 17 years to become that available. Personal computers took 13 years. Once the Internet became popular because of the World Wide Web, it took less than 7 years to reach a 30% penetration level.²

With computers and telephone lines already in place, the Web was propelled into the mainstream at a greater speed than the technologies which preceded it. Its penetration into Australian households is also significant. The Australian Bureau of Statistics found that “For the first time, the total number of subscribers in Australia exceeded 5 million at the end of March quarter 2003.”³ The Web’s proliferation into people’s lives carries with it social and cultural implications. Too often ‘people’ is synonymous with men. Throughout its history and development, men have owned and controlled the technology surrounding the Web. This originary grammar perpetuates past structures and values.

Without intervention, women will continue to be subjugated in digital environments. The

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modality through which this subjugation occurs must be analysed and evaluated. Cultural Studies provides an effective platform for this examination. The field’s interdisciplinarity, flexibility and diverse writing modality allows for an open and reflexive contemplation of women’s use and role in the World Wide Web.

As digital technologies are (relatively) new, many theorists believe that they contain the potential to eliminate sexism. Each new technology carries hope to remake the world. In the mid-1990s, digital media was framed as a way through which unequal (and unfair) gender dichotomies in technological fields could be challenged. The Web avatar would supposedly offer women a greater incentive for conducting business, gaining an online education and communicating in a space where femininity could be shielded or decentralised. The ‘problem’ of women could be masked. Scholars such as Christine Tamblyn⁴ and Shaun P. Wilbur⁵ believed the virtual interface could elude the limitations of gendered realities. However, these ideals were short-lived. David Shenk confirms that digital technologies - as with all technologies - are implicated in historical and cultural formations:

A great misconception about our time is the idea that technologies are completely free of bias - that because they are inanimate artifacts, they don’t promote certain kinds of behaviors over others. In truth, technologies come loaded with both intended and unintended social, political, and economic leanings.⁶

Shenk’s maxim is confirmed by women’s use of computers, the Internet and the Web.

Ideologies relating to a person’s race, age, class and gender configure the literacies to

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access the digital media. Historical narratives defining women as irrational, unintelligent and ornamental perpetuate a prejudice that continues to underpin many women’s inadequate knowledge of the digital realm. Indhu Rajagopal and Nis Bojin studied women’s self confidence with digital technology and found that “there is a statistically significant gap between female and male levels of self-confidence in using computers, which may explain why male students are five times more likely to pursue a career in computer programming compared to females.” ⁷ Dale Spender, a prominent scholar in digital technologies, also recognised the impossibility of a ‘genderless’ virtual interface. She discusses that, “[w]hereas a few years ago it was routine to praise the gender-neutral possibilities of cyberspace”, ⁸ a closer examination disproves this belief. The influence of men’s creation and control of the computer runs as deeply through the World Wide Web as it does in other digital technologies. White, middle-class men have the greatest advantages in learning about and operating digital technologies. In this thesis, I focus upon the barriers women confront that inhibit their participation in the World Wide Web. From access difficulties to limiting media representations, women are presented with a multitude of intimidating and obstructionary ideologies and discourses in using and operating computers generally and the Web specifically.

When I originally began research for this dissertation in 2000, a marked inequality was found in women’s and men’s participation in Internet-mediated environments. In Australia, the 1999 Internet-use rate comprised “48% of all adult males and 39% of all

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adult females.” Concurrently, surveys in the United States of America showed that the gender gap was beginning to close. "According to Web audience measurement firm Nielsen/NetRatings, 49.5 percent of all Internet users in the United States are women." Figures released the year after (in August 2000) revealed that women constituted 51 percent of Internet users - a balanced representation of the United States’ gendered population. National Statistics in the UK also stated that “[w]hile the proportion of men accessing the Internet has increased marginally to 55%, the proportion of women accessing the Internet has increased by 12 percentage points from 39 per cent to 51 per cent since October 2000.” By 2001, women had begun to use the Internet in the same numbers as men.

With this (positive) change in Internet use based on shifting demographics, my research became more targeted, and fascinating. I was particularly interested in monitoring women’s use of the World Wide Web to examine how it was distinct from Internet-based applications. Even though women are now using the Web in equal numbers to men, how they use it is different. Andrew F. Wood and Matthew J. Smith identified some of these distinctions:

[A]ccess to the Web does not mean the same thing to women and men. Intriguing research agendas await scholars who wish to pursue how subtle markers of gender continue to become inscribed in Internet communication. Moreover, it is important to realize that even as the digital divide has largely disappeared from a

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gendered perspective, it remains in other contexts.\textsuperscript{12}

My research takes on their challenge. Although I agree with Wood and Smith that ‘markers of gender’ continue to inscribe online communication, I do not believe that the digital divide has disappeared. Women still remain excluded and discouraged from operating in particular spheres of the Web. Older women, for example, are not socialised into a familiarity of the technology and may find computers and the Web daunting. Even Queen Elizabeth II admits she does not use the Internet: “Think what we would have missed if we had never … used a mobile phone or surfed the Net - or, to be honest, listened to other people talking about surfing the Net.”\textsuperscript{13} Her statement is important as it shows how women’s ‘operation’ of the Internet is mediated by others. I consider how factors such as age, education and cultural attitudes constrain women from learning about and using the Web. My thesis enacts a challenge to analyse how ‘markers’ of femininity punctuate women’s digital lives.\textsuperscript{14}

Not considered in the ‘51% of American women now online’ headline is the lack of women employed in Web building rather than Web shopping. In technical fields relating to the Web, women remain excluded. Women are poorly represented in computer-related

\textsuperscript{14} At the beginning of this thesis, I must acknowledge that I do not believe \textit{all} men have trouble-free relationships with computer technology, the Web and the Internet. In many cases, such as in generational divisions or class restrictions, some men confront as many difficulties, frustrations and limiting attitudes as women in learning about and operating the technology. When I refer to ‘men’ or ‘male-dominance’ in my analyses, I am primarily referring to men who have had the privilege and access in learning about the Web with much more ease than their female counterparts. This thesis is about women - therefore I consider the difficulties faced by men in disempowered positions only when relevant to my argument. Obviously there is much research to be conducted in so many sociological spheres of the Web. This thesis has a sharp focus and precise goal: to explore women’s use of the World Wide Web.
college and university courses, in careers in computer science and computer
programming, and also in digital policy. In 1994, Paula Span found that:

The Bureau of Labour Statistics reports that the percentage of women who are
computer systems analysts and scientists have barely budged in a decade: It’s still
under 30 per cent, even though nearly half a million more people have entered the
field. Fewer than a third of computer programmers are women, as well, another
statistic little changed since 1983.\(^{15}\)

In 2003 - twenty years later - this figure remains relatively unchanged. For example, in
September 2003, a press release detailing AT&T Foundation’s donation of $50,000
towards women’s education in information technology stated that women “earn only
about one-quarter of the bachelor-level computer and information sciences degrees
awarded in the U.S. - down from the 1980s when those numbers were in the mid 30s.”\(^{16}\)

In this thesis, I investigate the possible causes for the low numbers of women’s
participation in these technical fields. I consider the social and cultural reasons for their
exclusion and explore the patriarchal discourses which operate to discourage women.

Within my thesis, a differentiation between the Web and the Internet is required.\(^{17}\)

Although the Web and the Internet are closely related - they both function to display and
store digital information - they also have distinct histories and structural compositions.
The Internet, despite its ingenious ability to intangibly store information and function as a
means of communication, was initially difficult to use and consequently limited in access
to a few who had the computer language, literacy and capital to operate it. The World

\(^{15}\) Paula Span, “The On-Line Mystique” in Gail E Hawisher Cynthia L. Selfe eds., Literacy, Technology,

\(^{16}\) Charles Rose, “AT&T Foundation Grants $50,000 to UMBC Center for Women & Information
Technology”, University of Maryland News Release, 8/9/03. Found at:

\(^{17}\) In this thesis, the ‘Internet’ is written with the first letter in a capital. This reason is identified by Gene I.
Rochlin: “The Internet … is distinguished from various other forms of internets by its capital ‘I’.”
Wide Web’ as it is the registered name of a product which services the Internet.
Wide Web provides a more accessible tool that allows a broad range of people to use it.\footnote{18} The browser’s graphical interface operates through a simple ‘point and click’ system. Operators do not require knowledge of a complex code to access the online information. Mosaic, developed by a group of students at the University of Illinois in 1993, was a graphical browser designed to be end-user friendly and adaptable to many computer systems. The Web browser made the Internet readable and usable. Current browsers, such as Netscape Navigator and Microsoft Explorer, maintain this accessible user interface.

Despite their differences, writers on digital technology often refer to the Internet and the Web as indistinguishable phenomena. However, Tara Brabazon points out that there exists an important difference: “While the Web is a network of computers, the Web is a network of hypertext links.”\footnote{19} The Web and the Internet are separate entities in both coding and protocol. Their individual histories, as well as their construction, are different. The Web is entirely dependent upon the technology the Internet provides in linking geographically distanced computers. The Internet, in contrast, incorporates many features that were originally devised and operated outside of the Web’s structure. It is a much larger structure, incorporating file transfer protocol (FTP), gopher (a primitive form of hypertext markup language), usenet (a bulletin board system allowing people to post and read messages), telnet and many more applications. For example, email in the form of the Eudora or Microsoft Outlook Express programs function independently of the Web. However, sites within the Web such as Hotmail and Yahoo! Mail also offer email services. Often writers overlook the distinction between the Internet and the Web. While

\footnote{18} The World Wide Web was initially developed at CERN in Switzerland in 1990 by Tim Berners-Lee. A detailed description of this is included in Chapter Three. \footnote{19} Tara Brabazon, \textit{Digital Hemlock}, Sydney, University of New South Wales Press, 2002. p. 23
they converge, they are not synonymous. As a consequence, there are many articles written about the Web in which the author refers solely to ‘the Internet’. The author’s use of ‘the Internet’ in a citation is generally intended to include the Web as well.

The intricate relationship between computers, the Internet and the Web is a significant node of interest in this analysis with each revealing a distinct, gendered history.

Computers are a requisite device for accessing the virtual realm. For example an excerpt from a *First Monday* article exemplifies this three-way exchange:

> Few acronyms have ever crossed social, business, technical and cultural boundaries to enter the psyche of the populace as fast and effectively as the sometimes famous, sometimes infamous World Wide Web. In less than seven years, it has given the Internet far reaching potential, under the watchful eyes and persistent computer mouse taps of archivers, business marketers, consumers, policy makers, researchers, educators, artists, curious wanderers, gamblers and forecasters.20

The authors of this article demonstrate the importance of computers in the popularity and spread of the Internet and Web. The extent of a user’s computer knowledge will determine their level of confidence in using the Web. In my analyses of digital representations of women, I often refer to the importance of computer expertise and literacy.

A prolific writer in the field of digital technology is an Australian scholar, Dale Spender. Spender has been writing about the cultural affects of the Internet since the mid-1990s. She penned *Nattering on the Net* in 1995 - only a few years after Tim Berners-Lee and others at CERN ‘invented’ the World Wide Web. The book proved to be popular in the

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international academic community. It received reviews from publications across the
globe,\textsuperscript{21} and is included in many undergraduate curricula.\textsuperscript{22} The book’s content is
primarily concerned with how the Internet will alter methods of communication,
literature, language, librarianship and education from traditional analogue systems to a
digital modality. Spender considers how the place of women within cultural and social
formations will be affected. Spender’s outlook is cautious; she believes that unless
women acquire a level of technological capital equal to their male counterparts, women
will continue to be marginalised as new political and social ideologies develop. She
believes this education must occur as soon as possible:

> Margie Wylie, editor of \textit{Digital Media}, states that ‘far from offering a millennial
new world of democracy and equal opportunity, the coming Web of information
systems could turn the clock back 50 years for women’. I think she is optimistic;
it could take much longer unless women claim their place very soon.\textsuperscript{23}

I agree with this assertion: women need to be involved in technological development if
they are to challenge the old world order of (analogue) history.

I reread Spender’s \textit{Nattering on the Net} when I began my research in 2001. I admired the
way she wrote about the Internet in relation to the gender issues which have arisen since
its inception. There were few books at that time which addressed the highly masculinised
environment of technology outside of Donna Haraway’s theories of the cyborg.\textsuperscript{24} As I
read Spender’s book in more depth however, I realised that I did not concur with all of

\begin{itemize}
  \item \textsuperscript{21} Such as in the \textit{Toronto Star}: 19 September 1996 (Canada), \textit{Times Higher Education Supplement}: 13
      November, 1998 (Great Britain) and \textit{Herizons}: December-February 1996 (Canada).
  \item \textsuperscript{22} Courses such as “Digital Amazons, Cyborgs, and Wired Women: Gender, Identity, and New
      Information Technologies” at the Simon Fraser University in Canada, and “Feminist Theory, Power and
      Knowledge” at Deakin University in Australia contained readings from \textit{Nattering on the Net}.
  \item \textsuperscript{23} Spender, \textit{op. cit}, p. 170.
  \item \textsuperscript{24} Donna Haraway, “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late
      Twentieth Century,” in Linda J. Nicholson (ed.), \textit{Simians, Cyborgs and Women: The Reinvention of
\end{itemize}
the arguments. There are several theoretical and structural reasons why I diverge from her interpretation. My first concern was her discussion of women primarily as Internet-users. Spender views women’s use of the Internet in terms of ‘nattering’ - reinforcing the conventional ideal that women have an interest in technologies for entertainment value, rather than substantial occupations such as business or research.

I also oppose her frequently vehement approach in embracing and celebrating new technologies. I am not concerned with many of the radical changes to everyday life that Spender proposes in *Nattering on the Net* - such as the possibility of abandoning books in school education.²⁵ I agree with Jennifer Wallace when she writes that Spender presents an “uncritical advocacy of the new technology”.²⁶ This thesis works through Spender’s techno-enthusiast politics in contemplating how women will fit into the digital discourse, while carrying many analogue structures and languages with them. For example, I do not agree that a wholly online education is effective in producing successful teaching and learning. Thinking and scholarship are rarely technologically determinant. In the ninth chapter, I examine how the influence of a teacher and the support of a classroom environment have a significant impact upon a student’s accomplishments. Technologies should integrate with traditional methods of pedagogy - not replace them.

This thesis has been submitted for examination almost ten years after Spender wrote *Nattering on the Net*. My study of the ‘Web’ is distinct from her analysis of the ‘Internet’. The Web has expanded exponentially; it has become one of the most utilised features of

the Internet. The pervasive political and cultural implications of this shift cannot be ignored. In writing about gender and the Web, I update Spender’s opinions and observations about the role of digital technology in social and cultural development. My chapters engage with many of her theories, such as her arguments regarding online education, the production of electronic fiction and the role of libraries within the information technology environment. I also consider several discourses which have developed beyond the Internet to utilise the new capacities of the World Wide Web. Tracking this development requires analysis of websites and their content, representations of women as Internet operators in the media and an examination of the reasons why there are so few women in computer science and programming. Spender gave these topics little attention in *Nattering on the Net*. They are absences which I believe must be identified and researched to reposition women in a digital continuum.

Despite these differences in approach and premise, I appreciate the methodology Spender employs in discussing women in *Nattering on the Net*. My thesis does not concentrate on the intricacies of feminist theory or history, or track feminist writers and their conflicts. I acknowledge and affirm the importance of feminism to changing women’s lives. However, this dissertation is written for and about women, detailing their use of the Web, what they use it for, and if women construct the digital platforms that they use. In pondering these problems, I validate women’s voices beyond the academy by incorporating interviews and surveys that display a diversity of thoughts and opinions. Spender mobilises similar testimony in *Nattering on the Net*. She works with women from myriad backgrounds and empirically explores their relationship to the Internet. This methodology is described in detail through the first chapter.
I have devoted a chapter to methodology due to the unconventional approach mobilised in this PhD research. While the majority of this study makes use of published and peer reviewed resources, a significant part of the thesis also presents the thoughts and opinions of women who are not employed in the academy. I initially deployed this mode of research because of the lack of information in the field. Searching the libraries and using the databases available from my university’s server produced limited results. As I began to assemble my own resources through interviews, surveys and Internet discussion fora, I realised that this mode of investigation was becoming as interesting and important as the results produced through the process. The voices of women in my studies added a richness and depth that could not be emulated by only using academically-derived sources. The gathering of materials for this thesis gained a resonance as important as the content. The mechanism of research required to gather a plurality of women’s voices and opinions on the World Wide Web is one of my original contributions to knowledge.

This research balances ‘real life’ experiences from non-academics alongside refereed articles produced by scholars. The opinions expressed in peer-reviewed papers have their advantages - they are written by people who have attained a high level of education and specific methodological and disciplinary knowledge. These researchers have been exposed to rigorous debates concerning myriad theories, hypotheses and philosophies throughout their academic careers. Academic writers own a distinct cultural capital which

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27 The chapters in which I interview people from non-academic backgrounds include: Chapter Two: ‘Overview of the Web Population’, Chapter Five: ‘Objectified Web Women: Their Denigration in the Media’, Chapter Seven: ‘Cyber(Super)Women: The Web in the Workplace’, Chapter Eight: ‘Digital Policies: Women in the Creative Industries’, and Chapter Nine: ‘Education in an Online Discourse’. These chapters contain topics which I found to be under-researched at the time of writing. In particular, the Creative Industries debates - as they are being presented in Australia - demonstrate little consciousness of women’s distinct history with the knowledge economy, patents and copyright.
influences their beliefs and - occasionally - constrains their expressions. They are literate in criticising ideological assumptions and propositions. By incorporating the opinions of people who do not have training in academic protocols, I affirm the value and importance of their attitudes and ideas. Their opinions are drawn from different life experiences and trajectories. Therefore, between chapters I have inserted the words of women - and one man - to affirm the importance of plural voices, ideas and attitudes in a Web-based environment. Such structural interventions are a metaphor for more wide-ranging social interventions.

My thesis is structured into three sections. The first section, *Commencing the Cyber-Conversation*, presents the theoretical foundation. The opening chapter examines the methodology used in the formulation of the dissertation’s intellectual scaffold. The second and third chapters focus on the discourses encircling women’s use and operation of the Web. While the second chapter tracks Web-users habits, the third investigates the lack of incentives for women to extend their knowledge of computer science and programming. In both levels of operation, women are distinctly disadvantaged. A study I conducted in 2001 provides insight into men’s and women’s perception of why this disadvantage occurs.

The second section, *Techno-Texts: Writing (in) the Spaces*, explores the cultural texts in which women are featured as Web users and builders. In relation to the audience’s knowledge of acceptable cultural behaviour and attitudes, I ponder how women in popular culture mobilise computers and the Web. The fourth chapter focuses upon three forms of media (film, newspapers and magazines) and investigates the impact of
analogue representations on the digital realm. Chapter five analyses how the characters in television shows are mediated through online discussion fora. *The X-Files* and *Star Trek: Voyager* are employed as case studies in order to investigate how women are represented in Web-mediated communication. The sixth chapter researches novels, particularly focussing on juvenile fiction and books written for adults. The texts investigated contain the Internet and Web in their narratives. I examine how the female characters are portrayed; whether they are presented in a ‘traditional’ form of femininity as unintelligent and unable to operate computers and the Web, or if they are constructed to display knowledge of the media on a similar level to their male counterparts. The second section of the thesis is important, as popular cultural texts have a great influence in shaping and teaching readers and viewers about femininity. Popular culture holds a pedagogic function, instructing readers about ‘appropriate’ behaviour, roles, rules and truths. My work in this section also confirms a meta-theoretical point that no technology is self-standing: we gain information about ‘new’ technologies from those that preceded it.

The final section, *Creating Change*, is concerned with the organisations and structures in which women come into contact with computers and the Web. I investigate if the Web replicates or challenges women’s positions in cultural hierarchies in the educational system, government, academic fields and the workplace. These institutions are significant, as they are gatekeepers for political and social change. Chapter Seven details women’s use of the Web in the workforce. I focus on two types of environments: academic libraries (that are frequently female-dominated) and workplaces in technical industries (which are frequently male-dominated) and explore how digital technologies are mobilised in each space. The eighth chapter considers the role of women in the
Creative Industries (CI). I investigate the intermediary relationship CI performs between the government and the academy in the creation of digital policies. I examine why men dominate in the Queensland University of Technology’s version of the CI and consider how this inequality affects digital policies formed in relation to the Internet and the World Wide Web. The final chapter of this thesis examines the advantages and disadvantages of online education for female students. With the growing popularity of the Internet and the Web, there are many theorists who expound the benefits of a digital education. However, this Web-based platform requires a text-based mode of communication which results in the lack of a teacher’s presence and minimal bodily interaction with students. I interview teachers and students about this issue by analysing the operation of the Web in the ‘everyday’ exchanges of education, and compare their opinions to the interpretation of scholars such as Dale Spender.

In working through each of these fields, my thesis’s original contribution to knowledge is the mode through which I approach women’s relationship to the World Wide Web. In deploying cultural studies theories and approaches, I recognise, research and offer solutions to digital inequalities. For example, I constructed a website for the third chapter to demonstrate how women can be active builders of the digital environment. I do not simply analyse ‘the problem’; I also propose a myriad of potential solutions. This website offers a model for women’s participation in the World Wide Web as builders, not only consumers. It also models strategies to promote a more just digital future.
The Web is a malleable environment. It is essential to construct a detailed analysis of the social and cultural restrictions that inhibit women’s access to information and knowledge of digital technology. Middle class, English-speaking, white males have determined how communication devices such as television and telephones are administered and promoted. Similarly, they are also the dominating group controlling the Web. Women must challenge the barriers restricting their use of digital technologies in order to have a significant influence in the Web’s future development. The first stage in such goal is to diagnose, mark and acknowledge ‘the problem’.

In discussing the Internet, Patricia Wallace notes how everyone has the potential to manipulate the medium’s content: “The Internet is not simply a technology thrust upon us, one that we can choose to use as is or avoid altogether. We can do only that, but we have more power to influence this environment than we ever had for television or telephone because we are the creators, producers, and users at the same time.” [Patricia Wallace, The Psychology of the Internet, Cambridge, Cambridge University Press, 1999, p. 12.]
The Academic

The respondent to these questions is a PhD candidate in her late twenties. She owns her own computer and has an advanced knowledge of its operation. The Academic teaches several undergraduate classes and she is well versed in the methodologies and resources required to write in the humanities. Her experience and knowledge of academic scholarship, as well as her proficiency in computer use, provides insightful comments for entry into the first chapter.

Do you remember when you first heard about the Internet?
In all honesty, I cannot recall when I first heard about the Internet.

How often do you use the Web?
I use the Web on a daily basis for both work and leisure purposes.

What activities, sites or topics do you engage in during your periods of Web usage?
The activities, sites and topics that I engage in during my periods of Web usage include checking my email accounts for personal and work-related correspondence, chatting to people, surfing the net to find out all manner of topics - ranging from researching products, going into fan sites and looking up information for my PhD.

Do you think Cultural Studies is effective in reaching broad audiences and instigating change in social and cultural policies?
I believe that Cultural Studies is an effective way of reaching broad audiences and instigating change in social and cultural policies. However, its influence has been restricted to those who have access and knowledge of this discipline - generally those at a tertiary institution. Whilst 150 students enrolled in a Cultural Studies course may be considered a ‘broad’ audience (in terms of age, ethnicity and class background), it needs to be further widened to include a greater population.

For what purposes do you think women use the Web?
I think women would use the Web for similar reasons as men - to surf for leisure reasons, to locate information that may be required for occupational/study purposes, to communicate with others (such as in chat rooms, discussion boards). However, if I were to find one major difference between the way women and men use the Web, I would say that shopping and researching products (to potentially purchase) has become dominated by women. I will probably be lynched for making a comment like that and insinuating that the world wide Web has just become another (virtual) mall for females.

1 ‘Chapter One Participant’. Interviewed by Carrie Kilpin in Perth, Western Australia. Email interview conducted 18/3/04.
Do you have any comments, affirmations or criticisms of cyberfeminism?
I am not exactly sure what ‘cyberfeminism’ means or if I am correctly or incorrectly using it. If it means providing spaces for women online to actively engage in activities, educate, encourage and promote female action against inequality based on sex, such as forums for women to chat in, the spreading of things such as the Riot Grrrl ethos, then I would have to say that I affirm ‘cyberfeminism’. I would hate for the World Wide Web to just be another ‘boys club’ where women either play ‘fly on the wall’, or aren’t even visible.

To what extent has the Web and Internet had an impact upon research methodologies within the academy?
I think that the Web and Internet has not really had a major impact upon research methodologies within the academy. I do believe, however, that it has made the time needed to research a lot faster. For instance, one need not search the library for a document - it can be often located on a Web-based data system.

Do you think email interviews are an effective tool for scholarly research?
I think email interviews are a significant tool for scholarly research. However, their effectiveness are (sic) often curtailed by the lack of commitment by the interviewees. This may result from the time and energy that must be expended by participants to completing such interviews, especially if they are ‘questionnaire’ styled. Additionally, the advantages of email interviews - the ease with which they can be distributed and administered - can be offset by the fact that not all participants are equally proficient at expressing their ideas in a clear and detailed manner that a verbal interview is better suited for.
Chapter One

Mapping a Digital Terrain: Methodologies and Rational, Theories and Application

McRobbie’s methodological position … suggests that cultural studies has been overly theoretical and overly textual in its approach, and argues for a less detached, more policy-oriented position, which acknowledges the significance of the production rather than simply the consumption of cultural objects and texts, and which is firmly based on “substantial concrete research”.

Paul Sweetman

There is often an emphasis upon theory, with or without a capital T, rather than practice within the humanities. Paul Sweetman identifies that Angela McRobbie, a prominent cultural studies theorist, also sees this ‘problem’. The significance of production - building on the theoretical rigour of the paradigm - is under-discussed by cultural studies scholars. Precise theoretical excursions rarely tangle with tangible applications. I am not anti-theory, or against succinct, considered scholarly explications of important ideas and paradigms, but I affirm that more attention should be placed on the permeation and proliferation of these ideas beyond the academy. Cultural studies provides a flexible, dynamic and inter-disciplinary framework. However the dialectic of production and theory must be assessed and pondered, rather than assumed or revealed with rhetorical flourish. This relationship is relevant to cultural studies and digital policy.

Much attention has been given to theoretical modes of analysis in cultural studies, often resulting in “cabalistic” prose that is incomprehensible to those reading from outside this specialist discourse. Correspondingly, scholars of the digital realm often assume the advantages of the technology itself - with little critique or cultural investigation into its myriad social and political consequences. When digital policy and cultural studies do conflate, as evident in the writings of Donna Haraway, Sherry Turkle, Sadie Plant et al, their research on digital feminism is frequently inaccessible to ‘everyday’ consumers of the technology. The circulation of these theories is limited to the scholars who have the cultural capital required to disseminate this knowledge.

In analysing theories of women’s relationship to the Web, I incorporate methodologies which are derived from ‘real life’ sources. Obviously, all ‘realities’ are mediated and constructed. However through my interviews and e-interviews I wish to extend the scale of voices and views beyond published academic citations. In this thesis, the methodology used in acquiring resources is as important as the theories which result from their analysis. For example, the website created to complement Chapter Three is a significant

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2 This was acknowledged by Clodagh O'Brien, Donncha Kavanagh and Maurice Linnane: “It is well-known, for instance, that the cabalistic language of academics makes their writings and conversations practically impenetrable to others.” in a paper titled ‘Art, Work and Art Work’ submitted for The Management of Creativity and the Creative Industries Stream in the 2nd International Conference on Critical Management Studies, Manchester, July 11-13 2001, p. 6.


example of how practice can be as effective as theoretical analysis in identifying limitations women face on the Web.

The structure of this first chapter is different to the rest of the thesis due to the diverse nature of the topics. Its construction is metaphorically akin to a hypertexted series of links. Each section explores the same subject - the format and structure of this thesis. Each part is disparate, discussing different aspects of the thesis. This structure is necessary in order to provide a solid interpretative matrix for the diverse concepts and methods that are utilised in the sections that follow.

This chapter, concerned with concepts and method, is divided into four main parts. The first section examines the theoretical modalities of Internet and Cultural Studies - the two fields of knowledge from which the concepts and theories for this thesis are derived. The second component discusses Dale Spender and her role and function in this thesis, including an analysis of Nattering on the Net. The third part explicates how computers and the Internet are important in the discussion of the World Wide Web. The three technologies are intricately linked, yet structurally and historically disparate. The final section presents and probes the varying methodologies of research used in this thesis. It contemplates the benefits and disadvantages of email and oral interviews, as well as the published sources of information.

**Cultural Studies and Internet Studies**

Throughout this thesis, tropes, theories and concepts derived from both Cultural Studies and Internet Studies are employed to discuss women’s Web-use. While Cultural Studies
and Internet Studies have differing trajectories, imperatives and methods, they also contain many similarities and when converged, they function well. Both borrow theories from the more traditional social sciences and humanities to create innovative analytical frameworks and methodologies. For example, Chapter Nine incorporates theories of pedagogy discussed by writers such as Dale Spender and Robert Connell in Cultural Studies. Pedagogy is also a relevant concept in Internet Studies - the younger field also draws upon these authors in discussing theories of teaching, learning and literacy. In this example, Internet Studies and Cultural Studies align to produce provocative analyses of education and pedagogy in a digital context. The two fields benefit in sharing theories, languages, concepts and politics.

Developed by academics over forty years ago at the Birmingham Centre for Contemporary Cultural Studies and other British universities, Cultural Studies has spread into departments all over the world, including Australia, Canada, New Zealand and the United States. Varying disciplines and theories - from history, English literature, law, environmental science, and library and information studies - are accessed to create new ideas unconstrained by the boundaries of traditional disciplines. Ziadduin Sardar and Boris van Loon describe the field:

> It straddles the intellectual and academic landscape from old established disciplines to new political movements, intellectual practices and modes of inquiry such as Marxism, post-colonialism, feminism and post-structuralism. It moves from discipline to discipline, methodology to methodology, according to its own concerns and motivations.

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5 Theorists of Internet education include:

This identification of several theoretical paradigms with which cultural studies engages captures something of its dynamism. Cultural Studies incorporates theoretical frameworks including Sassurian semiotics, Hebdige-inspired ‘punk’ ethnography, Gramscian hegemony, and Jenkins’-framed textual poaching. The paradigm problematises the ideologies presented as ‘natural’ or normal through an implementation of analytical methodologies and frameworks such as textual analysis or social semiotics. Throughout this thesis, I employ many textual analyses - including an exploration of television programmes, films, magazines and books - in investigating the relationship between women and the Web. I also probe Creative Industries initiatives and strategies when studying the formation and implementation of digital discourses for women in the developing field of the World Wide Web. Detailed research into texts are matched with wider studies of structures and institutions. Put another way, meaning systems are conflated with social systems, with the aim of instigating political interventions and - hopefully - change.

Internet Studies is a relatively new area of study. It has entered academia in the last decade alongside the expansive growth of the Internet and its related technologies. Its

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pervading digital discourse has contributed to the creation of many new theories, incorporating cybernetics, cyberspacial politics, cyberterrorism, cybersovereignty, digital access and digital policy. At its best, it offers a considered dialogue between the social and the technical. Expertise in the field is based upon the theorist’s familiarity with the workings of technological artefacts - encompassing computers, software and accompanying peripherals. Having a technical, scientific background, Internet Studies is a field that is becoming a specialism. In performing the transitory nature of the medium, Internet Studies is also an ever-evolving paradigm. New theories as well as those poached from other disciplines (such as Cultural Studies, Library Studies and modes of feminist theory) contribute to its dynamic structure.

The Internet draws its trajectory from military origins. The event that initially triggered its conception was the Soviet Union’s launch of the Sputnik I on October 4, 1957. President Eisenhower was caught off-guard at the Russians’ unanticipated technological advances and “tuned his defence research and development strategy to making sure America stayed one step ahead.” Eisenhower had more faith in science than the military


13 Many universities have developed research centres which focus on producing publications and fostering community relations with companies in digital industries. For example, the University of Washington in the United States of America has a Center for Internet Studies which “is an interdisciplinary research and teaching unit for the study of the global networked society. The Center’s work focuses on the impact of the Internet and other information communication technologies on economic, political and social institutions.” (see http://www.cis.washington.edu/). Murdoch University in Perth, Western Australia has also developed a Centre for Electronic Commerce and Internet Studies. It aims to “carry out research which is relevant to business and the community.” (see: http://wwwcecis.murdoch.edu.au/).

organization itself, and as such, invested in a long-range research department that would concentrate upon advanced technological development projects for defence of the nation. Subsequent progress involving ARPA (the Advanced Research Projects Agency), the invention of packet switching and the establishment of networking systems resulted in the construction of the Internet. The availability of funding, political encouragement and recruitment of many of the nation’s best scientists meant that the United States of America was the first country to establish and thus control the future direction of the Internet.

The World Wide Web is different from the Internet, and this thesis - in focusing on women and technology - is stressing this distinction. The Web is a “system of Internet servers that support hypertext to access several Internet protocols on a single interface.”

Many discourses of the World Wide Web diverge in background and construction from the Internet. Perhaps the most significant delineation is that the World Wide Web is European in design, rather than American. Its creation is attributed to an Englishman, Tim Berners-Lee. The first steps to the Web’s creation began during Berners-Lee’s visit to Switzerland’s CERN (Conseil Europeen pour la Nucleaire, or the European Organisation for Nuclear Research) in 1980. With associate Robert Cailliau, the first Web was set up between their offices by the end of 1990. In 1993, the release of Mosaic browsers made the Web accessible to anyone using Microsoft Windows or a Macintosh. Its popularity grew exponentially and “[a]t the end of 1994, when the Web hit the

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headlines, there were some 10,000 Web servers around the world. By the end of 1999, that number was approaching 10,000,000 and still rising fast.”17 Thus the Web grew out of an institutional, European enterprise in nuclear research. Despite this distinct history, the Web’s proliferation is pivotal to the development of both the Internet and Internet Studies. In recent years, many scholars have examined the social and cultural attributes of the Web’s construction.18 One of the most important studies foreshadowing my analysis concerns an important Australian feminist, Dale Spender.

Dale Spender and Nattering on the Net

Dale Spender’s book, Nattering on the Net: Women, Power and Cyberspace, discusses many of the issues Internet-users were considering at the popularisation of the new technology. Her theories are constantly referenced throughout this thesis. Spender’s focus on gender and technology sets the book apart from others published in the 1990s, which were more often technical guides to the medium rather than social or cultural analysis.19 She identified important concerns with the masculinisation of the Internet and women’s exclusion from the development of new technologies. In reading Nattering on the Net at the cusp of the new century, I found significant absences in her observations of women and the Internet. Although Spender presents a solid recognition of the problems facing women in the technological ‘revolution,’ she neglects topics that in retrospect required

17 Ibid. p 148
18 These publications include:
19 The technical guides include:
clear attention. For example, the small numbers of women involved in website
collection and the negative representations of female Web-users in the media are
important considerations in examining women’s relationship to the Web.

Spender has a history of writing about women’s oppression. One of her highly regarded
published works is *Man Made Language*, which discusses how patriarchal language
structures the subordination of women.\(^{20}\) She also wrote *Women of Ideas and What Men
have Done to Them*\(^{21}\) in 1982. As an academic with an established international
reputation for her strong views on feminism and history, her observations of gender and
the Web attracted a great deal of attention. As noted by Cate Brett: “At 56, Dale Spender
(BA, DipEd, MA, LittB, PhD), is regarded as one of Australia’s leading gurus on the
digital revolution.”\(^{22}\) Spender’s opinions regarding women’s participation in the digital
discourse have generated both positive and negative interest in newspapers such as *The
Australian*,\(^{23}\) *The Times*\(^{24}\) and in academic publications including *NWSA Journal*.\(^{25}\)

*Nattering on the Net* provoked disagreement between its reviewers in academic journals
and the popular media. Larissa Silver and Melanie Stewart Millar identify the
shortcomings of Spender’s writing style in a review for *Women & Environments
International Magazine*:

\(^{22}\) Cate Brett, “An Audience with Queen of Cyberspace”, *The Press*, Christchurch, New Zealand,
\(^{23}\) See the Higher Education Letters [in *The Australian*. Canberra, ACT, Aug 27, 2003. pg. 24] for a list of
letters addressing Spender’s controversial remarks about digital education in an article she previously
\(^{24}\) Jennifer Wallace, “Sheila still making waves”, *Times Higher Education Supplement*, November 13,
\(^{25}\) Kate Burns, Book Review: “Nattering on the Net: Women, Power, and Cyberspace” *NWSA Journal*,
Informative, chatty, and largely anecdotal, this book is a must-have for those who want a soft introduction to women and computer networking. Spender blends feminism lite with the development, socialization, and perpetuation of a technology that may be leaving women in the dust. Unfortunately, she by-passes any analysis of this phenomenon. For someone who claims to be writing a book about people rather than computers, Spender's epic predictions for the demise of print culture, ‘gender-bending’, the death of the author, and cyber-society are remarkably technologically deterministic.26

Silver and Millar’s description of Spender’s approach as ‘technologically deterministic’ suggests that she has written an inflexible narrative about the impact of technology upon women’s place in society. In much of the book, Spender presents frank arguments and examples of how women are not gaining enough benefit from the potentials of the Internet. She focuses more upon empirical examples and anecdotes than theoretical contemplation. The first part of the book provides a narrative of technological advances in media over the centuries. She compares the contemporary digital revolution to the introduction of the printing press in the 1400s and considers how men have been responsible for keeping knowledge out of women’s grasp. Through stories and anecdotes about the function and role of books, authors, libraries and education in Western society, Spender draws a picture of a society weighed down by patriarchal domination and control.

This recognition of gender discrimination throughout history is common in feminist texts. As Jennifer Wallace from *The Times Higher Education Supplement* identifies: “The first 160 pages of the book focus on familiar concerns … Those who have read her earlier work … will find some repetition of points made in her previously published work.”27

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Wallace recognises that there is a repetition of ‘familiar concerns’ in Spender’s prose. Although the topics may vary, the same problems consistently resurface in her monographs. Women’s oppression is embedded in myriad disciplines and is threaded throughout histories of literature as well as technology.

In portraying the history of technological progress, Spender often compares her discussions of older technologies to the future-oriented, Internet discourse. This can occasionally produce some puzzling contradictions. For example, in writing about authors and their books, Spender enthusiastically discusses a future in which a multimedia ‘box’ would be able to produce an interactive style of consuming narrative: “This would be the ultimate in empowerment: everyone who had such a box could be a fully multimedia author, able to publish their own productions for everyone else in the world who was wired up.”²⁸ She then reverts to how she imagines critics of this new technology would react:

Not everyone would welcome such developments. This blend of self-created infotainment is a long way from the pedestal of print authorship, and requires a fundamental cultural shift (for the print generation anyway) before there could be a realistic assessment of its strengths and weaknesses.

Such an analysis does not address issues of scholarship, research, peer review and refereeing. While academics in print may be on a ‘pedestal,’ they are also verified, checked and matched against international standards. The problem with Spender’s ‘box’ is not print or authorship, but quality and rigour. This disjuncture between cause and effect, narrative and argument was confusing for the Herizons reviewer, who remarked that “Spender appears to be simultaneously for and against the Internet as it is currently

²⁸ Spender, op. cit, p. 90.
designed and managed, producing a rather uneven book.”29 The ‘uneven’ tone of the
book is a result of Spender’s structure, presenting a narrative of historical developments
of technology and women’s involvement in the present-day Internet.

Spender presents a more coherent method and thesis towards the end of the book, when
she considers the power relations between men and women in cyberspace. As Kate Burns
in a *NWSA Journal* review notes: “Spender is at her best in the long awaited final
chapters in which she deals directly with cyberspace…The conclusion that follows,
written in the first person, is a refreshing change after the rather textbook like use of
passive voice sentence constructions in previous chapters.”30 *Nattering on the Net’s*
seventh chapter, ‘Women, Power and Cyberspace’, is 88 pages long, constituting a
significant proportion of the book. It is here that Spender becomes more critical of the
ideologies circulating on the Web and lessens her emphasis upon historical inevitabilities.
She considers aspects of Internet technology such as social and cultural representations of
Web-users,31 sexual harassment32 and digital policy.33

The title *Nattering on the Net* offers insight into the subject matter and direction of
Spender’s book. It is about simply *using* the Internet and the Web. This ‘use’ is mobilised
in a number of contexts, such as a tool for education, conversation in chat rooms, library
indexing, academic publishing and computer games. These activities are fairly simple
applications - they require a basic knowledge of digital media. My greatest criticism of

29  Herizons Book Review, “Nattering on the Net: Women, Power and Cyberspace”, *Herizons*, Dec-Feb,
Vol 11, Issue 1, p. 31.
30  Kate Burns, “Book Reviews - Nattering on the Net and Wired Women”, *NWSA Journal*, Summer 1997,
Vol. 9, Number 2. p. 195.
Spender’s writing is that she fails to realise that there is more to digital technology and women’s role than these applications permit. The languages, protocols, information and industrial scaffolds that created the Internet and the Web are a (hidden) modality of gender inequality. It is in computer science, programming and engineering classes that women are outnumbered by men. The research in this thesis indicates that ‘the problem’ with technology and women’s lack of participation is tied to the root source of digital technologies. It is men who are creating, developing and controlling the medium; the grammar, structure and institutions of the World Wide Web were predominantly instigated by male scientists. Spender displays very little interest in this area throughout her book - a significant gap I investigate throughout this thesis.

Despite Spender’s avoidance of Web building processes and practices, she does address several significant points about Internet-use for women. As Burns discussed, “[t]he gaps in net scholarship that help to perpetuate a white, middle-class, First World, English-speaking hegemony in cyberspace still desperately need to be interrogated. … Although these issues remain unaddressed, the questions and answers presented in Wired Women [by Lynn Cherny and Elizabeth Reba Weise. No italics in original] and Nattering on the Net [no italics in original] make important contributions to research on gender, communication, and cyberspace.”34 Spender discusses many pertinent issues that have contributed to debates and arguments not only in Australia, but also around the world. Nattering on the Net has been a part of many university and college courses about digital technology and helped many recognise the limitations of assuming technology is gender-neutral. Her work remains important to this thesis as a way to monitor the changing

34 Burns, op. cit
modalities in which women ‘access’ and use digital technology in the movement from the Internet to the Web.

**Women, Men and Feminism**

Even though I write of ‘men’ and ‘women’ as separate and distinct cultural formations, this thesis problematises the easy knowledges that slot into conventional dualisms. Although binaries encourage restrictive representations of gendered ideologies, they are not as polarised as the binaries dictate. As Patricia Wallace states: “Calling men and women ‘opposites’ has probably biased our thinking about gender roles. The truth is that there are far more similarities than differences, and even when statistical differences are found on some measure the variation within each group is almost always extremely high.”35 For example, these ‘opposites’ result in the positioning of intellectualism, science and technology to masculine discourses. Judy Wajcman, in her article ‘Technology as Masculine Culture,’ states that the “link between technology and masculinity is commonly supposed to be self-evident and in no need of explanation”36 due to the inherence of Cartesian dualisms in Western culture. There are certainly many men who feel awkward and under-confident in using the Web and computers. Other social variables such as class, race, education and age are required to give clarity, definition and depth to binarized ideologies.

With this caveat in mind, this thesis focuses precise attention on the historical and traditional conditions which have created and perpetuated women’s oppression in digital

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spheres. Ziadduin Sardar and Jerome R Ravetz identify this synergy: “The binary coding of cyberspace carries with it another type of encoding: that of gender relations.” The 1s and 0s that underlie digital technology in the form of bytes are known as binary codes. These numerals are also metaphors for the ‘coding’ of gender dualisms threading digital technology - yes equals men, no equals women.

These binaries are a tool of the patriarchy. They subordinate women and the feminine. Patriarchy has several varying definitions. Heidi Hartmann describes the framework as “a set of social relations between men, which have a material base, and which, though hierarchical, establish or create interdependence and solidarity among men that enable them to dominate women.” The ‘material base’ to which Hartmann refers frames and facilitates the discourses of technology and science. By refusing women entrée into these domains throughout history, men have restricted the applicability of education and knowledge, resulting in their continued subjugation. Throughout history, but particularly in the last century, women have challenged this hegemonic oppression and begun mobilising traditional masculine domains such as institutionalised education and work outside the home. Within this thesis, the term ‘patriarchy’ is used to express the dominance of masculine ideologies in order to oppress women and exclude them from certain fields of intellectual importance - such as digital technologies.

Many scholars have identified and attacked the inequalities of the patriarchal system. Most, including Judith Butler, Germaine Greer and Elizabeth Grosz, have utilised feminist theories and methods. I continue this project by applying and tracking the multiple definitions and applications of the term ‘woman’. Many feminists, particularly those using poststructuralist frameworks, have been criticized as producing theories that are complex and inaccessible to those without an academic background. My method of avoiding this critique is to insert the voices of women, those who identify as feminists, as well as those who discuss their concerns with the movement, into this thesis. The opinions of women who contributed to the evidence and research in this thesis provide myriad views of feminism. They come from both academic and non-academic backgrounds and have varying experiences and opinions of digitisation. This diversity is important. Surveys, interviews and questionnaires can be not representative of all women, but a sampling of diverse attitudes and ideas is important.

Between the chapters of this thesis, I have interleaved several interviews. These dialogues provide a ‘voice’ in relation to the topic of the following chapter. For example, I interviewed a newspaper journalist to precede Chapter Four: ‘Moving Beyond the Digital Girl Friday: Women in the Media’. I asked about her views of women’s position in the media and inquired about her own Web experience. These insertions are presented as a guide, interlude and interjection between the topics of each chapter. The majority of discussions are with women. This is a significant feature of my thesis. I aim to provide a space for women to voice their opinions about the Web. I also included an interview with one man before the eighth chapter. As an expert in the Creative Industries, he provides a

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unique perspective when discussing his views of women’s position within the field, and the rationale for their exclusion.

It is also important to state what this thesis is not investigating. While my research is making a positive intervention in women’s use of the World Wide Web, it is also crucial to recognise what is not being addressed. My work is not wholly situated in cyberfeminism. This paradigm is described by Susan Hawthorn and Renate Klein as “a philosophy which acknowledges, firstly, that there are differences in power between women and men specifically in the digital discourse; and secondly, that Cyberfeminists want to change that situation.”41 While recognising the value of this work, I use a wider range of influences and sources. This diversity is necessary, as I am discussing the Web as a technology that is operated by women who are familiar with its functions, as well as those who are not. Focusing upon cyberfeminism in this analysis would not be entirely beneficial or appropriate, as it is a framework that has been designed for and by women who are fluent in how the Web works.

Susan Luckman points out another concern with this discourse: “Cyberfeminist activity is frequently utopian in its outlook; draws heavily on postmodernism and psychoanalysis, and is commonly technologically determinist, uncritically supporting the contention that technology can save the world.”42 I do not agree that cyberfeminism is as ‘uncritical’ as Luckman maintains; cyberfeminism has facilitated the recognition of many inequalities

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operating on the Web. However, her point about it being a method of analysis reliant upon a familiarity of the digital discourse is the reason why I do not base all arguments under this trope.

Similarly, this thesis is not part of Donna Haraway’s cyborg project, and the theories objecting to the masculinisation of technology. Renate Klein points out the flaws in this approach: “The electronic revolution has already created the information-rich and the information-poor, and the rampant individualism inherent in post-modern cyborg-thinking reinforces this trend.” Cyborg theory, similar to cyberfeminism, demands high level literacies in both internet-mediated technology and academic protocols and languages. Many of the women I have interviewed and researched do not currently hold these abilities. Further, as I am interested in proactive intervention in the assumptions which frame technology, I must recognise that cyberfeminism and cyborg theories can, at times, perpetuate many of the problems I am critiquing. I acknowledge the contributions from those who work within these theories and their input in destabilising binary-dependent notions which have excluded women from the technological realm. However, this thesis is more interested in producing empirical challenges to gender dualisms. For

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43 The book *Cyberfeminism: Connectivity, Critique and Creativity* edited by Susan Hawthorne and Renate Klein (North Melbourne, Spinifex Press, 1999) contain many essays about the movement. The authors pinpoint the downfalls as well as many advantages of cyberfeminism.

44 Donna Haraway’s theories attack binary suppositions by creating a new identity of the ‘cyborg’ - a creature that is neither wholly male or female, biological or technological. Susan Luckman writes: “This conceptualisation of cyborg subjectivity as a model for socialist feminist praxis was theorised by Haraway in the now legendary article: ‘A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s.’ In it, Haraway articulates a project which recognises the need for new ways of operating, of relating to others, in a postmodern world where partial subjectivities are the norm rather than the aberration or, in the words of Stimpson who conceptualises a similar project: imagine how players of all genders ‘might juxtapose points of view to lace together new, perpetually provisional feminist cultural treaties.’” [(En)Gendering the Digital Body: Feminism and the Internet”, *Hecate*, October 1999, volume 25, issue 2, p.36]

example, Chapter Four contains references to films and magazines that construct and perpetuate binary divisions. These visual languages naturalise the structures that portray women as incompetent users of technology.

My words and research are aimed at encouraging women to recognise the systematic inequalities of patriarchal domination within digital technologies. I continue the modality of Dale Spender’s *Nattering on the Net*, confirming accessibility and openness through prose and structure. I also update her work with recent research findings and theoretical approaches. In particular, I acknowledge and consider the fear some women hold about digital technologies. This thesis endeavours to expose the thread of patriarchy woven within institutions such as the media, education and the workplace, which are complicit in discouraging women from learning about digital technologies.

**Women and the Construction of Computers and the Web**

Historically, female contributions to the design and construction of both the Internet and the World Wide Web were minimal. The military origins of the Internet signify its overt masculine bias. When Eisenhower supported this technological development in the 1950s and 1960s, it was an era which encouraged restrictive gender attitudes. Following World War II, men were eager to reassert the values of patriarchy in the workplace and the stereotype of the domesticated female was perpetuated strongly throughout the media and in educational environments. Active female involvement in military or political fields
was rare.\textsuperscript{46} Names such as Donald Davies, Bob Taylor and J.C.R Licklider are codified as the Internet’s fathers.

The Web’s construction was also male dominated, with men such as Tim Berners-Lee and Robert Cailliau given credit for its development.\textsuperscript{47} However, being a relatively recent creation (developing in the 1980s when females were visible and accepted in fields of science), there were more women involved. The first woman to have direct contact was at an early stage of its evolution. Nicola Pellow was responsible for creating the code to move the Web out of Berners-Lee’s NeXT (a machine similar to a computer) and into the more commonly used computers of the time. Gilles and Cailliau described Pellow as “an unlikely revolutionary”.\textsuperscript{48} Louise Addis was another woman to have some involvement. With Berners-Lee, she encouraged Paul Kunz to finish work on the first Web server, also being involved in setting up an informal group of volunteers to support the Web at the Stanford Linear Acceleration Centre:

‘We called ourselves the World Wide Web Wizards,’ she recalls, ‘much to the consternation of some who thought that was a little too informal.’ Chief sorceress was Addis herself, assisted initially by Mark Barnett, George Crane, Joan Winters, Bebo White and Tony Johnson.\textsuperscript{49}

While Addis referred to herself as a ‘Wizard’ - not a witch - she was re-gendered by the two ‘above the title’ male Web developers as a ‘sorceress’. While there is a desire to locate her work in feminine sorcery, it is clear that Addis and others were more able to participate in the Web’s development than preceding generations (albeit, still in a masculine frame).

\textsuperscript{46} As opposed to their ‘passive’ presence. For example: Jacqueline Kennedy, who was seen but never heard.
\textsuperscript{48} \textit{Ibid.}, p. 203
\textsuperscript{49} \textit{Ibid.}, p. 225
In the initial stages of many digital inventions, females were present. Women such as Ada Lovelace and Grace Hopper were among the early pioneers who helped develop the computer system. Many were also involved in early computer programming, which was then considered monotonous and irrelevant, and therefore ‘appropriate’ for women to undertake. Once the potential of programming was recognised, it was rapidly dominated by men. As Dale Spender identifies:

> When women were the ones with the skills, it was ‘women’s work’ and what they were doing was regarded as mundane, mindless, and fairly unimportant. But these days it is men who monopolise the machine, and sitting at a keyboard has become ‘men’s work’; what they are doing is now leading-edge and supremely powerful and significant.  

Data entry was devalued in comparison to programming. Women’s work and skill with keyboards and typing was ultimately demeaned, as computing became significant in the development of patriarchal and capitalist institutions. As a result, the participation of women in computing and Internet-related fields remained low, and women’s role in this history un(der)written.

There are many conflictual accounts of women’s Web use during the 1990s. It was estimated that in 1995 only ten to thirty percent of Web users were women. This estimation is difficult to confirm due to an absence of research into women’s use of digital technologies. With the recent growth in popularity of the Internet in western popular culture, women’s participation has eventually increased and so has research interest. In 1999, women represented 48 percent of users, and by August 2000, it was

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50 Spender, *op. cit.* p. 223.  
officially announced in the United States of America that for the first time, women had exceeded men in Web usage - to 51 percent. Throughout these changes, women continue to be portrayed as ‘users’ of the Web. They are not configured as having any influence in its construction, growth or maintenance.

Methodologies of Research

Having addressed historical and theoretical frameworks of note, it is important to present and justify the strategies used in conducting interviews and locating published research. Spender remarked in *Nattering on the Net* that: “There is not much point in looking to educational research to find out what is happening with girls and computers, or to obtain an account of the growing gender gap. So little work has been done in the area that there is a resounding silence in the literature and databanks.” Although this dearth of evidence may have been applicable in the 1990s, in recent years the growth of the Internet has also increased the scale and scope of research on this topic. When I began writing in 2001, there was not a great deal of information available - which is one of the reasons why there is a concentration upon empirical research in this thesis. The great challenge and joy of this research project has been that most weeks, new data, surveys and monographs emerged that sharpened the parameters of my work.

Research by Interview

Many of the chapters in this dissertation contain interviews conducted both face-to-face and by email. I pursued my research in this way for several reasons. One goal was to

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52 Chapter Two - ‘Overview of the Web Population’ - discusses the methodology in preparing and distributing a survey.
53 Spender *op. cit.*, p. 176.
incorporate the voices and opinions of diverse groups in my work in order to give it a ‘real life’ resonance. Another aim was to build alternative sources alongside the published research in the field. For example, in 2001 when investigating theories used in Chapter Nine I noticed there was very little work published from the students’ and teachers’ perspectives about their perceptions of online education. In order to gain their opinions, I realised that I should go to the source itself; interviewing several students and teachers in order to gain their opinions of digital pedagogy. I analysed their responses by comparing their views with citations from scholars published in peer-reviewed journals.

Sherry Turkle also uses an empirical mode of research in her book *Life on the Screen*. Throughout the text, she frequently refers to interviews, anecdotes and even conversations as evidence for her theories. She describes her “work on cyberspace”\textsuperscript{54} to have a “distinctly real-life bias”\textsuperscript{55} - an ambition I also desire to achieve in this research. This imperative represents what Turkle calls “the new culture of computing, humanistic as well as technical.”\textsuperscript{56} This culture contributes to a mode of writing that is more accessible and understandable to all women. For example, in pondering how people interact with computers, she discusses the experience of one of her students: “Consider Lisa, an eighteen-year-old freshman in my Harvard programming course…”\textsuperscript{57} As well as anaecdotal analysis, Turkle also considers virtual research. She states that: “Virtual reality poses a new methodological challenge for the researcher: what to make of online interviews and, indeed, whether and how to use them.”\textsuperscript{58} The interviews Turkle

\textsuperscript{54} Ibid., p. 324.  
\textsuperscript{55} Ibid.  
\textsuperscript{56} Ibid., p. 325.  
\textsuperscript{57} Ibid., p. 53.  
conducted with computer users are similar in purpose and structure to those conducted in this thesis.

The interviewing process mobilised either conventional oral techniques or deployed email questions. The latter method has many advantages. Nicholas Negroponte advocates this technique: “E-mail interviews are both less intrusive and allow for more reflection. I am convinced that e-interviews will become a terrific medium and a standard tool for a large amount of journalism around the world - if only reporters can learn some digital decorum.” The electronic mail form of interviewing, as Negroponte identifies, allows space for the recipient to carefully formulate answers that may not have been available in a verbal interview. The answers are better structured, appearing as complete sentences rather than speech (which often appears disjointed in a textual medium) and read more clearly when cited in an article.

The technique of email interviewing is a variation upon the methodology of oral history research. There has been little theoretical investigation of email interviews, but many methodologies used in assembling oral histories are still applicable. Even oral interviews have been demeaned or marginalised in research methodologies. As Robert Perks found, “[u]ntil relatively recently tape-recorded interviews, speeches, events and radio broadcasts have rarely found the prominence they deserve.” One reason for this marginalisation of oral testimony may be that the medium is often used to record the histories of minority groups, such as senior citizens or immigrants. The recording of oral history with a digital inflection is particularly relevant to a thesis concentrating upon the

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narratives of women - a group that is traditionally deemed irrelevant in the digital discourse.

Gathering information from emails is beneficial in many ways. Email provides access to locations that previously may have been quite difficult, particularly from Australia. For example, I was able to contact Macromedia in the United States and ask whether they have any demographic data about the sales of their website design software. The response, as shown below, was received within a couple of days:

Sender : ckilpin@central.murdoch.edu.au
Sent to : Webmaster@macromedia.com
Subject: use of Web site design software
Date : 03/26/01 11:13

Hi,

I am a PhD student writing a thesis about women's participation in and on the WWW.

I was wondering if Macromedia has any figures showing how many men, as compared to women, purchase programs such as Dreamweaver and Flash.

Thank you,
Carrie Kilpin.

To: ckilpin@central.murdoch.edu.au
From: servicereply@macromedia.com
Subject: RE: use of Web site design software
Date: Wed, 28 Mar 2001 12:54:44 -0800

Hello Carrie,
Thank you for contacting us. Unfortunately, we do not have this information documented.

If you have any other questions, please feel free to contact us again.

Sincerely,
Taryn Mandrell
Macromedia Customer Service

The email address for this particular correspondence was obtained simply by following the ‘Contact’ links provided on the Macromedia website. After this reply, I was also put in touch with an Australian employee of Macromedia in their research department. She offered to assist me if I needed any further information. The instantaneous communication provided by electronic mail was in this case extremely beneficial. My request for information was dealt with on a global scale involving very little cost and time. This is particularly pertinent considering that I conducted most of my research from Perth, Western Australia - the most isolated city in the world.

In my email interviews, the questions were formulated in a highly structured manner to elicit a response. They were designed to address particular aspects of the chapter. The questions were also intentionally open-ended to allow for a detailed response. The language I used, such as “How do you think education has changed since the introduction of the Web to university course curricula?” assumed that the respondent already had a bank of knowledge from which to interpret the question. The responses to my email interviews were mostly well-constructed and grammatically correct - indicative of higher levels of digital and textual literacies. The interviewees were also quick at replying to the request I made for interviews and their answers displayed evidence that they had spent time pondering the questions.

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However there are also problems in relying on email communication. When preparing research for the ninth chapter, I contacted a high-profile feminist scholar about her views about women and the Web. She is based at a university on the east coast of Australia and has written many texts about education and the Internet’s impact on women. I thought she would provide a unique perspective for the writing of the chapter. The results of my request were disappointing. They developed in this fashion:

From: “Carrie Kilpin” <ckilpin@central.Murdoch.edu.au>
To: *****
Sent: Wednesday, October 10, 2001 3:04PM
Subject: Email Message from your Web Page

Dear *****,

I was wondering if you would have the time to help with a PhD project I am working on. My thesis concerns women and their use of the World Wide Web. I am at Murdoch University in Perth, Western Australia.

I am currently writing a chapter about women who have gained success in varying fields connected to the Internet. I have so far interviewed women in Telstra and Macromedia Software who have achieved a high position in their field of work.

I would very much like to also ask you several questions. This would be via email.

Please let me know if you could help.

Regards,
Carrie Kilpin.

From: *****
To: “Carrie Kilpin” <ckilpin@central.murdoch.edu.au>
Sent: Wednesday, October 10, 2001 3:05 PM
Subject: Re: Email Message from your Web Page

DELIGHTED TO ANSWER ANY QUESTIONS
PHONE MIGHT BE BETTER
#### ### ### [mobile phone number deleted]
*****

From: “Carrie Kilpin” <ckilpin@central.murdoch.edu.au>
To: *****
Sent: Sunday, October 14, 2001 8:51PM
Subject: Interview for PhD Research

Hi *****,

Thanks for your reply.
I was hoping that I could interview you via email as there are only 10 questions and email is a fast and efficient way to both send the questions and create replies. I don't have easy access to the facilities that would allow me to record a phone conversation. However, if you would prefer it to be by telephone, I will certainly try to arrange this.

Kind regards,
Carrie.

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From: *****
To: “Carrie Kilpin” <kilpin@central.murdoch.edu.au>
Sent: Monday, October 15, 2001 6:26 AM
Subject: Re: Interview for PhD Research

>im just such a slow an dlusy typist

(prrof aboved)
send questiojs and I will see what i can do
*****

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From: “Carrie Kilpin” <kilpin@central.murdoch.edu.au>
To: "*****
Sent: Thursday, October 18, 2001 11:16 AM
Subject: Interview Questions

Hi *****,

Thank you very much for your willingness to attempt these questions. Please let me know if you have any worries.

Carrie.62

[n.b Questions attached.]

The correspondence in this email exchange failed, as this scholar never replied to the interview questions. It is important to note that of all respondents to my email interview requests - approximately thirty women - she was the only one who did not respond. This particular situation provides an example of the disadvantage of email interviews. Not everyone is comfortable communicating through a text-based digital medium.

I also conducted several oral interviews. For example, in the ninth chapter I spoke to three high school students. Although this age group is probably the most competent at

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using the medium, they are also less articulate in expressing themselves through a textual medium. By interviewing the school students in an informal, everyday situation and tape recording their responses, I could ask a question and follow their answers with an explanation if they were confused. I was also able to verbally encourage more in-depth answers, beginning with simple inquiries, including “Are you good at using the Internet?” and “What’s your favourite subject at school?” before moving into more complex questions, such as “Do you think that being a girl disadvantages you in everyday life?” As these questions were relatively simple, they were mostly close-ended and I encouraged further information by asking ‘why?’ after their initial responses. The level of language was not as advanced as the questions given to the older women. For example, rather than ask “Do you think the Internet will benefit girls in future educational teaching methods?” I reworded it to read “Do you think girls will be better off at school in the future because of the Internet?” These changes were made not because I assumed the girls were unable to answer the questions, but rather to make them appear more easily accessible, and thus assist in eliciting the best possible answers. In this situation, the oral interview was the appropriate mechanism through which to elicit evidence.

Print Sources

An important consideration of methodology and evidence that also must be addressed is the origin of my research. Most of the citations and statistics in this dissertation are drawn from sources in the United States, Australia or the United Kingdom. The difference between these countries in terms of Web-use is significant. There are more Americans online than British or Australians. As a result, the Web is constructed with a largely U.S. bias in terms of content, language and information. Susan Hawthorne also recognises this
dominance: “As a sometime Internet surfer, most of the Web sites which come up when I put in a search, are located in the US. Most of what we have come to see as digital culture is American in origin, even when it concerns other cultures and countries.”

Most online news services, such as Wired News and Businessweek Online are U.S. based sources of Web information. When I draw upon the articles they produce, I am accessing data that is written from an American perspective. However, as a medium that is accessible throughout the world - although mostly to western countries - female use of the Web should not be considered in the context of only one country. Mark Deuze wrote an article specifically investigating online journalism. He supports the premise that research on any topic concerning the Internet should be presented in a multi-national manner:

Although online journalism is still very young, research into the profession should be guided by the same notion that makes the Net a mass medium: its global nature. Evaluation of results from a single country makes more sense when compared with findings from other countries where the same research methodology was used.

Although the majority of online news sources are of U.S. origin, I do not rely solely upon the information they present. My writing seeks not only to give a voice to women, but also to an Australian point of view. Sources of research from Australian and British publications, although fewer in number than U.S. productions, are considered with as much depth.

Many of the references in this thesis are from refereed books and journals. However, they did not contain all the information I needed to complete this study. Up-to-date statistics


about Web use, for example, are much more accurate from online news services. In this situation, extracting data from an Internet based information source, such as *Wired News*, is more relevant. Using Internet sources as research is contentious in the academy. Beth Stafford presented an analysis of using the Internet for academic research and found that:

> Academic research involves three steps: finding relevant information, assessing the quality of that information, then using appropriate information ‘either to try to conclude something, to uncover something, to prove something, or to argue something’. The Internet is useful for the first step, somewhat useful for the second, and not at all useful for the third.65

I agree with Stafford’s maxim. Her interpretation provides a base of how information gleaned from the Web is treated in this thesis. When I do use Internet sources such as *Businessweek Online* and *Wired News*, I am aware that they derive their information from well-known and established data-collection agencies such as Neilsen/NetRatings. Both these online publications are also associated with print-based magazines, which further enhance their credibility. As the Web is often portrayed as containing irrelevant or useless information (as noted by Miller: “the truth is that much of what is on the Web is plain junk - not current, objective or trustworthy”66), I have made sure that the references of this thesis contain sources that are reliable and respected within the academic realm.

The best scholarship, particularly for a PhD, prises open a gap, recognises an absence or discovers a silence. Dale Spender’s *Nattering on the Net* opens out a field. I focus on parts of this story in the context of women and the World Wide Web. I ask how digital politics, grammar and language are used, deployed and rewritten by women. In doing so, I am providing a space for women to recognise and criticise sites of oppression in digital

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technologies. Spender provides a base which identifies many of these unfair suppositions limiting women in using the Web to their full advantage. I work from this foundation and add my own interpretation of the restraints women face not only in Web-use, but also in the construction and design of the Web.
A Housewife

This interviewee is a woman in her fifties who has been a housewife for most of her life. She was introduced to computers by her son who studied computer science at university. He has always provided a computer for her use. Her husband has little interest in the medium. Her use of the Web is recreational. She does not rely on the Internet as source of important information; it is a convenient method for communicating via email and for looking up advice of an entertaining or instructional matter.1

Do you remember when you first heard about the Internet?
I first heard about the internet when my son was studying it at uni. I knew that it was the big thing back then and he was very interested in it. He was going to be working on it and I had absolutely no idea what it was.

What level of expertise do you have with the Web?
I use the internet about once week. My level of expertise is not very high at all. It takes me ages to find what I want and I seem to find a lot of rubbish. If I ever want anything worthwhile, I’m not sure of the best way of getting it.

What activities, sites or topics do you engage in during your periods of Web usage?
The last thing I used the Web for was chilli sauce. So I put in ‘chilli sauce’ and that was successful because I got lots of things that I wanted. The time before that, I was looking up travel and accommodation. What I found was far too broad. I eventually got onto that Travel Britain site which was pretty good because I’ve had brochures from them. The site was good, but it didn’t make me confident enough to make a booking on it.

Does your use of the internet differ very much from your husband’s use of the internet?
He doesn’t use the internet hardly at all. At work he really has no need to use it. He never bothers to use it at home. I think he’s amazed that I can do what I can, whereas my son thinks, oh no, you’ve got to be able to do better than this.

The only time I’ve used it for anything definite is for airfares to Sydney. I looked up Virgin Blue and Qantas and ended up with probably second best to what I would have hoped - but good enough. Then my son comes along a bit later and says ‘oh don’t look up the airline sites, look up travel sites like Flight Centre and a few others. They get the best deals.’

I don’t think my husband would have even known how to start that. He might have. I mean he does, now. He’s just not really that interested.

1 ‘Chapter Two Participant’. Interviewed by Carrie Kilpin in Perth, Western Australia. Oral interview conducted 9/2/04.
Why did you first decide to start using the Internet?
I started using the internet probably because the computer was just there [in the house]. It was something different to do. I did a basic computer course. They just did a little bit about the internet - that was another course. I thought I probably don’t need to do another course. But I’d still like to. One of these days - just to find out how to use it more efficiently.

I did the course because I figured that having my husband or son show me was a waste of time because I couldn’t even see the arrow, let alone what they were clicking on to. They were doing it too quickly. People who can use it, do it too quickly for you. They click on something, but they don’t tell you why they’re doing it, or what’s going to happen. When you go to one of these courses, they start off knowing that you’re really stupid and that you know nothing, and they give you a logical sequence to follow. That’s what I like.

How long did it take for you to feel comfortable when using the computer?
I became comfortable using the computer during the course, which was ten weeks, but I suppose it wouldn’t have taken the whole ten weeks. They did the really basic stuff like the My Computer site and how to change the colours and how to do scrolly things. The kind of things that I’ll never use again. I guess if you’ve had a bit of insight into that, you know why things happen. If my son says ‘Go into My Computer’ I know how to change things.

I lost all the little icons once - the ones on the bottom. Eventually they reappeared along the side! I couldn’t work it out, couldn’t get them back. That was when my son was in England. He told me on the phone [what to do] and I got them back.

How much time do you spend on the Web in one go?
I spend probably a couple of hours on the Web, until I get really sick of what I’m looking up. And then I think, oh I’ve had enough of this! A couple of hours just goes really quickly.

Who owns the computers that you use?
All the computers are my son’s. He’s bought a new one and upgraded it. When he leaves, I presume we’ll get another new one.

When you were at school were you encouraged to learn maths and science to the same degree as the male students?
I went to an all-girls school. In an all-girls school they tend to encourage girls to learn maths and science. My father always thought that you should do whatever you wanted to do, girl or boy. But being the eldest of six children, it was get a job as soon as you were able. [At school] I did a sort of better maths and then I did commercial - book keeping
and typing and that kind of thing. I was certainly better at book keeping than typing. I wasn’t very good at shorthand.

You couldn’t do commercial and science - only one or the other. I don’t have any regrets about that because I don’t see myself as a scientist! When I was at school, back then, there was probably only twenty odd in our class. Maybe about 25 per cent would have done science. Not a lot.

**Why do you think there is such a difference between men and women in computer science classes?**

I don’t know why. Men don’t seem to go into the written arts. Not as many men would do English Lit at school. They tend to go to science. You’ve probably got equal ability amongst men and women brain-wise, it’s just that women tend to use their brains in different areas to men.

**Do you think life with the Web is better than life without the Web?**

The more you get to use the internet, the better it is. The difference now, is that when you want to find out something, it would be the first place to try - even if it wasn’t successful. Whereas before I might have looked up books or gone to a library.

The internet is great for email. That’s really why I bothered to use it in the first place. I knew I always would, but as soon as my son went away [to England], that was when I did the course. Instead of writing a letter - which can be a tedious thing to do - you can write a little note and get an answer back. When all three [of my children] were away, it was really useful.
Chapter Two

Sampling a Digital Census: Overview of the Web Population

Hold onto your suspenders, gents. Women rule the Web. The 61 million women now online make up 51% of US Internet users, according to Jupiter Matrix Inc. What’s more, the number of female surfers is growing 35% yearly, three times the rate of men.¹

Roger O. Crockett

When the first draft of this chapter was written in early 2001, I intended to investigate the reasons for women’s lack of use of the World Wide Web. However, upon an initial survey of the field, I discovered that since August 2000, in the United States of America, women had constituted at least 51 percent of online participants. In July 2003, this proportion was maintained.² Statistics in affluent European countries, such as Sweden and the United Kingdom, also showed a significant proportion of women using the Web.³ As a result, my intentions turned to investigating what these women are doing on the Web. I question why women choose to visit certain websites and explore the implications of gendered behaviour online. Crockett’s declaration that ‘Women rule the Web’ is not

² Jemima Kiss, “Fairer sex lags behind online”, dotJournalism, 11/7/03, found at http://www.journalism.co.uk/news/story681.html, Accessed 20/9/03.
³ “The female audience is proportionally the largest in countries where Internet usage is most well established, with Sweden at 46 percent, the UK at 42 percent, and Germany and France at 39 percent.” Ibid.
accurate. Although there may be 2% more American females on the Web than American men, overall the medium remains a masculine domain.

In Nattering on the Net: Women, Power and Cyberspace, Spender does not delve into the types of sites women prefer to visit on the Web. This is a topic which is a significant indication as to whether women’s online behaviour is replicating or challenging traditional feminine ideologies, frameworks and discourses. She also does not discuss women as constructors of the Web. Spender views women more in terms of users than developers of the digital medium. I question this emphasis.

The first part of this chapter, titled Beginner’s Level, examines women’s knowledge of computers and the Web. I discuss comments from my survey in terms of the varying degrees of competency women feel with computers. This section also deals with general perceptions of the Web. The second part of this chapter is the Intermediate Level which extrapolates the activities of those familiar with the Web. This involves recognising the disparity between the types of websites men and women visit and how much time they spend on the Web. The final section is the Advanced Level, which is concerned with those who are more skilled with using and building the Web. This includes people who communicate regularly through applications of the Web (such as email), individuals who participate in chat rooms, and people who have the skills to design and maintain websites. The purpose of this section is to provide an insight into whether higher-level interactions with the Web separate males and females in terms of ability and literacy.
In preparation for this chapter, I conducted a survey in June and July of 2001. In retrospect, I was unhappy with the sample I surveyed. Of the two hundred people to whom I distributed the questionnaire, there was an overwhelming bias towards female university students aged between twenty and twenty-four. The demographics of the participants are displayed below:

<table>
<thead>
<tr>
<th>SEX</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30</td>
</tr>
<tr>
<td>Female</td>
<td>70</td>
</tr>
</tbody>
</table>

Results showed that 65% of participants were female and 34% male. One percent did not specify their gender.

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4 The survey I distributed (Survey of Internet Users by Carrie Kilpin, distributed April and July 2001 in Perth, Western Australia) can be viewed in Appendix I.
The largest age group constituted those in the 20-24 bracket (32%) while the smallest age group who participated were those aged under 15, comprising 1.5% of total respondents.

The third question asked participants for their main occupation. The largest replied as university students: 25.5%, while the smallest response was from both the unemployed
and homemakers, at 1%. The bias in these demographics skewed my results. Although Internet surveys can only ever be representative of a sample of all online users the distortion in these statistics are too great to be considered as reliable data.

Although I decided to discard the percentage results of this survey, the comments made by some of the participants were too interesting to ignore. As such, I replaced the statistical analysis with an examination of the participant’s testimony. In the composition of the survey, I decided to combine both qualitative and quantitative methodologies; in addition to the multiple choice questions I also left space for the participants to write down their thoughts about the subject. As Barry Brown and Abigail Sellen found, surveys utilising only one methodology “tend to suffer ... from lack of a connection with the thoughts and perspectives of users (in the case of collecting online usage data).” The individual opinions and thoughts of Web users are not given any space in purely quantitative surveys. Brown and Sellen also identify that qualitative surveying is a technique more “powerful in terms of understanding than generalisation.” The space for comments in the survey adds a greater depth of understanding in my investigation as to how the participants chose to answer a certain question. As such, the focus of this chapter

5 Gaining exact figures about the activities of all Web consumers is impossible. As Rita Tehan identifies: “Since there is no central registry of all Internet users, completing a census or attempting to contact every user of the Internet is neither practical nor financially feasible.” [Rita Tehan, “RL30435: Internet and E-Commerce Statistics: What They Mean and Where to Find Them on the Web”, Congressional Research Service Issue Brief, last updated 24/10/00, found at: http://www.ncseonline.org/NLE/CRSreports/Science/st-36.cfm?&CFID=12911197&CFTOKEN=86613840, Accessed 5/3/04.]

6 Mandy Balla from the E-processes department at Telstra conducted a pilot study of this questionnaire in April 2001. As a result of the advice provided by Balla, several questions were revised. For example, rather than the first question reading ‘Do you feel comfortable using a computer’, it was advised that the word ‘comfortable’ was changed to ‘competent’ to more accurately reflect the user’s abilities with computer-use.


8 Ibid.
has turned towards analysing the comments made by the survey participants.

Investigating this testimony illuminates how women are viewed in relation to the Web by providing insight into the thoughts of Web users.

The questions in the survey were based on what I considered to be significant issues in relation to women’s relationship with the Web. For example, I asked the participants for their opinion as to whether men or women dominate the online environment. The responses demonstrate that most people believe the Web is male-dominated. I also wished to explore if the Web remains as hostile to women as when it was popularised in the mid-1990s. Unsettlingly, the comments I received from several male participants displayed prejudice against women Web users. I also found that many of the female participants expressed their negative experiences of the Web (such as a woman who had been the target of unwanted attention in chat rooms). The majority of people I surveyed view the Web as a patriarchal construction perpetuating traditional feminine practices and reinforces masculine dominance in fields of technology.

I have kept the statistics from published sources (such as Neilson/NetRatings) as current as possible, knowing that they fluctuate within months. However, the theories behind the figures are representative of contemporary discussions within the academy and are therefore valid for the purpose of analysing the gender inconsistencies of Web use. For example, the reasons why women avoid technologies are not derived from - or caused by - statistics. There are patterns which are embedded in the historical development of digital and analogue technologies.
Ultimately, the participation of women online is crucial if they are not to be excluded or decentred from technological changes. As more industries, professions and knowledge systems mobilise digital platforms, women must learn and be encouraged to maintain parity with men in this field if the progressions of feminism are not to falter. As Spender identifies:

More and more of the world’s business - along with education, entertainment and consumerism - will be conducted online. And women will have to become part of cyber-society. This is why women have to insist on the right to make up at least half the rules in their own interest. It is why they have to demand the right to a more hospitable and respectable environment.9

I aim to track women’s progress and identify the barriers they face. The figure showing that women are now 51 percent of Web users in the USA is a promising sign of their future on the Web. However, whether they are using the Web and its capabilities to its full potential is a concern I address.

**Beginner’s Level**

A computer is a necessity for using the Web. One factor that influences many women’s participation on the Web is their feelings of incompetence with computers. For the pre-Baby Boomer generation, the lack of access to computers and a discrediting of women in science-based fields during their youth provide an explanation. Cheris Kramarae and H. Jeanie Taylor identify the generational awkwardness felt by women when confronted with computers: “women, especially older women, are often trained to think that they will break machinery if they try to use it.”10 The history of masculine-dominated

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computing transforms the technology into a daunting object for women raised under restrictive patriarchal conditions.

The attitude that women are not competent computer-operators is also perpetuated in the workplace. Traditionally, women are relegated to positions of clerical work which involve literacy in repetitive ‘menial’ tasks such as typing and note taking - a subservient position to their male superiors. Their access to digital technology actualises this social division. A participant in the survey noted that “in my experience, men occupy positions within institutions and businesses that rely heavily on (newer) technologies - laptops, mobiles, email, Powerpoint. Females are lumbered with archaic landlines and PCs at the front desk of organization.”¹¹ These archaic landlines are often the only access to digital technology that women are allocated. This is a result of their secondary position within cultural and economic systems which privilege males. For example, a participant in the survey discussed this digital divide in her workplace. She works in a privately owned book store. As a small business, the owners could not afford to equip every worker with a new computer. In her office on the shopfloor, the participant uses a computer is that ten years old to locate books, assist customer queries, balance accounts, access the Web and catalogue books. It takes almost five minutes to start up, lacks a functioning floppy disk or CD-ROM drive¹² and has keys that often get jammed. Upstairs, where the (male) owner of the shop works, the computer is less than a year old. He uses it only as half as often as the woman working on the shopfloor - mainly to send emails and research information about books on the Web. It has all the components that one would expect to

¹¹ Participant 111. Survey of Internet Users distributed by Carrie Kilpin, April and July 2001 in Perth, Western Australia.
¹² Her documents are accessed through a ‘Network Neighbourhood’ connection from another computer.
find on a new computer - including a large screen, an ergonomic keyboard, a modem, a
colour printer and several PS2 ports for the attachment of peripherals. The woman on the
shopfloor uses her computer for greater amounts of time and for more complex activities,
but is relegated to outdated and archaic technology. The use of computers for little more
than clerical labour is generally assumed to be the extent of most women’s abilities with
this technology, even if their competency is greater than their (male) superiors.

In *Nattering on the Net*, Spender is staunch in her view that competency with computers
is mandatory for anyone accessing the information superhighway.¹³ In her analysis,
Spender describes computers as a “medium [which] makes a difference to the
message.”¹⁴ From this perspective, the remark about women being lumbered with
‘archaic landlines’ necessitates further interpretation of women and technology. Based on
the capabilities of the computers in the bookshop, the ‘message’ demonstrates that
women’s communication is slow, tedious and outdated, while men’s correspondence is
modern, fresh and fast.

Despite the discouragement women receive in learning about computers, no research
exists to prove males are ‘naturally’ better in this field.¹⁵ In fact, women were present at
the initial construction of computers. Gail E. Hawisher and Cynthia L. Selfe discuss this
frequently ignored history: “The gender disparity in computing exists, of course, not only
on the Internet - it runs through the whole of the computer culture despite the fact some
of its early programming pioneers were identified with names such as Grace Hooper and

¹⁴  Spender, *op. cit.*, p. 87
¹⁵  As discussed by Val Henson in “How to Encourage Women in Linux”, *Women in Action*, April 2003,
    Issue 1. Full Text.
Ada Lovelace.”\textsuperscript{16} Despite women’s abilities in using computers, the influence of patriarchal attitudes restrain them from gaining credibility equal to their male counterparts.

The level of competency women feel in using computers also affects their numbers in using the Internet. The proportion of female internet users in the United States is not replicated in the rest of the world. In Australia, women are very close to equalling men in Web-use, constituting 48 percent of Web-users.\textsuperscript{17} In Europe however, there are fewer women online. Swedish women make up 46%, in the United Kingdom women comprise 42% of Internet users, and in Germany and in France it is 39%.\textsuperscript{18} Women’s use of the Internet in Italy and Spain dropped by 31 and 29 percent respectively in 2002.\textsuperscript{19} Furthermore, media articles have stated that: “Though the number of women online is increasing in Europe, researchers predict that the internet will not be used equally by men and women until 2010.”\textsuperscript{20} In the next six years, the younger computer-literate generations will become a much greater force on the Web. Within this group, women will be more active.

Searching for statistics of gender use of the Internet in countries like Iran or Saudi Arabia has proven to be more difficult. An article from The Economist states that: “unofficial

\textsuperscript{19} \textit{Ibid}.
\textsuperscript{20} Kiss, \textit{op. cit} Full text.
statistics suggest that two-thirds of Internet users in Saudi Arabia are women.”21 *The Economist* gives several reasons for this high percentage, claiming that women use the Web more than men for business and informational purposes. The anonymity of the Web allows these women to conduct business much easier than in person. Restrictions upon their gender, such as not being able to drive a car, prevent women from performing tasks or gaining information as easily as their male counterparts. In this case, women can use the Web to evade the patriarchal ideologies dominating Saudi Arabia’s cultural and political customs.

Despite the apparent accuracy of the figures I have cited from these published sources, many Web-use statistics are open to interpretation. Rob O’Neill states in *Computerworld New Zealand*: “The number of women online has long been wildly underestimated, since many women log on to online services through a household account (which is often in their husband's name) or a workplace one.”22 This discrepancy is an example of how women are buried beneath a patriarchal veneer controlling the computer realm.23 Spender does not mention statistics often in *Nattering on the Net*: most of her evidence is anecdotal. However, in contemplating the online gender ratio, she cites James Pitkow and Mimi Recker from a 1994 text: “the proportion of women online could not be much more

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23 See Chapter Four - and the discussion concerning representations of women in newspaper articles - for further examples of how statistics are manipulated to maintain patriarchal figures of dominance.
than 5 per cent.”²⁴ In the subsequent decade, it is clear that this percentage was inaccurate.

In the survey I conducted, the majority of participants believed that men were the dominant users of the Web. Several powerful comments captured reasons for this answer. One male identified the demarcations made between boys and girls in education and schooling as a reason: “Women are underrepresented in computer lessons at school. I would imagine that from an early age girls are encouraged into more traditionally feminine pursuits and miss out on what should be an important part of education.”²⁵ Spender addressed this socialised distinction in Nattering on the Net: “In computerised classrooms, it is not uncommon to see boys of all ages actively seizing the machines, and physically pushing the girls away. This violence can be accompanied by taunts about how girls can’t ‘do’ computers, and how screens and controls are a boys’ game.”²⁶ These boys attitudes are the result of a society that privileges masculine confidence in computer and technological fields. Their dominance online is an acknowledged outcome of this ideology.

The Web’s history plays a significant part in the popular notion of its masculine dominance. A female respondent to the survey theorised that: “originally it was military, so that had an impact. Then the academy starts using it, another male dominated institution. Then there is the porn thing.”²⁷ The military, education and pornography are assumed and framed as masculine-controlled institutions. These three highly visible

²⁴ Spender, op. cit. p. 195.
²⁵ Participant 32, Survey of Internet Users, op cit.
²⁶ Spender, op. cit, p 177
²⁷ Participant 59, Survey of Internet Users, op cit.
institutions and genres are inherent in the Web’s construction and therefore liable to influence perceptions regarding its use. As Nina Wakefield identifies: “Margie Wiley has argued that the electronic networks which we know as the internet have inherited a problematic relationship with gender from their roots within the military-industrial complex and in academic institutions.” The problematic relationship between women and these masculine-controlled fields is one of the most significant influences in the perception that the Internet and the Web is male territory.

In discussing power and the Web, there were also several participants who believed that women were the most common users. A distinct proportion of these were male. However, rather than applauding women’s efforts in learning about the technology and challenging the patriarchal space, the comments made by these men revealed sexist generalisations. For example one male participant wrote that women were the dominant users as they were likely to be “lonely housewives.” Another male, also influenced by this conservative ideology, wrote “They [women] get bored very quickly at work.” These comments are a reproduction of patriarchal values maintaining that men are superior in intellectual pursuits to women. They represent an outdated (and untrue) ideology of femininity in which women remain domesticated and unintelligent, while men are intellectually superior. Also perpetuating the polemic distinctions between men and women, a male executive answered that women would use the Web more than men because of “More entertainment and shopping access.” The lack of credibility allocated

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29 Ibid.
30 Ibid.
31 Ibid.
to women is represented in this remark which exemplifies some of the more
‘insubstantial’ activities offered by the Web. As evident in these attitudes, insular values
still exist to denigrate women’s relationship to the Web. Conventional attitudes are
emphasised and reproduced. The Web remains a masculine domain where women are
invited to partake only in traditionally ‘feminine’ lightweight pursuits.

Despite these negative perceptions, a survey made by Women.com in 1999 found that
“70 percent of the women polled cannot imagine life without the Internet.”32 Although
this indicates that many women find the Web important to everyday practices, this does
not necessarily mean it is a space free of patriarchal domination. Rather it shows that
women are able to negotiate and translate the differences to find the Web a useful
augmentation to leisure and workplace practices. It also proves that assumptions about
men having a greater involvement in the Web are not accurate. Women are challenging
patriarchal assumptions - not accepting the Web’s historical narrative as an exclusively
masculine space - but taking a larger role in creating feminine space on the Web.

**Intermediate Level**

The second part of this chapter investigates the *activities* of Web users and if they diverge
on a basis of gender. One mode of digital tracking is to evaluate the amount of time each
gender spends using the Web. The masculine construction and historical domination of
this technology formed the basis of my own supposition that men would continue to
override women in the amount of time spent using the medium. Dense research around

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32 Author Unknown, “Women Leaders Online: Women Can’t Imagine Life Without the Web” *Nua
this hypothesis in the past few years has confirmed that my assumptions were correct. A 2003 Jupiter MMXI survey found that “In February this year women spent seven hours on the Internet compared to 10 hours for men, who mainly browse, read content and download applications.” This study is similar in result to research that was conducted in 2001. Nielsen/NetRatings also found that “men spend 16% more time online every month than women.” Although as many women as men use the Web, the duration of their usage is different. In this section, I consider the different behaviours of men and women on the Internet, asking how this time is filled.

Spender does not discuss temporal disparity in Nattering on the Net, but in the survey I conducted, the majority of contributors thought men spent a larger amount of time online. A female participant wrote that she thought this was because “[m]en are more willing to embrace technology.” Her assumption is based upon the patriarchal narratives of technological evolution. Women have traditionally been excluded from participation and contribution to ‘serious’ activities that have a significant bearing in any development of the societal hierarchy. As Melanie Stewart Millar notes: “From the burning of female witches at the stake during the Middle Ages, to the exclusion of women from universities, to the rise of female invalidism and domesticity in the nineteenth century, women have been continually excluded from the construction of western scientific knowledge and technology.” Although there was an attempt to disrupt this paradigm in the twentieth century - with the surge of the feminist movement and two world wars allowing women

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33 CNN.com, op. cit
35 Participant 78, Survey of Internet Users, op. cit
to step (briefly) out of the kitchen - the dominance of masculine modalities is perpetuated. The emergence of digital technologies has provided little exception. The results from a 2001 UCLA (University of California, Los Angeles) survey, which questioned over 400,000 students at 717 American colleges and universities, found: “Only 1.8 percent of women, compared to 9.3 percent of the men surveyed, said they planned to enter computer programming as a career - the largest gap in the survey’s history.” The difference between being able to use to the Web and having a higher-end literacy of the medium has a large influence upon each gender’s time on the Web. The greater familiarity and level of comfort with computers that web-users experience affect their online behaviours and how long they will spend on them. Due to the systemic discrimination against women as technology operators, my survey participant’s notion that ‘men are more willing to embrace technology’ is a prevalent one and affects their use of the Web.

The types of websites women visit identify whether they are following conventional feminine traits or challenging their gender’s prescribed role. The Web is often perceived as a medium where women can evade restrictive gender identities and move fluidly through multiple subjectivities. Christine Tamblyn, for example, considers how the Internet promises to “serve as a perfect vehicle for remaking one’s subjectivity.” However, outdated values regarding women in the media are perpetuated through the Web. Several journalists in Internet news sources, such as ZDNet and Nua maintain

gendered archetypes of women’s Web behaviour. For example, in an article titled ‘Internet now a tool of the Masses’ the author states that “the average Web user is more likely to be a suburban housewife than a technology aficionado.”39 The distinction between the (female) housewife and the (male) techno-aficionado creates roles, behaviours and expectations. Debra Donstan, who discusses the results of (yet) another survey in this field, also identifies the influence of gender roles:

Women tend to be more time-pressed than men, as they are more often heads of households making important decisions for their families regarding health and wellness, social activities, vacation and financial planning … Men, on the other hand, devote more time to software downloads and are more interested in technology for technology’s sake.40

Results of the study undertaken in Donstan’s analysis show a definite gender bias in how the Web is used. The female is immediately associated with a maternal subjectivity and her use of the Web is assumed to concern family-oriented activities. In another analysis of women’s use of the Web, Anya Sacharow reconfirmed this distinction, stating that while men are willing to devote time to software downloads and upgrades, “women seek ease of use and rely on the Web to make their lives more efficient and productive.”41

Tamblyn’s statement that women can use the Web to remake gender subjectivities is rarely acknowledged in the media. Instead, these comments illustrate how the media reproduces traditional gender role differences when discussing how the Web is used. It is these generalisations about women that perpetuate their subordination as Web-users. Journalists make little effort to challenge patriarchal ideologies.42

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41 Ibid.
42 See Chapter Four for a comprehensive explanation of how the media reproduces conventional gender roles in relation to Web-use.
This inequitable attitude is also observable in the comments produced in the survey I conducted. For example, a female university student wrote that women use the Web for “shopping online, helping children with homework, education.” Another comment made by a male participant identified that “[a]lthough unfair, men do not contribute as much time to the domestic chores of the household.” It is commonly perceived that men are unburdened by familial duties and have time to use the Web for more advanced functions. Clearly, attitudes reinforcing the gender divide proliferate in the wider social and cultural consciousness.

The websites visited by men and women are often differentiated by gender roles through much scholarly analysis. For example, Linda Johnson et al align email use as a feminine activity based upon preconceived ideologies of women, communication and socialising:

> Based on well-established evidence that women are more interpersonally oriented than are men and that men are more information/task oriented than are women (Eagly & Johnson, 1990; Gilligan, 1982; Tannen, 1990), we predicted that females would use e-mail more than would males.

Patriarchal gender distinctions posit that women prefer to be entertained rather than challenged by more ‘serious’ activities in research or business. Web-based email sites such as Hotmail and Yahoo! are generally used for informal communication and conversation and as a result, are popularly becoming inscribed as feminine domains. However, as noted by Janet K. Winter et al, Johnson et al’s ‘well established evidence’

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43 Participant 152, Survey of Internet Users, op. cit
44 Participant 13, Survey of Internet Users, op. cit
46 The authors note in their study of gender difference in business communication, that the ‘gendered’ behaviours of men and women are “a result of culture and role expectations.” This is also applicable in assuming that women are going to be ‘naturally’ more communicative and use email more than men.
of women’s interpersonal skills are formed from a patriarchal basis of cultural and role
differentiation systems. A female university student in the survey identified the
discriminatory nature of this gender assignment in her thoughts about women’s Web use.
She wrote that using the Web “is like reading a trashy magazine. Can find out any info
and waste time. Maybe women like to browse, surf and just look, as sexist as that
sounds.”[47] Although the female university student makes several assumptions about
women’s activities on the Web, she does at least acknowledge that she is conforming to
patriarchal assumptions.

When discussing women’s behaviour on the Web, Spender also maintains these
assumptions. In her chapter about ‘Women, Power and Cyberspace’, Spender writes that:
“Sherry Turkle, and Nancy Kaplan and Eva Farrell … found that women like ‘chatting’
on their e-mail and bulletin boards; they thoroughly enjoy nattering on the net.”[48] The
very title of Spender’s book identifies the inferior role women are consigned as Web-
users - they merely ‘natter’. Spender also discusses how computer communication is a
natural progression from another feminised technology: “Like the telephone, the
connected computer is just crying out for women to use it.”[49] These statements contribute
towards the perpetuation of women as second-rate operators of technology. If women are
relegated to the position of chatty communicators who would rather use the Web for
entertainment than workplace tasks, e-commerce or political lobbying, then men may
unproblematically continue as the more dominant and credible users of the Web.

Regard Interaction and Leadership Differences in the Business Communication Course”, Business
Communication Quarterly, 2001, Vol. 64, full text.]
47 Participant 150, Survey of Internet Users, op. cit
48 Spender op. cit, p. 175
49 Spender op. cit, p. 192.
According to recent research about women’s behaviour on the Web, women do not use email sites such as *Hotmail* as often as Spender and Johnson predicted. In a 2003 survey conducted by Nielsen/NetRatings, they found that “The most popular Web sites for women are lifestyle sites, such as travel, shopping, education, finance and health. High street retail sites feature heavily in the top 10 most popular sites for female Web users in the UK, with clothes store Next.co.uk drawing an almost exclusively female audience of 82.9 per cent.”\(^{50}\) There is an eclectic mix of sites here that show women do not exclusively partake in traditional feminine activities on the Web. Popular email sites, such as Hotmail, are not mentioned. Although shopping is framed as a large element of women’s online activity, the fact that their interest in education, finance and health is measured also shows that women are not limited in their interests to sites of communication and ‘nattering’. Social conceptions of archetypal ‘femininity’ are not always validated by surveys or tracked applications. Although women do explore websites relating to ‘typical feminine interests’, they also have concerns in areas outside of this conventional gender discourse.

**Advanced Level**

The final section of this chapter addresses a higher level of Web-use. It moves beyond simple Web browsing to incorporate a greater interaction with the Web. I investigate the Web as a medium for identity production. Virtual chat rooms are a significant space where patriarchal narratives of femininity are reinforced. The type of identity a participant chooses to display when communicating in a chat room captures the function

\(^{50}\) Kiss, *op. cit* full text.
and place of gender in the interaction with other Web-users. The extent to which women feel comfortable with their identity on the Web can be considered by examining how they describe themselves to other chat room members.

Experimenting with a manufactured identity in chat rooms is a feature that attracts many participants. A regularly asked question to a newcomer in a chat room is ‘ASL?’ This abbreviation (age/sex/location) is one of the most basic elements of identity that participants in a chat room can alter about themselves. Choosing to remain ‘authentic’ - selecting three basic identity variables and granting them overarching meaning as opposed to constructing more complex and mediated performative self - demonstrates much about the confidence and competence of the participant in the chat room. Those more familiar with the environment may find that changing identity contributes to their empowerment, experimentation and new modes of consciousness.

Obviously chat rooms are not free of ideology. Gender identity is a major factor in how the contributor is treated in chat rooms. An acknowledgement of femininity - even from a ‘male’ participant - will illicit more interest than a male identity, even from a ‘woman’. An article reported that: “Girls were twice as likely as boys to have received unwanted comments of a sexual nature.”51 Chat rooms, more distinctly than most other sites on the Web, are a space where women are actively and overtly excluded. Negative experiences motivated a female teenager in my survey to remark, “there have been situations where some creep has been obsessive over certain topics. It can become quite scary or

intimidating.”52 This behaviour is a part of the dominance some men display in assuring their authority on the Web. As Spender notes “Sexual harassment has often been referred to as the systematic means of keeping women out of male territory, and this is certainly how it works in cyberspace.”53 The negative treatment of female identities in chat rooms is indicative of the dominance of masculine ideologies in this particular space of the Web.

It is easy to summon ideologies of a digital femininity. The choice of a ‘nickname’ determines how a participant is treated. Choosing a nickname that is distinctly feminine such as ‘Melanie’, or associated with traditional feminine qualities like ‘Angel’, immediately draws attention to the gender of the chatroom user. Spender researched this phenomenon and concluded that “These days I assume that most women will take non-female names (or handles) simply to avoid some of the hassle. And that any blatant feminine names that are out there (such as ‘Marilyn’), probably belong to men in drag.”54 Gender is so important in how members of chat room relate to each other that even if a gender-neutral nickname, such as ‘Rabbit’ is used, the immediacy of the ASL question establishes a judgement upon how a formerly anonymous member of a chat room is ‘read’ by those following print on a screen. As Patricia Wallace states: “many people are uncomfortable dealing with someone whose gender is unknown.”55 The discrimination blatantly directed towards female avatars in chat rooms has triggered women’s experimentation with changing identities. The chat room is a space where women cannot

52 Participant 120, Survey of Internet Users, op. cit
53 Spender, op cit., p. 203
54 Spender, op. cit, p. 245.
avoid restrictions formed through traditional and historical frameworks, languages and roles.

A higher level of web knowledge is required to build websites. Females have had little involvement in the Web’s construction. Negative opinions regarding women’s capabilities in this realm contribute to their poor participation rates. For example, a remark made by a male aged 20-24 in the Survey expressed a prejudiced opinion: “men know how to use stuff. Women are lazy/don’t care.” The outlook of this student reveals an example of the social hindrances women often receive when learning higher-level uses of technology, such as website construction. Compared to men, women supposedly have a lack of interest in digital applications.

There are some incentives being put in place to encourage women. Muriel Magenta describes how she is encouraging women to become more involved with the Web:

The World’s Women On-Line! arose from my experience as a new media artist, activist, and leader in the Women’s Art Movement, and from creative research at the Institute for Studies in the Arts of Arizona State University. The objective is to bring the global resource of women's experience and culture more prominently into the rapidly developing realm of information technology. Most importantly, the intent is to see greater numbers of women participate in today's social discourse, much of which occurs on-line. To reach that objective a two-part project was developed in collaboration with many artists and technologists. This group effort features women artists on the Internet and in traveling multimedia installations of the same work. Consistent with the global spirit of the Internet, we designed a World Wide Web site that features over eight hundred images sent by women artists from every continent.

The proportion of women who have created websites compared to men is low.

Encouragement such as the World Women’s Online! website as identified by Magenta is

56 Participant 112, Survey of Internet Users, op cit.
needed if the Web is to avoid remaining endlessly constructed, regulated and renovated by men. The mechanism for this intervention is the task of the next chapter, which looks at the women behind the interface.

Spender does not discuss website construction in *Nattering on the Net*. She describes women’s relationship to the Web in more traditionalist terms - as ‘users’ rather than ‘creators’. In her only (brief) mention of website creation, Spender cites Donald Carli’s recommendation that female designers “need to get involved in large numbers if they intend ever to play a role in shaping the form or the content of the Metaverse in a significant way.”

This remark highlights the fact that the Web is a space still very much dominated by masculine discourses. Spender does not provide a mechanism for how women can become involved in the web’s construction. In advanced levels of Web use, more men than women maintain higher levels of expertise. They have a greater influence over the Web’s construction and in spaces of interaction - such as chat rooms.

The responses to my survey capture a snapshot of the dynamic negotiations and opinions of advanced web literacies. As a relatively new addition to the digital continuum, measuring men’s and women’s use of the Web is indeterminate. Continuing surveys, some of which are cited in this chapter, attempt to track the changes and opinions of web use. However the expanding numbers of people learning how to use the technology also needs to be monitored. The demographics of those involved in its use are in a continual state of flux.

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58 Donald Carli as cited by Spender, *op. cit*, p. 171.
The importance of how the next generation utilize computers and the Web is significant in considering how women will be treated in relation to the Web. With gendered archetypes actively discouraging women from participating in so-called masculine realms of technology, their level of comfort with the field is paramount if women are to gain a greater presence in web as builders as well users. It is also important that men recognise the abilities of women do not necessarily match, mirror or verify patriarchal assumptions or narratives. The comments I have analysed show that although these roles are often replicated in some areas (such as the masculine domination of website construction) they are beginning to change. Through the building of avatars - if not websites - women are creating a world that may be more of their choosing.
The Website Designer

The Website Designer works in a technical area of the Web. Her job is to design and construct websites for a company selling Web-based products. She is in her thirties, unmarried and has a high level of education. The Website Designer has an advanced knowledge of computers and the Internet. She is familiar with the lack of women in computer technical areas from first hand experience. Her opinions provide concise observations of the computer industry.  

Do you remember when you first heard about the Web?
In about 1997 I became aware of the internet and the web through email which was, at the time, for me fairly new. I was 26 years old. I heard about it through my work as a graphic designer when a client started the first internet service provider in Kenya. At the time I did not know exactly how it worked and used the terms interchangeably. I became more curious in 1998 when I actually used email for the first time when our office set up an account with a service provider. As time progressed and I began to browse the net, I began to grasp the vastness of the concept and became interested in the impact it would have, particularly in the graphic design industry.

How often do you use the Internet?
I use the Internet almost on a daily basis.

What level of expertise do you have with the Web?
I would say my level of expertise with the Web is above average. This would be due to my interest in web design leading me to explore the internet and web in greater detail in my Masters of Design.

What activities, sites or topics do you engage in during your periods of web usage?
I usually access it from work to check email accounts, bank balances, search for information, and keep up to date with design issues.

What is your job? What is its title and what do you do?
I am a web interface designer. I design the visual interface that an end-user sees and interacts with. This often involves navigational structure as well.

Do you know any women who work in technical fields relating to computers and the Internet such as engineering, programming, etc?
I know of two women. One is a web-programmer/designer and moved to Sydney to pursue her career. And one is (or used to be) the same at the Curtin Library.

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1 ‘Chapter Three Participant.’ Interviewed by Carrie Kilpin in Perth, Western Australia. Email interview conducted 23/2/04.
Why do you think there are so few women in university and college classes that study computer science?
The reasons there are so few women in university and college classes that study computer science are a combination of factors. I think it is partly due to the, often-unsaid, expectations society/families place on a girl as she is growing up. And partly due to behavioural differences and/or priorities and between men and women. These are traditionally male-dominated areas which results in few role models for young girls. This in turn is more likely to influence society and parents to discourage girls from pursuing such a career. They feel a girl would not be good enough to compete with men. Or they subscribe to the concept that since there are so few women in this field it must mean they have to be bordering on genius. The other reason is that I think women prioritise differently. In most cases they are forced to because they have children etc, but also because they are not driven by the male need to dominate and achieve power. Consequently, I think there are many successful women in traditionally male-dominated areas that are simply not recognised because the male definitions of success differ.

Do you think that women are replicating cultural stereotypes online? (eg: women are more likely to shop and chat on the net than participate in more ‘masculine’ activities such as watching stock market shares or playing computer games)
I think that women may be replicating cultural stereotypes online because of a lack of role models and because they traditionally never played the role of financier at home unless out of necessity. This is changing, I feel as more women realise the potential of the Web and take advantage of it by forming their own e-commerce ventures as they see a need in the market.

When you were in high school, were computers available to use? Did the girls have as much access to the boys?
When I was in high school computers were available. The class had to pair off and share a computer so access was equal. I also feel that there were no real differences in how the genders were treated.

Do you think you know as much about computers as the men at your work do?
I think I know as much about computers as most of the men at my work do. Others are fairly specialised so I don’t feel I would know as much as them.

Does the stereotype of people who have a higher level of knowledge of computers as being ‘geeks’ put you off learning more about computers?
The stereotype of ‘geeks’ does not put me off learning more about computers. I have increased my knowledge in certain areas for my own reasons and it has been a conscious decision.
Do you own a computer?
I do not own a computer, mainly because I feel I always have access to one when I need it and there have been other priorities when I am able to spend.

Are you interested in playing computer games?
I never really got into the contemporary games, possibly because we did not have a computer at home when they became popular. I find they waste an incredible amount of time and find them quite boring. Now, since I work with computers all day I do not feel inclined to spend my leisure time in front of one.
Chapter Three

Game Over, Girls:
An Absence of Women in the Web’s Technical Development

By changing the perception of the end-user of digital technology as male through our engagement with the discourse and technology of digital culture, women may be able to begin the process of ‘degendering’ the computer. In so doing, women might just alter the ways in which digital technology is used and reinvent new information and communication technologies ourselves. Education, too, plays a key role in this process as we develop ways to subvert hegemonic messages of inequality and encourage female children to experiment with technologies in new and potentially liberatory ways and to invent new ones.¹

Melanie Stewart Millar

Women are socially and institutionally inhibited from technical development specialisms in the Web, such as computer science and programming. This chapter postulates reasons for this inequality and absence. Millar’s statement identifies an optimistic view of how women may influence the infrastructure of the Web. However, statements such as “[a]ttempts to recruit more women into IT by taking on graduates with non-computer skills have failed and the industry is finding it hard to stem the loss of senior women executives from the industry”² make this goal seem unrealisable without intervention. The reasons for the lack of women in the Web’s technical fields are identifiable in three key areas, all of which are observable in Millar’s statement. Unfair values in education,

social attitudes and accessibility to digital technologies constitute significant key areas which contribute towards women’s exclusion.

Throughout my research, I found that there is little investigation of women’s poor representation in computer classes and work environments compared to gender use of the Web. Whilst many books discuss theories relating to discourses of identity and communication on the Web, very few consider the influence of those who are behind the Web’s screen façade. Nor do they investigate who is responsible for writing its applications. It is vital for women to gain a better knowledge of the technical aspects of the computer and Web. As Millar considers; “The underlying assumption is that if more women were users and eventually became technicians, programmers and designers of computers and computer networks, the Internet’s gendered nature would disappear over time.”3 There is much discussion of the Internet’s origins in the military, but identification of who still controls and maintains the Web is rarely presented. Women must gain some influence in this realm if they are to challenge male domination of digital technologies.

In examining the numbers of women who study and work in areas requiring digital expertise, I found that they remained (predictably) low. The areas of technical skill I consider in this chapter include computer programming, computer science, back-end coding, Web design and construction, and computer technician support. These fields of computing require much more knowledge than can be gained from introductory classes or

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3 Millar, op. cit, p. 56.
from experience simply ‘using’ computer applications. A comprehensive education in technical knowledges of software and hardware devices is required in these fields.

As a part of this chapter, I have constructed a Website called ‘A Digital Intervention: Women in the Web’. I have included this aspect in my thesis to signal that it is vital for women to construct websites if they are to have influence in creating the Internet as much as using it. By writing in a Web environment, I demonstrate many of the reasons why the Web is not a space in which women can ‘evade’ masculine-dominated practices. Women are rarely considered to possess the same amount of technical knowledge of the Internet as men are. They do not build as many websites as men. They use the digital environment for traditional ‘feminine’ practices, such as shopping or chatting. I have built the ‘Intervention’ Website to illuminate areas of the online environment where women are performing traditional ‘feminine’ activities - and also sites that show women breaking from a conventional roles and rules. By incorporating a website into this thesis, I am affirming the importance of production to theory, and practice to politics.

Three sections structure this analysis. The first part focuses on education. I examine the negative feedback women receive when learning about digital technologies, spanning from early schooling to tertiary levels. Jane Dudman found a disturbing trend in women’s studies in computing: “Computer science remains one of the three most popular degrees in the UK, but of the 97,425 UK higher education students on computer sciences courses, only 25,315 - just over a quarter - are women. In higher education as a whole, 55% of all students are women.”4 This data shows that while women are participating well in

4 Dudman, op. cit full text.
academia overall, in masculinised areas like computing, they are still outnumbered by men. In the education section, I propose reasons for this disparity.

The second section considers the social attitudes that prevent women from participating in highly skilled fields relating to computers and the Web. Much discouragement, such as the lack of female role models, harmful media representations and the perpetuation of negative ‘geek girl’ stereotypes, provide daunting barriers and exclusions for women desiring to enter upper level computer courses and careers. Finally, the third section investigates the limited accessibility to computers and the Web that many women encounter. I examine how computer games, family commitments and men-only groups discourage women from developing a higher knowledge and ability in digital applications.

In *Nattering on the Net*, Spender’s opinions about women’s participation in computer science and other such digitally saturated fields reveal many of the inadequacies women face in learning about the medium. However, she refers consistently to the need for women to merely become computer-literate\(^5\) rather than gain more highly developed skills in the medium. I agree with Spender that for the Internet to be used effectively, it is essential that an adequate knowledge of the computer is held by the user. The statistics which show that women constitute approximately half of all Internet users proves that this has been accomplished. However, in this chapter I probe Spender’s thesis further, asking why the majority of women have reached this level of internet use and then stopped developing their interests. Although Spender does not delve into the lack of

women in computer science and its related fields, she does consider some of the
discouraging discourses women encounter, such as economic restrictions, when they do
wish to increase their knowledge of the digital realm.

Throughout this dissertation, I often refer to women as ‘Web-users’. The reason for this is
that women remain dominant *users* of the technology rather than creators or designers.
This descriptor has both negative and positive implications. Women’s participation on the
Internet is beneficial through the sites they choose to access and the services they employ
in areas including digital research, Internet shopping and education. In mobilising these
particular sites, women are contributing to a greater influence and strength in female
representation on the Web. Through consumerism, women now have an economic role
and a social presence. The number of websites that are visited and prove to be popular
influences the construction of similar portals. One female user of the Internet remarked “I
noticed that even as I was inducted into this world, I invoked changes into it … You
create the net in the act of accessing it.” When there are more women visiting sites and
thus indicating their preferences for the design, subject matter and content of particular
Web pages, they are ultimately influencing the way in which the Web is developing. An
article in *PC World* also recognised this change:

> Experts don’t know whether the new content attracted more women or whether
> the influx of women spurred new content. Either way, ‘more women being online
> is definitely changing the face and the energy and the content of what’s there,’

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6 Nancy Kapland and Eva Farrell, “Weavers of Webs: A Portrait of Young Women on the Web” found in
*Literacy, Technology, and Society Confronting the Issues*, Gail E. Hawisher and Cynthia L. Selfe (eds.),
said Aliza Sherman, who runs Cybergrrl, a business that aims to link women to the Web - for their own benefit and marketers.\(^7\)

The Web is evolving away from the earlier masculine-orientated designs and topics to reflect increasing feminine use. This is occurring in the personal use of the web, alongside business-related applications. The increase in alternative modes of design is addressed in the ‘Intervention’ Website. It includes identification of examples such as the Digital Divas website.\(^8\) These spaces are a result of women’s increased demand for a ‘presence’ in the digital environment.

**Education**

Education is pivotal in the consideration of women’s computer capabilities. Schooling and family structures affect confidence levels in using technology. Although women are strong in numbers of Web-user, they remain poorly represented in more specialised areas of the Internet’s technical development. The lack of women who are educated in developing software and other digital platforms is a significant reason for this exclusion from Web construction. As Emily Jessup observes: “Indeed, it appears that all levels of learning about computers - in schools, in higher education, in further education, in training, in adult education classes, and in independent learning - women tend to be strikingly underrepresented.”\(^9\) The lack of women involved in the technical side of the Web is a significant explanation for the continued dominance of masculine ideologies in the field. The danger of this absence is recognised by Bismallah Kader who encourages

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women to get online, or “risk being left behind, as we are now at the threshold of an
education revolution.”¹⁰ This statement evokes the urgency associated with gaining a
digital education. Phrases such as ‘being left behind’ and ‘one day’ highlight the sense of
panic, stress and redundancy connoted in the literature surrounding women’s minimal
formal technical education. Dale Spender also discusses this exclusion. She writes:
“Women - and Indigenous people, and those with few resources - cannot afford to be
marginalised or excluded from this new medium.”¹¹ Almost ten years after Spender wrote
her book, women are still being excluded from the digital realm due to a deficient literacy
and knowledge of technical and technological skills.

Even though many girls now have access to computers at home and learn how to use
them with an enthusiasm equal to their male counterparts, their interest rarely extends
beyond this basic or intermediate level. Learning how the computer operates - exploring
its science and programming features - is rarely taken up by females with as much
commitment as males. Feelings of competence with computer technology are taught early
in both the school and home environments. It is in these learning conditions that attitudes
and values about computers and the Web are taught. Nancy Kreinberg and Elizabeth
Stage state that:

The biggest barriers to women taking advantage of the computer revolution are
the myths and stereotypes about technology that are well established in children’s
minds at a very early age … Changes must take place in schools and outside of
schools so that women will have equal access to computer technology.¹²

¹⁰  Bismaller Kader, “Gearing Women Towards Embracing Online Learning”, Computimes Malaysia, New
¹¹  Dale Spender, op. cit, p. xvi.
¹²  Nancy Kreinberg and Elizabeth Stage, “EQUALS in computer technology” in Jan Zimmerman (Ed.)
One of the conservative ideologies in the curriculum is that men have a ‘naturally’ higher ability in using digital technologies. With this assumption underlying behaviour, girls do not take as much interest in technical fields relating to computers and the Internet.

A significant reason for the small numbers of women in computer science and programming fields is the lack of attention girls receive in the classroom when computers are being taught. When computers were first introduced into the school curriculum in the mid 1980s, the relationship between gender and computers was not viewed as a significant pedagogical consideration. For example, in computer classes during my first year of high school (1991) I remember the male students dominating the computers while the girls had no choice but to sit at their desks playing games while waiting for their turn (which would only be a few minutes at the end of the class). In allowing this practice to persist, the (male) teacher encouraged our insecurities and did little to promote an equitable classroom. We performed poorly in our assignments and class tests as a result. With the higher pervasiveness of computers in today’s schools, and an elevated consciousness of gender inequality in digital education, such prejudice would now attract much criticism.

The values taught by parents in the home also affect how computers will be viewed by each gender. As discussed in the sixth chapter, computers in the family home are usually owned and dominated by the males. Val Henson wrote an excellent interpretation of why so few women learn Linux, which included suggestions about how to discourage sexist behaviour in the computing industry. In the study, she identified a significant reason for
this paradigm: “[t]he most striking example of a subtle bias against computing for women is that, in the U.S. at least, the family computer is more likely to be kept in a boy’s room than in a girl’s room.”¹³ This bias is particularly influential to young girls’ perceptions of males having ownership and control of computers. They receive a negative message about themselves as technology operators when they see their parents favouring their brothers. As a consequence, girls will doubt their own skills in operating and manipulating the technology.

The outcome of experiences of implicit - and sometimes explicit - sexism is revealed in the poor figures of women enrolled in computer science and programming courses in universities. For the generation now at tertiary education age, although computers were available to most in their youth, the lack of encouragement in learning how they function is an operative factor for many who dislike the technology. This lack of confidence is observable even in women who have decided to develop their interest in the technical fields of computer programming. They frequently have less self-assurance in their abilities than their contemporary male students. In a study of doctoral students in “a world class computer science department”,¹⁴ published results found that despite the comparably equal performance in using computers, the female students “felt much less comfortable, confident and successful than did the men.”¹⁵ In another study of university students, Kendra Mayfield discovered a similar paradigm: “female freshmen were only half as likely as men to rate their computer skills highly. Only 23.2 percent of women,

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¹⁵ Ibid.
compared with 46.4 percent of men, rated their computer skills as ‘above average’ or ‘within the top 10 percent’ of people their age.”\(^{16}\) College-aged women - many of whom grew up with computers in their homes and/or at school - remain doubtful of their competence using the computer. Women are taught to be modest about their abilities in general and this is particularly emphasised in the computing realm where masculine dominance has been pervasive. Val Henson discussed her own experiences in a study of computer scientists:

> [W]hile 53 percent of the male computer science (CS) freshmen rated themselves as highly prepared for their CS courses, zero percent of the female CS freshman rated themselves similarly. But at the end of the year, six out of the seven female students interviewed had either an A or B average. Objective ratings don't agree with most women's self-estimation. I personally encountered this phenomenon: Despite plenty of objective evidence to the contrary, including grades, time spent on assignments, and high placement in a programming contest, I still didn't consider myself to be at the top of my class in college. Looking back objectively, it seems clear to me that I was performing as well or better than many of the far more confident men in my class.\(^{17}\)

Studies\(^ {18}\) show that women have learning abilities equal (and sometimes superior) to men, however the lack of encouragement they receive is a major reason for their lack of education in technical fields relating to computers and the Web. The perception is ubiquitous that women are less secure about their ability to operate computers.

In the past few years these attitudes have begun to change. With the proliferation of computers in homes and businesses, women are becoming more interested in the medium. There are many encouraging educational initiatives to promote their interests in


\(^{17}\) Henson, *op. cit*

the technology, including camps and classes. Several of these are identified in the ‘Intervention’ Website. Links are provided to sites which demonstrate learning programmes designed to encourage girls and women to learn about digital technologies. For example, a camp called the ‘Girls Summer Web Camp’ in Chicago, USA teaches female high school students “new Web technologies and how to use the Internet to create or develop a business.” It is an example of the many camps in the USA which promote the learning of technologies such as the computer and Web. In Australia, the teaching of information technology has also been targeted to ensure boys and girls receive equal attention in school. The lack of girls entering computer science provided the impetus for a program aimed at “updat[ing] teacher skills and understandings and to identify and seek to address the inequalities for girls in this priority area.” These initiatives are providing a better opportunity for women to gain knowledge in computing. They may also provoke young women’s interest in furthering their education and careers in this area.

Social Attitudes

Most of the reasons for the lack of women’s education in the technical aspects of computing involve limiting social and cultural attitudes towards their abilities. Historical attitudes towards gender are still present in institutions of contemporary social and cultural significance. Embedded within the English language, for example, are distinct patriarchal ideologies privileging men. This also extends towards digital languages. Technologies are a product of a masculine-dominated history and the Web is a...

21 For example, words such as spinster have a negative connotation - while bachelor is considered positive. See Nicole Decure, “The Difficulties of Teaching a ‘Man-made Language’”, Women and Language, Spring 1994, Volume 17, Number 1.
component of this narrative. In an interview I conducted with the (male) Web Designer of a first year university course, he stated that “realistically, the Internet is not a vehicle for the liberation of women from patriarchal structures - the patriarchy is much more insidious than that. And speaking as a card-carrying member of the patriarchy, as soon as women fully come to terms with the Internet we will find a new technology to exclude you.”\textsuperscript{22} The Web Designer identifies an undeniable relationship between social roles and gender. As long as technology is coded as masculine, women have little hope in finding a space free of male domination on the Web or in any other device of communication.

This ideology is distinctly observable in attitudes towards women working in careers related to digital technologies and in the Web. In a discussion of the “alleged democracy”\textsuperscript{23} of Internet communication, Suzanne Romaine found that “Women may also be discouraged by the medium itself, because men heavily dominate the computer and related ‘high-tech’ industries, where women have advanced beyond the ranks of middle management. Industry leader Microsoft Corporation, for example, appointed a woman to its Board of Directors only in 1996.”\textsuperscript{24} The attitude that women are intellectually inferior to men permeates the computing industry much more than other fields like commerce or retail where women are present in a proportion almost equal to men. As a more technical field, social and cultural conceptions deem computing to be more intellectually demanding and thus ‘inappropriate’ for women.

\textsuperscript{22} Website Designer, interviewed by Carrie Kilpin on the 5\textsuperscript{th} of September, 2001 via email at Murdoch University, Perth, Western Australia.


\textsuperscript{24} \textit{Ibid.} pp. 160 - 161.
Another example of social attitudes limiting women in technical areas relating to computers and the Web involves the lack of confidence in female expertise. The validation of male opinions often occurs indiscernibly in everyday communication. In an article titled ‘Why are There so Few Female Computer Scientists?’ Ellen Spertus discovered this bias occurred entirely unconsciously:

> When a female computer science undergraduate visited one of the graduate schools to which she had been admitted, she and a male prospective student met with a male graduate student to discuss the school. Whenever the woman asked a question, the graduate student directed his answer to the male prospective instead of to her, i.e. by making eye contact and gestures toward the male prospective. This treatment surprised the woman, as she had not encountered such behavior at her undergraduate institution. After the meeting, she delicately pointed out the behavior to the graduate student, and he apologized profusely and sincerely, clearly unaware of the bias while it was occurring. When they met later in the day, his behavior was markedly better. The same woman, however, in a later meeting with two other graduate students, one male and one female, found herself addressing most of her questions to the male until she recognised her behavior and corrected it.25

The attitude that men have more valid opinions and are more worthy of attention than females is a hidden curriculum in educational communication. As the woman in Spertus’s passage found, even though she had just experienced gender biased behaviour - she later replicates it herself. Patriarchy is not activated by and through men (alone), but through structures. Just as not all women are feminists, not all men gain from the patriarchy. This different treatment based upon gender is symptomatic of the reasons why women are excluded from technical areas of computer expertise. They are not - intrinsically - given the same credibility as men are in fields of technical skill, even by other women.

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An additional reason for the lack of women in computer science and programming concerns the attitude that the feminine realm of the web is small, limited and insular. Traditionally-formed parallels in the relationship between gender and behaviour are identifiable in a statement made by Roger Crockett:

Monica L. Boyd signed up for a Hotmail.com account in September when a friend told her about the free e-mail service. 'I don't like to spend money,' says the 17-year-old Chicago student. Webmasters: take note: Monica might not spend much today, but she and her grandmother should be as important to you as her brother is.26

Unfair assumptions regarding gender are rife in Crockett's words. While Monica is situated as a young and naïve female who is just learning about the Web, Crockett presumes that her brother is already a Web expert and considered important to the Webmasters. Crockett's anecdote also positions Monica’s predicted behaviour within the confines of a 'conventional female’. He informs Webmasters that Monica is likely to be spending money on the Web in the future. Crockett’s supposition presumes that these (male) Webmasters are the ones who are constructing the digital gateway for Monica's burgeoning interest in shopping and spending money through the Internet. Her possible desire in developing a higher understanding of computers (perhaps even becoming a ‘Webmistress’) is not acknowledged. Men are explicitly positioned as having control of the Web - being active and holding agency - while women are the (second-rate) consumers. A link provided in the ‘Media Representation’ section of the ‘Intervention’ Website identifies a website called GraceNet which recognises unfair assumptions such as this in the media. The organisation’s establishment of the DisGraceful Awards deliberately targets media campaigns which denigrate women’s abilities in the field.

Women’s poor participation in technical participation of digital technologies is exacerbated by the lack of popular cultural modelling. The under-representation of technologically-skilled women in film for example, does little to encourage more women to become involved in the digital discourse. Intelligent female characters, such as Angela Bennett in *The Net*, are frequently portrayed as awkward and socially inept. Similarly, the representation of women as superficial figures in magazines and books promote women as passive objects in the masculine-dominated world of computers. These limiting representations of women in the media explain women’s lack of involvement in digital technologies.

Negative representations of women in the media are particularly influential in discouraging their participation. Computer magazines are written for male audiences and the gender bias in these texts do not go unnoticed by the women who read them. As Spertus demonstrates:

> A female computer scientist sent me a copy of the cover of a prestigious computer periodical that showed a family (parents and a boy) looking at a computer. A bubble next to each shows what they are thinking. The mother is imagining her son using the computer to learn math and the father using it to figure taxes. The son and the father both imagine using the computer to play space war games.

This example exemplifies the secondary status attributed to women in the media. The mother is not thinking of herself as using the computer to increase her maths skill, or to do the taxes. These are shown to be higher level activities best performed by men. The interest of the two male figures in the computer for space war games is also an example of the masculinity of the computer. They see it as a toy rather than a tool for gaining

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28 See Chapters Five and Six for an analysis of women and technology in the media and in fiction.
29 Spertus, *op. cit*
further empowerment. As Leslie M. Miller identified: “Males are more likely to play games, to program, and to see the computer as a playful, recreational toy. Girls tend to view the computer as a tool, a means to accomplish a task such as word processing or other clerical duties.”

Old world orders remain: women have merely moved from typists to processors. Spender notes a similar relationship between gender and technology in *Nattering on the Net*. She writes: “One theme that runs through the commentary on the gender gap and computers is that women and men see the computer differently. To put it simply, the consensus is that women use them, while men fall in love with them.”

That women only ‘use’ computers, while men ‘fall in love’ with them exemplifies the divergent intimacies between the avatar and the interface. However, this perception is not always accurate. An article discussing the importance of women in marketing identified that “[c]ontrary to the stereotype of men being in love with their speakers, women are more concerned than men are - with sound quality in communication products, and equally concerned as men with audio and visual quality in entertainment products.”

Texts like the computer periodical discussed by Ellen Spertus reinforce traditional conceptions that men have a much greater knowledge, skill and intimacy with computers. The perception that women see the computer only as an object for basic use is not correct.

Cultural representations of high level computer operators are also an acknowledged cause for women’s low participation rates in computer science and programming fields. People

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interested in computers are viewed as ‘geeks’ or ‘nerds’ - particularly those who have an advanced knowledge of the digital realm. As M. Katherine Gavin and Sally M. Reis found, these “stereotypes influence perceptions and performance in school and in life, and are often cited as contributing to girls’ problems in math and related fields such as technology.” The stereotype of the ‘computer geek’ encapsulates someone who spends much time alone, has few friends, is not physically attractive and has an unpleasant personality. Women are expected to conform to culturally defined ideals of appearance and character. The computer geek is an antithesis of most of these attributes. Faith Wilding discusses the “negative social representation of being a geek girl (i.e., going against the grain of female construction)” as a reason for the lack of women in computer fields. Spender also notes that the image of the ‘techie-head’ is a discouragement:

To many women who want to work in ways that make a positive contribution to their community (and there are plenty of girls who express such sentiments when thinking about a possible career), the scientist and the techie-head are a turn-off. This is why, for example, most girls don’t look to the world of the computer buff and don’t imagine themselves flourishing in such an environment.

The image of the computer geek is a contributing factor to the under-representation of women in computer science and programming. The ‘geeky’ image of the computer technician or programmer conflicts with the traditional, submissive and feminine ideologies. When learning about computers in schools, girls are at an age where they are

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33 I acknowledge that boys also suffer from negative stereotypes when they have particular interests in technology. For more information about this see: Lori Kendall, “‘The Nerd Within’: Mass Media and the Negotiation of Identity Among Computer-Using Men” *The Journal of Men's Studies*, Spring 1999. Volume 7. Issue 3. p. 353. I do not delve into this topic as I am discussing girls’ rather than boys’ problems with computers.


36 Spender *op. cit.*, p. 173.
particularly conscious of their identity. The negative image of the ‘geek’ does not provide encouragement in increasing their knowledge of the medium.

A particularly significant reason for the few women in technical areas of the Web is the absence of female mentoring in computer science and programming fields. Male leaders dominate this field, with names such as Bill Gates and Tim Berners-Lee ubiquitous in the computing world. Female names in the narrative are rare. As Henson notes: “Women in computing do exist, but most people aren’t lucky enough to meet a female computer scientist.”\(^{37}\) Women who are successful in computing fields do not receive the same levels of acknowledgement as their male counterparts. There are some exceptions, with women like Carly Fiorina and Meg Whitman heading large organisations like Hewlett Packard and E-Bay. However, women who have made significant progress in fields of technical skill are not as widely recognised. In mathematics - a field similarly dominated by men - Gavin and Reis identify that “The names of the following female mathematicians are usually not recognised by boys or girls: Hypatia, Marie Agnesi, Sophie Germain, Evelyn Boyd Granville, Sonya Kovalevskaya, Mary Somerville.”\(^{38}\) These women made outstanding contributions to the advancement of maths, and yet they are not known to young girls learning the subject in formal education. Perhaps if they were, more women would have an interest in mathematic and scientific fields. Modelling behaviour is both required and important. The ‘Intervention’ website discusses this need and provides links to sites which present positive female digital mentoring. The ‘4000 Years of Women in Science’ website for example, shows girls that they have not been as

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\(^{37}\) Henson, *op. cit*

\(^{38}\) Gavin and Reis, *op. cit*
excluded from these traditionally male dominated domains, but have been erased from commonsensical histories and narratives of progress.

Another reason for women’s minor role in the technical nature of the Web is the continued dominance of men in the higher echelons of power and decision making. Sue Hatt elucidates this distinction in a university environment: “The way in which women are regarded in the working environment is influenced by social norms and stereotypes... Although those in senior research positions are likely to be male, in many departments, the majority of the administrative staff are women.”39 Men are also more likely to be awarded professorships and positions within the chancellery structure rather than their female counterparts. This hierarchy is paralleled in the corporate and governmental sectors of the workforce. Women are often confined to administrative jobs rather than the more influential executive positions in which they could effectively promote and support women learning about computer and Internet technologies. Underlying these structures are historical and social formations which have hindered women’s participation in intellectual fields. It is in these many areas that change needs to be made in order for there to be a more equal representation of women as Web users and technical contributors.

**Accessibility**

Having access to computers is important in gaining familiarity and knowledge of the digital medium. Experimenting with computers and the Web is necessary to achieve confidence and experience in learning how they operate. Women are often treated as

secondary citizens in the information technology discourse and are granted much less access to computer technology. It is men who grow up learning that their gender is more competent in computers and who eventually dominate the areas in which high levels of skill and expertise are required to create and develop digital technologies.

One of the first introductions to the computer that children receive is in the form of computer games. From Pac Man to The Sims, computer games have developed to become increasingly complex over the past twenty years. One feature that has remained constant: the dominance of games for and by males. As Eugenie Samuel in *New Scientist* discusses:

> In the 1980s, entertainment technology, such as games and toys, were made by men for men. The first generation of game programmers were nerdy boys, a group that was also into science fiction or fantasy and pseudo-military zap the enemy arcade games. And so they designed the computer games they wanted to play. Right from the start their games narrowed the market: most women (and, of course, many men) were simply not interested in this subculture. In the early 1990s, market research by Sega, Nintendo and others showed that more than 99 per cent of computer-game buyers were still men.40

As the games available were marketed towards men, over ninety nine per cent of computer game buyers were male. Gavin and Reis identified that “Software continues to be geared toward male interests, with males being the heroes in 63% of the software examined in one study (Nelson & Watson, 1991).”41 When Nintendo released Mario Brothers (and Sega introduced Sonic) a few years later, the games’ cartoonish appeal spread to girls as well as boys. However, these games were still inherently geared towards male interests. In Mario Brothers for example, the two male plumbers’ mission is

41 Gavin and Reis, *op. cit*
to rescue a trapped princess; the traditional tale of the man rescuing the helpless woman was merely reified in this game.

In 2001, Melissa Chaika conducted research into the nature of the games and found that there was not a great change from the early 1980s in the computer games market:

A list of best-selling Sega and Nintendo titles reveals the obvious targeted market: boys. Take for example these games: *Blades of Vengeance*, *Vectorman*, *Primal Rages*, *Triple Play ’96* (baseball), *NHL ’96* (hockey), *Mighty Morphin Power Rangers*, *Madden ’96* (interactive football), *Killer Instinct*, *Chrono Trigger*, and of course *Mortal Kombat*. Few girls gravitate toward something called *Killer Instinct* or *NHL ’96*.

Although some girls would take an interest in some of these games - hockey for example, has many female fans - the masculine emphasis is still palpable. Computer games involving ‘girls’ sports, such as netball or softball, do not exist. Spender’s interpretation of these games explores content-base concerns. She noted that most video games were constructed so that the player aimed to kill as many people as possible - “with a preference for violence against women.” She also describes a study in which girls’ participation rates in computer games have dropped from 40% in the 1980s to 10% in the 1990s. This lack of interaction with computer technology is a disadvantage for girls. They are not learning the literacy associated with using computers in leisure that boys are encouraged to utilise. The confidence built in this sphere can spill into work-related competence, or at least the assurance to attempt new applications.

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43 Spender, p. 186.
44 Ibid.
When the computer games industry did begin to create games specifically for girls in the mid-1990s, they merely reproduced replicas of the conventional ideals of ‘femininity’. These games included themes such as choosing clothing from a virtual wardrobe and playing with a Barbie doll. A report from *Children Now* found that:

> In the world of gaming, girls seem to be forever associated with sugar and spice. Games for girls tend to focus on physical appearance or fashion style. Currently, Barbie® reigns supreme in the realm of video games for girls. Mattel’s Barbie® software games were the top-selling games for girls in 1998 and 1999, accounting for a considerable amount of Mattel’s $5.5 billion in net sales (*Mattel 1999 Earnings Report*; www.mattel.com. Last visited 11/29/00). A majority of Mattel’s software for girls focuses on traditional forms of play with its Barbie® dolls. For example, girls alter Barbie’s® appearance, clothes and accessories.45

The inaccessibility to computer games that are educational or non-gender specific at an early age is a contributing reason for the lack of women in technical fields of the Web and computing. Girls are not given an opportunity to expand the boundaries of gender restrictions and explore the technology’s capabilities much further. In the ‘Intervention’ website, there is a link in the ‘Computer Games’ page to a website which illustrates several non-gender specific games. For example, most children, regardless of gender, are interested in topics such as magic and puzzles. Computer games that do not enforce conventional gender roles through a masculine dominance are a potential solution in encouraging girls’ interest in the technology.

Inaccessibility to computers at a young age is an integral explanation to women’s later awkwardness with computers in non-leisure settings. Women do not have the same levels of confidence as men in handling the technology. In computer classes, many women find that men are given preferential treatment from teachers, and as technicians men make the

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technology look mysterious and beyond women’s understanding. Spender provides an illustration of this paradigm:

Much more common is the computer support person who casts aside the client and after a series of flamboyant clicks, which emphasise his expertise and mystique, declares that all has been fixed, it was merely a matter of doing ‘X Y Z’. He proceeds to depart - looking bored and disdainful. The woman who asked for support and instruction is none the wiser.46

The unwillingness men often show in teaching women about computers and the Web is indicative of their desire to keep computer technology encased within a highly masculinised space. Women are denied access to the ‘expertise’ the technician demonstrates, which furthers their awkwardness in the environment.

This behaviour is also observable on the Web. Women’s literacy in Web-mediated sites depends upon their level of comfort with computers. It is only within the last few years that women have caught up with men in terms of numbers, and as such, many are still inexperienced in using the medium. This is another facet in which men can dominate and intimidate women. As Patricia Wallace notes:

As often happens on the net, particularly in the less psychological spaces, women wind up in the category of newbie. They are usually the target of more attention, and they frequently get more assistance from the male players. This trend fits well into the gender stereotype of men as the knowledgeable experts and females as the dependent newcomers.47

The position of females as the ‘dependent newcomers’ is another reason for the poor representation of women in fields of technical computer skills. If they are unable to feel comfortable with merely using the computer and the Web, it is very unlikely that they will feel encouraged to explore the mechanical aspects of its construction.

46 Spender op. cit, p. 184.
A significant reason for the alienation most women feel in regard to the technical realm of computers is the men-only ‘clubs’ that form. The assumption that the average computer operator is male remains common, as Wendy Harcourt points out: “Popular imagery tends to exclude women as participants in cyberspace, with the typical image of the Web user as a middle class (white) male ‘techie’.”48 Beyond the generic ‘participants in cyberspace’ exists organised groups with specific knowledges of the digital realm which are almost always male-dominated. Computer clubs reflect this discourse. For example, in the ‘Intervention’ website, the link to the New Zealand Computer Club reveals that the group consists entirely of men.49 The University of Western Australia Computer Club website also provides a list of its members. An examination of these names shows that the majority are male.50

Another example of male-only groups is computer hackers. Tove Håpnes and Knut H. Sørensen studied hacking in Norway and found that “(t)hey are a strictly male and very marginal community, extreme in their engagement with computers.”51 These men-only groups exclude women from gaining knowledge equal to their own. They perpetuate a masculine domination of digital fields and maintain an intimidating front to women.

A particularly significant reason for women’s computing access difficulties involves the perpetuation of traditional gender roles which involve confining many women to a domestic environment. For women who have a family, often the demands of looking after a household and children is enough to discourage their interest in developing a more technical interest in the operation of computers and the Web. This is not a predicament most men have to confront. In discussing the gender bias in computing, Spender cited Leila Chang, a woman who works for HiTech Entertainment and who expressed her disdain for her male colleagues’ ideas:

To a lot of the guys in the industry it never occurs to them why their wives never play video games. Women are not interested in activities that reinforce the notion that we should be sitting around waiting for some guy to marry us and let us tend for him in his house and have his babies.52

The traditional ideal of a wife staying at home while her husband goes to work is a pervasive narrative in the male-dominated technological field. It is an ideology underlying many of the obstacles which hinder women from learning higher-end skills about computing and digital technology. It is not real, nor is it an accurate representation of women’s lives.

The demands of taking care of a family deny many women access to developing any interest they may have in learning about computer sciences. In fact, in an email I received from a Web design company, the (male) director remarked that “most of our good female designers we can't get enough of due to their family commitments.”53 Women who do have an interest in Web technologies find that their role as a ‘mother’ limits their abilities

52 Leila Chang, as cited by Spender, op. cit, p. 187.
53 Gary Barber, email correspondence, Perth, Western Australia, received 9/10/03.
in expanding their knowledge and experience. It appears that the role of ‘father’ is not as relevant.

Another important reason for the lack of many women’s involvement in digital texts and sites is their inability to access the technology due to economic reasons. If they have received an education about computers and the Web, the capacity to be able to afford access to it can be limiting. Robert Adrian recognises this class based inequality: “When reading about or contemplating the amazing techno-future promised by the superhighway propagandists and cyber-industry barons it is wise to remember that it applies only to those of us with telephones, electronic gadgetry and purchasing power.”54 Women earn less wages on average than men.55 Their access to the technologies Adrian identifies - particularly ‘electronic gadgetry’ - is not within the reach of many. Spender also identifies this lack of economic power that many women face:

At the moment there are many barriers to women’s participation. One of the most obvious is that it costs money to purchase a computer, training and, for most people, time on the net. Because women have on average less money than men, they can be disadvantaged. When they can’t get into this new medium, their disadvantage - and their lower financial rewards - are being compounded….It’s a case of the information-poor getting poorer.56

The money required for access to computers and the Web puts many at a disadvantage. Women are not only ‘information-poor’ because of this inequality. They are also knowledge-poor, as they do not have the capital equal to men to access the technological hardware in sufficient numbers.

The reasons I have outlined in this chapter for women’s poor representation in education and careers relating to the more valued areas of computing and the Web perpetuate the historical traditions that privilege men’s immersion in digitisation. Women are faced with multifarious barriers in bridging the gender divide in digital politics at almost every stage of their life. Many of these concerns are addressed in the ‘Intervention’ website which provides the evidential base for this chapter. The links provide information about how women are beginning to overcome these barriers.

In probing the lack of women in the technical development of computing, Millar noted “Some feminists even suggest that the perception that women’s relationship with information technology is problematic is a generational one that is simply not expressed by younger women who have grown up with electronic communication.” The perception of women’s discomfort with computing resulting from generational differences is a valid proposition. However, I have discovered throughout this chapter that it is not entirely a problem of age or generation. Education, social attitudes and accessibility are primary factors in determining the level of confidence women experience when in learning about digital technology.

57 Millar, op. cit, p. 56.
The Journalist

This Journalist is in her late-twenties. She works for a daily newspaper and relies on the Internet for research on a daily basis in her job. She has little interest in gaining knowledge of the digital technology beyond the applications relevant to her employment and leisure. Her comments are perceptive in conveying the limiting social and cultural representations of women in the media.1

Do you remember when you first heard about the Web?
I was pretty young. I remember being at my cousin’s house. He was always big on technology. We were chatting with a dude in Perth. We pretended we were a big buxom lady and peeped around the corner at him from the McDonalds where we were supposed to meet.

How often do you use the Internet?
All day every day. I’m on it all the time at work - just to distract me or to find out things. It’s a lot easier than looking up a book or asking someone. We’ve got an intranet where I work. So I can always look up news stories that are on the same vein as what I’m writing - it may have been written in a News Limited publication in New York, Sydney, wherever.

What level of expertise do you have with the Web?
Google is my favourite thing in the whole world. But I still don’t think I’m very good at using it. It still takes me a while to be able to search for exactly what I need. I think I need to be more in touch with different types of search engines. I just did a course [in Investigative Journalism] which showed me all these other different kinds of websites. It showed me how to use government, overseas and other kinds of database websites.

What activities, sites or topics do you engage in during your periods of web usage?
Internet banking, paying bills, checking the weather. I’m always on news.com and I’m always looking up gossip, magazines and fashion. Email is a big thing. I email one of my best friends who sits next to me at work! Often I’ll email one of my editors who sits behind me. Sometimes I just can’t be bothered having a conversation.

What is your job?
I’m a journalist by trade. I write for the features section of the Sunday Times. It means I write pretty much anything that is thrown my way: arts, fashion, music. I could do reviews for plays or a CD. I might be asked to do a lift-out on property. The last lift-out I did was articles and statistics for changes in real estate, property and land sales in

1 Chapter Four Participant. Interviewed by Carrie Kilpin in Perth, Western Australia. Oral interview conducted 9/3/04.
Western Australia. I also write for Prestige Property which is a lift-out that goes through the western suburbs.

Do you use the Internet very much in research for your stories?
The Internet is pretty much my main source. If there’s a play that is in town I usually look up on the Net who has written it, the history of the person who’s written this play, and where this play has been. When it comes to arts and fashion and music, the Internet is it.

Why do you think it is so important for women in media productions like film and news reading to conform to certain standards of ‘beauty’?
I could look at a dog ugly woman reading the news on TV and I really wouldn’t give a shit. But I can’t imagine any man in the room would take her seriously. They probably wouldn’t look at her as reading the news, they’d look at her as an ugly woman.

I’ve done some research into ads for digital products (like computers) in magazines and found that almost every time, the person represented as the product’s operator is male. If a female is featured, it’s usually as a sex object, or to show her as incompetent in some way. Why do you think this is still occurring in this day and age?
I think a lot of women are portrayed like that because they would just rather not know. It’s too hard, not their thing and would rather leave it up to someone else. But then, my girlfriends who do do it, do it really well. They would be completely insulted by those kinds of campaigns.

I must admit that I can’t get my head around coding in computer design. In the website company I [used] to work for, there were two girls and about thirty guys. When I first started, I said ‘Yeah, yeah, I know html!” because I thought it was an abbreviation for Hotmail. So I was given a lot of coding and I was like ‘What the fuck is this?’ They said ‘You said you knew html!” I told them I thought it was hotmail and everyone laughed.

I wanted to stay ignorant to all that coding, [although] I would love to be able to put pictures on a screen. Slowly, at the end of my job I was asking questions and wanting to know how to do certain things. But I must admit I like being ignorant to all that. I think of it as being a boy thing - just like Pacman. Although I really did like computer games.

Do you think the media can ‘reflect’ society?
No matter what you put in a paper or on TV, there’s a whole sphere of things you’re leaving out. There’s too much going on, and too much that is never going to sell a paper. There are things that people don’t want to know about, and that’s never going to go to print. Murders and rapes and bashings usually sell. But somebody in an Aboriginal community getting a job won’t - not unless this person has gone through young adult
delinquency or something marketable, it’s not going to be a story. That is a shame because society needs to know that these types of things are important.

**Do you think the media is patriarchal? Does it portray women fairly in news stories?**

Michelle Roberts [the Western Australian Government Police Minister] is often quoted as saying things in defence of the police and she’s often quoted as saying quite intelligent things. Usually, they back it up with a quote from Barry Matthews [the Western Australian Police Commissioner]. I do think they give a fair go to women in industries of their own expertise, like Fiona Stanley. I think the media in Australia are quite willing to push forward women as powerful figures in the community. But they are also just as ready to jump on the bandwagon when a woman fails quite miserably, whether it be Pauline Hanson or Cheryl Kernot. They like to make a victim out of a woman. They like to persecute a woman. I think the media is a little bit happier to see a woman fail than a man because it’s more newsworthy.
Chapter Four

Moving Beyond a Digital Girl Friday: 
Women in the Media

I recently saw the film American Pie\(^1\) for the first time. The plot is based upon the pact several teenage boys make to lose their virginity by the end of their final year of high school. Their activities in pursuing this objective are predictable: they stumble, fumble and frequently embarrass themselves, but ultimately they all succeed. However, there was one particular scene I found significant. A European exchange student named Nadia asks the main character Jim, if she can change out of her sports clothing in his bedroom before a tutoring session. As advised by his fellow conspirators, he sets up a webcam to broadcast her undressing live across the Internet. The masculine gaze in this scene is ubiquitous. The camera shot focuses upon a webcam silently recording Nadia’s movements. This is followed by several shots of groups of males circled around their respective computers gawking and verbally encouraging the transmission. The filming technique of the bedroom scene immediately separates Nadia from the ‘boy’s club’. The camera frames her as a sexualised object through a high camera lens angle which participates in further subjugating her body to the masculine gaze.

The Web provides a convenient mechanism for voyeurism. In relation to the Internet and World Wide Web, women are repeatedly positioned as incompetent or objectified in mainstream motion media. The scene from American Pie is an example of how women

\(^1\) Chris Weitz, Paul Weitz (Dirs.), American Pie, Universal, 1999, starring Shannon Elizabeth (Nadia) and Jason Biggs (Jim).
are textually positioned outside technological discourses. The lack of confidence many women actually do hold in relation to using computers and the Internet is rarely addressed as a social issue requiring social concern, positive cultural policy, intervention or educational initiatives. Rather, media texts from Hollywood-based cinematic genres capture women’s uncertainty, ambivalence or under-confidence as a point of humour or humiliation in constructing a narrative.

The increasing numbers of women using the Internet demonstrates that the intimidation and barriers blocking their access are declining. Older generations of women are still exhibiting reluctance in using a medium they have been taught is coded as male and exclusionary. Women are not encouraged to challenge restrictive social and cultural boundaries in digital technologies when they view inept female characters as incompetent in the Internet discourse.

In any analysis of popular media, a regard for the social and cultural origins from which the text has been produced is important. For example, articles in newspapers described the advent of radio. Years later, discussions on radio framed the invention of television. A similar process exists in the case of the Internet. The stories told in television and film inform their audience about the ideologies evolving in this relatively new field. The values regarding the gendered use of the Internet are portrayed through traditional storytelling elements (including character construction and dialogue). In an article discussing social change in electronic media, Joseph Scmitz identifies that “Media systems are

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conceived, enacted, and given meaning by the social context that surrounds them.”\(^3\) The ‘social context’ framing the use of the Internet and Web is the older media such as film, print, radio and television. However, a significant element of the media’s ‘social context’ is also its patriarchal, consumerist modality. Masculine authority is a dominant grammar in the discourses of technology and journalism. As such, the attitudes and values a text conveys will perpetuate patriarchal modalities. A challenge to this paradigm was created in the film *The Net.*\(^4\) The central character is a female who is adept at operating digital technologies. She disturbs historical assumptions that women are incompetent in fields of technological skill.

Representations of women who use the Web and its related technologies in the media are the focus of this chapter. This is a topic Spender did not address in *Nattering on the Net.* Although she discusses how the digital medium has the potential to radically change the way in which media entities are viewed,\(^5\) she does not examine how women are represented in already existing texts. I explore if media productions support the Web’s potential to challenge the boundaries of patriarchal restrictions, or if they reiterate traditional images of awkward women under-confident in digital technologies. The types of media I discuss encompass texts from Hollywood cinema, computer magazines and newspapers. The first part of the chapter investigates how women are represented in the cinema as Web-users. In film, female characters are often constructed within limited roles


\(^5\) Spender discusses that: “The electronic media can go even further. Within bounds that cyberspace sets, new artistic freedoms and forms will emerge. They range from computer graphics to virtual reality and include interactive fiction. We are only beginning to glimpse the creative and intellectual possibilities of cyberspace.” *Nattering on the Net*, Melbourne, Spinifex Press, 1995, p. 51.
such as a mother, love interest or object of sexuality. I ask if this paradigm is disrupted in films in which they are operators of the Web and the Internet, such as *The Net*. I analyse if cinema is teaching its audience that women are still subjugated by digital technologies, or if they can contest these archetypes. Films that are also considered include *You’ve Got Mail* and *Hackers*.

The second part of the chapter concentrates on news stories in the popular media. Journalistic writing styles, including language choice and ideology, are explored in order to discern how ‘Web women’ are represented. I ponder how advertising and magazine iconography present women’s connection to digital technology. Magazines are coded as less credible than newspapers and are traditionally considered a site of popular consumption by women. Subverting this maxim, I examine two publications - *PC User Australia* and *Wired* magazine - which are dominantly consumed by male readers. These have been chosen as they are popular sites of consumption for news relating to computer and Web use. They contain many examples of varying representations of gender in the use of digital technologies.

In her research, Gaye Tuchman discusses a theory formed by George Gerbner called *symbolic annihilation*. Tuchman uses the theory to draw attention to the trivialisation, condemnation and absence of women in the media. She discusses how ‘symbolic representation’ in the media prioritises dominant social values (such as the nuclear family), resulting in a symbolic annihilation which sidelines and under-values women who challenge traditional sex-gender roles. For example, symbolic annihilation is

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apparent in television when considering that “working women in television plots are symbolically denigrated by being portrayed as incompetent or inferior to male workers … Women do not appear in the same professions as men: men are doctors, women nurses; men are lawyers, women secretaries; men work in corporations, women tend boutiques.”

This paradigm is observable in numerous media texts. Advertisements selling household goods such as dishwashing liquid feature women using the product, while those promoting car engine oil are more likely to contain a man. This symbolic annihilation of women is also applicable in popular media codings of the Web. Computer magazines, for example, participate in sidelining women by regularly presenting males as the dominant operators of the Internet. Women are also denigrated in films in which the Web, or its related technology, form a part of a plotline. Female characters rarely embody the intelligent hero in a film. This patriarchal premise is evident throughout much of my analysis of media texts in this chapter.

Women as Web Operators in Mainstream Film

Within cinema, particularly the Hollywood genre, there is an acknowledged history of weak and submissive female characters who occupy secondary and supporting roles to the male protagonist. Tuchman’s theory of the symbolic annihilation of women is observable in the frequency of inferior roles to which women are relegated. Teresa de Lauretis recognises a “narrative of feminine love and honor as eternal and selfless devotion to her husband” portrayed by female characters in popular film. Similarly, bell hooks critiqued the sex object/domestic role of women in Spike Lee films, “[t]he film

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7 Ibid, p. 408.
begins with scenes of lovemaking, where she is busy pleasuring her man. We see her later in the film cooking and cleaning. Even her job is mainly about looking good." This example of the narrow typecasting of female actors is prevalent in the Hollywood narrative. With only few exceptions, there are a lack of films positioning women in roles positively portraying independence and strength. Female characters who do embody characteristics that detract from a traditionally-defined femininity are often depicted in a devastating outcome. For example, in her article ‘The War Against Feminism’, Nancy Gibbs supports Susan Faludi’s claim about popular film’s participation in the feminist backlash: “Faludi finds that female characters were more likely to be portrayed as obsessed with career at the expense of family (Broadcast News), burning out from the rat race (Baby Boom), abandoning their children (Three Men and a Baby) or exploring the rewards of prostitution (Pretty Woman).” These female characters are presented as unstable and damaging to a feminist ideology. Their failure in managing successful personal and professional lives informs the audience that women are much better suited to occupying a singular role - preferably the domesticated, patriarchally-defined housewife.

A digital trope links the scenes I examine in this section; female characters who use the Web or its related technology as a part of the film’s narrative. My observations found that

9 bell hooks “Male Heroes and Female Sex Objects: Sexism in Spike Lee's Malcolm X”, Cineaste, Fall 1992, Volume 19, Number 4, full text.
10 Although it is now quite common for Hollywood films to feature women in the main role, such as in Legally Blonde [Robert Luketic (dir.), MGM, 2001. Starring Reese Witherspoon as Elle Woods], these female characters rarely break from cultural conventions in which they are primarily concerned with their appearance. Exceptions include Erin Brockovich [Steven Soderbergh (dir.), Universal Pictures, 2000. Starring Julia Roberts as Erin Brockovich], The Hours, [Stephen Daldry (dir.) Paramount Pictures, 2002. Starring Meryl Streep as Clarissa Vaughan, Julianne Moore as Laura Brown and Nicole Kidman as Virginia Woolf] and the Alien quartet [James Cameron (dir.), Alien, 1979, Aliens, 1986, Alien 3, 1992, Alien Resurrection, 1997, Twentieth Century Fox. Starring Sigourney Weaver as Ellen Ripley].
these characters were presented as incompetent operators of the Internet. The ideologies emanating from these films articulate that women are inept users of technology. The roles women have occupied within the genre of science fiction and action have been particularly marginalised. As Yvonne Tasker recognises in her book *Working Girls: Gender and Sexuality in Popular Cinema*, “[t]hough there have been some spectacular (and much debated) exceptions, including *Alien* and its sequels, * Terminator 2* or the more recent *The Long Kiss Goodnight*, the majority of big-budgeted action movies continue to focus primarily on male protagonists and to position women in supportive, often romantic roles.”

Just as this genre has persistently excluded women from leading roles, many films in which the Web is a part of the storyline sideline female characters. Thus far, there has only been one film about the Internet in which a female has starred in a high profile role as the sole protagonist. This is *The Net*.

*The Net* is about a single woman (Angela Bennett) who lives her life working mostly in front of a computer. She has little contact with other people except her therapist who believes her to be deluded, and her mother who suffers from Alzheimer’s disease. When she accesses a disk that is linked via the Web to secret files belonging to a terrorist agency, she is hunted by a hit man. Having escaped his murderous intent, she finds that her entire identity has been erased from computer files throughout the country. Due to Angela’s introverted nature, there is no one who recognises her except her therapist who is soon murdered. The plot develops with her attempts to alert the FBI about this terrorist network before she is captured.

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The Net has been praised as being the first to feature a woman in a leading role. Stanley Kauffmann extols this attribute in The New Republic:

[T]his screenplay by John Brancato and Michael Ferris is bold, original, a milestone. The protagonist is a woman. What's more, she's not just one half of a romance, with a male waiting for union with her at the end of a twisty trail. If ever there were a pop-film heroine not defined by men, she's the one.13

Kauffmann’s comment may illustrate the importance of the central character’s gender, however he fails to identify that she does not represent the strong, confident hero most male protagonists epitomise. Angela Bennett is presented as socially inept: she has no friends, orders pizza for dinner through the Web and becomes embarrassingly nervous when approached by a man. For example, at the beginning of the film there is a scene where she has a drink with a man she has just met. He asks her “Computers are your life, aren’t they?” She replies, “yes, perfect hiding place.”14 However, when forced to fight to regain her identity - which involves many action scenes and heightened interactions with other people - she achieves independence away from her computer and a ‘healthier’ personality. While the narrative does show her developing a stronger, more confident identity, ultimately she is constructed as a woman who is highly intelligent but unable to participate with much skill in social interactions. The Angela Bennett character is awkward and unsociable while she works with the Web, but when her computer has been taken away she develops strength outside of the digital discourse, thus seeming to ‘prove’ the ideology that women are unable to sustain a compromise between maintaining sophisticated computer abilities and social skills.

14 Irwin Winkler (Dir.), The Net. op. cit
This representation of the socially inept ‘geek girl’ is part of a cinematic continuum involving female operators of computers and associated technology. Other films that have perpetuated the typecast of intelligent but awkward women include The Matrix in which Trinity is one of only two females in a band of outsiders; The X-Files: Fight the Future continues the narrative of the unsociable Dr Dana Scully from the television series; and Clarice Starling in The Silence of the Lambs is an inexperienced novice in the male dominated FBI. The social and political function of women in these films is to provide an antagonist to the patriarchal system. In The Matrix for example, the ‘system’ is constructed by computers which create the matrix world and imprison human beings inside it. Trinity is part of a rogue group determined to end the control of these

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15 Larry Wachowski, Andy Wachowski (Dirs.), The Matrix, Warner, 1999. Starring Carrie-Anne Moss (Trinity) and Keanu Reeves (Neo).
16 Rob Bowman (Dir.), The X-Files: Fight the Future, written by Chris Carter, Directed by Rob Bowman, Twentieth Century Fox, 1998, starring Gillian Anderson (Dana Scully) and David Duchovny (Fox Mulder).
computers. Her ‘awkwardness’ is evident in the way she is configured as the outsider within that group. The other female member dies early in the film, leaving her as the only woman - and the target of at least two of the male characters’ romantic interests. The Trinity character develops as an object of sexual desire, not as an independent operator of digital technologies.

Even in films that have short scenes involving computers, the female operators of the technology are still relegated as incompetent. In My Best Friend’s Wedding, Julianne, the main character, is shown using email in an attempt to destroy her friend’s impending marriage. Borrowing the bride’s father’s computer, she is fidgety and nervous while typing the message. She is so awkward in this scene that she even falls off the chair. Although these actions are supposed to be associated with her underhanded actions, she is nevertheless presented as a devious and inept character; the opposite of the calm and confident (male) computer owner. The audience infers that females are unskilled, unstable and unable to maintain an intelligent interest in the digital medium.

Another favoured Hollywood film narrative involves the intelligent female character gaining happiness only if she is romantically entangled in a heterosexual, monogamous relationship. Her intellect is secondary to her abilities in attaining the attention of the leading male protagonist. Once again, The Matrix follows in this tradition. Trinity’s chief role is to serve as Neo’s love interest. Similarly, Hackers presents a highly intelligent lone female ‘belonging’ to a group of men. Rather than presenting the character of Kate

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19 Iain Softley (Dir.), Hackers, MGM Home Entertainment, 1995. Starring Angelina Jolie (Kate) and Johnny Lee Millar (Dade).
as independent of masculine admiration and worthy of respect for her talents and skills in the digital realm, she is constantly involved with other men. Her initial boyfriend, although unequal to her abilities in computer use, is nevertheless shown as dominant in their relationship - such as when she rides pillion on the back of his motorcycle when they leave a computer arcade. The plot development involves a competition between Kate and the lead character (Dade) wherein a series of tests are constructed to determine the better hacker. If Dade won, his ‘prize’ was to take Kate on a date. The hacking feats performed by both the characters in the movie exemplify that they possess equal skill in penetrating highly secure computer databases. However, the contest concludes with the adjudicators (a group of male hackers) declaring Dade to be the winner - the decision based upon their opinion that there is no other way he could get a date. In this film, Kate’s gender causes her to be judged the loser, while Dade’s romantic interests triumph. However, she is shown to be happy at the end of the film because she also ‘wins’ by entering a relationship with the male protagonist.

You’ve Got Mail is another Hollywood film that subordinates the female character in preference to maintaining patriarchal values epitomised by a domineering male. In the film’s narrative, Katherine Kelly owns a small bookshop inherited from her mother. She runs it successfully until a chain store selling a larger range of discount priced books opens nearby. At the same time, she is in an unsatisfactory relationship and uses the Web to meet other people. In a chatroom, she meets a man with whom she regularly corresponds by email. She describes to her employees that, “[o]n my birthday I went into

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20 Nora Ephron (Dir.), You’ve Got Mail, Warner Bros., 1998. Starring Meg Ryan (Katherine Kelly) and Tom Hanks (Joe Fox).
the over-thirty room for a joke, sort of, and he was there and we started chatting.”21 She finds herself attracted to the unidentified man’s words. When they eventually meet, she discovers that he is the owner of the domineering chain store which ruined her business. Despite the fact that he intentionally forced her to close her mother’s shop, she remains seduced and starts a relationship with him. This film is a vivid example of how the narrative in Hollywood film denigrates women who characterise intelligence and independence by ultimately moving them into a relationship with the dominating male protagonist. Women are configured as the submissive gender; their inadequacy at maintaining an independent identity is evidence of Tuchman’s concept of the symbolic annihilation of women in film. They are portrayed as gaining ‘completeness’ only through a heterosexual romance.

The focus on women’s bodies is another mode of denigration within the cinematic discourse. The physical appearance of female characters in Hollywood film is valued more than their intellectual abilities. In visual media, E. Ann Kaplan notes that women are configured to conform to one of three main images: as an asexual mother, a fetishized object, or degraded through a voyeuristic gaze in which the female body is objectified and has no intrinsic meaning beyond a corporeal identity.22 The character of Kate in Hackers is an example of the corporeal object within Kaplan’s theory. By maintaining the physical conventions of a typical heterosexual female role, she is configured as an entity which is vital for the consumption of the masculine gaze. Kate is tall, slim, and wears modern fashions. This standard of ‘beauty’ is emphasised in the producer’s choice of

21 Ibid.
actress to play the character - Angelina Jolie portrayed a supermodel in another film; *Gia.*\(^{23}\) The value placed upon women’s physical appearances is part of a patriarchal construction that dictates women should maintain an ornamental role rather than an intellectual one. In an article about the lack of women in computer programming, Val Henson noted:

> Often, they don't appear to actually be using the computer and are just sort of decoratively posed near it. Movies and TV shows are no better. When a woman is depicted as a programmer, often, more screen time is spent admiring her shapely body and kissable lips than demonstrating her competence as a programmer. Notable example: Angelina Jolie in ‘Hackers’.\(^{24}\)

In *Hackers*, Kate’s computing abilities take a secondary position to her physical appearance. Pam Cook identifies an argument offered by Laura Mulvey that “Hollywood cinema was constituted by a system of looks dominated by a controlling male gaze at the highly fetishized figure of woman, thus confirming the traditional active male/passive female dichotomy.”\(^{25}\) The tradition perpetuated by this dichotomy is certainly apparent in films relating to Web use. Women are configured as passive characters in order to adequately conform to mainstream (male controlled) values.

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\(^{23}\) Michael Christopher (Dir.), *Gia*, HBO, 1998, starring Angelina Jolie (Gia).


Female characters that are allocated a degree of intelligence in mainstream film also conform to the dichotomy of the passive female - they are always provoked to explicitly address, mould and emphasize their femininity. They cannot operate in a narrative with the same ex-nominated freedom that male characters embody. For example, in *The Matrix*, Neo could easily have been cast as a female or male character. He is never challenged to prove a determinate masculine identity. Instead, it is Trinity who reveals her femininity. In a scene when the two characters meet for the first time, Neo is astonished to find Trinity is a woman. He was familiar only with her gender-neutral nickname through her reputation as a clever computer hacker. The scene exemplifies not only the intrinsic prejudice female operators of technology receive (through Neo’s assumption of Trinity being a man and therefore competent), but also the reference Hollywood cinema must always make towards positioning women as other. Trinity is outside of the masculine sphere, and the audience must be made aware of this.
Overt markers of femininity are observable in other movies about the Web and computer technology. In *The Net*, Angela Bennett uses a nickname of ‘Angel’ in a chatroom. Rather than disguising or remaking her virtual identity, she designates herself a feminine avatar. The word ‘angel’ carries with it connotations of innocence, goodness and beauty - three adjectives the Angela Bennett character embodies - as do all ‘good’ female characters in Hollywood film. In contrast, Ellen Ripley from the *Alien* quartet26 is rarely referred to as a ‘feminine’ character. She displays very few characteristics - such as innocence or subservience, which contribute towards the conventional female film character. Nevertheless, her masculinity is still marked in that she is repeatedly portrayed as a mother figure. Amy Taubin identifies these incarnations: “In the first film, she’s the career woman whose nurturing impulses are invested in her cat. In the second, she becomes the adoptive mother of Newt. In the third, having lost Newt, and with her biological clock running out, she discovers she’s pregnant - with an alien.”27 In *Alien Resurrection*, Ripley’s character is again personified as a mother figure - this time to an alien. James Bowman writes that she embodies a “nightmarish motherhood to a giant Alien fetus.”28 Even in films like *Alien* that stray from narratives of acquiescent femininity, signifiers of the female character’s otherness are prevalent.

Conventions in Hollywood film allow little space free of patriarchal values for female characters who access and deploy the Web in cinema. Women are presented in the

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26 *Alien* (Ridley Scott, Dir.), *Alien* (James Cameron, Dir.), *Alien 3* (David Fincher, Dir.), *Alien Resurrection* (Jean-Pierre Jeunet, Dir.), Twentieth Century Fox, 1979, 1986, 1992, 1997.
narrative as objects for the gratification of masculine desires - rather than independent, confident and competent characters. As Andrea Slane identifies, “[d]espite the fluidity of (non)identities promised in cyberspace, most films featuring computers do not unsettle gender binaries, nor the ensuing dominant association of women as opponents to technological ‘progress’.” Although the Web may provide some potential for women to challenge male dominance in areas such as the workplace, popular film continues to reinforce traditional values denigrating women’s place in technological realms. Widespread consumption of these movies assists in the systematic maintenance of gender discrimination.

**Women and the Web in the Print Media**

The inadequate representation of women in media decision making is mirrored in the media's inadequate representation of women's perspectives and concerns. In recent surveys, men provided 85 percent of newspaper quotes or references, accounted for 75 percent of the television interviewees, and constituted 90 percent of the most frequently cited pundits.

Deborah L. Rhode.

Rhode identifies an important reason that persuades women to doubt their computer and Web-use abilities. Overwhelmingly, there is a saturation of masculine ‘credibility’ in the iconography and language of print media. The media invests men with a higher degree of integrity in providing information in professional fields. They fill the role of ‘experts’. The lack of a female perspective is an indication of masculine-centred values that privilege men’s experience and expertise - to the neglect of women’s knowledges and

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consciousness. As Terry Threadgold explains, there is an “economic base of the capitalist patriarchal order in which women’s work - production, reproduction, sexuality and the socialisation of children - has no monetary value and is therefore constantly undervalued by men and women alike.”31 This ‘undervalued’ position is particularly observable in historical documents. Ross Harvey notes that “history books, once only written about great men and major battles [are] now much more concerned with the lives of women, the working classes, minority groups and so on.”32 This chapter has found evidence for Harvey’s analysis, moments of movement and change, but also continual sites of neglect in the print media. Representations of women as domestically-oriented consumers and mothers contribute towards placing women in secondary positions to men. The values extolled by the authors in mainstream print media such as The Sun Herald, Australian PC User or The Daily Telegraph are derived from a male-dominated society. The methods they use to write about women and technology reveal the extent to which femininity is demeaned, discredited or rendered redundant.

Images in magazines are also punctuated with a patriarchal grammar. Images in advertisements relating to computer and Internet devices often demean and undermine women’s lives, histories and expertise - presenting them as sex objects, incompetent or humorous. These representations contribute to the prevailing attitude that women are technologically inept. Overall, I found that the language and pictures in print media negatively capture and continue women’s operation of the Internet and the Web.

Newspapers

Journalistic writing is embedded within the ideological meaning systems of a man-made social and cultural system. Jacqui Ewart recognises the modality of news that journalists present depends a great deal upon a hierarchical structure controlling the article’s ideologies:

While journalists have some control over what makes news, which they exert through their choice of news according to their personal life and background, news is selected and rejected according to the construction of readership by a small group of people who control the paper, especially the editor, but also the chief of staff.33

This small group is most often composed of men.34 Editors are particularly influential in controlling the communication devices through which news is presented to its audience. For example, the language used in newspaper articles is written from a viewpoint that is inherently obstructive to women’s interests. In a Woman and Language article, Nicole Decure states: “English, like all languages, is a reflection of a culture and therefore sexist: a spinster is not the female equivalent of a bachelor.”35 In Nattering on the Net, Spender also identifies how patriarchal systems influence the media:

In her book Backlash, Susan Faludi interpreted and used research findings about women to convey a preconceived image; no matter what the researchers found, the media could use it to discredit feminists and to foster the premise that women should be in the home. While some such presentations were distortions, others were completely in defiance of the evidence - but they fitted the editorial policy and made a good story.36

34 In a study of American newspaper editors, Joe Strupp notes that: “Among the nation's top 30 daily-circulation newspapers, only eight have women editors. Of those 30 papers, 19 have changed editors within the past three years, with only four choosing women to fill the vacant posts. Three of the papers - the New York Daily News, the New York Post, and The Arizona Republic in Phoenix - chose to replace departing women with men.” Article found online at Editor and Publisher, “Women Editors On the Rise”, September 16, 2002. Downloaded from http://www.editorandpublisher.com/eandp/news/article_display.jsp?vnu_content_id=1709017. Accessed 1/2/04.
35 Nicole Decure, “The Difficulties of Teaching a ‘Man-made Language’”, Women and Language, Spring 1994, Volume 17, Number 1, p. 36.
Faludi’s work in *Backlash* was ground-breaking in identifying the failures of feminism - such as unequal wages and the media’s continual degradation of women and their achievements. Newspapers are a primary site within the media for constructing and reinforcing traditional views of women and their interests. The language used by reporters and journalists reiterates a negativity of women’s achievements outside of conventional stereotypes - this extends towards their operation of digital technology.

The choice of language and modality in a newspaper article is a significant monitor for this structural positioning of women in the digital environment. For example, this excerpt from a *St Petersburg Times* article, written by Susan Aschoff, reproduces many traditional notions of women as the domestic, surface-oriented and trivial gender:

> From where to find a date to how to raise children, from makeup bargains to nutrition advice, one-stop online sites for women are growing. But will their popularity last? They promise to prove www stands for what women want. Just click onto the Internet and go to a single place to fill every need. A daily horoscope. A baby crib discounted 10 percent. A live interview with Hillary Clinton in which she talks about her campaign for U.S. Senate. And her hair. Niche or ‘affinity sites’ for women combine information and services in one location. Addresses such as Oxygen.com, Women.com and iVillage.com are some of the most hyped on the Web today.37

The ‘www’ acronym - *what women want* is addressed by the author as a series of constructed ‘feminine’ interests. These suggestions, including how to find a date, a baby crib, or a horoscope reading, instruct (or confirm) that women’s interests are defined by dominant cultural ideologies. Women are informed through this type of communication that their online experience remains in areas of traditional feminine pursuits. By offering

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37 Susan Aschoff, “Chick Cliques”, *St. Petersburg Times*, South Pinellas (Florida, USA), 01/24/2000, full text.
the options of the Web “to fill every need”\textsuperscript{38} for women, Aschoff is contributing to the dominant perception that women’s interests are restricted to domestic and non-intellectual activities. Words such as ‘niche’ further exemplify the lack of importance women are allotted as Internet operators. They are presented as a small and insignificant group. Through the use of this language, they are symbolically annihilated as Web-operators from participating with credibility in the print media.

Articles deploying language and ideology like the piece from the \textit{St Petersburg Times} are found in myriad newspapers. In Germany for example, an article in \textit{Deutsche Presse-Agentur} introducing women to the Web adopts an even more derisive attitude towards Web content aimed at women:

\begin{quote}
Many Web sites for women are feminist in outlook and hard to bear for female Internet users who may be less interested in this kind of politics. One such site is maintained by the Virtual Sisterhood (http://www.igc.apc.org/vsister/).

The Sisterhood have been trying for a year to set up a global women's network with a view to strengthening international feminist organisations. They supply politically tinged information about women in science and technology, art and literature.

[…]

But do not be misled into believing that none but dyed-in-the-wool feminists use the Net. There is something for everyone, from a political youth page, New Moon (http://newmoon.org), which is edited and run by girls, via a home page about preparing to get married (http://weddingweb.com) to cookery recipes for the wired housewife.\textsuperscript{39}
\end{quote}

The belittling of feminist ideology and its voice on the Web is direct evidence of the influence of patriarchal values threaded throughout the mainstream press. Even though

\textsuperscript{38} \textit{Ibid.}

\textsuperscript{39} Meike Bruhns, “Cybersisters flex their muscle on the Net”, \textit{Deutsche Presse-Agentur}, Hamburg, 14/12/1996, full text.
this article does inform women about sites outside of ‘typical’ feminine interest, such as
science and technology, it refers to them as politically tinged. The word ‘tinged’ causes
these subjects to appear disturbing and troubling to a traditional ideology of femininity.
The home page offering recipes for the ‘wired housewife’ also perpetuates a traditional
ideal of women using the Web for activities relating to conventional gender roles.

Other newspaper articles are not as explicit in portraying female Web operators in such a
conventionalized pigeonhole. However, they still manage to depict women as second-
class Web citizens by rendering them as the ‘other’ in cyberspace. This article, from the
Sun Herald, inadvertently labels women as technologically backward:

Cyberspace was a destination half the population had no desire - or reason - to
visit. But now it's being explored and conquered by women. FIONA STEWART
reports.

www dot com. Two or three years ago most people had never heard those
“words”, let alone knew what they meant. But the Internet, once the domain of
scientists, the military, computer engineers and subversive teenage hackers, has
become part of everyday existence.
Once alien territory that only the technically gifted dared explore, the Internet was
dominated by males from the start. Shoot-em-up games and pornography, the
main attractions on the web in its early stages, added to its blokey, unappealing
image. Women, not surprisingly, stayed away in droves.

[...] 

Mrs Moffatt was introduced to information technology (IT) by Conway Berners-
Lee, the father of Tim Berners-Lee, who invented the World Wide Web in 1993.
“Forty years ago, only a handful of women were involved with computers, but
women have been breaking new technological ground from the beginning,” Mrs
Moffatt said. “Take Countess Ada Lovelace, Lord Byron's only legitimate
daughter, who worked with Charles Babbage, the father of the modern computer.
“And, during WWII, the women working on the Colossus codebreaking project
were actually called ‘computers’.”
Despite the phenomenal growth of the IT industry, only 20pc of the 300,000
computer professionals in Australia are women.
So why are female school leavers and graduates not taking the bait?
“Sadly girls don't think they're capable,” she said. “They think a career in computing is all about boys' toys and reject it as being too blokey. They also believe they'll have to turn into Einstein and boys won't find them attractive. Many think you have to have a degree, but only half of the people in the industry have a degree of any kind. In fact, 80pc of the jobs in IT could be done by well-trained school leavers or people who have done TAFE courses. “It's a pity that girls think this way because it's a wonderful job for a woman. With people in short supply, it's flexible, you can even work at home. Thanks to my career, I've been able to travel and bring up six children, mostly as a single mother. I've had a ball.”

Mrs Moffatt is enthusiastic about awareness-raising efforts such as the recent Women's Online Week (WOW!), a Commonwealth Government initiative designed to show women how to take advantage of online information and services, as well as help them develop the skills for an IT career.

“The Net is a fantastic resource for women, it’s so empowering,” she said. “Yet a lot of people hold back because they think it (surfing the web) is difficult and they’re afraid of looking stupid if they can’t get the hang of it.”

The language in this excerpt subtly exemplifies many facets in how women are discouraged from learning about the Web. The article appears to be encouraging - it presents a history of women as computer operators, citing the example of Ada Lovelace and the ‘easy’ (non-degree) educational requirements. However, it also operates on another, more political level to symbolically annihilate women by informing them that the web is still very much a masculine domain. For example, the author, Fiona Stewart, begins the article by reporting that women have had no desire or reason to visit cyberspace, as it was the ‘domain of scientists, the military and computer engineers’.

Stewart implies that women are excluded from these occupations and spheres. Women are notified that their interest in the Web would not have any investment in these ‘masculine’ sites requiring a high degree of skill and intelligence. The readers are also informed that not surprisingly women do not have any interest in pornography or

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computer games. As ‘alien territory’ to females, Stewart makes it seem obvious that only men would have an interest in entering the digital realm.

Further into the article, Stewart draws on an example of a woman who works in computing, Ann Moffatt, to illustrate the alienation females have received in this industry. Stewart cites several comments made by Moffatt that are effective in portraying how women will be viewed by men if they do attempt to use the Web. When Moffatt claims that the educational qualifications required to work in IT are not necessarily as high as many women may presume, she is degrading their intelligence by implying that most women do not think they are intelligent enough to attain a degree. The article also presents stigmatising stereotypes warning women what will happen to their ‘femininity’ if they do attempt to use the Web. Spender writes about how women “turn away from … the image of the scientist of the computer hacker” as “[i]t doesn’t fit with their notions of themselves as young women.” The statement that if women turn into Einstein, boys won’t find them attractive is instrumental in maintaining the patriarchal value that women should remain focused upon their ‘biological destinies’ while men dominate sites of intellectual activity.

Moffatt also mentions the case of Countess Ada Lovelace - an example revisited repeatedly in accounts of female influence in early computing history. However she

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41 Dale Spender, op. cit, p. 173.
42 Ibid.
43 This dichotomy is a part of the sex-gender distinction that limits women’s capabilities to biological, corporeal and reproductive abilities, while men receive ‘superior’ intellectual, and cultural traits. This dichotomy has been disproven by feminists on numerous occasions, such as Moira Gatens (in “A Critique of the Sex/Gender Distinction”, in Judith Allen and Paul Patton (Eds.) Beyond Marxism? Interventions after Marx, Sydney, Intervention Publications, 1983). However its values are perpetuated in the media.
encases Lovelace’s name within men’s identities (Lord Byron and Charles Babbage),
thus demonstrating that a woman could not have handled such a responsibility on her
own. She also emphasises that Lovelace was Byron’s only legitimate daughter and she
was therefore operating safely within the laws of the patriarchy.

Stewart’s statistics confirming the small proportions of female participation within the
computing industry functions to further notify women of their lack of influence. The
figures, which are repeated in several different ways throughout the article (such as ‘only
20pc of the 300,000 computer professionals in Australia are women’) discourage women
who have had little experience with computers. Shown as ‘representing fact’, statistics
are a tool often used to intimidate and warn women away from masculine domains.
Furthermore, as shown throughout this thesis, the credibility and certainty of these
surveys and statistics is not always assured.44 All surveys require context, interpretation
and analysis. Spender concurs with the ideological nature of the news media. She
discusses how facts reproduced in news reports can lead to inaccuracies, “[s]ometimes
the media tries to use the findings of the research community to create a good story which
leads to inaccuracies and misrepresentation.”45 Stewart’s use of these figures does not
courage women to find out more about the Web - rather she demonstrates and
reinforces the ideology that men continue to dominate in this traditional site of
masculinity. The short reference to the Women’s Online Week initiative is the only
positive - interventionist - information that women receive from the article. Although it is

44 See Chapter Two for an example of how statistics can ‘miss’ certain people during surveys, leading to
inaccurate results.
45 Spender, op. cit p. 127.
singling women out as needing special treatment to learn about the Web, it is at least offering assistance to those who read newspaper articles.

The perpetuation in the media of women as inferior technological operators reinforces an unfair perception that they lack the Web literacies of men. Masculine standards are the ideal against which women’s skills and knowledge are compared. Academic journals often contain articles indicating the necessity for women to view positive media coverage about their gender. For example, the *Academic Exchange Quarterly* found that “articles written by women scientists, descriptions of new products developed by women, or newspaper or trade journal clippings that spotlight the work of women engineers”\(^{46}\) can guide female students in feeling able “to challenge the traditional masculine image of science and engineering.”\(^{47}\) This concern from the academy is essential in encouraging female students’ participation in masculine dominated courses. This mode of information will at least provide a space for more women to take part in technological fields and consequently encouraging a greater representation of female Web operators.

Eleanor Roosevelt’s work in the media is a fine example of how structural change can occur within journalism. During the 1930s and 1940s, she broke with convention to participate within the male-dominated media. In her Whitehouse biography it is recorded that she “broke precedent to hold press conferences, travel to all parts of the country, give lectures and radio broadcasts, and express her opinions candidly in a daily syndicated


\(^{47}\) *Ibid.*
newspaper column, ‘My Day’.” An article in the *National Forum* identified that she held the press conferences for attendance by women only. She discussed topics such as “sweatshops, teacher salaries, economics, and the coming of World War II. Reporters came to understand that occasionally Mrs. Roosevelt would ‘float a trial balloon’ for the president.” Although acting on her husband’s behalf, Eleanor Roosevelt’s women-only policy encouraged female journalists to write serious political articles during a period that valued gender discrimination, “[t]he first lady shared her views, and newspaper women were able to legitimize their work by covering a national figure.” The women of the 1930s and 1940s who read newspaper articles about Eleanor Roosevelt’s press conferences (written by female journalists) found a resistance to a restrictive gender hierarchy. Although the language and values of the era remained dominantly patriarchal, the voice of female journalists in newspapers would at least have provided the idea of an alternative to the housewife image that women of that time were expected to epitomise. Similarly, women of today who read articles encouraging their use of the Web may also find they offer support in using the technology. However, due to the ‘hook’ of the stories - particularly through the presentation of statistics - women continue to be configured as outsiders to the digital continuum. The representation of women as ‘other’ is reinforced. Newspapers perpetuate Web space as masculine space.

50 Ibid.
Magazines

Magazines do not have the same credibility as newspapers. They are relegated as providing trivial entertainment, while newspapers supposedly present ‘fact’. However, within the differing genres, greater integrity is granted to certain types of magazines. Women’s magazines are commonly allocated less credibility due to their ‘insubstantial’ content. For example, Frances Bonner identified that women’s magazines are gender-role oriented in that they “are concerned with fashion and beauty, with health, exercise and food, with relationships and celebrities; most are also concerned with the home.”51

Compared to Woman’s Day or Cleo, magazines produced from within the masculine realm of science (including computer magazines) and business (such as The Bulletin) are not dismissed so quickly as trivial. The articles and information within these magazines are written mostly by men for male consumers and as such, are granted credibility that women’s magazines lack.

This section considers two computer-related magazines: Australian PC User52 and Wired.53 Australian PC User is concerned with computers and various hardware peripheries. It has sections titled “Test Bench”, “Help Station”, “Enterprise” and “Net Living”. Wired is a much larger and more encompassing magazine. It has subject areas relating to all areas of digital electronics - from computers to conference phones and surveillance cameras. Gene Rochlin from the book Trapped in the Net, extols the features of Wired: “Nowhere are the alternatives of a networked future more thoroughly or imaginatively explored than in the pages of the journal Wired, an eclectic blend of

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technical detail, New Age spiritualism, and futuristic hype that has become the semiofficial voice of the libertarian wing of the computer culture.\textsuperscript{54} Both of these magazines contain information about the Internet, with articles offering advice and describing related products. Most importantly they contain information about who should be using computers and the Internet. Photographs and illustrations in the magazine’s articles and advertisements provide a pictorial representation of how the magazine hails its audience. In computer magazines, this audience is commonly framed as white, middle class and male.

Images in computing magazines frequently naturalise men as computer and Web users. Roberta F. Hammett identified that:

Representations in the media affect attitude, interest and confidence. Demetrulias and Rosenthal (1985), examining 175 issues of 15 different general and educational computing magazines found that 59\% of magazine advertisements portrayed a lone male and 90\% of those males were White.\textsuperscript{55}

The results have not varied a great deal seventeen years later. Assessing Wired, I found that the majority of pictures in advertisements and feature articles are of men. In Australian PC User, there were very few pictures of humans. Most stories and advertisements concentrated upon the products. In the pictures that did feature a person, such as the Hewlett Packard and Vodafone advertisements, the model was more often male. However, there were also two images in the magazine which specified neither a male or female gender.


Figure 3. These two images from *Australian PC User* display androgynous representations of computer users (March 2002).

The “help station” banner (above right) heads several pages of advice about computer use in *Australian PC User*. It is difficult to identify the gender of the face in the graphic. This gender neutrality avoids the masculinist ideology ordinarily associated with digital technologies. The advertisement for Audigy (above left) is for computer hardware and also presents an image that does not overtly display typical masculine or feminine signifiers. However, it is doubtful that the advertiser is consciously avoiding a specific gender identity as in *Australian PC User*’s ‘help station’ banner. The image of the silver head is more likely aimed at representing a ‘futuristic’ illustration that is often associated with computer related products.
Advertisements are designed to construct an ideology pertaining to the dominant culture and taken-for-granted ‘lifestyle’ of its audience. In the case of both *Australian PC User* and *Wired*, the dominant culture in the images throughout each is revealed to consist of middle class, white males.

![Hewlett Packard advertisement](image.png)

**Figure 4. A Hewlett Packard advertisement featuring a lone male** (*Australian PC User, March 2002*).

This picture is from a Hewlett Packard advertisement for printers in *Australian PC User*. Featuring a solitary male, it is representative of the theory Richard H. Kolbe and Paul J. Albanese produced in an article for the *Journal of Advertising*, “[w]hen an advertiser depicts a man alone in an ad, the man becomes a representative of maleness central to the image and message the advertiser is attempting to convey.”\(^{56}\) The ‘message’ being

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communicated indicates which gender is expected to be the dominant operator of the advertisement’s product. For example, most advertisements for domestic goods, such as cooking ingredients and cleaning products, feature females using the items. As Mee-Eun Kang identifies: “Advertisements have consistently confined women to traditional mother-, home-, or beauty/sex-oriented roles that are not representative of women's diversity.” In the case of computer technology - such as the Hewlett Packard printer, the man is placed in the advertisement to represent the ‘maleness central’ to the product. The advertisement is portraying the ideology that computers and their associated peripherals are part of a masculine domain in which women have little influence. This also extends towards women as Web operators.

*Wired* magazine features a greater visual field than *Australian PC User* and was more equal in terms of how many women and men were in each. However there were differences in the way each gender was represented in relation to the technology. Hammett identified the results of an investigation into this subject matter:

Ware and Stuck (1985) investigated the images of women computer users in the media of the time to find that:

1. Even though women comprise a majority of the population, only one woman appears for every two men in computer magazine illustrations.
2. Women are significantly more often shown in clerical roles, while men are more often depicted as managers, experts, and repair technicians.
3. When women appear in illustrations, they may be shown as sex objects, while men are never seen as such.
4. Women are portrayed more often in passive roles, with men in the active, “hands-on” roles.

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5. If anyone is shown avoiding the computer (i.e. a representation of “computer phobia”), it is a woman.58

These results maintain relevance nineteen years later in contemporary computer magazines. Within *Wired*, many pictures in advertisements for computer-related products presented women who did not engage with the technology at all. They were included as sex objects or as gimmicks - certainly none were actively and intelligently portrayed as technology operators. For example, the Radeon™ 7500 advertisement (below) overtly treats the female model as a sex object.

![Radeon™ 7500 Advertisement](image)

Figure 5. The primary role of the woman in this Radeon™ 7500 advertisement is to attract attention as a sex object (*Wired*, December 2001).

58 Ware and Stuck (1985) as cited by Roberta F. Hammett, *op cit*. pp. 211-212
The model appears to have no connection to the product apart from the product’s name and illustration on her midriff. Her body has become a billboard. Kolbe and Albanese recognised that women are often portrayed in advertisements merely as objects:

One of the most common criticisms lodged against advertisers about women in advertising is the objectification of women's bodies. Objectification refers to the depersonalization of the individual in a manner that is dehumanizing and demeaning. It occurs when advertisers present sexually suggestive body parts or do not include the person's head in a photograph.59

Half of the model’s head in this advertisement is out of shot. Her breasts, or suggestive body part, are instead a prominent feature in the picture. She is presented as a surface on which to be written. This advertisement shows very little regard for most female consumers of computers. It is obviously designed to attract heterosexual males. As Spender notes “Using sex to sell a product isn’t new … for decades cars were sold by scantily clad females … But there is a much more direct link between the new technologies and the availability of women’s bodies.”60 The advertisement’s ‘message’ suggests that men are the operators and buyers of this technology, while women are the means through which to attract their attention. This patriarchally-influenced attitude is common in computer magazines. There are few (if any) advertisements that reverse this representation and present males as sex objects.

Another advertisement in Wired presents a woman in a position that is completely irrelevant to the technology it is promoting. This advertisement shows an older woman representing an annoying ‘grandma’ obstructing computer use:

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59 Kolbe and Albanese, op cit.
60 Spender, op. cit p. 212.
The heading “Cripes, you networked your grandma last year” demonstrates the lack of importance granted towards women, especially elderly ones, when computers are discussed. The advertisement is from Sun Microsystems for a mainframe-class server designed for networking computers. The woman’s age is presented as an impediment to upgrading and advancing the computer network. If an ‘irrelevant’ component of the digital society has been networked, then it is absolutely extraordinary - to the normalized reader of this advertisement - that the data centre had yet to be networked. This image is
an example of how older women are particularly sidelined and discouraged from
becoming computer and Web users. A mother, aunt or sister could also substitute for the
figure of the grandmother, as the ‘message’ of the advertisement deems females
irrelevant to the advanced use of technology. This text blatantly presents women as
existing in opposition to (male) operators of digital technology. Other social variables
such as age only intensify the disadvantage.

Even though Spender is herself of a more mature age than many other technology
authors, she does little in Nattering on the Net to critique the negative images older
women face in the media. She discusses children in the K-12 education system and
college students in-depth; she remains intent upon focusing on the younger generation of
Web users rather than suggesting how to assist older women in learning about digital
technologies. In a column Spender wrote that was published in The Australian in 2003,
she overtly pinpoints the older generation as causing ‘trouble’ in the transition from print
to electronic media, “[i]t’s the print-primed professionals who are making all the fuss,
who continue to apply the old rules, who have failed to recognise that the medium has
changed from print to digital.”61 Spender frames people who learnt the ‘old rules’ as
problematic in the digital discourse. She does little to examine the reasons for their
reluctance to learn about the new technologies, nor does she suggest how these
inequalities may be solved.

Finally, and perhaps the worst example of a woman in an advertisement for Wired
magazine, is for Sprint PCS, a product described as, “[i]t’s for web access, advanced

voice services, management tools, smart devices and crystal clear calls." The picture accompanying the text (below) overtly displays a negative correlation between women and technology.

Figure 7. The women in this Sprint PCS ad is overtly labelled ‘out of touch’ with technology (Wired, December 2001).

The text placed across the woman’s forehead leaves no doubt about the fact that she is considered incompetent. The advertisement symbolically annihilates her from being recognised as a credible operator of the Web technology in this image. Although the advertisement aims to portray that the hardware the woman is using is ‘out of touch’, the

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fact that a female was chosen to represent this person is indicative of the prejudice
women receive in relation to computers, the Web and other technologies. At least she is
seen to be holding a laptop computer in this advertisement - even if it is framed as
outdated.

The iconography from the two magazines, Australian PC User and Wired, are
instrumental in sustaining the patriarchal narrative favouring men as computer and Web
users. They systematically place women in subordinate positions - as sex objects or
examples of incompetence. The language in newspaper articles also contributes to the
perpetuation of women existing outside the masculine dominated realm of digital
technologies. This iconography has changed little in the past decade, despite figures that
show women now constitute at least 51% of Web users in the United States of America.

The representation of women as competent and intelligent operators of the Web is also
absent from popular feature films. Hollywood cinematic genres rarely offer alternatives
to the archetypes which feature women as damaging to the Internet and web. In fact,
when dealing with any technology, in films from Aliens to Hackers, the female characters
are very rarely granted the same credibility as their male counterparts. They are always
represented as secondary, adjacent or decentred from men’s competence and authority in
and with digital media.

These awkward, naïve and simple portrayals of women in the media are destructive to
women’s conceptions of themselves as valid operators of technology. The symbolic
annihilation of women in varying media texts informs audiences that women lack the
ability to participate in digital technology as effectively as men. In the media, women are
not granted a space free of masculine domination in which they may operate as
independent and intelligent operators of technology. After Angela, Trinity and
Ripley - and beyond *Wired* - cultural theorists need to affirm and confirm that it may be
popular culture that is ‘out of touch’.
The Online Fan
The woman with whom I conducted this interview is digitally aware. She participates in several online discussion groups and wrote an Honours thesis that included a discussion of slash fiction in online communities. The Online Fan is married and in her forties. She has no children, and owns two computers. Her opinions in this interview impart knowledge and familiarity with online spaces of communication. She recognises that the text-based mode of virtual communication can demonstrate limitations in the performance of an identity.\(^1\)

Do you remember when you first heard about the Web?
It was in the late 90s that I first heard about the Web, although I cannot recall how I found out about it. Probably it was through my husband. We already had a computer, which we upgraded so that we could access the Internet. I would have been in my late 30s at the time.

How often do you use the Internet?
I use the Internet virtually every day - it would be very rare for me not to access it. We have broadband, which is absolutely fantastic. As I study full time from home, I tend to log on in the morning and stay on for the remainder of the day.

What level of expertise do you have with the Web?
I don’t have a web page or live journal, due to lack of interest and time, and don’t have the requisite skills to set one up. I imagine I would be able to do so if I wanted to - there are so many easy programs that could be downloaded. In the past I have used ISC, newsgroups and online card-playing but again don’t have the time or inclination to use these features at present. I have friends who download TV shows and music from the Net, but I have not personally done so. Writing this, I realise that I tend not to use the web to its full potential. In fact, I only use a small number of its features, although I am quite comfortable using it for my own purposes. The web slurps up time voraciously.

What activities, sites or topics do you engage in during your periods of web usage?
I use the Web for email on a daily basis, using it for both study and personal reasons. Because I was brought up pre-web, I tend to email in the form of letters, although I am starting to get used to one-line emails. I am a member of several online lists - several of these are for study (calls for papers and such-like) although most of them are fannish in nature. I am an active member on some of these lists, but lurk on others. I read a lot of fan fiction on the Internet - usually online. I save the stories that I really enjoy to access again later. I have an enormous number of ‘favourites’ bookmarked that I use frequently. I often use the Web to access various University library catalogues and find it a useful resource when researching. I mainly use the Google search engine.

\(^1\) Chapter Five Participant. Interviewed by Carrie Kilpin in Perth, Western Australia. Email interview conducted 10/2/04.
Which online fan communities do you participate in or observe?
I primarily participate in slash fandom, although I am a member of the Harry Potter for Grown-Ups list, which is generic and extremely prolific. I am a member of seventeen groups under my home email address, and twelve that I access with a Yahoo account, specifically under a fannish pseudonym. Most of these are specifically slash-oriented, with the fandoms being either Professionals or Harry Potter. The fiction that I read is primarily slash, but I will read the occasional het fic, so long as it is well-written. Fandoms include (and this is just from a quick look at my favourites): Angel/Buffy; Babylon 5; Blake’s 7; Due South; Harry Potter; Firefly; Hercules, the Legendary Journeys; Highlander; Jonathon Creek; Lord of the Rings; The Sentinel; Smallville; Star Trek (mainly TOS and Voyager); Star Wars; Starsky & Hutch, and X-Files. I email LOCs (letters of comment) to authors who work I have enjoyed. I tend to read m/m slash, but also read femslash. I do not participate in either the m-preg (male pregnancy) or RPS (Real Person Slash) communities as I have little interest in either of these slash fandoms.

Do you think there are more males or females involved in these?
There are definitely more females than males in these fandoms. In fact the overwhelming majority are female, although there are a few males on the lists.

Do you use your real name or a nickname? Does this reveal your gender?
I use both my real name and a nickname. My nickname is gender-specific. It is interesting that, even though I know I will be anonymous in your thesis, I still do not wish to reveal my pseudonym. Obviously, concealing my identity is of great importance to me in some circumstances.

I write as an academic about slash, and use my real name when I am contributing to a list in this capacity, or asking a question of a list that is linked to my study. As such, I am consciously taking my ‘real life’ persona onto the net and therefore tend not to speak my mind any more than I would in a face-to-face situation. However, when writing primarily as a fan I generally use a pseudonym. I feel that this gives me a much greater freedom to speak my mind. This is generally when I am discussing fic online.

Do you think that the desire to know the identity of the person with whom you are communicating online is increased due to the lack of physical signifiers?
I have little, or no, desire to know the identity of the person with whom I’m communicating online. I am interested in what they have to say, not who they are. I don’t mind whether they are male or female, so long as what they have to say is interesting.

Have you ever noticed bullying or dominating behaviour from the (identifiable) male contributors towards the female participants?
Slash fandom is pretty much dominated by females. The posts from those identified as male are certainly not bullying or dominating on the lists that I belong to. They merely contribute to the discussion if they have something to say.

At one stage I was on the alt.startrek.creative.erotica.moderated newsgroup. What I loved about it is that although it was for any sex-related Star Trek fic, the vast majority of postings were by women, writing slash fic. There were males present, and some of them did make comments about “jugs” etc, but they were very much in the minority, and pretty much ignored, or told where to get off if they were persistent. This was some five years ago. I’m not sure if it has changed, but I hope that this group has not been overwhelmed by young, homophobic males.

Do you think the English language is patriarchal? How does this influence communication online?

I think the English language is definitely patriarchal. After all, a language incorporates/exposes a society’s values, and we do live in a patriarchal society. Consider the different connotations of ‘Master’ and ‘Mistress’ to name but one example.

I’m not really sure how this influences online communication. I do think that one of the pleasures of slash fandom is that it subverts notions of what is considered ‘appropriate’ language for females to use. The language of slash fiction slash includes “cocks” and “arses”, “fucking”, “bonking”, and “cunts” (this last in femslash). However, these words are used much less in discussion about the fic. I can vaguely recall posts from fans saying that they enjoy reading about men fucking, but am unable to remember which list(s) this was on. Is this an effect of patriarchal norms? I’m not sure.
Chapter Five

Heroines in a New Frontier:
Janeway and Scully in Online Discussion Fora

Topic: Girl with one brain cell survives life!

//electronicbonker [25.Apr.02, 4:00 PM]
How does Jess do it?
With one brain cell and she can still walk, talk and even eat with a spoon. Jess has to go.

//Reply ..reveal [26.Apr.02 - 12:48 PM]
It's not how little you've got that counts. It's what you do with it that matters. Jess provides a fluffy light relief from Spatrina the “on the edge of a nervous breakdown: give me nicotine or I'll kill you antics” and Shanes oops Shannon’s blokey bravado and lets not even bother with the other two boring, whiney space wasters.
Jess is a blessing. A blissfull little blip on the BB screen.

//Reply ..edwina yumyum [26.Apr.02 - 5:54 PM]
She's good value - token blonde bimbo.

//Reply ..Trillion [26.Apr.02 - 9:09 PM]
If you combined Jessica, Shannon and Mirabai - I still don't think you would get one complete brain cell.

If an online forum such as this was to be believed, the semiosphere is filled with dumb blonde women who make Paris Hilton look like a Harvard Professor. This chapter was inspired by the ‘brain cell’ exchange I encountered while browsing the Australian Big Brother website during the 2002 season. Jessica Hardy, a participant in the television show who was described as “reality-TVs clash and trash queen”, attracted negative attraction in the Big Brother message forum. The series, which ran from April to June

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2002, featured six women who were confident and outspoken. In the official *Big Brother* website’s discussion forum, their televised behaviour prompted message posts are heavily inflected by discriminatory comments. The statements about Jessica and the other participants’ supposed lack of intelligence is indicative of the criticism targeted specifically towards the female members of the *Big Brother* household. My concern is not only limited to the arena of *Big Brother*. Female characters on other television programmes are attacked in virtual spaces of communication.

This chapter determines whether there is a space to evade, critique or negotiate with patriarchal attitudes in digitally-mediated discussions about women on television. I ponder how judgements about truth, bodies and value are critiqued or reinforced in online discussion fora. My research proves that it is a space dominated by masculine ideologies. Although discussion fora offer room for women and men to construct a feminist defence, denigrating and misogynistic messages are common. Dale Spender studied this phenomenon. In a section about ‘Male Menace on the Superhighway’ she describes examples of sexist and intimidating behaviour directed towards women online. She notes that “males who in real life probably wouldn’t dream of butting in on a group of women, appear to have no compunction about posting messages to women-only groups on the net. A significant number of these postings are sexually explicit and abusive.”³ I explore possible reasons for the inappropriate comments made by male participants in discussion fora. I also analyse the modality and form of contributions by women. An investigation of these comments probes whether the Web gives women a space to criticise patriarchal ideologies.

As the primary mode of communication in discussion fora, the written English language traces how gendered identities are constructed. A participant’s choice of words, grammar and sentence construction configure a virtual persona. For example, someone who writes correctly and formally summons a divergent identity to that of a person who utilizes emoticons and abbreviated language in their message posts. Dale Spender’s book, *Man Made Language*, presents a feminist critique of patriarchally-constructed English. She observes how textual communication assumes a masculine address, “[s]o powerful is language in structuring thought and reality that it can ‘blind’ its operators to the evidence of the physical world; objects and events remain but shadowy entities when they are not named.”

This is applicable in an online context. ‘Objects’ include Web users’ bodies which are ‘shadowy entities’ in the discussion forum’s discourse. The patriarchal ideologies marinating speech patterns are prioritized in text-only spaces of communication.

Online communities are spaces where people congregate to discuss myriad subjects such as television shows, politics or music. They provide examples of how gender is performed and constructed in an online context. Stacy Wren defines this space: “A virtual community is a community of people sharing common interests, ideas, and feelings over the Internet or other collaborative networks.”

Despite this seemingly inclusive ideology, the textual basis of the Web means that femininity is more often a source of derision. The heightened gender-consciousness of the Web is identified by Kitchin:

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[O]nline, gender, rather than being erased, is being intensified discursively. In Foucaultian terms, on-line women (in general) still remain ‘docile bodies’ - bodies that are regulated by, and subjected to, men. Rather than gendered identities becoming renegotiated in cyberspace, cyberspaces are becoming clearly demarcated through heightened sexism and the creation of protective women-only spaces.\(^6\)

Virtual communities are complicit in *discursively intensifying* gender demarcations. The communication that takes place in an online message board is a textual performance of identity. It lacks (or is disconnected from) signifiers, such as a physical presence, that in ‘real life’ contributes to a mode of dialogue or conversation. A feminine modality in a virtual space idealises a Foucaultian ‘docile’ identity that is controllable by dominant masculine ideologies. Women remain subject to gendered prejudices in virtual discussions.

These patriarchal ideals are also woven into cultural productions. Television programmes are a part of popular culture, and thus deemed to be distinct and separate from elite or high culture. The ideologies enacted in these texts represent the social values of the time and place in which the show has been produced. Although a television text does not ‘reflect reality’ (it can never mirror the complexities of ‘real life’) it does provide a representation of social and political ideals. The *bardic function* is a theory constructed by John Hartley which describes the ability of television texts to negotiate the concerns within a culture through narrative, characterisation and representation.\(^7\) The portrayal of women in television is thus informed by current social attitudes. The extent to which Western society values male leadership and control is evidenced by the lack of female characters in television’s drama shows who occupy positions of power. Two characters

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who break this pattern are Kathryn Janeway (Kate Mulgrew) who is Captain of a starship in *Star Trek: Voyager*, and Dana Scully (Gillian Anderson) who is a Special Agent with the Federal Bureau of Investigation in *The X-Files*. These characters demonstrate how attitudes are changing towards gender and positions of leadership. The ramifications of this challenge to the patriarchal stronghold are observable in many discussion boards on the Internet.

**Discussion Fora**

There are several sites for communication on the Internet, including Usenet, email, text chat, MUDs and other graphical worlds. My analysis concentrates upon the communities that form within discussion boards. A ‘discussion board’ is known by several descriptors, including ‘discussion forum’ and ‘message board’. It differs from ‘chat’ in that it is composed of a list of messages organised into categories. Discussion does not take place in real time. Kitchin describes the system as “Many-to-many asynchronous communication.” This community is distinct from a Usenet group as it does not take place primarily through the delivery of emails to subscriber’s inboxes. Although this is an option in many discussion fora, the boards I examine display conversations on a website.

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8 Although these women do carry influence within their careers, ultimately, they report to a male superior. Janeway answers to the male dominated Federation, and Scully to Assistant Director Skinner (Mitch Pellegi) who is only one dominating man amongst many in *The X-Files*. In examining other female characters on television who are also constructed in positions of importance, I found that their superiors are always men. For example, Kerry Weaver who is Chief of Staff in *ER* reports to her boss, Dr. Donald Anspaugh. In *Law and Order: SVU*, Olivia Benson reports to team leader Capt. Donald Cragen. I chose to use Janeway and Scully as the focus of this analysis as their characters have a greater Web presence than the others.


Most communicative spaces on the Web allow for malleable identities. Gender may be changed, ages modified and nationality altered. Without the overt presence of the body, the participant’s physical identity can be masked. Jodi O’Brien discusses the political potential of this fluidity:

In this interactional realm it is possible to observe how persons categorize self/other and structure interaction in the absence of embodied characteristics. Specifically in this case, ‘gender as performance’ can be theoretically and empirically separated from corporeal sex markers.11

Although the Web provides space for individuals to evade judgements based upon ‘corporeal sex markers,’ their identity is often observable in their particular mode of communication. The use of a gender neutral ‘nickname’ such as a surname or animal, may not provide identification of the participant’s identity. Their message may contain other indicators. Melanie Stewart Millar studied the research conducted by Susan Herring and concluded that “women already use computer-mediated communication differently from men, at least to some degree. While men are more likely to engage in aggressive debates and shun rules for discussion, women tend to use more polite and considerate modes of communicating.”12 This demarcated mode of communication is observable in the discussion fora I studied. The female participants were much more likely to engage in focused and concentrated debate about the forum’s topic. The contributors who identified themselves as male posted most of the messages containing negative comments that were not always linked with thread.

Identity in discussion boards differs from chat rooms in that the participant does not communicate as an identity based upon a ‘self’. Rather, participants post opinions as a

fan of the forum’s topic. As Judith S. Donath writes about newsgroups: “the basic premise is that the users are who they claim to be.”\textsuperscript{13} In fan communities, it is more often the text that is focused on than the participants themselves. Henry Jenkins recognises that: “Fan communities … [tend] to keep the media text, rather than the reader’s use of it, as the central focus of analysis.”\textsuperscript{14} In the context of a fan community, personal identity is secondary to the person’s identification as a fan of the featured text. Gender politics are observable in the manner through which participants discuss the characters or storylines of the television show.\textsuperscript{15}

Theories of fandom are necessary in analysing how fans mobilise online discussion boards. Henry Jenkins’ \textit{Textual Poachers} provides a well regarded method for discussing fan culture. Jenkins analyses the politics of fans and their social and cultural practices in popular culture. He describes fans as “a social group struggling to define its own culture and to construct its own community within the context of what many observers have described as a postmodern era.”\textsuperscript{16} The fan culture and communities he wrote about in 1992 were connected through media such as ‘zines’; produced and distributed by fans, exclusively for fans. They are, as Jenkins remarks, “a mode of amateur, non-profit publication.”\textsuperscript{17} With the growing popularity of the Internet throughout the 1990s and into the 2000s, virtual communities proliferated. Compared to print, online communities

\begin{thebibliography}{9}
\bibitem{13} Judith S. Donagh, “Identity and Deception”, in Smith and Kollock, \textit{op. cit}, p. 30.
\bibitem{15} As such, this discussion does not involve speculation as to why people may change their gender identity on the Web. This analysis is a concentration on what is actually \textit{said} by the participants. The substance and content of messages incorporating the opinions and expressions conveyed by the contributors is examined. I investigate how the gender of certain characters is discussed in the forums.
\bibitem{17} Jenkins, \textit{Ibid.} p. 158.
\end{thebibliography}
embody different characteristics. Although essentially still a space for “the public display and circulation of meaning production and reading practices”\(^\text{18}\) of cultural artefacts, the flexibility of the Internet has influenced much larger and accessible fan communities. As Kirsten Pullen notes “it seems as though the Web has opened up the boundaries of fandom, allowing more people to participate in fan culture, and designating more television programmes, celebrities and films as worthy of fan activity.”\(^\text{19}\) A fan’s website typically contains links to cast profiles, actors’ biographies, episode storylines and may also include a chatroom, discussion forum and fan fiction. The discussion forum allows participants to post their opinions, debate topics of interest with other fans and report newsworthy items to the community. It is a dynamic space for an active involvement in the text.

Fans of the television series *Star Trek: Voyager*\(^\text{20}\) and *The X-Files*\(^\text{21}\) discuss the gender of the main characters regularly in virtual fora. These two television shows each feature a strong female lead character. Captain Kathryn Janeway and Dana Scully provoke much debate in the fora due to their gender fluidity. In viewing several discussion lists,\(^\text{22}\) I found that analogous to the *Big Brother* site, participants who identified themselves as female were supportive and encouraging of the Janeway and Scully characters, while

\(^{22}\) I chose discussion boards from sites that were not based upon specific characters. The debate in these fora would be biased in favour of that particular character. Having read through many message boards (from sites such as the Yahoo and Google forum sites), I decided to concentrate upon two boards specific to the actual show. Allscifi.com has a link to a discussion forum for *Star Trek: Voyager* fans, and I chose the official www.xfiles.com discussion board to study how Scully is talked about. Although I perused many discussion fora, this chapter is concerned with several specific messages I decided were relevant to my argument, rather giving a less in-depth overview of the many messages I viewed.
male contributors were more likely to either denigrate them, or view them as sexual objects. Examining the comments of these ‘fans’ is crucial in investigating how the web is used by audiences to express diverse opinions about how strong women are portrayed in television.

An important feature of the Web is that it is available to a wide range of people - including those who have little interest in sustaining intelligent debate. Internet literacy does not always converge with critical literacy. The interjections made by interlopers are often an unavoidable consequence of the open nature of the Internet. Spender recognises the interference of male contributors in women-only discussion boards:

Because they feel as though they do not have free speech in the presence of men, many women have set up women-only forums. (The same applies to other oppressed and minority groups, of course). But where such safe space has been set up, the response from some quarters is predictable. There are men who vehemently object and who claim that women-only space impinges on their right to free speech. They try to overrun, disrupt or destroy the exclusively female forum.23

These interlopers represent a collection of people who are uncomfortable with discussions concerning politically significant issues - such as women in leadership. Although their messages hinder the discussion, it is important that this group is recognised, discussed and analysed. Their presence is evidence of groups of people in the wider social realm who feel threatened by or actively oppose women gaining power on an equal standing to men. Their negative comments, which display a fear of women’s inquiry into patriarchal ideals, exemplify the perpetuation of gendered roles in virtual space.

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Star Trek: Voyager

The Star Trek series has a long history of fan communities both online and off, and academic discussion upon their development has grown in the past decade. Theorists such as Henry Jenkins, Constance Penley, Anne Cranny-Francis and Joanna Russ have investigated the myriad ideological and political implications of Star Trek fandom. The topic of gender is often detailed in their analyses. For example, Jenkins believes the show promoted recognition of “earthly injustices unacceptable in the realm of Star Fleet, [it proposed] new ways of structuring gender relations based more fully upon notions of equality and the acceptance of difference.” He depicts the futuristic Star Trek world as a “utopian vision”. However, this interpretation is not entirely accurate. Gender roles, particularly in the earlier series, were often sexist and limiting for women. Penley wrote about gender in Star Trek in relation to the subversive practice of textual poaching. She describes Star Trek (the original series) as negative: “there is bitter disappointment that these women of the twenty-third century are still behind the switchboard, at the doctor’s side, or in miniskirts serving coffee to the men.” Female characters in the early Star Trek series reproduced traditional feminine roles of the 1960s. There were few women in positions of authority and command. They performed menial tasks; as Penley identified, they answered ‘calls’ from hyperspace and made coffee.

25 Jenkins, op. cit, p. 116.
26 Ibid.
This inequality is also observable in online message boards. Women who enter *Star Trek* discussion groups often receive negative attention from the male participants. Dale Spender cites a passage written by Barbara Kantrowitz which pinpoints the double standards of behaviour women often experience within Internet discussion fora:

As a long-time *Star-Trek* devotee, Janis Cortese was eager to be part of the Trekkie discussion group on the Internet. But when she first logged on, Cortese noticed that these fans of the final frontier devoted megabytes to such profound topics as whether Troi or Crusher had bigger breasts. In other words, the purveyors of this *Trek* drek were all guys. Undeterred, Cortese, a physicist at California’s Loma Linda University, figured she’d add perspective to the electronic gathering-place with her own momentous questions. Why was the male cast radically diverse while almost all females were young, white and skinny? Then, she tossed in a few lustful thoughts about the male crewmembers. After these seemingly innocuous observations, “I was chased off the net by rabid hounds,” recalls Cortese. Before she could say “Firephasers”, the Trekkies had flooded her electronic mailbox with nasty messages - a practice called flaming.28

This woman’s challenge to the dominantly male environment was not well received. The patriarchal tone in this discussion group was ubiquitous. Women were discussed in terms of their physical features rather than their intellectual achievements. When Cortese confronted the lack of diversity amongst the young, white female cast, the response she received demonstrates the sexist discourse operating in virtual spaces of communication. Women who challenge traditional paradigms of femininity are criticised and attacked.

In 1995, a new *Star Trek* series began. This was *Star Trek: Voyager*, and it featured a woman in the starring role - Captain Kathryn Janeway. She has been widely acknowledged as the first female character to defy the conventions of submissive femininity that other *Star Trek* women were assigned. Tara Brabazon, for example, states that “Janeway is an example of what a successful woman can be. She is not satisfied in a

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feminine work ghetto of health, education or retail.”  

Previous female *Star Trek* characters were relegated to the ‘feminine’ positions of care, such as a counsellor (Deanna Troi), a nursing assistant (Kes) and a medical doctor (Beverly Crusher). This is also discussed by David A. Schultz:

> [D]espite *Star Trek’s* (often deliberately cultivated) image as a social trailblazer, a deeper reading suggests a generally conservative depiction of gender. The three recurrent female characters in *ST:TOS* all performed tasks that were accepted ‘women’s work’[communications operator, secretary and nurse] in the mid 1960s. All were young, attractive and dressed in very short skirts, as were most of the other women to appear in the show. Storylines involving Captain Kirk’s irresistible masculine allure, and his conquest and subordination of women, were commonplace. Even the show’s slogan - ‘to boldly go where no man has gone before’ - signalled its reflection of, rather than challenge to, established gender stereotypes.

*Star Trek* has always been very masculine in its cast and representations of traditional femininity. Although not drawn to represent interests of a conventional female role, Janeway still characterises many traits constructed as inherent in women. Anne Cranny-Francis approaches this framework in her analysis of textual construction. She writes:

> “The underlying cause for this [gender] limitation is the acceptance by many involved in the text production process of stereotypically patriarchal views of masculinity and femininity which ultimately dictate … what those texts should be about and how they should function.”

Although the creators of the *Star Trek: Voyager* series did not typecast Janeway as a recognisable female archetype, they were nevertheless conscious of maintaining specific gender boundaries in which her behaviour would identify her as a socially constructed ‘woman’.

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Men are frequently assigned to positions of importance - such as leadership. Janeway’s ‘femininity’ causes conflict in her role as Captain. The creators of *Star Trek* were conscious of creating a character which, while participating within a traditional masculine domain of leadership, did not embody too many ‘masculine’ attributes. Jeri Taylor, a co-creator and executive producer of the series remarked:

> One thing that I felt very strongly about was that, surely by the twenty-fourth century, we can say that a woman can be successful without having to act like a man. That there's room for a feminine side, a nurturing side, a warm side, for all those things that I think we all agree are mostly identified with women. There is no reason why she simply has to be Jean Luc Picard with long hair.\(^{32}\)

The creators’ determination for the Janeway character to remain ‘feminine’ is an example of a persisting adherence to sex/gender binaries within popular cultural texts. Janeway’s long hair, for example, is framed as a necessary facet in maintaining an important physical characteristic of femininity.

The negotiation between Janeway’s ‘femininity’ and ‘masculinity’ has drawn both criticism and praise of her character’s construction. Her role as an efficient Captain inspired many comments about the character’s masculinization - and even dehumanisation. Brabazon identified that the actress who played Janeway, Kate Mulgrew, believed “she had to sacrifice her humanity to claim authority.”\(^{33}\) Brabazon disagrees with the paradigm of women having to *sacrifice* emotional attributes in order to enforce effective leadership. She writes, “[i]f a woman is smart, then she must be drained

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33 Brabazon, *op. cit*, p. 137.
Female characters are often constructed as portraying either intelligence or emotional capabilities; rarely do they successfully embody both. In contrast to this view, Michèle and Duncan Barrett, from *Star Trek: The Human Frontier*, commended the Janeway character for retaining a traditional femininity. She is portrayed by these authors as *excessively* feminine:

> The delivery of the part is clearly indebted to a detailed study of Katharine Hepburn: Janeway raises her eyes, sighs, weeps and comforts in the most classic registers of Hollywood femininity ... The image is one of a woman who has sacrificed not one iota of her femininity in the accomplishment of her job as a military leader.  

The word ‘sacrifice’ is again mentioned. However in this instance it is used to illustrate Janeway’s adherence to a socially constructed gender role. Her *sighing*, *weeping* and *comforting* purportedly signify ‘natural’ feminine traits, even though the character very rarely ‘wept’ in *Star Trek: Voyager*. The conflictual response to Janeway’s performance of gender illustrates the slipperiness encountered when attempting to correlate specific behaviour and feminine ideologies. It demonstrates that the binary system is not reliable in determining gendered characteristics, particularly around leadership. A woman in power is an unstable cultural formation that triggers not only discomfort, but respect.

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36 There are three episodes in which Janeway has tears in her eyes. These are “The Gift” where Kes leaves Voyager (Episode 4.2, First aired 10/10/97). There is also another episode when Tuvok and Neelix become integrated to form a new person: “Tuvix”. Janeway is emotional when she must destroy him to bring back the other two characters (Episode 2.24, First aired 6/5/96). The “Resolutions” episode has Janeway and Chakotay stranded on a planet together. Janeway is teary when Chakotay tells her a story confirming his loyalty to her (Episode 2.25 First aired 13/5/96).
Captain Janeway’s femininity is also a source of contention between fans in online discussion fora. Very few women on television hold positions in leadership comparable to Janeway. The occupation of this powerful role by a woman attracts diverse audience responses. The *Star Trek: Voyager* text - particularly involving the Janeway character - is polysemic; the audience responds in myriad ways to its ideologies. An altercation that took place on the Allscifi.com website in the *Star Trek: Voyager* forum is an example of the negotiations encircling the character. It demonstrates the ideological struggle between female and male fans of the *Star Trek* series in debating Janeway’s role as a Captain and woman. The moderator of the forum, who identified as female, used the space to discuss gender issues through her status as a fan of *Star Trek* and the Janeway character. She introduced the debate:
Captain Kathryn Janeway: Feminist role model for the 24th century?
Moderator - 4/19/2002 11:19:45 AM

Captain Kathryn Janeway represents the ultimate evolution of women in Star Trek, in more ways than one. This is the first time we see a woman captain as a regular character. In Next Generation there were several episodes where women guest starred as Captains, but they didn't seem very tough or capable.

[...]

In fact, Janeway seemed to focus quite a bit on the quality of personal relationships, and that's what differentiated her from male Captains, like Captain Picard. When a crewmember let Captain Picard down, he reprimanded them woodenly, and then went back to staring at his fishtank without further comment. But Captain Janeway, in the privacy of her ready room, oozed with emotions, her feelings hurt at being betrayed. Kathryn seems to be thinking less "how shall I punish them?" and more "how do I feel about them?". A man would be more interested in enforcing rules; Janeway is more interested in enforcing relationships.37

This message from The Moderator presents a compliant reading of Star Trek: Voyager and the Janeway character. The Moderator praises the creators’ decisions to maintain

Janeway’s femininity as ‘oozing with emotion’ and focused on ‘enforcing relationships’ - which does not disrupt feminine ideology. In comparison, Picard is positioned to perform only one role - the ‘wooden’ male leader. In a passage that concluded the Moderator’s post, approval of the show’s gender discourses can be observed: “What Star Trek is saying here is that women can be capable and effective leaders and retain their feminine aspects as well. Star Trek is also saying that women are just as capable as men in being in top roles.”38 The Moderator’s satisfaction with the show’s portrayal of Janeway’s femininity is clear. In comparing each Captain, the Moderator emphasises the distinct

38 Moderator, allscifi.com Website, op. cit
gender divisions between Janeway and Picard. Her opinions attracted a wide range of reactions from other Star Trek fans.

Within this topic of discussion, there were many responses that challenged the relegation of Janeway to such a highly constructed feminine category. One commentator, Tazz, in direct response to the moderator’s opinion, remarked “[y]ou say women can be leaders and retain their feminine side? I think the Captain is a good role model because she's not just a female leader but also very tough. You don't have to be sensitive just because you happen to have breasts.”\(^{39}\) The contributor identifies that physical characteristics do not necessarily equate to socially constructed gender traits. Sojourner Truth demonstrated this framework’s inadequacy many years ago. She was an advocate for the equal rights of women and African-Americans in the USA during the 1800s. When accused of behaving like a man in asserting her beliefs, she allegedly exposed her breasts to prove she was a woman. This act proved that traditional alignments of cultural, political and social roles are inadequate.

Another participant on the online forum used the space to critique the Moderator’s post.

Personally i am sick of hearing the words "feminine qualitys" (sic) particulaly (sic) in reference to Janeway. Why is it that woman are seen as being people who need to compromise (sic) their naturally empathatic (sic) natures with their command responsabilities? (sic) Because women are naturally more emotional?! Pig swill to that! There is no reason why a female shouldn't be just as detatched/assertive/brave/ect (sic) as a male. Surely Picard feels just as betrayed when his top officers let him down as Janeway does but he conforms to the expectations of being both male and Captain. That Janeway has the capacity to show both her emotional involvemant (sic) with her crew and her professional

39 Tazz, allscifi.com Website, \textit{Ibid.}
detachment (sic) from them, without any diminishment (sic) to her authority makes her an excellent captain and human being rather than an example of someone "leading with their feminine (sic) qualities intact".  

The Grand Ol’ Gherkin identifies many salient points in this message. This comment recognises that the discussion of Janeway’s gender and leadership role, as extolled by The Moderator, operates within regulations of traditional sex/gender behaviours and role. The Grand Ol’ Gherkin’s identification of Janeway as a ‘human being’ rather than an embodiment of ‘someone leading with their feminine qualities intact’ is a significant interpretation and addition to the debate. The contributor’s opinion conveys the fluidity between masculinity and femininity often displayed by Janeway’s character. An example of this mobility is evident in the episode ‘Parallax’. When faced with the difficulty of escaping an event horizon, Janeway remarks to the crew, “sometimes you just have to punch your way through.” The violence implied in ‘punch’ is a conventionally masculine trait. It is not an example of someone leading with their ‘feminine qualities intact’. Janeway’s character evades such easy performances of gender. The identification of this fluidity by The Grand Ol’ Gherkin is an example of how online discussion fora can be mobilised to express criticism of established gender roles. The response is representative of a negotiated reading of Janeway’s character construction. Whilst demonstrating an acceptance of the producer’s aim to promote a positive female role model in an important position, The Grand Ol’ Gherkin recognises that the Moderator is portraying Janeway as an ideal model - rather than complex, flawed or contradictory.

40 The Grand Ol’ Gherkin, allscifi.com Website, Ibid.
41 An event horizon is powerful energy field surrounding a quantum singularity. A quantum singularity is a star that has collapsed in on itself.
42 Kate Mulgrew as Captain Kathryn Janeway. “Parallax”, Star Trek: Voyager, series one, episode two, directed by Kim Friedman. First aired in the US on 23/1/95.
Topics in the plot lines and characters of *Star Trek*, or other favoured cultural texts, provide a means through which criticisms can be discursively positioned and illustrated with examples from the show. The posts by the Moderator, Tazz and the Grand Ol’ Gherkin are examples of John Tulloch’s maxim that women can utilise discussions of *Star Trek* to examine issues such as “the ‘marginalisation’ of women in the workplace … or traditional masculine authority.” Online fora provide space for women to virtually voice their opinions about restrictive gender traditions. As Jenkins explicates, fans “are drawn to specific programs in part because they provide the resources for discussing the issues of central concern to them.” The strong female characters of the *Star Trek: Voyager* series provide fans with an impetus to debate their opinions of gender politics in the show.

The medium of television is a traditionally disempowered site. It attracts much critique and analysis. Due to its location within popular culture, television does not have the same credibility allocated to academic subjects. It is a site women can employ to unravel patriarchal values. Andrea L. Press, in her book *Women Watching Television*, conducted a study into the affects of television in the lives of women. She concluded that, “[t]elevision is both a source of resistance to the status quo for different groups of women and a reinforcer for the patriarchal and capitalist values that characterize the status quo.” This analysis is verified in the fora I researched. Women challenge patriarchal institutions by identifying gender inequalities in television programs such as *Star Trek*.

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The online discussion forum provides a space for these views to be made public and for the proliferation of debate.

The second part of Press’s statement - that television reinforces patriarchal values - is evident in several posts in the Star Trek: Voyager forum. The defence against traditional femininity by Tazz and The Grand Ol’ Gherkin was deflected by several of the male contributors to the discussion. Susan Herring, in a keynote talk delivered to the American Library Association, identified a pathology of discussion fora - ‘flaming’. She studied a range of listservs and online discussion groups and found that posts by men were “characterized by adversariality: put-downs, strong, often contentious assertions, lengthy and/or frequent posting, self-promotion, and sarcasm.”46 During my survey of discussion fora, I found that posts of this description were very often directed towards women. Male participants’ determination to reinforce the ‘patriarchal status quo’ was evident.

At least two men disturbed the discussion of the Moderator’s post in the Star Trek: Voyager forum by positioning Janeway as an objectified being. For example, The all-knowing Alan of Planet Wandsworth wrote “well I for one find her attractive and would be proud to serve under her if ever that were ever possible?!”47 A contributor by the name of Maddog added, “[y]es, I am certain that many of those interested in Female domination WOULD be interested in serving under Domme Janeway.”48 The discussion of Janeway as a positive role model was ignored or ridiculed by many of the forum’s

47 The all-knowing Alan of Planet Wandsworth, allscifi.com Website, op. cit
48 Maddog, allscifi.com Website, op. cit
male contributors. Attention is directed instead to sexual objectification, with a woman in power being eroticised as a dominatrix. The positioning of women as sexual beings is criticised by Ellen Bayuk Rosenman. She analyses the portrayal of women in a Victorian novel called *The Mysteries of London*, discussing a section of the novel which exemplifies the pervasiveness of the sexualised masculine gaze:

> Having ordered a photograph of one of the women who were such objects of fascination for him, Munby finds himself approached by the photographer's doorsman, who brings him another woman and offers to take her picture “with her clothes up” … Although Munby is shocked at the suggestion, it follows the logic of his own voyeurism. The doorsman's immediate mental leap from clothed to unclothed women, his ready acquisition of a suitable subject, and the quick transformation of body into image demonstrate the ease with which women were objectified, sexualized, and consumed within the economy - both visual and monetary - of the city, especially when aided by the new technology of photography.49

The ‘ease with which women were objectified’ is applicable to any cultural text featuring women - these historical roots are evident even in recent developments of technology. The interceptions made by Maddog and The all-knowing Alan of Planet Wandsworth to an intelligent debate about gender and cultural conventions illustrate the discomfort some men encounter when women challenge patriarchal ideals. They use the online space to perpetuate traditionally dominant gender roles which subordinate women.

These male contributors also criticised Janeway’s age. The Captains in other *Star Trek* series, such as Picard and Riker, were past their youth. However, being an *older woman* is considered problematic to these participants. In a *Journal of Women’s History* article, Corinne T. Field identified that middle-aged and older women were considered, “[f]inancially insecure, politically powerless, and regarded as burdens on men rather than

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models of individual accomplishment.”50 The responses of several (male) participants to the Moderator’s initial message denigrated Janeway’s character in this respect. For example, they criticised her ‘femininity’ as being too maternal. Maddog (again) commented, “[t]he writing leaves the show with weak, constant mistake making males, that must be dressed down by Momma Janeway.”51 Similarly, another participant identifying as ‘Jeff’ wrote that the actor playing Janeway was too motherly for his liking: “Mulgrew was more like my mom - I can't - nor do I want to relate to that.”52 The notion of previous male Star Trek captains being ‘fatherly’ was rarely configured as a problem. However, having a maternal figure in charge of a large starship presents a threat to these contributors. Their belief that a ‘mother’ could not captain a starship as effectively as a male emphasizes the lack of credibility given to women in jobs traditionally designated as masculine.

The resistive readings from Maddog and Jeff exemplify a backlash against the Moderator’s praise of Star Trek: Voyager’s positive portrayal of a woman in a leadership role. They isolate specifically gendered characteristics to criticise. If a man performed in Janeway’s role, it is doubtful that he would be accused of exhibiting overwhelming paternal instincts or be regarded as an objectified, sexual object. When Janeway reprimands her crewmembers, she performs it as a Star Fleet Captain - similar to Kirk, Sisko or Picard. There is no inherent ‘motherly’ inflection to her actions. It is the ideology of Janeway’s positive portrayal of women in leadership that is a problem for

51 Maddog, Ibid.
52 Jeff, Ibid.
these contributors. The discussion forum is a space where patriarchal values are still enforced, despite the opinions of other contributors attempting to challenge them.

**The X-Files**

As with *Star Trek*, the Internet has provided a space for much discussion of the television series *The X-Files*. The two main characters in this show, Fox Mulder and Dana Scully, provide the catalyst for analysis and conversation in online discussion fora. As with *Voyager’s* Janeway, debates about Scully’s femininity also proliferate. The presence of an authoritarian female character in mainstream television is still viewed as anomalous by many television fans.

Scully embodies many similar attributes to those exhibited by Captain Janeway. She has intelligence and expertise in a scientific field, and she is part of a heterosexual twosome in which the other (Mulder in Scully’s case, and Chakotay for Janeway) plays a ‘feminine’ role in maintaining spiritual beliefs. The reversal in traditional gender roles on *The X-Files* has attracted a great deal of attention. Mark Wildermuth comments upon this:

> Critics note that Mulder and Scully cross gender-related epistemological boundaries - Mulder seems ‘feminine’ in his appreciation of nonrational, intuitive approaches to discovering ‘The Truth,’ while Scully is remarkable for her capacity to embrace patriarchal, skeptical rationalism as the basis for investigation.\(^{54}\)

The sex-gender dichotomy - also present in Cranny-Francis’s definition of character construction in television - is discernible in the adjectives Wildermuth applies to Scully and Mulder. Traditionally, terms such as ‘rational’ and ‘sceptical’ are assigned distinct masculinised identities. In *The X-Files* these terms are inverted in their allocation to

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53 Played by Robert Beltran.

gender. Scully, as a woman who is successful in a scientific field, is portrayed as embodying masculine values. She is constructed to adhere to ‘masculine’ traits such as logic and scepticism as part of a scientific ideology rather than embodying feminine traits that would conflict with a ‘commonsensical’ rationale. She remains a product of the patriarchy in that her character accepts and advocates ‘patriarchal truths’. Her gendered performance is not transgressive, it is merely inverted. Mulder is constructed as intuitive and subjective. His disregard for the scientific discourse and his belief in spiritual forms grants him a ‘feminine’ persona. He takes on the emotional responsibilities shunned by Scully. There is a similar inversion in Voyager. Chakotay, Janeway’s First Officer, is an indigenous American with spiritual beliefs. In episode ‘The Cloud’ he helps Janeway embark on a visionary trip to find her ‘animal guide’. As a result of these gender trait inversions, Mulder and Chakotay are interpreted by theorists such as Wildermuth to be ‘feminine’ in character.

Figure 2. The reversal of gender roles Mulder and Scully perform is parodied in this photo of *The X-Files* characters.

Women who challenge the patriarchy are rarely awarded success in both their professional and personal lives. As characters who focus on their careers, Scully and Janeway are presented as having incomplete or inadequate personal lives. They share a relatively barren social sphere that is often the subject of mirth. Captain Janeway remains celibate throughout the *Voyager* series, except for the ‘Threshold’ episode in which she and the ship’s pilot Tom Paris turn into lizard-like creatures and procreate. Following the adventure, the situation is rendered humorous:

Janeway: “I've thought about having children but I must say, I never considered having them with you.”

Paris: “Captain, I'm sorry. I don't know what to say, except I don't remember very much about.... you know.”
Janeway: “What makes you think it was your idea?”

This exchange perpetuates an assumption that a male character would have instigated the copulation. By turning the tables upon the assumed gendered roles, Janeway furnishes the conversation with humour. She thwarts expectations by refusing the traditionally submissive feminine role. However, throughout the series in general, Janeway does maintain conservative standards of feminine behaviour. Kate Mulgrew, who plays Captain Janeway, discusses her alter ego’s sexual role: “I'm not going to do it when there are 165 people whose lives I have to protect… There’s no time to jump into the sack. Plus, I don't want girls to see Captain Janeway drop her knickers.”

The presentation of a ‘socially responsible’ woman who guards her sexuality is a primary reason for Janeway’s lack of sexual relationships. The actress and the producers carefully maintain her position as an authoritative leader and role model to young female fans of the prime-time television series. A woman engaging in numerous sexual relationships is not customarily perceived as embodying a ‘responsible’ sexual discourse.

Brabazon also problematises the paradigm of Janeway’s celibacy contributing towards her “authority and integrity.” Unlike previous Star Trek Captains such as Kirk, Janeway’s lack of sexuality is required in order to maintain her power in a leadership role. The values that dictate women remain sexually controlled in order to maintain respectability - while men are free to explore their sexuality - is a pervasive double standard. If Janeway were to engage in myriad sexual relationships, the audience would

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58 Brabazon, op. cit, p. 131.
lose respect for Janeway as a woman, and therefore as an effective Captain. While Kirk’s
promiscuity is portrayed as evidence of a successful masculinity, Janeway’s ‘femininity’
blocks her from participating in the same behaviour. This prejudice is maintained by the
producers of Star Trek: Voyager in their decision to keep Janeway as an asexual Captain
throughout the series. In the final episode, she remains the only character not to have
married - a milestone which even the holographic Doctor achieves.

A comparable circumstance exists in the portrayal of Scully in The X-Files. Scully has an
authoritative role as an FBI agent. As a woman with power, her social and romantic life
remains deficient and divergent - even the subject of ridicule. For example, in the episode
‘Never Again’, Mulder rings Scully to inquire about a case she is investigating. She
replies that it is finished, but that she is planning to spend an extra night in Philadelphia.
He responds with: “What, do you have a date or something?” When Scully remains silent, he laughs and remarks, “[y]ou're kidding!”59 As with Janeway, the lack of
romantic relationships in Scully’s life is constructed as a point of triviality through
humour. Scully’s sexuality is a topic of amusement because of the attention she receives
from one of the members of The Lone Gunmen - a group of ‘computer nerds’ who assist
in the duo’s investigations. In the episode ‘Fearful Symmetry’, Frohike (Tom
Braidwood), one of The Lone Gunmen, tells Mulder, “[i]f you see the lovely agent
Scully, tell her I've been working out. I'm buff.”60 The comic moment is created by the
audience’s knowledge that Frohike is not a person Scully would choose to date. Her

59 Rob Bowman (Dir.). “Never Again”, The X-Files, Episode 4: 13, originally aired 2/2/97. Created by
Chris Carter, written by Glen Morgan and James Wong. Starring Fox Mulder (David Duchovny).
60 Other remarks include "she's hot" and "she's tasty". [James Whitmore Jr., (Dir.), “Fearful Symmetry”,
The X-Files Created by Chris Carter. Written by Steve DeJarnatt. Series 2, episode 18, originally aired
24/2/95.]
continued ‘singleness’ makes her the object of attention from similarly socially inept characters.

Mulder is presented throughout the series as much more sexually active than Scully. He enjoys pornography,\textsuperscript{61} attracts the attention of women\textsuperscript{62} and is visited by ex-girlfriends.\textsuperscript{63} Conversely, Scully is shown to be romantically involved with only a few males throughout the series - and one of them includes Mulder. His sexuality is presented as neither problematic nor difficult. His position in power (as a member of the FBI) does not interfere with his personal life to the same the extent as it does in Scully’s. In The X-Files, Scully’s sexuality is a source of derision and incompetence. Brabazon compares Scully’s social ineptness to the Star Trek Captain: “Janeway, like Scully, could not manage personal and public success. They both display the unique pressures powdering the feminine face of power.”\textsuperscript{64} These pressures, mostly a result of social and cultural proprieties restricting women’s behaviour,\textsuperscript{65} form barriers that male leaders are not required to handle. The television series’ depictions of socially incompetent yet

\begin{footnotesize}
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\item[\textsuperscript{63}] They include Phoebe Green, [Larry Shaw (Dir.), “Fire”. The X-Files. Episode 1:11. Created by Chris Carter. Written by Chris Carter. Originally aired 17/12/93. Guest starring Amanda Pays] and Diana Fowley (who appears regularly in the sixth series, 1999).
\item[\textsuperscript{64}] Brabazon, \textit{op. cit}
\item[\textsuperscript{65}] For example, there is a double standard dictating that women who are promiscuous attract the derogative label of ‘sluts’, while men are given the more positive term ‘studs’. See Nicole Decure, “The Difficulties of Teaching a 'Man-made Language’’, \textit{Women and Language}, Spring 1994, Volume 17, Number 1.
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professionally successful women maintain archetypes of conventional femininity that
denigrate and devalue women’s abilities in achieving accomplishments in male-
dominated fields. Women who achieve success in their field of work are presented
through the television programmes as unable to manage accomplishments in both the
workplace and private spheres.

The ambiguities surrounding Scully’s performance of femininity are a source of
fascination in online discussion fora. Topics such “Scully Test: What kind of Scully are
you?” illustrate the pervasiveness of discussion concerning her gender on the web. In a
book about The X-Files, Gillian Anderson cites the prevalence of the Internet as a site for
fan debate. In discussion of a joke that was used in the ‘Syzygy’ episode, she reveals,
“[t]hose are comments that have come on the Internet from the beginning … They’re
always picking apart aspects of the show that have nothing to do with the show per se.”
The Web is a significant mechanism for fan activities in the X-Files. This active
engagement with the show is a significant part of fan culture. As Jenkins notes: “Fan
reading … is a process through which individual interpretations are shaped and
reinforced through ongoing discussions with other readers.” Fan discussions, which
may consist of preferred or resistive readings, proliferate in response to topics of the
show with which fans may be either satisfied or dissatisfied.

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66 Posted by Crazy_Singing_Lady, on “The X-Files Forum”, message number 95040.1, posted on 22/5/02,
accessed 8/7/02, found at: http://forums.prospero.com/foxxfiles/messages. The message reads:
“Go try it! This is what I got.
#1 The All Knowing Scully
#2 The Loyal Scully
#3 The Kickass Scully
#4 The As Written By Gillian Anderson Scully
#5 The Flustered Scully
#6 The Anti-Scully”

67 Gillian Anderson, as cited by Brian Lowry and Sarah Stegall, The Official Third Season Guide to Trust

68 Henry Jenkins, op. cit, p. 45.
Scully’s performance of femininity encourages much debate in online fan communities. The following discussion exemplifies how Scully’s gender is a point of controversy in 

*The X-Files*:

**Scully Doesn't Wear Skirts Anymore**

**Christianna Danielle Angela Teska Mulder** (TREKKIE6)  
Apr-14 1:20 am  
What's up with that?  
She doesn't want Monica getting another look?

**SPOOKIEBEAR**  
Apr-14 10:09 pm  
She only wears skirts around Mulder. *Wink Wink*  
>Duchovmuffin<

**(Touchstone aka Psychophile)** (MANDSC4EVER)  
Apr-14 11:22 pm  
hear hear!!! that's GOTTA be the reason! *g*  
dya think it is a subconscious thing? she wore skirts and those wonderful ridiculous heels all the time just for him?! how coool is that?!  
thanks for the idea!  
Touchstone

**griff** (GRIFF1213)  
Apr-15 12:01 pm  
I don't think Scully wears skirts as often as she used to because her character has taken a step up from the earlier episodes. I don't remember where I read it, but GA says that in the very begining she was told to run behind Mulder and “catch up”. She's says it was very archaic, which it totally was. As the years and seasons went on her character developed and she became more equal. It almost seems that her skirts where a sign of weak feminity. Now that she is big dog on campus, Scully is sporting the pants. I don't see why wearing a skirt would mean a position any less than a mans’, but that's how I interpret it.  

These varying responses are indicative of the polysemic nature of *The X-Files*. The interaction between differing viewers and viewpoints in this debate (which overall attracted 79 responses) illustrates the way in which fans read and interpret meanings from

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the programme. In their messages, Spookiebear and Touchstone aka Psychophile prefer to read that Scully wore skirts to impress Mulder. They view Scully as feminine through her dress and fashion - she exhibits a traditionally feminine, ornamental role. Scully’s femininity may not be prominent through her behaviour (as the scientific expert), however the skirts she wears signify to these fans that she is still a woman attempting to impress a man. She does not operate outside of patriarchal boundaries. Appearance is framed as a priority in the expression of her femininity.

The post by griff in the discussion thread presents a different perspective. This participant expresses dissatisfaction with the notion that skirts signify weakness and represent a ‘position … less than a man’s.’ The discussion of the character’s dress in relation to her femininity is an example of how Scully’s gender is represented as problematic. As opposed to the skirt, the suit represents a masculine discourse signifying power and dominance. Spender also notes that “there is more to life than being an attraction to men” as women now wear “shoulder pads, dinner jackets, career suits.” The contradiction between Scully’s ‘wearing’ of these masculine characteristics and her denial of a skirt and its connotative ideologies generates much conflict. The post from griff critiques this paradox; exemplifying a resistive reading.

The physical features of the characters in *Star Trek: Voyager* and *The X-Files* attract consideration in discussion fora topics. The participants in a message board communicate through a text-based medium - and through the patriarchally inflected English language. The irony is that digital avatars are summoning the *physicality* of televisual characters.

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70 Spender *op. cit.*, p. 246.
Even this multiple mediation of identity does not permit women to evade patriarchal limits regulating their behaviour. Boundaries defining ideological limits for both men and women operate regardless of the lack of a participant’s physical presence.

The discussions of Janeway and Scully in the fora I have studied reveal that intelligent debate within fan communities is prevalent on the Web, particularly in the posts about the characters’ femininity in relation to their social position. These debates about the validity of women are indicative of the Web’s ability to provide a space for women to contemplate and discuss the subject. The discussions also inform participants in the online community about issues concerning women and the patriarchal system that they might not have previously considered. The Moderator’s post in the Star Trek: Voyager forum provoked thought about femininity in relation to power. It also caused members of the community to respond with myriad points of view revealing a broad range of opinions and ideas. As Beate Gersch found: “While the Internet may simply reproduce existing power relations between men and women, many view it as a positive experience that allows them to explore power in a way that was not possible before.”72 Rather than remaining a ‘passive’ pastime, television is assisting in an education and in-depth contemplation of social concerns.

Debate on the Internet fandom is also beneficial because it tracks the building of communities that may be geographically isolated. Having a discussion about Scully and how her dress represents changing status may not be an option many fans have in a ‘real life’ situation. The virtual forum is positive in that it allows people from multifarious

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backgrounds to contemplate such an impact. It is a place where people who share common interests can exchange ideas.

Ultimately, online discussion fora are beneficial for women. It is an environment where they have an opportunity to expand their thoughts upon issues such as feminism and gender equality. Discussion fora also provide a variety of opinions representing differing modes of thought. As a text-only space, patriarchal overtones in the language remain prevalent and negative comments, such as those found in the Big Brother forum, mar the environment. Spender’s notion of ‘man-made’ language is ubiquitous within virtual spaces of communication due to the lack of a physical bodily presence between the fora’s participants. However, even from the fount of disempowerment can emerge resistance.
The Book Reader
This woman is in her early twenties and works full time at a large bookstore. She is an avid consumer of books - particularly fiction. She is confident in using the Internet for email and researching information, but has few skills with the technology beyond this level. The Book Reader’s knowledge and opinions about fiction highlights important concerns about gender representation in novels for children and adults.¹

Do you remember when you first heard about the Internet?
I was about fourteen or fifteen in high school when I was first exposed to it and started using it. My friend Russell was using it a lot. I knew it existed before then, but I had never considered it. When my friend started using it, I became aware of what you could use it for.

How often do you use the Web?
Four times a week.

How would you assess your own level of web expertise?
I am really good at finding what I want using search engines. But I’m not very good at designing a Webpage or anything like that. For actually using it to get information, I think I’m very good.

What activities, sites or topics do you engage in during your periods of web usage?
I read the British newspapers. I read a lot about films because I’m quite interested in films. I read book reviews. If something has been in the news lately that I don’t know a lot about, I use it to find out what it is about. I use email all the time. That’s the main reason I go on, then I surf for a while.

What sort of books do you prefer to read?
I like biographies and literary fiction and popular science books. I like Haruki Murakami and Banana Yoshimoto - modern Japanese authors. I like books that have a cultural slant on them, like Isabelle Allende [whose books are] always set in South America.

How are ‘boys’ books differentiated from ‘girls’ books in the young adult fiction genre?
When I was younger, the books that I read were very, very girly books - like The Baby-Sitter Club books, Secret Garden and The Little Princess. All those sorts of books were worlds apart from what my little brother was reading. He was reading the Hardy Boys and detective things. Kid’s books are very gender specific sometimes, but recently there’s been a blurring. Everyone is into fantasy because of Lord of the Rings and Harry Potter.

¹ Chapter Six Participant. Email Interview. Interviewed by Carrie Kilpin. Perth, Western Australia. 13 March 2004.
Do you think these books teach girls how to behave within the confines of socially constructed notions of gender?
No, I think they ‘support’ that teaching. Gender teaching starts earlier [from] the way that their parents teach them. Because I was a girly little girl, I always read quite girly books and I enjoyed that. I don’t think they taught me anything I didn’t already know. I’d say [the books] reinforced it.

Have you read many books in which the Internet and Web form a part of the narrative?
I own Alison Pearson’s I Don’t Know How She Does It - that’s a chicklit book. It’s a normal story about a mother and she’s very stressed. When she emails her friend she’s quite funny and clever. It’s about being a different person in email. She has a great job, is really good with computers, [and has a] fantastic house with lots of money. But she has problems in her relationship. She’s struggling to have her job and her children at the same time. At the end of the book she leaves. She can’t handle both. But it’s not a sexist book - she has a really demanding job and she makes more than her husband. Her husband stays at home and watches the kids more than she does. In the end she leaves [her job] because she wants to see her kids more often.

Do you think the books written in our era have much gender bias in them?
Yes. [For example, in] The Da Vinci Code, there was gender bias. The girl in it was a very bizarre mix of extremely capable and very uncapable at times - following along with the guys. But at the same time, she’s this brilliant cryptographer and she rescued him [the male protagonist] in the first place. A couple of chapters later she’s kind of ‘I don’t know what to do’. Obviously it’s an extreme situation. I don’t know how I’d behave.
Chapter Six

The Amazing Adventures of CyberWomen: The Web in Fictional Texts

As a child I was an avid reader. Visiting the library I would take my own library card as well as my mother’s, brother’s and sister’s. This meant that I was able to withdraw twenty books at once. The books I read were always fiction, and they usually featured a female protagonist involved in some amazing adventure - such as Flossie Teacake who turned into a grown-up whenever she buttoned up her magic coat. But the novel which was one of the greatest influences of my childhood was Louisa May Alcott’s Little Women. I loved Jo - the character with ambitions to be a writer, and whose imagination often led her and her sisters into all sorts of trouble. Despite the restrictions of her era, Jo wanted to push Victorian social boundaries and achieve something she was really good at. The positive impression the character had upon me and countless other Little Women fans is indicative of the substantial influence novels have in shaping social and cultural impressions of gender roles. Children learn a great deal about acceptable standards of behaviour - and the roles women are expected to perform in society - through the consumption of fictional texts.

The topic of this chapter was not part of the initial thesis plan. However, after researching and writing the second chapter, I realised the significance of fiction in the wider cultural and social sphere. Books are rarely a fashionable topic of cultural representation in cultural studies analyses. Television, film, fashion and food are far more frequent hues in the theorist’s palette. However, popular novels have a significant pedagogical role. As Dale Spender identified in Nattering on the Net: “For two centuries, the novel has been captivating audiences, drawing them in, entertaining and informing them. (Throughout the period when women were denied access to education, the novel was their curriculum,
their major source of information and education in values, judgement and character.)”¹

Novels are an important site of cultural investigation. Their narratives inform and educate both women and men in social realities and ideological truths. Popular literature became an important fount of pedagogy in the suite of representations investigated in this section of the thesis.

The study of novels and fictional writing can be approached from several modes of theoretical analysis. As Robert Higbie notes: “Literature is too complex for any one theory to explain adequately; each approach needs to accommodate others.”² I work within a cultural studies modality, particularly using textual analysis. Concurrently, the writings of Paul Virilio are helpful in my evaluation of cultural texts. Virilio wrote of the accelerations of modern society, tracing the cycles of invention and redundancy:

History is not just the geopolitics of peoples that have succeeded each other over the ages. It is also the implementation of the energy available in each particular period - formerly metabolic, then mechanical, relative speed, and absolute speed today with the boom in electromagnetic systems.³

The computer and cybernetics development, he believes, has contributed towards a faster velocity in the time and space relationship. Furthermore, he writes that “Fernand Bernard was right when he spoke of the energetic dimension of history, of time’s speeding up … If the tale of historical chronicles is effectively written information, it is also energy and mass - that of the living species.”⁴ The speed of computations and communication enabled in the virtual world in processing information and data is creating a new dimension of space - an accelerated version of historical artefacts. ‘Written information’

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which incorporates fiction, becomes one way to monitor the passage of ideas through this fleeting present.

The accelerated speed at which technologies such as the Internet are developing makes it difficult for scholars to mark, monitor and theorise. New skills and sources are required. As shown throughout this thesis, surveys and qualitative interview data have been matched with myriad representations such as film, television, online fora and advertising. Songwriters, filmmakers and novelists are the new historians documenting history through cultural productions and social interpretations. They record the present, and because of this, elements in their narrative become anachronous after a period as short as a few years. For example, one of the novels I read for the research in this chapter, *Cyberkiss*, was written just as the Web was gaining popularity. It contains passages explaining aspects of the Internet that are now common knowledge - such as what an email is and how it works. The book was published in 1996 and it is already - in technological if not literary terms - redundant. Spender also discusses that the “transitory, ephemeral nature of the electronic media is one of its most striking features”\(^5\) in *Nattering the Net*. Whether a book is published in print or electronic text, the information records are rendered swiftly redundant through rapid social changes. Descriptions of the Internet within fictional narratives are a part of a technological continuum.

In this chapter, the young adult category encapsulates fiction aimed at children aged from ten to sixteen. These books are designed for readers mostly in their teen years. The narrative, characterisation and language of the text reveal the cultural values of gender

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\(^5\) Spender, *op. cit*, p. 83.
differences in Web use. Alison Cooper-Mullin and Jennifer Marmaduke Coye recognise
the significance the books have in influencing children’s ideals: “We believe that stories
are what we grow on. Our future is shaped by our childhood, and the books of our
childhood are such an important part of our journey.”6 As books are such a significant
part of childhood, the values conveyed to the audiences have the power to influence how
future attitudes towards women in technology will develop. It is important that female
characters are presented as active agents in the Web discourse. The novels I analyse for
this include Margaret Clarke’s Love on the Net, Michael Coleman and Allan Frewin
Jones’ Internet Detectives: Virus Attack and Tessa Duder and William Taylor’s Hot Mail.

Within adult fiction, the novels I examine are situated in three genres. The first is the
short story. Authors from diverse backgrounds contributed stories towards the
compilation of The New English Library Book of Internet Stories, including Pat Cadigan
(science fiction writer) and Chris Manby (erotica and comic fiction writer). I investigate
how female characters are framed in these short narratives as positive or negative role
models to Web operators. The second genre is crime fiction, which lacks the credibility
granted to the gothic or tragic novel. As a liminal genre, detective and crime fiction is a
space that women can use to their advantage in writing about empowered female
characters. I also examine a romance novel. This text was written by a man and within its
narrative, many roles, behaviours and narratives are inverted. The central character is
male. He holds an emotional function while the female characters are more rational.

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6 Alison Cooper-Mullin and Jennifer Marmaduke Coye, Once Upon A Heroine: 450 Books for Girls to
Young Adult Fiction

A significant feature of children’s literature concerns the relationship between adult authors and their younger audience. When writing about young adult characters, adult authors draw experiences from their own childhood. Their attitudes are embedded within the narrative of the books they write. This is examined by Lundin, who states:

In many ways, children's books are adult literature. Critics speak of the ‘cross-writing’ of texts between the child and the adult, a conversation between past and present selves, a construct of interplay and intertextuality. Adults write books, market books, review books, buy books, and read them as a shared or private practice.7

This ‘cross-writing’ activates multiple nodes of difference around the words ‘children’ and ‘literature’. Adults and children have diverse experience of technological development. Spender is herself implicated in the division of technological knowledge between Baby Boomers and Generation Y. In a review of Nattering on the Net, Kate Burns identifies that Spender:

[D]raws broad connections among several technological transitions in Western culture; the move from scribe-based to a print medium, the emergence of mass television culture, and the current shift toward electronic communication systems. Her conclusions, of course, are those of one writer - a feminist who situates herself as part of the in-between generation, or those who were brought up to learn through print and are now learning to log on.”8

Spender’s perception of Internet and Web technology is similar to most within her generation. Young adult fiction is mostly written by people who were educated in an era where digital technologies were considered daunting to women. Conversely, children in the contemporary era are growing up in a world where new technologies are constantly emerging as much faster and more ubiquitous than ever before. As Virilio theorised, younger generations are experiencing a much more accelerated culture in terms of history.

7  Lundin, op. cit
and its progress. Adults who write books about the Web did not grow up with the digital technology punctuating their lives. The older generation compose narratives about technologies with which a younger generation are familiar, however they marinate them in older and more traditional cultural values.

Due to these attitudes, children’s literature is often bounded by older, limiting gendered categories. ‘Girls’ books are different in subject and content to ‘boys’ books. In her article ‘But That’s a Girl’s Book!’ Elizabeth Dutro examined a classroom of children and their reactions in choosing certain books. Books with seemingly non-gender specific narratives were still judged by the children she studied to exist within gendered categories. For example, *Goosebumps* is a series of novels that contain narratives inclined towards adventure. Dutro’s study revealed that female students identified a masculine bias in the *Goosebumps* series:

> Both Neena and Tara characterized as ‘boys’ books’ a series that I had assumed children would view as gender neutral (my analyses show that there are only slightly more male protagonists than female in that series). Their assumptions seem to be based on the content of the books - scary and adventurous - in contrast to the more domestic, school- and friendship-centered themes of series such as The Babysitters Club.

Adventure and fear, according to these students’ ideas, fall into the category of masculine-oriented books, while stories that focus upon personal and emotional plots, such as ‘friendship-centred themes’ are considered feminine. For schoolchildren learning about the ideologies of gender, the categories of ‘feminine’ and ‘masculine’ provide strong narratives dictating their behaviour. Spender also noted this division in her personal reflections of book reading as a child: “Girls are interested in personal relationships, in the ongoing story of existence. Death in a novel could in itself be

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traumatising. Even now I can recall the terrible effect that the demise of Judy in *Seven Little Australians* had on me, along with that of Beth in *Little Women*.”¹⁰ The gender divisions in children’s books are distinct. Girls prefer a domestic and romantic theme, while boys are drawn to sport or mystery narratives.

*Internet Detectives: Virus Attack* by Michael Coleman would fall into a masculine domain as it operates within the categories of adventure and mystery. The narrative begins with two of the main characters, Josh and Tamsyn, using computers at school. Josh chats on the Internet with an overseas friend, while Tamsyn reads a Charles Dickens story she downloaded from the Web. When a virus hits the network of computers causing them to all stop functioning, the teacher immediately blames Josh.¹¹ Surprisingly, he is positioned as an obstruction to the technology. Rather than automatically placing blame on the female character (the fourth chapter described how women are positioned as troublesome in relation to computers), the male character is isolated as the cause of trouble. This ideology was also summoned by one of the students I interview in the ninth chapter. Student ‘A’ remarked that the teachers treated the female students well in her Interactive Media class as they were generally better behaved than the male students.¹² Female students are shown in this educational discourse to be more compliant, disciplined and responsible users of digital technology. As the book is aimed at both male and female readers,¹³ the author shows that traditional attitudes of women being unskilled

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¹³ Although I categorised the novel as belonging within masculine interests based upon Dutro’s study’s findings, it is nevertheless aimed at both genders. If males are the more dominant readers of this book,
and dangerous to technology are tempered by contemporary - and controversial - debate about boys in schools.¹⁴

The language used by Coleman in Internet Detectives: Virus Attack is sporadic in its allocation of equitable digital knowledge between the characters. The younger female characters are portrayed as holding high level Web literacies, but there is a distinct gender divide between the older generations. For example, in one passage the character Lauren has been playing Internet chess with an unknown competitor. The words here show how gender is consciously decentred from holding a clear function and significance:

‘If it upsets you that much’ her gran said reasonably, ‘maybe you should stop playing with him, uh, her. Which is it honey?’
‘Dunno’, Lauren shrugged. ‘I never asked. We don’t chat much.’¹⁵

In this passage, Coleman illustrates how the (younger) female character considers gender to be an irrelevance or a triviality. The nonchalant ‘Lauren shrugged’ and her casual reply, ‘Dunno’ places an emphasis upon the supposed insignificance of gender in Web-use ability. Although Coleman constructs gender to appear irrelevant to the younger generation, the elder character is not granted the same position from which to speak.

Once more - as we have witnessed throughout this thesis - in both representational politics and surveys, older women are being framed and judged as either wedded to old then the capable female characters Coleman constructs assists in informing these readers that men are not necessarily ‘naturally’ better at using digital technology.

¹⁴ Boys are having difficulties in schools. As Leonie Rowan et al identify: “Current debates about boys and schooling in many Western nations are increasingly characterized by a sense of crisis as government reports, academic research and the day to day experiences of teachers combine to indicate that: boys are consistently underperforming in literacy; boys are continuing to opt out of English and humanities; boys represent the majority of behaviour problems and counselling referrals; and boys receive a disproportionate amount of special education support.” However, this thesis does not have the scope to delve into this debate. See Leonie Rowan, et al. Boys, literacies, and schooling: the dangerous territories of gender-based literacy reform, Buckingham [England] and Philadelphia [USA], Open University Press, 2001.

¹⁵ Coleman, op. cit, p. 10.
ways and systems of knowledge, or redundant to the digital era. While these novels show a more ambivalent, fractured and complex presentation of boys and girls and technology, Jodi O’Brien suggests that the textual medium of online communication always incorporates a gendered consciousness. He writes:

[G]ender is an embodied institution that requires interactional performance in order to be achieved and sustained, [and] is not an easy thing to transport into the narrow bandwidths that we call cyberspace. The proclivity for doing so, for lugging gender in where theoretically new forms of interactional categorisation might emerge in its stead, suggests that gender is a dominant, shared construction that constitutes a primary symbolic form around which we organise interaction.  

Despite the medium’s potential to create new identities, the Web remains a space in which conventional gender ideals are maintained. The need to know the gender of the online participant - asking the question in terms of gender rather than nationality, class, race or age - is presented as the primary trope of identity, even within fictional texts.

Lauren’s grandmother is framed as bringing ‘old’ ideas into the operating system of the Internet. In another example, when she asks Lauren to send an email, she mistakenly says ‘e-post’ and is instantly (and exuberantly) corrected by her granddaughter. Lauren’s grandmother is not the only older female to exhibit an ‘outsider’ status in relation to the Web. Coleman describes the feelings of another character: “Meanwhile, Tom’s mother was feeling like a computer widow. The only time she saw her husband or her son was when they zipped into the kitchen to raid the fridge. So far as she could tell, they’d both gone Internet-crazy!” In Internet Detectives: Virus Attack, Tom’s mother is positioned in a traditionally feminine environment - the kitchen. It is only the two men in the family

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16 Jodi O’Brien, “Writing in the Body, Gender (re)production in Online Interaction”, in Communities in Cyberspace, op. cit, p. 87-88.
17 Ibid., p. 72.
who use the computer. Both of the older female characters are alienated from digital technology; Lauren’s grandmother uses an incorrect term, while Tom’s mother is described as a ‘computer widow’. Both are firmly entrenched within a domestic sphere, which further emphasises their marginalisation. Just as bachelor is not equivalent to spinster, ‘computer widower’ does not have the same currency or connotations as ‘computer widow’.

Tessa Duder and William Taylor’s book *Hot Mail* consists of a series of emails exchanged between two teenagers, one of whom is sailing around the world on a yacht. The main characters are of a different gender and a romance is hinted. It would therefore be of interest to both male and female readers as both romance and adventure are incorporated in the narrative. *Hot Mail* is successful in designing characters who have equal knowledge of computers and the Web. The limitations of rigid gender segregation are identified by Jess, the female protagonist in the novel. Jess scoffs at the assumptions made by Dan (the male character) that women should conform to conventional ‘feminine’ standards of behaviour. Her email dialogue reads: “Where I come from, any male who sits in front of a screen all day looking up his fave blonde jokes has to be really sick in the head! And if males are going to put zillions of blonde jokes on the net, course they can expect some stroppy females to get a homepage and share some jokes about men.”

With Jess defending women’s right to respond to this behaviour, *Hot Mail* challenges men’s ability to regulate and determine digital values and regulations. Jess’s refusal of traditional ‘feminine’ compliance demonstrates that gender discrimination - at least in some fictional contexts - is no longer an acceptable practice. As one text in Virilio’s

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historical continuum of an accelerated technological world, the novel documents and expresses that prejudice based upon gender is objectionable. It exemplifies that social attitudes are shifting away from a sexist culture.

The language in *Hot Mail* reverses conventional ideological assumptions about gender roles. Dan is characterised as sexist and ignorant - an immature country boy. At the start of the story, his speech runs along the lines of:

> Everyone knows who old Clinton is, Ms (or Mr!) Smartarse! So this all bright [Madeleine Albright] woman tells him what to do? Yeah, yeah, yeah … pull the other one. You mean she told him what to do with Monica? LOL. LOL BIGTIME!!! Oh yeah? Old Clinton phones up Albright from his office and says ‘Hey! I got this bimbo in my office Albright and she’s hot as. What do I do now?’ and then the Albright says, ‘Go to the door Bill and look up and down the hall. If Hillary isn’t coming, you get stuck right in! It’s your birthday!!’

Dan’s language, consisting of words such as ‘Ms Hairy-legs’ and ‘bimbo’ in his emails, demonstrate his desire to mock, ridicule and undermine. In contrast, the female character is presented as more progressive and feminist in her views. The language mobilised in her responses to Dan is more literate and polished. For example:

> And just because I feel sorry for you I shall waste my time telling you that Madeleine Albright is the most powerful woman in the world. She’s the US Secretary of State and tells Mr Clinton what to do. She gets to ride around in limos and talk to world leaders about the peace process which is more than you or most men will ever do.

[…]

> “pps The future is female. If you don’t believe me, ask your teacher who is the Prime Minister of New Zealand.”

Jess’s spelling is correct and her sentence structure more fluent. She is also effective in identifying strong female political leaders. At the time *Hot Mail* was published (2000), and still in 2004, Helen Clark remains the Prime Minister of New Zealand. Both

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20 Duder and Taylor, *op. cit*, p. 8
communicators in this passage are represented as having the same knowledge of the Internet. However, the improved articulation of the female character reveals her to be not only a capable user of the technology, but also exhibiting intelligence outside of it.

The third novel I examined, Love on the Net by Margaret Clarke, does not present its female character in a comparably positive light. This book exists within the romantic genre and is therefore framed by feminine ideologies. The narrative details the experiences of a teenager named Clementine who is concerned about losing her boyfriend. He relocates with his family to the Bahamas, and the best means of contact Clementine has with him is through email. Clementine is initially constructed as indifferent to digital technology. She is portrayed in a ‘stereotypical’ feminine role as being more concerned with emotional issues (such as her boyfriend leaving the country) rather than having any knowledge of the Internet. It is her brother and father who own the computers in her home, and she must ask their permission for access. When Clarke writes of Clementine using a computer for the first time in the novel, she portrays the female character as having to resort to an emotional plea in order to borrow her brother’s computer:

Clem felt like bawling her eyes out. How was she supposed to work and print out and …
‘Okay, okay,’ said Jasper suddenly, as he saw her face. ‘I’m not all bad. You can use mine and I’ll suffer the midget, but don’t stuff it up or I’ll seriously mangle you.’

Clementine’s foreshadowed incompetence is clearly evident in the dialogue (‘don’t stuff it up’) and the patronising conduct of her brother. This passage exemplifies that the male character has an authority in the digital field, while the female character lacks

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technological knowledge, and is reliant on the good will of men to use computers, printers and the Internet. *Love on the Net* is a novel written for a young female audience. In passages like this one, women are confirmed as emotional and helpless, while men own and operate the technology.

Clarke constructs Clementine as a boy-crazy teenager, convinced she will not be happy after her boyfriend leaves the country. In *Love on the Net*, the female character, despite her youth, is represented as functioning within traditional gender roles. The language in the following passage reveals the limiting way in which the Internet is presented as useful to her life:

‘I can’t wait to get on the net,’ said Jasper enthusiastically. ‘I can tap into all sorts of info. I can contact anyone in the world.’
‘Oh, yeah?’
Clem turned to go. Then it hit her. She stared at Jasper.
‘Anyone in the *world*?’
‘So long as they’re on the internet: email, you know.’
Clem beamed. Email. She could write everyday to Julian if he was on the net. He was mad on computers.

Jasper, Clementine’s brother, is shown to be the character with the most knowledge and interest in digital technology. He is ‘enthusiastic’, he knows the jargon and is interested in exploring the technology. Clementine, in contrast, sees the Internet merely as an opportunity to communicate with her boyfriend - as *he* is also ‘mad on computers’. The words ‘Then it hit her’ illustrate Clementine’s backwardness in relation to the technology. The phrase demonstrates the character’s slowness to pick up on ideas and her lack of understanding in how the Internet can be used to communicate internationally. She is presented as inept and helpless at operating the technology.
Aside from *Love on the Net*, the young adult fiction books I read in this section provided a positive cultural modelling for children. Gender was not the restrictive variable in the building of identity: age became far more determinant of Internet ability. While *Love on the Net* appears a hindrance to this achievement, the plot concludes with Clementine attaining a job in a computer shop and learning more about the technology. Although she is represented throughout most of the novel as backward and ignorant of the Internet, she is ultimately constructed in taking steps to build digital literacies.

**Adult Fiction**

The language used within fictional texts to describe the characters and their actions is a significant aspect in analysing the relationship the authors draw between gender and digital technology. W. J Harvey writes about the author’s influence in this construction:

> However invisible he may make himself, whatever narrative techniques he may use to conceal his exit from fiction, the novelist is and must be both omnipotent and omniscient. The last word is, both literally and metaphorically, his alone.23

The author’s ‘omniscience’ occurs in the language he or she chooses to use. Language is inherently patriarchal, and therefore contains many ex-nominated devices in promoting the domination of men and subjugation of women.24 Harvey’s own writing is an example of this tendency. In this extract, he assumes the author to be male - referring to ‘he’ and ‘his’. Harvey’s exclusion of women from his ideology of authorship demonstrates how patriarchal inflections of the English language easily dismiss and denounce women. In books containing reference to the Internet and the Web, this discriminatory form of

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exclusive writing privileges men by informing the audience that women are irrelevant in
the digital discourse.

In the books read for this section, most of the authors do not rely on assumed narratives
or ideologies to present the characters. However, there are exceptions. In The New
English Library Book of Internet Stories, James Flint’s short story ‘Network Network’
perpetuates notions of the female gender existing as a corporeal identity rather than
displaying any mental talent or rigour. The story is set at a conference for Internet
technologies. This passage reveals Flint’s portrayal of the limiting stereotype:

Shortly after his racing retinas had registered the undeniable reality of the girl’s
breasts, Marty’s cortex broadcast the disappointing news that they were breasts,
yes, but that they were snugly encased in a flesh-coloured Lycra® bikini bra the
cups of which were decorated with the same eye-wink logos as on the bottles of
mineral water. Below these, daubed across the girl’s stomach in red body paint,
was the brand name of the Internet search engine she was advertising: ‘Excite.’

Similar to the advertisement for Radeon™ 7500 discussed in Chapter Four, the female
center - known only as ‘the girl’ - consists primarily of bodily surfaces, a billboard of
flesh and skin. Exploiting the woman’s body as an advertisement is conveyed as a
‘natural’ part of the dominant social and cultural system. It is also a potent metaphor for
the way in which ideologies write on - and over - women’s lives, knowledges, bodies and
histories. Flint also demonstrates that males hold power in the digital technologies
industry by identifying the most important people in the story to be male. He writes:
“Yellows like him were irrelevant, journos and body-ads and liggers, he could forget
about them. It was all about the reds and the greens, those were the boys, the reds in the

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minority but holding the cards.”26 Flint labels the important people as ‘the boys’ - in opposition to the irrelevant ‘body ads and liggers’. By naming the influential characters as male, he illustrates that females are of little importance in the Internet industry. The female characters are conveyed as irrelevant to the digital discourse.

Another short story from *The New English Library Book of Internet Stories* captures an ideology that positions the female character in a traditional gender role. ‘Shopping’ by Chris Manby explores the life of a woman who uses the Internet primarily for buying possessions, especially from sites such as jewellery.com. Manby shapes a consumerist ideology as a natural and expected pastime for a woman using the Internet. As she writes: “For someone raised on QVC, Internet shopping was the obvious next step for Kara Smith. Like that progression from smoking pot to shooting up - shopping via the Internet provided a faster, more effective hit than messing about with the phone.”27 The character displays little interest in the Web other than buying items such as make-up, clothing or dish drainers. She rarely leaves her home and is presented as a socially isolated net surfer. In this story, the connotations of women as domestic shopaholics are maintained.

When gender identity is identified in an online context, traits belonging to a particular gender are reified. In *The New English Library Book of Internet Stories*, a passage illustrates how a gendered identity, when recognised, affects conversation:

> Back in London, he remained on-line and, sure enough, a few minutes later, the bell sounded again and his screen opened up to the chat box.

> Dave: hi there

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He replied:
106562.2021: hello

The response was fast.
Dave: where are you?
106562.2021: in London
Dave: m or f?
106562.2021: sorry?
Dave: are you male or female?
Dave: ok. bye.

A line saying (Dave has left the forum) appeared on the screen.28

The ‘m or f?’ phrase is a common question posed by chat users to determine gender.

Dave, whose masculine identity is marked by his name, is interested in only conversing with a female. Howard Rheingold confirms that, “[s]exy chat and chat about sex, net.sleazing and gender switching”29 are well known spaces of virtual communication. Female identities are eroticised in the Internet chat discourse. Jakubowski presents the male gender as predatory and sexualised in character, while women are assigned a passive, preyed-upon identity.

A short story from The New English Library Book of Internet Stories also uses language to convey an inequality in its presentation of male and female characters. ‘It Came in a Box’ by Stella Duffy gives a female character intellectual power and, through inversion, summons a man as a collection of body parts - an e-male:

From the Internet she would collect all the right pieces….She would hoard them together, and then, when it was time, she would take her pieces of him and the new words she had harvested from across the globe in the pre-dawn dark and she would make him. The man. The e-male. The ultimate quest for the virtuous man.

Virtually requested, literally hers. Superstition and ultimate technology. Twenty-first century boy-toy.30

In this story, the male character is an object designed only for the protagonist’s entertainment. In opposition to presenting female characters based upon physical features (as portrayed by the body advertisement models in James Flint’s “Network Network”), Duffy treats the male body as a surface to be constructed and on which to be inscribed. Words such as ‘The e-male’ and ‘Twenty-first century boy-toy’ contribute towards the storyline’s objectification of the male body. Although this storyline gives women an empowerment that is conventionally held by men, its treatment of masculinity - by appropriating the tropes of patriarchal femininity - merely perpetuates the problem. The storyline is subversive in inverting gender binaries, however this can only be the first stage in creating a more social just mode of internet communication. In this case, the Web in fiction is used to challenge patriarchal unfairness to women, but without accruing positive results. The patriarchal ideology is revealed in this example to be detrimental and unjust to men as well as women. Gender roles in Web operation are not significantly challenged in these four stories from *The New English Library Book of Internet Stories*.

Another fictional site I explored has a more positive outlook on women and technological aptitude. Female authors have historically received little credibility as authors. As Spender notes: “Women may have been accepted as scribblers, they may have even been popular, but their work, and their novels, were virtually never placed in the same category as that of their male counterparts.”31 Sally Chapman’s *Cyberkiss* plots a female computer-network detective. In traditional ideologies, detective and crime fiction was not

30 Stella Duffy, “It Came in a Box”, *The New English Library Book of Internet Stories, op. cit*, p. 23
31 Spender, *op. cit*, p. 80.
accepted as a genre in which female authors should be writing, and certainly not featuring as the main protagonists. A.E. Murch pointed out the social opposition women received in writing narratives about crime in the 1800s:

When the outcry against ‘Sensationalist Novels’ was at its height in the 1850’s and 1860’s, contemporary critics were considerably disturbed because many of them were written by women. In spite of the notable precedent set by Mrs Radcliffe at the end of the eighteenth century and the popularity of her Tales of Terror, mid nineteenth century publishers seemed to feel there was something peculiarly indelicate about tales of crime or criminals being written by a woman, and were reluctant to print them, though stories of social or domestic life were readily accepted.32

In the past century however, this genre has evolved as a popular site though which women are portrayed as intelligent characters. With precedents ground in detective and mystery fiction by women such as Agatha Christie and Dorothy L. Sayers, female authors are no longer restricted to narratives concerning ‘social or domestic life’. They are the new participants in Virilio’s technological continuum of history. Their books document the changing social and cultural attitudes to traditional gender roles.

In Cyberkiss, the main character and her boyfriend are asked to investigate a murder that appears to be the result of a cyberstalker. Throughout the narrative, Julie displays competence and ease in using computers and the Internet. She is presented as intelligent and independent. The following passage from the novel demonstrates how women can be literate in computer technology. The scene takes place at a wedding. Julie is dressed as a bridesmaid and this obvious marker of femininity is judged by the computer technicians to signify that she does not have the skill or knowledge to fix a technical problem:

Hansen’s techno-jockeys stood around sulking, gazing down their noses at me with the priggish reserve of old schoolteachers, certain my failure was imminent.

Although I had an excellent reputation in Silicon Valley, Hansen’s keyboard cowboys would never believe that I could succeed where they hadn’t, plus the fact that I was just a girl. In spite of all the advances of feminism, most of the high tech world was male, and there was an unspoken but prevalent belief that you needed a Y chromosome when it came to computers. Of course, the fact that I was wearing a prom dress didn’t enhance my credibility. I could see the doubt on their faces and was determined to prove my worth.33

Julie efficiently fixes the problem with the computer. Chapman’s willingness to frame the character as competent and proficient in a domain where her gender is normally sidelined demonstrates how - through fiction - feminine and masculine narratives can be rewritten. Chapman notes Silicon Valley’s chauvinism in this passage. In the continuum of Virilio’s accelerated culture, the author successfully challenges this gender inequality. Cyberkiss constructs a positive space of women’s use of the Web.

As the Web is a textual realm of communication, gender ambiguity is a plot device many authors utilise in their stories. The narrative of Cyberkiss describes a female detective’s attempts to solve a murder case. The language in this excerpt illustrates an assumed femininity assigned to the name ‘Night Dancer’:

‘It’s just like Night Dancer’s threat isn’t it?’ I said. ‘Her note said she would stick the knife into him while she kissed him. That’s why she smeared the lipstick on Bernie’s face.’

‘But why do we keep assuming it was a she?’ he asked. I opened my mouth to answer, then realized I didn’t have an answer. Not a good one, anyway. Why had I assumed Night Dancer was female? Bernie had used the feminine pronoun, but it was equally possible that Night Dancer was male. Bernie couldn’t have known for sure since he’d only known Night Dancer through the computer.34

In this example, Chapman elucidates gender anonymity granted by the Internet. The confusion experienced by Lauren’s grandmother about the gender of a chess player in Internet Detectives: Virus Attack is replicated in this passage. The abstractness of text-

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33 Sally Chapman, Cyberkiss, New York, St. Martin’s Press, 1996, p. 223
34 Sally Chapman, op. cit, p. 72.
based communication demonstrates how language can create ambiguity between the word on a screen and the reading of an off-screen body. Gender is mobilised in these narratives as an unstable construct; the Web contributes towards producing anonymous identities that are not immediately definable.

Similarly, *Man or Mouse* unravels gendered archetypes. The novel is written as a romance and its masculine viewpoint provides a contrast to the notion that romance belongs within “women’s genres”. My analysis of this book is aided by an interview with the author. He remarked that his work “portrays a woman's world, in which Ren is effectively a fish out of water. It meant the women had to be sussed about themselves in order for him to learn, and aspire to become like them.” It is important that both male and female authors depict women as experienced operators of Internet technology. In his novel, Whyman accomplishes this goal by designating female use of the Web as ‘standard’ while men are marginalised and presented as existing outside this norm. The plot depicts Ren’s ambition to form a romantic relationship with a girl he works with through a Web-based meeting site. However, this meeting site is for women seeking contact with other women. Ren discovers that he has to create a female identity in order to gain his workmate’s attention. In the following dialogue, the character’s frustration with gender identities on the Web is apparent:

> ‘Willie we’re dealing with screen names like MassiveWun, JapEye, ShagU24/7, Deano69XXX.’
> ‘Subtle.’
> ‘WristDeep, even. Can you believe it, a name like that?’

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36 After reading *Man or Mouse*, I visited Whyman’s website. He was easily contactable via an email address on his site, which is how I gained his consent for an interview.
My dealer frowned. 
‘Deep in what?’
‘It doesn’t matter,’ I assured him quickly. ‘All I know is it means I can’t get a fox to trust me. My gender marks me out as a wanker.’
‘No it doesn’t.’
‘Believe it, Willie. As soon as she clicks on my vitals, finds out I’m a man, she immediately assumes I’m typing with one hand.’

Ren’s belief that his gender ‘marks him out as a wanker’ is in contrast to the self-assurance and literacy coded to men who operate the Internet. The conflict in these assumptions is the relationship between heterosexual masculinity, pornography and the Internet. An *American Demographics* study found that “while 86 percent of American men were likely to click on sex sites, only 14 percent of American women were likely to do so.” While this thesis does not make any judgments about pornography, the coding of this genre has consequences for men and their modes of communication with women. In Whyman’s narrative, women are presented as having a more valid use of the technology. Female characters in *Man or Mouse* are constructed as having a legitimate reason for utilising the Web. Men, conversely, are configured as troublesome to the digital discourse.

This ideology is prevalent through chat meeting sites. The language in *Man or Mouse* exemplifies how men are constructed as having an avid interest in a virtual sex discourse while women are depicted as their targets. The words in this passage exhibit how online males are portrayed as highly sexualised beings:

In a late night poll of males, not a single one listed HONESTY in their Virtual Vitals. I know, because I checked the Vault. Buzzwords such as SEX and FUCKING featured heavily. Not only in ‘Interests’ but ‘Occupation’ too.

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38 Matt Whyman, *Man or Mouse*, London, Hodder and Stoughton, 2000, p. 34.
Surprisingly, ROCKET SCIENCE returned one screen name, though further investigation placed the name in typical context.

**Screen Name:** LIKRIK  
**Real Name:** Ricky  
**M/F:** You callin’ me a poof?  
**Age:** 25  
**Marital Status:** I do wives  
**Location:** The Arsenal  
**Occupation:** Tool Hire  
**Interests:** Girls who go down! Especially Asian Babes  
**Watch Word:** ‘Fuck rocket science. Let’s Fuck!’

To ensure some impartially, I ran the same check on the female net contingency. HONESTY came up plenty. A virtue, sought in vain by so many. FUCKING was also a contender. As in ‘no FUCKING men’. Interestingly, MEN itself returned a number of variations on the same theme: MEN don’t bother me.’ ‘MEN get a life!’ ‘Not into online MEN’. ‘Only women please’.40

This ‘typical context’ of online male identity is shown to comprise a discourse of active and predatory sexuality. Virtual sex, or as defined by Elizabeth Reid “‘net sex’, a form of co-authored interactive erotica”,41 forms a significant proportion of online chat interactions. Words such as ‘sex’ and ‘fucking’ are prevalent in the language of the Web’s erotic discourse. However, Whyman presents these terms in different contexts for each gender. He attributes ‘fucking’ in the erotic sense to a masculine identity (‘Let’s fuck!’), while it functions as a forceful adjective in the case of women (‘no fucking men’). The expletive moves from a masculine verb to a feminine adjective. Whyman also presents men as overtly heterosexual and predatory, as seen in Ricky’s Virtual Vitals. In contrast he indicates women are more interested in terms such as ‘honesty’. Although the plot reverses gender binaries in that women are presented as the more credible users of the technology, Whyman nevertheless adheres to polarised categorisations of sex and gender. Women appear much more sexually conservative than men. As with Janeway and

Scully, it becomes difficult for women to align sexuality, intelligence and Internet literacy.

Compared to books written thirty or more years ago by writers such as C.S Lewis, Enid Blyton and Lewis Carroll, contemporary authors do not consciously discriminate between men and women in a methodical or predicative fashion. Bob Ashley in *The Study of Popular Fiction* points out that the texts produced by Enid Blyton were located “firmly within the framework of dominant ideology - especially in respect of attitudes to race and class, and also to gender.”42 The dominant ideology in Blyton’s novels was evident through the characterisation - the boys were adventuresome while the girls always returned home to help with their mother in the kitchen.43 In contrast, contemporary texts produced for the younger generation demonstrate that males do not have a natural ability in using computers and the Internet. Rather, these narratives show children of both sexes that the Web can be operated competently by boys and girls.

As well as documenting a rapid advancement of technology, books provide an indication of gender values from the era in which they are written. Comparing Enid Blyton’s novels to those written by Michael Coleman (*Internet Detective* series) reveals how attitudes towards children’s behaviour, based upon their gender, has changed within thirty years. While Enid Blyton’s female characters were firmly ensconced within narratives of domesticity, Coleman’s fictional girls are just as adept as their male counterparts in operating technologies like computers and the Web. The social and cultural values of

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43 Such as in novels including *The Folk of the Faraway Tree* (Sydney, Angus and Robertson, 1953) and *Children of Cherry Tree Farm* (London, Country Life, 1940).
these novels are indicative of a heteroglossic influence in the author’s construction of the plot.

The other significant function that books embody is an influential pedagogical role in the reader’s lives. For both adults and children reading books about the Web, the way in which women are portrayed in relation to the technology will inform their knowledge of gender behaviour. Through their use of narrative devices, character and language, authors have the ability to work with or against limiting feminine ideologies. For example, James Flint in ‘Network Network’ superficially links women and technology, while the male characters have authority as the red and green buttoned ‘boys’. In contrast, Matt Whyman uses characterisation in his novel *Man or Mouse* to reverse gender stereotypes. His narrative informs the audience that men do not have any ‘natural’ advantage over women in the use of the Web.

The books I read and examined for this chapter indicate that the relation of gender to the Web is inconsistent. Several of the authors, such as William Taylor, Tessa Duder and Sally Chapman, attempt to challenge this inequality by constructing characters that unravel traditional archetypes assigned to gendered identities. These positive portrayals of women in relation to the Web operate to acknowledge changing ideals of gender in contemporary social and cultural patterns. They also inform and educate their readers about the potentials of Web women.
The Career Woman
The woman I interviewed for this chapter works full time in an environment where computers are regularly used to research information. She is in her forties, and was introduced to computers when enrolled in a university course in Computer Science. Although she worked with computers following her graduation, she did not remain in the field. This woman now works for an antique bookshop. She views the Web as a device to organise and research data pertaining to her work.1

Do you remember when you first heard about the Internet?
I first heard about the internet in 1982 at the age of 20. The word ‘Internet’ was first coined that year. Prior to 1982 the following services were available:

*Telnet* (first established in 1972), allowed a user to remotely connect to another computer.

*FTP* (or file transfer protocol established 1973), was developed as another remote access utility allowing users to transfer files back and forth rapidly.

*Gopher* was an early, text-only method for accessing internet documents. It is still used.

*Usenet* (established in 1979) was a service by which users could post messages to a public bulletin board on any manner of topics.

How often do you use the Web?
I use the web on a regular basis throughout the day. In total I would normally spend about 4 hours a day accessing information in relation to my work.

What level of expertise do you have with the Web?
I have a good understanding of how to use the web. I can easily and readily retrieve information required for my work from the internet.

What activities, sites or topics do you engage in during your periods of web usage?
My books are listed with several overseas bookselling databases (or search engines) on the web. On these sites, I maintain our stock on a weekly basis as items are ordered and sold. I use the web for searching rare, antiquarian and out-of-print books for clients who request specific titles. As I also deal in historical and rare documents, I spend a considerable time researching such material at the national and international libraries on the Web.

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1 Chapter Seven Participant. Email Interview. Interviewed by Carrie Kilpin. Perth, Western Australia. 27 February 2004.
What was the computer course you studied after high school?
In 1980 I enrolled at The University of WA and studied Commerce, Economics and Mathematics. The Department of Computer Science (Faculty of Science) was founded in 1976. In 1981 the unit Computer Science 101, as a component of Mathematical Sciences 100 was introduced. Professor Jeffrey Rohl, author of Programming via Pascal lectured and tutored me in Pascal. I also studied the program ‘Basic’ as part of this unit.

Why did you decide to undertake this particular course of study?
I decided to undertake the Computer Science unit as it was a new course offered by The University of Western Australia. I knew that there would be a future in knowing about computers and how to program.

How many women were in your classes?
There were 3 women enrolled in the unit Computer Science 101.

Was there much opportunity for women to get jobs in the computer industry after you graduated?
After I graduated in 1983, I was employed by a national company to handle stock records on an early Burroughs computer. In 1985, I was employed by one of Perth’s largest stock-broking companies to help establish a computer system. Up to 1985, all their trading and account records had been hand-written. My job was to phase in the new computer system whilst phasing out the old manual system.

Do you know of any women who have successful careers in industries relating to computers and the Internet?
There have been many famous women who have been successful in industries relating to computers and the internet.

Grace Hopper (1902-1996) invented the first computer “compiler” in 1952 and created the programming language Cobol. Hopper coined the word “bugs” when she identified that a moth was the cause of problems in a circuit.

Carly Fiorina (1954- ) is chairman and chief executive officer of Hewlett-Packard, the largest business in the USA run by a woman. Fiorina has reorganised the company to participate in the internet.

Has the internet made your job easier or more complicated?
Though I have a comprehensive reference library of books at my disposal, I am able to access information on the internet which is not readily available in books. Web sites such
as libraries are useful for my research. The internet has certainly made my work a lot easier.

Do you think the Web has become another area which women use for chatting, rather than more substantial occupations?
Many of my female friends use the internet in their daily course of business. These women are involved in a wide variety of occupations ranging from successful international musicians to executive business women. Emails have become a quick, easy and efficient way for them to communicate in their occupations. I do not think that the web has become another area which women use for chatting.

Do you think the introduction of the Web into the workplace has provided more advantages for women?
I gained employment because of my computer skills in 1983 when not many women had computer knowledge or experience. Since then there has been an increase in the number of women becoming involved in IT occupations in the last couple of years. Associations have been formed specifically for women in the area of computing, such as: The Association for Women in Computing (AWC), which is dedicated to promoting the advancement of women in the computing professions. Women's Internet Council, The mission of WIC is to establish a point of presence for Women working with the Internet. I do think that the introduction of the web into the workplace has provided more advantages for women.
Chapter Seven

Cyber (Super) Women: The Web in the Workplace

Women’s exclusion from technological competence, from skilled work and from large numbers of occupations, was established and continues to underpin the social relations of technological work today. Shaped by male power, technologies embody patriarchal values and have become intimately related to masculine culture.2

Juliet Webster

Women have historically been excluded in areas of scientific and technological study and work. The ‘patriarchal values’ to which Juliet Webster refers continue to marginalise women from full participation, as both builders and users, of the Internet. In workplaces where digital technology is the focus of the enterprise, rather than a mechanism through which to accomplish other tasks such as sales, education, health or marketing, women remain significantly outnumbered by men. An historical confinement to domestic spheres3 contributes to the lack of support many women receive when attempting to transgress the boundaries of masculine domination. This chapter investigates the continuing barriers blocking women’s success and ambitions in the workplace. I investigate if - and then how - the Web is having an influence in changing attitudes towards women’s participation within the professional environment.

3 Gaye Tuchman states that in the USA: “In 1920, 24 percent of the nation’s adult women worked for pay outside the home and most of them were unmarried.” (Tuchman, “The Symbolic Annihilation of Women by the Mass Media”, in Oliver Boyd-Barret [Ed.] Approaches to Media: A Reader, London, Arnold, 1995, p. 406.)
For the purposes of this study, I compare two types of workplaces. I examine three academic libraries, where the staff are predominately women. Through professional development, this group is highly skilled in new and emerging technologies. As ‘Web Women,’ librarians are an important part of women’s contribution to digitization. I compare the conditions in these locations to a selection of companies operating within the private sector including Telstra, Macromedia, IBM and Vircom. These are male-dominated workplaces - consisting of much fewer women in specialised technical aspects of the organisation. I ponder how the Web operates differently in these environments and examine how women may challenge boundaries enforced by years of masculine control of digital literacies.

There are more women than men in the profession of librarianship. As a result, the discourse of librarianship has acquired a feminine modality. Several academics recognised that this feminised sphere has attracted negative connotations. For example, Marie L. Radford wrote an article about the stereotype of the female librarian, and noted that, “[l]ibrarianship has long been considered a ‘feminized profession’.”

Radford critiques the portrayal of the librarian in the popular media as being “middle-aged with tight gray curls, double chin, glasses, and wearing a shapeless suit with blouse fastened tightly at the neck.” Despite computerised technologies that have transformed libraries into information centres, Radford identifies that traditionally negative stereotypes of the female librarian have remained. The degradation of this feminised sphere is the subject of

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5  Ibid.
Deborah M. Kolb and Ann C. Schaffner’s article about the poor wages and lack of skill recognition attributed to librarians. They found that “[a]s in other professions that are primarily female or come to be dominated by women, salaries are lower relative to other professions.”6 These ‘other professions’ are largely occupied by men. Occupations that attract large salaries, such as politics or finance, do not encourage women’s participation. Despite the challenges to historical traditions that women have confronted in the past few decades, men continue to receive much higher incomes.7 The irony is that with the glut of information on the Internet, the skills of librarians have never been more important or relevant.

Spender identified another aspect of economic concern faced by librarians. Computer (and male) dominated fields in the university cause conflict with librarians due to budgeting problems:

At the same time that the cost for scholarly journals was soaring, libraries were confronted with dwindling budgets. This was partly because for the first time they faced competition when it came to information funding. Computer Information Services (generally managed by a male) began to appear on campuses and to attract resources which had once gone exclusively to libraries (an occupation where women had played a major role). The battle for money was on in more ways than one.8

In any economic battle, it seems that men usually win. In the battle for money between the computer services department and the library, the older (analogue) style of

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7 Marilyn Lake states that one “of the contradictions of women living a man’s world is their comparative poverty; whereas nearly half of all women have a gross weekly income of less than $200, only 27 per cent of men do. Of men and women in the workforce, men earn on average $715.50 a week, women $468.30 per week.” in Getting Equal: The History of Australian Feminism, St. Leonards, Allen and Unwin, 1999. p 279.
information provision is more likely to lose out, even when it is as contemporary and innovative as current library education.

In the research for this section, I conducted several interviews with women working in academic libraries of three Western Australian universities⁹ to explore how the Web functions in their everyday working lives. It is important to research, recognise and log how female librarians view the Web. I evaluate whether the technology can contribute towards fracturing the patriarchal constraints women face in this working environment. I also interview women working within male-dominated fields in the private sector. Primarily, I chose women who work in companies directly related to Web and Internet activities. Vircom sells Web-based products. Telstra is an Australian communications corporation, with a large investment in Web-related products and services. Macromedia is one of the world’s largest companies in producing website construction software. I interviewed a woman who is employed by the firm in the USA. I also interviewed a woman who works for IBM in Germany, in charge of Quality Management of IBM products. These interviews provide insightful comments in how the Web contributes towards changing attitudes of socially constructed gender roles. How these women view the Web and its benefits or problems provides an indication of how technology may increase women’s success, competence and confidence in the workplace.

**Gendered Workplaces**

A female health and safety supervisor who used her surname to communicate with fellow workers in a distance site met a man who realised that she was the regulatory officer he worked with at a distance. In a passionate intervention he

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⁹ Consisting of three West Australian Universities: Murdoch University, Curtin University of Technology of Technology and the University of Western Australia.
expressed his sense of betrayal, “if only he had known” (he would not have taken her instructions so seriously?). Ultimately this fellow and the others in the room stated the need to know the biological identities of the communities in order to know how to appropriately respond. They looked forward to video conferences of visual identification on the Net. The women expressed the exact opposite desire; they welcomed the freedom from their bodies. In a culture organised by gender, power lives in ambiguity.\textsuperscript{10}

The lack of respect this woman received from her male colleagues is representative of an organizational culture that requires a gendered body to rank and ascertain competence and expertise. Gender discrimination has discouraged many women from participating in areas that are male dominated. However many reasons, such as the two World Wars and the progress of feminism in the past century, have encouraged women’s participation in sites that had traditionally been occupied by men. These sites include law firms, the police force, government offices and banks. Compared to one hundred years ago, the numbers of women working in these environments has proliferated exponentially.

The quote from Diamond (above) describes illustrates the impact of technology in the workforce. By not explicitly acknowledging the gender of the person conducting business, digital communication is displacing - rather than confronting - gender role restrictions. While the introduction of the Web opens many windows of opportunity for women, it also reproduces many traditional gender representations - through denial. That is why avatars and handles warrant fetishized attention. The desire to code and categorise on the basis of gender spills into the Web. Because of its disembodied form - and its ambiguity - it may or may not be critiquing the gendered truths of organizational culture.

Alison Adam and Eileen Green note the important influence of working environments on gender roles: “the two-way relationship between gender relations and information technology is a complex mixture of interactive processes, a key site of which is the workplace.”\footnote{Alison Adam and Eileen Green in Brian D. Loader (ed.), "Gender, Agency, Location, and the New Information Society" Cyberspace Divide: Equality, Agency and Policy in the Information Society, London, Routledge, 1998, p. 85} The level to which the Web influences gender relations differs in the division I have made between two particular types of working environments. In the female-dominated realm of the university library, interaction on a physical basis with students is common. As information desk attendants, staff trainers or reference workers, providing face-to-face assistance is integral to a librarian’s professional role. However, in the private sector of information technology industries, the women I interviewed often communicated with clients or other office staff through the electronic medium. Diamond’s example is more likely to occur in this situation. However, these women are identifiable by their names that appear at the head of the email, so gender is still ‘visible’. Analysing the influence of the Web in these workplaces shows how it is used - whether it assists these women in networking, providing better access to resources, and furthering their careers.

A comparison of the gender ratios in each working environment is an important indication of the type of environments in which these women are employed. One of the questions I asked in the interviews inquired as to the number of women and men working in their particular department. The librarians’ answers were predictable. These responses were similar to the answers of all twelve librarians I interviewed:
13 women; 2 men

3 men and around 14 women

3 men in a staff of 15

Suzanne Hildenbrand postulates a reason for the high percentage of female librarians by explaining the occurrence of the “paraprofessional” - the humanities graduate who turns to library work due to the “poor job market” in their chosen field of study. These paraprofessionals, she notes “are even more likely than librarians to be women.” This theory is observable in the comments I received from the librarians. One noted that she was, “[w]orking in the library at UWA [University of Western Australia] while studying Arts/Law. Liked librarianship better.” The library provides an alternative for Arts graduates. It is a female-dominated field, and is not as daunting to female graduates as corporate workplaces which are more male-dominated.

The number of women in librarianship has increased during the past eighty years. Before that time, books and information remained within an exclusive domain of men. In A Room of One’s Own, Virginia Woolf describes her efforts to write a speech about women and fiction. In pursuing her research, she attempted to enter an Oxbridge library. However, she was informed that “ladies are only admitted to the library if accompanied by a Fellow of the College, or furnished with a letter of introduction.” When later continuing her research in London’s British Museum, Woolf examined many books

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12 Respondent Librarian K. Perth Western Australia. Interviewed by Carrie Kilpin, 18/10/01
13 Respondent Librarian F. Perth Western Australia. Interviewed by Carrie Kilpin, 23/10/01.
14 Librarian Respondent A. Perth Western Australia. Interviewed by Carrie Kilpin, 19/10/01.
15 Ibid.
16 Ibid.
17 Ibid.
18 Respondent Librarian C. Perth Western Australia. Interviewed by Carrie Kilpin, 21/10/01.
written about women and found that their authors were all men - “agreeable essayists, light-fingered novelists, young men who have taken the M.A. degree; men who have taken no degree; men who have no other qualification save that they are not women.”

The subject of women in the early part of the twentieth century was the preserve of male fiction writers, scientists and psychoanalysts. The fact that men created and controlled the use of books, while women were barred from access to their information, underlies lingering prejudices that operate to hinder women in gaining knowledge. Dale Spender identifies an historical reasoning behind Woolf’s and other women’s restricted access:

As books became cheaper and more readily available, every effort was made by professional men to keep new sources of information from getting into the wrong hands. They were clearly worried about the fair sex; they didn’t want women to be able to pick up books and read them - and get ideas.

This exclusionary attitude is now redundant within libraries. However, it remains an ideological trace in the information technology field. There are far fewer women in technical fields of digital technology. Although women use computers as an apparatus for their library functions and role, they may have little control in its creation or technical construction, and are given little credit for their web expertise. Patriarchal attitudes, languages and social structures implicitly discourage women from entering this field of work - and being valued once they do.

This intimidating ideology is evident in the gender ratios presented by the women I interviewed within the IT sector. Answers to the question of how many men compared to women worked in their department comprised:

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20 Ibid. pp. 21-22.
9 men, 2 women\textsuperscript{22}

Approximately 90\% men\textsuperscript{23}

my department at IBM - two women and ten men, my recent project at Commerzbank - two women and 17 men.\textsuperscript{24}

Feminine and masculine work activities are still segregated. ‘Women’s work’ is defined as organising, categorising and administration, while ‘men’s work’ is more often recognised as strategic management, handling new technologies and the dissemination of information and knowledge. Hildenbrand identified this gender difference at a training level: “[A]n examination of the 50 ALA-accredited LIS programs in the United States suggests a clear gender divide. Men predominate in Information Science (IS)--71 percent of full-time faculty--while women predominate in Library Science (LS)--61 percent of full-time faculty.”\textsuperscript{25} Sara Diamond also concurs with this gendered differentiation. She found that women are confined to ‘low-tech’ roles in the workplace:

Work remains organised by gender. In other words, what kind of work you perform depends, in great part, on how you are configured biologically and positioned socially. Women work at the low end of high-tech manufacturing, few are in management and even fewer are key decision-makers. Within new technology industries, whether software or communications, there are few women CEOs, except at the head of smaller companies. In a corporate era marked by a resurgence of individualism, women are positioned either as anonymous end users or production line workers.\textsuperscript{26}

While occupations in which technological skill plays a large part in the job description are dominated by men, women are relegated to clerical positions that do not demand skills in management or specialised knowledges of a technical nature. Consequently, men

\textsuperscript{22} Respondent Corporate D. Perth Western Australia. Interviewed by Carrie Kilpin, 26/11/01.

\textsuperscript{23} Respondent Corporate A, Perth Western Australia. Interviewed by Carrie Kilpin, 26/11/01.

\textsuperscript{24} Respondent Corporate G. Perth Western Australia and Mannheim, Germany. Interviewed by Carrie Kilpin, 25/11/01.

\textsuperscript{25} Suzanne Hildenbrand. “The Information Age vs. Gender Equity” \textit{Library Journal}, April 15, 1999 Volume 124, Issue 7 p. 44.

\textsuperscript{26} Diamond, \textit{op. cit}, p. 84.
significantly outnumber women in careers relating to direct influence upon the Web - including jobs such as software engineers and Internet analysts which require specific knowledge of the technology. Women dominate jobs in which the Web is used - such as by librarians, rather than manipulated - as by computer programmers or engineers.

I also questioned whether the respondents had encountered any obstacles in their careers due to their gender. The reply from the librarians was overwhelmingly in the negative. Many commented similarly to this response: “No, my library is predominantly female - as are all libraries at UWA. Gender is probably more of an issue for the men in the system.”27 The discourses in the librarian profession encourage women rather than undermine their abilities. Furthermore, as the library was historically a masculine domain before becoming dominated by women, men do not find it as difficult to enter this field as women find penetrating the masculine echelons of commerce or similar industries. Women who do work in male-dominated areas, such as those concerned with technology or law, are often unjustifiably assumed to be inadequate at performing to the same level as a male. One of the librarians commented:

Working in Local Government, senior staff and councillors certainly listened more to what the boys said. Working in a law library of a commercial firm, my youth and gender meant that I was often presumed not to have skills in areas I actually had skills in.

Working as a systems librarian my gender was actually an advantage, as it involved a lot of people skills and relationship work that women are good at, as well as technical computing skill.28

This description of how female employees are treated differently in two distinct fields of work is representative of how attitudes are based upon gender dualisms. Ideologies

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27 Respondent Librarian D. Perth Western Australia. Interviewed by Carrie Kilpin, 22/11/01.
28 Respondent Librarian C. Perth Western Australia. Interviewed by Carrie Kilpin, 21/10/01.
attributed to gender roles, such as women having better communicative or ‘people skills and relationship’ qualities, means that they are welcomed into certain professions, such as social work or nursing, but find obstacles when attempting to advance into the more competitive fields of business and commerce. This is reinforced in another comment made by one of the women I interviewed. A librarian answered that “administration is just seen as a female occupation any idiot can do!”29 The cultural representation of women being suitable only for these repetitive, low skill tasks and not in positions of greater complexity continues to predominate.

The introduction of electronic databases into the library is one area where the two fields of employment converge. Computer programmers and developers provide a new means for librarians and students to use information systems. Searching for an article or book on a computer through a web-based programme, such as Innopac30 through an OPAC (Online Public Access Catalogue),31 is now a common practice in libraries. As with most historical practices, this masculine-controlled technology defines how information is regulated. Spender also recognises the limitations of this in Nattering on the Net. She cites a passage from Maureen Ebben and Cheris Kramarae:

If women aren’t involved in the classification systems of the new electronic publishing, women will be excluded not only in the texts but also in the metatexts. As feminists have been arguing for the past two decades, culture is classification. Many librarians argue that a sexist database has been established for print sources: we need to pay immediate attention to this problem as electronic databases are established.32

29 Respondent Librarian G. Perth Western Australia. Interviewed by Carrie Kilpin, 18/10/01
30 For further information, see: [Collated by the State Library of Tasmania with contributions from members of the CASL digital issues working group] “E initiatives and networked infrastructure”, Australian Academic & Research Libraries, Volume 34. Issue 4, December 2003.
As the domination of men in computer fields indicates, electronic databases are perpetuating already existing ideologies. Web-based electronic databases perpetuate patriarchal dominance because they are created by men.33

The female dominated staff of the library often have the technical training to modify or advise on the best interface for their ‘clients’. University courses for librarians include units about programming, database and systems management.34 However, computer literacy amongst librarians varies. A librarian at the University of New South Wales commented: “There are all sorts of librarians, some of whom dogmatically chant the mantra ‘technology is your friend’, others insist that OPACs are the work of the devil (particularly those who have had the unpleasant experience of implementing a new system), and a few sit uncomfortably in the middle trying to make sense of it all to themselves, and to others (clients and colleagues alike).”35 While men dominate the technical aspects of computer programming, younger generations of librarians are also learning a literacy of the medium. They are gaining more influence in the organisation and categorization of information in library systems.

34 For example, the Bachelor of Arts in Communication (Information Management) at the University of Technology, Sydney (New South Wales) offers electives in the following courses:
Information Systems Principles
Systems Modelling
Programming Fundamentals
Database Principles
Networking Fundamentals
Project Management and Quality Assurance.
Similarly, the Graduate Diploma in Information and Library Studies at Curtin University of Technology (Western Australia) states in its prerequisite requirements that: “As the course is heavily dependent on computer skills, applicants should develop competency in word-processing, and use of Internet browser software before commencement of the course.” Downloaded from: http://handbook.curtin.edu.au/courses/19/191806.html. Accessed 20/4/04.
In the interviews, I asked the female librarians and those from the corporate sector if they receive gender biased treatment in their workplaces. I received diverse answers. Several answered they had not recognised any disadvantages caused by their gender. A Telstra employee replied: “Not that I am aware of!”36 Another respondent, an employee of IBM, answered: “Not really, I guess by time I got used to working with men only, and probably I don’t recognise many of the everyday incidents which might be considered as obstacles seen from a feminist point of view.”37 These responses identify how many women believe that gender had little bearing on their careers. As Sue Hatt remarks: “For some, being a woman is not felt to make any significant difference to their working relationships whilst, for others, it is perceived as a significant factor which can affect their working lives either positively, or negatively.”38 The reasons why many women do not feel that their gender is a significant influence in the workplace may be similar to the IBM employee’s comment; that she does not ‘see’ the disadvantages. Overt differences, such as unequal wages or openly chauvinistic behaviour in the work environment, are not common due to the introduction of sexual discrimination laws. However, the lack of opportunity in gaining promotions and the prevalence of patriarchally-influenced assumptions that women are not as effective as men in the workplace do limit their advantages.

Despite the two corporate sector employees’ lack of recognition of gender discrimination in their workplaces, these male-dominated sites do perpetuate implicit discrimination. In

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36 Respondent Corporate H. Perth Western Australia. Interviewed by Carrie Kilpin, 15/10/01.
37 Respondent Corporate G. Perth Western Australia. Interviewed by Carrie Kilpin, 25/11/01
an article about women and technology, Birgitta Edelman noted that, “[a] good number of studies have shown how women are ostracised, alienated, belittled, or made invisible when they enter male-dominated workplaces.”\(^{39}\) In the interviews I conducted, several others identified treatment similar to Edelman’s description. For example, a Telecommunications Engineer/Manager noted that “Promotion has been much slower compared with peers, and I’m much higher standard than many. I’d say I’m approximately 5 years behind the equivalent male, maybe more.”\(^{40}\) A General Manager from Telstra also found this occurred “where strong ‘boy’s’ networks exist in traditional parts of the company. Also, when gender biased language is used in meetings.”\(^{41}\) There are many ways in which women are excluded from advantages that men receive within the workplace, and the colloquially named ‘old boys network’ is one of them. Carolyn Britton discusses how it benefits men and excludes women:

> We are all familiar with the old boy network which is demonstrably significant in promoting the careers of male academics and researchers, as in other professional groups. It works on the basis of informal power structures, through which reputation - who knows you and whom you know - is established and it opens doors. Women have been largely excluded from these informal networks.\(^{42}\)

These informal power structures are based upon historically formed and validated patriarchal value systems. The ‘old boy network’ operates in workplaces such as Telstra and IBM that have a large interest in new technologies. It is another structure which discourages women’s advancement in a traditionally male dominated environment.

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40 Respondent Corporate B. Perth Western Australia. Interviewed by Carrie Kilpin, 12/12/01
41 Respondent Corporate C. Perth Western Australia. Interviewed by Carrie Kilpin, 7/11/01.
When women do attempt to transgress these boundaries, they often face barriers blocking their progress. Gisele-Audrey Mills experienced first hand the discrimination women encounter when attempting to learn new technologies:

The need for training is certainly not a phenomenon unique to the Internet. I have found that in nearly every place I have worked - including several more-progressive organizations - little, if any, attention was paid to skills training as a way to broaden access and increase diversity. Where training opportunities exist, they often occur within the "informal" context of the old-boy network - that infamous male-bonding institution.

For example, I once worked at the New York City affiliate of a national community-radio network, where one might have expected to find a broad representation of the multicultural community. However, 90 percent of the technical production staff were White men, and the few women ‘techies’ were also White.

When I inquired about the procedure to gain access to the advanced production studios, I was told that one had to pass a test - yet there was no preparation course for the test, nor were there any scheduled times when the test was given.

When I pushed, I was told there were already more than enough engineers. In other words, White men remained the gatekeepers to the full potential of the technology, confident that no possibilities for its use could lie outside their expertise. 43

The structures that have historically formed in masculine-dominated and structured workplaces continue to exist and exclude women. Training women in technological skills is not considered as important as it is for their male counterparts. Women remain in the position of the ‘end user’ of the technology rather than the controllers of it. In this respect, the Web is making little difference to women’s careers, except as an exclusionary function. The World Wide Web is merely replicating the networking web men have traditionally operated within.

43 Gisele-Audrey Mills, “Online democracy: can Internet training move us toward greater justice?”. The Other Side, May-June 1997, Volume 33 Number 3, full text.
Working Women on the Web

Despite these impediments to their participation, women continue to find ways in which to overcome this prejudice. Many websites have been created to assist women in the (virtual) workplace. These female-specific sites provide support and information for women in multifarious fields of employment. Shana Penn commented on two such sites:

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<th>BizWomen</th>
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<td>How</td>
<td>Web</td>
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<tr>
<td>Where</td>
<td><a href="http://www.bizwomen.com">http://www.bizwomen.com</a></td>
</tr>
<tr>
<td>Comments</td>
<td>“BizWomen provides the on-line interactive community for successful women in business: to communicate, network, exchange ideas, and provide support for each other via the Internet.” A directory links you to women working in the fields of advertising, arts, inace, electronics, health services, legal services, publishing, and others. Women InterNetworking (WIN) is a good place to begin your business networking.</td>
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<td>Where</td>
<td><a href="http://www.digitaldivas.com">http://www.digitaldivas.com</a></td>
</tr>
<tr>
<td>Comments</td>
<td>This is a growing network of the finest females that make magic on the Internet. Our members are talented, artistic, intelligent, and ethical females who aren't intimidated by the latest technology... in fact, we welcome it and even help to create it. We love computers and we spend endless hours on them... using our talents to produce some of the finest work found on the World Wide Web. Each member is blessed with her own unique gifts and we are joining together to grow and learn... to share ideas, offer encouragement, promote ethical standards, and to give of ourselves through our work.</td>
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BizWomen actively encourages women to climb the corporate ladder by providing an opportunity to network and includes a list of relevant resources. DigitalDivas assists in promoting women to participate in another traditional male area - technology. It provides advice and information about how to progress in technological areas such as website construction and computer programming. Dawn Dietrich supports these sites, describing women’s online networks as “structural attempts to intervene in the patriarchal

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44 Penn, op. cit, p. 177.
domination of electronic technologies. They appear to be an ideal space for women to challenge gender roles.

These sites also risk reinforcing elements of difference between genders and contributing to a digital ghetto dominated by females. The comments from the women I interviewed showed that these sites are not well known. I approached the topic of female-oriented websites with the librarians and women in IT. I asked if they had ever visited Webpages such as Digital Divas or Cyber Grrls. Most answered that they had not known they existed. As one pointed out: “I would not seek out a targeted female only website, because I had not thought there was a gender issue on websites, until this survey got me thinking.” Those who were familiar with these sites all remarked that they were not frequent visitors. A Telstra employee compared them to magazines, stating that she thought they could reinforce stereotypes of women. Another worker from the corporate sector remarked that they were dangerous as they could potentially perpetuate myths about women not having the skills necessary to navigate the Web without this support.

The librarians were also sceptical about the idea of female-only websites. One librarian mentioned that she avoids the sites as “so many of them focus on topics which are supposedly part of the female domain - children (I have none), household, recipes, shopping, etc.” This response is indicative of one mode of female intervention in the Web discourse. Although the purpose of these websites is to support women in the workplace, they appear to be having little effect. In this situation, feminist websites are

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46 Respondent Librarian G. Perth Western Australia. Interviewed by Carrie Kilpin, 18/10/01.
47 Respondent Corporate H. Perth Western Australia. Interviewed by Carrie Kilpin, 15/10/01.
48 Respondent Corporate A, Perth Western Australia. Interviewed by Carrie Kilpin, 26/11/01.
49 Respondent Librarians E. Perth Western Australia. Interviewed by Carrie Kilpin, 26/11/01.
not providing a space free of gendered assumptions where women can challenge and evade restrictive cultural representations.

In many of the interviews, librarians indicated they did not set out to purposely become successful in their field. A respondent found she had an “Interest in libraries, but fell into it really - as [I] needed a job. Now studying to be a librarian.”50 Another noted that she “fell into this position but it was through no clear career path that I ended up in this position!”51 The last comment was written by a librarian who is responsible for “Supervising a staff of seven people; monitoring the maintenance for all Library buildings (of which there are 9 libraries); responsible for the security of the library buildings; Departmental Safety and Health Officer, general administrative tasks.”52 Her position involves much responsibility and skills in managing a large establishment. However, she does not believe that her gender has had any impact upon her career; she only ‘fell into it’. During the interview, she remarked that promotion to a higher position has little to do with gender, “[i]t becomes too much of an issue too, when women (or men for that matter) become paranoid that the only reason they didn’t get a job or a promotion or anything else they wanted, was because of their gender.”53 This librarian believes that neither the influence of the Web nor being a woman has made any difference to her career trajectory. Her reticence about gender politics in the workplace is an example of how women tolerate concealed misogynistic attitudes.

50 Respondent Librarian D. Perth Western Australia. Interviewed by Carrie Kilpin, 22/11/01.
51 Respondent Librarian G. Perth Western Australia. Interviewed by Carrie Kilpin, 18/10/01.
52 Ibid.
53 Ibid.
Another librarian spoke about the Web being an advantage for women in librarianship, but not in the corporate sector. She noted:

given that much of the internet is still tied up with business and profits, which means heavy business involvement which generally involves a very masculine culture, then I think there will still be gender issues that will disadvantage women.54

Due to the governing masculine culture in the corporate working environment, women looking to gain higher positions in these fields face a more pointed consciousness and awareness of gender issues. These limitations are not so pronounced in the library field where the staff is female dominated. Cheryl Lehman identifies that gender has added repercussions in commerce because “economic empowerment fosters, enhances, and reproduces social empowerment.”55 Companies that are strongly masculine-dominated, such as Telstra or IBM, are complicit in this ‘social empowerment’. Women must make a greater effort in aiming for the higher-end positions normally reserved for men.

The possibility that many women may take time off work to have children also limits career options in this sector. The Telstra employee proposed that the Web might help women to work from home due to family commitments. These women, she suggests, could maintain their position within the company communicating “by email whenever and wherever they choose.”56 In this respect, the non-physical mode of communication the Web offers is advantageous to women with children who wish to maintain and advance their career.

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54 Respondent Librarian F. Perth Western Australia. Interviewed by Carrie Kilpin, 23/10/01.
56 Ibid.
Women entering male-dominated workplaces need to critique and question the values and standards that perpetuate their exclusion from particular roles, jobs, skills and tasks. Lehman recognises that in corporate workplaces, “[w]omen have consistently sought to demystify business and to enter all aspects of commerce, broken glass ceilings, shattered glass walls, and shaken stereotypes.”57 However, the number of women who reach top positions is small. Spender writes, “[t]he glass ceiling may be preventing women from getting to the top levels of general management, but it is also preventing them from getting into cyberspace in appreciable numbers.”58 It is fascinating to note that the glass ceiling is also a silicon ceiling. Limitations are justified through literacies, rather than gender. When I asked the women if they were aware of a glass ceiling preventing their career ambitions, most replied ‘yes’. A Telstra employee observed that she had “heard that it happens as the very top levels, which is obvious just in the ratios you see at Senior Management levels.”59 Male CEOs proliferate in large companies. It is rare to find a woman in the upper echelons of power in corporate workplaces due to the systemic discrimination and limiting attitudes hindering their progress in careers.

Despite the glass ceilings that prevent most women from gaining high-level positions, the ‘San Francisco Women on the Web Top 25 Awards’ have recognised the achievements of women since 1998. The Fort Mason Center states that “For the first time in history, women are taking a leading role in shaping this new industry, thanks in part to the efforts of those already working in the field. San Francisco Women on the Web, a networking organization for female internet professionals, honors the rising stars of the internet

57 Lehman, op. cit
58 Spender, op. cit, p. xxiv.
59 Respondent Corporate H. Perth Western Australia. Interviewed by Carrie Kilpin, 15/10/01.
world.”⁶⁰ These awards recognise women who have ‘broken’ the digital/glass ceiling barring women from executive positions. They reward women who have worked their way to the top of a large company, such as Carly Fiorina, the President and CEO of Hewlett Packard. Women who have started and developed their own business, such as Heidi Van Arnem who founded Icanoline.net. In breaking the ‘glass ceiling’, the IBM employee I interviewed suggested that, “[a]s I see the situation today you can only sort of break through if you found your own business.”⁶¹ The dot.com ventures many women have undertaken have resulted in a success rate for women in gaining top-end positions within the industry. They are also encouraging other women to follow them by providing role models of successful career pathways for their successors. The Awards are instrumental in proving that dominant cultural representations of femininity are part of a patriarchal fallacy. The Web, in this respect, is providing an alley for women to break free of limiting gender roles.

Throughout the corporate industry, the participation of women in management and leadership positions of private sector corporations remains low: “[O]nly 7% of top officers at FORTUNE 500 tech forms are female.”⁶² Carly Fiorina (CEO of Hewlett Packard) and Meg Whitman (CEO of eBay) are the two highest listed women in Fortune’s 50 Most Powerful Women in Business list.⁶³ Both work in information technology. The Web is a part of their company’s product profiles. The Web and new media technologies have influenced women’s advancement in the workplace. It is a realm

⁶¹ Respondent Corporate G. Perth Western Australia. Interviewed by Carrie Kilpin, 25/11/01.
where women are successfully gaining top-end positions in comparison to older, more traditional corporations such as Ford or General Electric, which remain male dominated. Hewlett Packard and eBay are comparatively young companies. They do not have the traditions of male leadership and do not heed to limiting gender conventions to the same extent.

Carly Fiorina is an outstanding example of how a woman can reach a high position in the corporate sector despite gendered assumptions that may have limited her development and career trajectory twenty years ago. Her example provides a positive model for other women to confront patriarchal conditioning in male-dominated workplaces. As Fortune reports: “Resistant to formula as well as to the status quo, Fiorina has preserved one thing at HP: the team at the top. Four of her seven direct reports are women (including Ann Livermore, No. 11 on our list, and Carolyn Ticknor, No. 37).”

Fiorina’s support of women in top positions is an encouraging example of the success women can achieve, even if she is named as the ‘chairman’ of Hewlett Packard in official statements.

Despite these individual’s success, the small percentage of women in high end positions is representative of the stronghold patriarchal conventions continue to maintain in positions of importance and power. It is also evidence that a silicon ceiling also pervades the technological industry. Betsy Bernard, CEO of AT&T Consumer, remarked in 2000 that “When I was 21, I was expecting that by this point we’d be in the fifty-fifty range.”

Women’s slow progress in reaching positions as important as the CEO reveals that

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gender inequality in the workplace is still a dominant concern that requires a greater effort in fracturing.

Despite its widespread introduction in the workplace, women still remain in positions of administration and ‘low-end’ functions in the IT workforce. The Web has little impact upon women’s success in the workplace. Its anticipated advantages, such as providing women with benefits due to its text-based, non-physical methods of communication, are not being realised. Instead, the Web is developing as a medium, like television or the print media, which reproduces gender roles and patriarchal values. Its place within the workforce has had little effect upon how women may challenge obstructions to their participation in male dominated fields of work.

Certainly there are women who are finding success in the digital computing industry. They may not all be high-profile achievers, but their contributions to the digital environment are still significant. In Nattering on the Net Dale Spender notes that:

[C]ompetent women belie the belief that women can’t do computing. Women like Karen Hellyer in the USA, who spends half her time as a high-school art teacher and the other half at the National Super-Computing Centre, and who has established a students’ art gallery on the Internet; Mary Hosck, who developed one of the first (and still one of the best) programs that integrated computers and creative writing…and Cheris Kramarae who, with H. Jeanie Taylor, has done so much to develop research priorities in the area through WITS.66

WITS are the initials for Women, Information Technology and Scholarship and is in practice at the University of Illinois in the United States. These women - and those who contributed to my research in this chapter - are just a few examples of how women are utilising the technology of computers and the Web successfully. They prove that women

66  Spender, op. cit, p. 232.
who work with technology do not necessarily have to conform to the masculine culture that Juliet Webster identified at the commencement of this chapter. By acknowledging the ability and skill of librarians and teachers as professionals, it may be a first and important stage in revaluing women’s expertise in the World Wide Web.
The Man
This is the only interview where I include the voice of a man. This interviewee is an expert in the field of Creative Industries and has unique views upon digital policies as he has worked in this field in both an academic and governmental context. He possesses an insider’s view in how women are involved in the politics relating to the development of digital policies. As the area in which the exclusion of women seems to not even be recognised as ‘a problem,’ his words offer a framework for conceptualising the Creative Industries in a new way.1

Do you remember when you first heard about the Web?
i was in North America as a Visiting Professor in Communication and Cultural Studies, Vancouver, Canada, in 1994 and students looking at websites for their research was really in its infancy. they were extremely interesting (and interested) students and it struck me then how the web would change student research processes.

How often do you use the Internet?
i use the internet every day and have done for ten years (apart from a few months in 2003).

What level of expertise do you have with the Web?
i can access websites for my research work and writing but beyond that i have no other expertise.

Do you think Cultural Studies is effective in reaching broad audiences and instigating actual change in social and cultural policies?
Cultural Studies as a ‘guerrilla’ discipline (magpie like, picking and mixing from established disciplines) is in a real dilemma as far as I am concerned. If you take its original trajectory in England from English studies in the 1950s and 1960s to the present day broad academic humanities schools in universities throughout the world it has hit a crossroads because few people would see it as anything other than a ‘theoretical’ enterprise. Creative Industries strategies are now being touted as the answer to the problem of making ‘cultural studies’ more relevant socially and politically. On the other hand those who oppose such strategies (for being reformist) would claim cultural studies neo-marxist and feminist traditions as the reason for it being socially and politically relevant in a conservative age.

1  ‘Chapter Eight Participant’. Interviewed by Carrie Kilpin in Perth, Western Australia. Email interview conducted 6/2/04.
How would you define the Creative Industries?

Creative Industries strategies differ on what definition to use. Indeed the debate is fierce over what to include and exclude. The Department of Culture, Media and Sport in the UK in 1997 (first Blair term) coined the term (Chris Smith, Sec of State) Creative Industries and listed the industries - architecture, film, music, TV, graphic design etc. But other definitions would claim that Creative Industries are defined by their relevance to copyright, patent, design and trademark production.

Does the Internet and the Web have much of a role in the Creative Industries?

The most cutting edge definitions of Creative Industries would emphasise the IT aspects of business - eg computer design in fashion industry or video business. E-commerce and virtual enterprise anywhere is very much what the Creative Industries idea is about.

Do you think the UK or the Australian Creative Industries are more successful - and what are your reasons for this?

The idea of Creative Industries is now very widespread in the world - very short time in fact since 1997 when the term was invented. But creative industries strategies are in place in many cities and countries now. UK, Australia and NZ have attempted versions but many European countries, as well as states in North America, and cities are putting the ideas into practice. The big difference with the older creative arts model (50s and 60s) and cultural industries model (70s and 80s) is that the creative economy envisaged is not a state interventionist one. The ‘new cultural state’ in the Creative Industries in the different countries performs differently depending on where you are in the world but it is too early to say exactly how successful this new relation between state and ‘knowledge’ economy is going to be.

Do you think women are fairly represented in each nation’s version of the Creative Industries?

The gender relations in the Creative Industries has not been a major focus of research to date. The creative arts and cultural models did attract a lot of gender and ethnicity research.

Why do you think that after decades of implementing gender equality policies, women still remain outnumbered by men in positions of political and academic importance?

The role of anti discrimination legislation is a problem in all countries. It has often been symbolic (rather than instrumental). In other words even though equality has been enshrined in the law, the enforcement of those laws has been relatively poor.
Chapter Eight

(Un)Designing Digital Democracies: 
Women in the Creative Industries

At the moment, most of the forums in which cyber-policy is being made are exclusionary. White, professional, English/American-speaking males have got the floor: and they are focusing primarily on technological issues - or pornography, property, and privacy problems. (A survey of Wired indicates that these are the hot topics.) It is easier to talk about the latest ‘toys’ and to defend concepts of ‘free speech’ for the boys, than it is to address the major social and political questions which go with the new technologies; it is the human factor that now demands attention.¹

Dale Spender.

It is not until the very last chapter in Nattering on the Net: Women, Power and Cyberspace that Spender writes about her concern for the relationship between social policy and technology. The ‘human factor’ she mentions ‘demands attention’ in the development of policies being formed in the digital realm. The influence of women in this process is vital. Previous media, particularly print and aural, were formed in highly masculine social and cultural environments. Men controlled the academic and political institutions in which these older media were created, legislated and regulated. They also enforced an austere set of social behaviours which oppressed women’s interests in new technologies.² Although gendered attitudes changed a great deal in the last century, there still remains a lack of women in positions of political and academic power. Throughout

² As Spender writes: “Women were frightened into hiding their intelligence, into denying their skills. They were coerced into pretending that females were foolish and that males were intellectually superior. This oppression of women by men continued for much of the time that men controlled the information medium …females were reduced to a state of dreadful ignorance at the time that men’s knowledge of the world was dramatically expanding.” Ibid. p. 165.
this chapter, the domination of males within digital, political and academic realms is investigated in order to demonstrate the patriarchal grammar perpetuated in the World Wide Web discourse. I examine the role of the Creative Industries in relation to the under-representation of women in academia, the government and management positions in the workplace.

The limitations women experience in using technologies related to the web, as confirmed in previous chapters of this thesis, is the subject of theory and speculation. However, practical strategies in confirming and encouraging women as effective web-operators have not incurred a significant presence in Cultural Studies theories. Discussing feminism and the patriarchal nature of the web within the enclosed space of the academy requires careful translation into applicable public knowledges. Cultural studies’ effectiveness in reaching broader audiences relies upon the teaching of undergraduate students in universities, and from publications in academic journals. The critical methodologies taught in Cultural Studies courses are transported by students into other facets of their lives. Effects of this education are observable in the changing attitudes towards disempowered groups, such as ethnic minorities, over the past few decades.

A technique for bringing Cultural Studies into a broader consciousness is through the mobilization of a more policy-oriented field of study. Cultural policy is an effective modality in identifying the correlation between Cultural Studies and digital media. Jim McGuigan, in his book *Culture and the Public Sphere*, undertook an investigation into the relationship between policy-oriented Cultural Studies and the administrative and
production components of the arts and media. His definition of cultural policy
exemplifies its inclusive nature:

But what is cultural policy? There is more than one answer to this question. The
narrowest answer is to say that it is about the administration of ‘the arts’, which
should, of course, be of interest to cultural studies. The broader answer which
frames the argument of this book, however, is that cultural policy is about the
politics of culture in the most general sense: it is about the clash of ideas,
institutional struggles and power relations in the production and circulation of
symbolic meanings. Such a perspective on cultural policy is inclusive, not
exclusive: in fact, so inclusive that all the nooks and crannies that could be delved
into cannot possibly be covered exhaustively in a single book.\(^3\)

The ‘clash of ideas, institutional struggles and power relations’ that McGuigan describes
exhibits how cultural policy defines everyday politics. The broadness in which he defines
cultural policy also indicates its accessibility to multiple concerns in both academic and
public spheres. As such, cultural policy provides an apodictic means through which to
discuss the political implications of gender and digital technologies. It also provides a
theoretical apparatus that encourages a contemplation of digital media’s relevance to
social and cultural manifestations.

Within Cultural Studies, teaching students and the production of scholarly monographs is
often the basis for monitoring changing cultural and social attitudes. However, far-
reaching cultural changes are more empirically observable when they are monitored
through government legislation. The current position of women in the workplace is an
example of this change. The movement of second wave feminism grew from a largely
academic base in the 1960s and 1970s.\(^4\) Major changes concerning women’s subordinate
role in the workforce, such as equal pay, occurred because of the protests and writings of

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4 For example, the writings of feminist academics such as Germaine Greer, Dale Spender and Betty
Friedan challenged many patriarchal values.
these women. The criticisms made by these feminists did a great deal to inform influential (political) figures of the inadequacy of dominating patriarchal legal structures. It was law reform that actually implemented policies designed for gender equality. When these official capacities took place in a court of law, and were enforced as part of the Sex Discrimination Act - in 1984 in Australia - tangential changes in attitudes towards women in paid employment did result. If laws regarding the Internet and the World Wide Web are to develop with a better representation of gender equity than in workplace legislature, more women need to be involved in their creation and development. A greater participation of women may correct the gender imbalances of current legislation-incorporating laws which have since had to include lengthy social equality clauses.

The Creative Industries (CI) project is a field in which a conflation of Cultural Studies theories (incorporating gendered considerations) and administrative law, creative institutions and the market economy align in a wider public domain. The project provides potential to bridge the gap between the academically-confined Cultural Studies and wider modes of social involvement. The CI exists both as an initiative of the United Kingdom’s government’s decision to allocate more economic prominence to the arts, and also as a strategy employed by the Queensland University of Technology (QUT) to create a ‘Smart State’. Amongst its varying roles, the Creative Industries also functions to encourage cooperation between Cultural Studies and policy to create a consciousness of the social and cultural implications of digital technology. It is hoped by many within the Cultural

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Studies field\(^6\) that its political concerns, many of which have been festering under the dominance of the new right, will gain recognition and a more prominent standing.

Within the portfolio of the Creative Industries, the Web plays a minor role. Although the Australian and UK’s CI both have comprehensive websites, inclusion of the Web as an aspect of the Creative Industries falls under the umbrella terms of ‘Interactive Leisure Software’ and ‘Software and Computer Services’ in the UK site, and as the ‘Visual Arts’ and ‘Media Communication’ in the QUT curriculum. In fact, the notion of website design and construction as a creative art is rarely considered. It is frequently relegated into the realm of graphic arts or technological construction. However, the merging of artistic design and digital knowledge makes website construction quite distinct from singularly constituting a graphic art. Website design is a medium through which artistic skills converge with (traditionally masculine) digital coding.

Spender realises that prose within the academy does not translate fluently to a broader audience. She writes that The Australia Council “in 1990 published the booklet, \(\textit{Unlocking the Academies,}\) which urges academics to stop speaking only to themselves and to ‘go public’”\(^7\) In bridging the gap between the academy and wider society, Spender identifies a significant step that is required. The Creative Industries is a potential solution to this conundrum. Spender’s discussion of women as website designers is brief. As previously discussed, she does not show an interest in the field. However, in building a socially just environment on the Internet, she recognises that “calling for more women

\(^6\) Including John Hartley, Stuart Cunningham and Peter Lavery - leaders in the formation of QUT’s Creative Industries faculty.

\(^7\) Spender, \textit{op. cit}, p. 122.
designers whose insights and contributions could provide a remedy, and make the
platform more female friendly, is a reasonable place to start.” Through the promotion of
women as competent and skillful manipulators of web technology, the Creative Industries
have an opportunity to promote women as knowledgeable operators and creators of the
digital realm. An investigation into how this process may occur forms the basis of this
chapter.

The Creative Industries

As a modality operating in conjunction between the academy and the government, the
Creative Industries is an ideal framework through which cultural policies can influence
the values and literacies of wider social consciousness. The development of policy within
the CI will have a great impact upon how women are considered in relation to digital
technologies.

There are two forms of Creative Industries organisations I consider in this chapter: the
UK and Australian (primarily focusing on Queensland) versions. Both were constructed
upon similar principles yet operate through diverse modalities. The UK Creative
Industries, including “the resolutely analogue (arts, crafts, antiques, architecture),
established commercial business sectors (TV, radio, film) as well as all-digital new
economy sectors (software, interactive leisure software)” originally began as a concept
developed by the Blair Labour Government in Britain in 1997. The Department of
Culture, Media and Sport (DCMS) was set up to map activity in the Creative Industries

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8 Spender, op. cit, p. 171.
9 Stuart Cunningham, “From Cultural to Creative Industries: Theory, Industry and Policy Implications”,
*Media International Australia Incorporating Culture and Policy*, Griffith University, Queensland,
February 2002, p. 54.
and to identify “policy measures that could promote their further development.”\textsuperscript{10} The aim in creating the CI in the UK was to increase recognition of the significance of economic contributions from the arts. The Blair government realised that the potential of the creative arts, based upon figures such as the generation of revenues of around £112.5 billion and the employment of over 1 million people,\textsuperscript{11} deserved a Task Force (the CITF) dedicated to its regulation and promotion. This development involved government cooperation with many leading industry figures - including organizations such as Sothebys, The British Film Institute and the Royal Institute of British Architects.

The Creative Industries project proved to be very successful. The government attributed its implementation of policies at “national, regional and sub-regional levels”\textsuperscript{12} as responsible for moving the CI from the “fringes to the mainstream.”\textsuperscript{13} These policies have contributed towards many new provisions within the arts, including a service providing information about intellectual property, support for exporters and an encouragement of closer partnerships between the government, universities, and organisations within the Creative Industries. This has resulted in collaborations such as the Music Industry Forum and the Creative Industries Export Promotion Advisory Group.\textsuperscript{14}


\textsuperscript{13} \textit{Ibid}.

\textsuperscript{14} This group defines its work in four main clusters:  
- content: books, music and broadcasting
Past liaisons linking scholarly research and the cultural industries (as the precursor to the CI) have triggered conflict. The relationship between academic research into the arts (which incorporates CI), and its impact upon the government was part of the topic of a seminar titled ‘Measuring the Impact of Culture’. Held at the University of Northumbria in 2000, it involved debate on the “methodologies used to research the social and economic impact of the arts and the influence of this research on practice.”\(^{15}\) The discussion investigated the link between the academic world and the Creative Industries and found opinions about “snobbery in the academic world”\(^{16}\) which denigrated practical research in favour of more theoretical models. Arts practitioners (encompassing arts managers and marketers, as well as many arts organizations), criticized the methodologies academic researchers utilized in their studies of the social, cultural and economic impact of the arts communities. In order to encourage a more effective partnership between the two fields, it was suggested that “just as Arts & Business had promoted the closer involvement of business with the arts, so should there be encouragement of arts organizations to invite researchers on to their boards and of academic assessment panels to include arts practitioners.”\(^{17}\) In deployment of this type of relationship, cooperation between the practical-oriented Creative Industries and the comparatively insular academic community benefits both areas. Cultural Studies is granted the potential to express its views to arts practitioners, while those in the arts

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- design and architecture
- heritage, museums and tourism services
- the Performing Arts.


\(^{16}\) *Ibid.*

\(^{17}\) *Ibid.*
community have an opportunity to influence the lack of credibility granted to ‘practical’ research within the academy.

A positive relationship between the academy and fields of practice is important. The academy benefits in that it may observe its theories taking place on a practical level, while art practitioners are given an opportunity to explore further options through the theoretical discourses offered to them. This is observable in the relationship between the UK’s Department of Culture and the Creative Industries research deployed in British universities. Steve Redhead of Manchester Metropolitan University contributed much information and research for the Secretary of State for Culture, Media and Sport, the RT Hon. Chris Smith, MP in 1998. Smith published *Creative Britain*18 detailing government policies about creative culture in Britain. Redhead has also written articles for academic journals that discuss the government’s involvement in assisting the Creative Industries.19 The government’s interests in the promotion of the Creative Industries incorporate the concerns of Cultural Studies scholars, bringing the field’s ideologies into wider currency. At the same time, the government benefits from Redhead’s research and scholarly endeavours in the field.

In Australia, the relationship between humanities academics and the federal government has not resulted in the same levels of interaction or convergence. Although scientific and technological contributions of university studies are often acknowledged in an official capacity at a government level, academics within the arts and humanities are rarely called

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upon to discuss their research in cultural and social ideologies. The introduction of the Creative Industries as an area of study in Australia has provided an initiative in helping to change this. The Creative Industries faculty and its research division, the Creative Industries Research and Application Centre (CIRAC), were launched at the Queensland University of Technology in 2000. The Australian government has a significant investment in the progress of QUT’s CI programme. The Department of Communications, Information Technology and the Arts developed a project (the ‘Creative Industries Cluster Study’) aimed at investigating economic and cultural growth strategies in the development of cluster mapping and effective new business models for the advancement of the CI.\footnote{Information about this is available from the Australian Government website for the Department of Communications, Information Technology and the Arts. “Digital content and Australia's Creative Industries - a survey and case study on clustering and clustering strategies for industry development” found at: http://www.dcita.gov.au/Article/0,,0_1-2_1-4_16007,00.html, Accessed 3/10/03.}

A report in The Australian newspaper elucidates the government’s role in supporting the Creative Industries faculty and research centre - incorporating the construction of the Kelvin Grove village at QUT. In her article “Oh, the Humanities”, Dorothy Illings states that funds for the $400 million expansion costs are derived from a variety of sources: “The state has put in $15 million, the federal Government about $5 million and QUT will spend $45 million in the first stage of the project.”\footnote{Dorothy Illing, “Oh, the Humanities”, The Australian, 1/8/01, p. 33.}

The funds provided by the government indicate its commitment and support of the CI’s development within an academic discourse. This development has helped pave a significant relationship between humanities academics and government policies.

An important facet in the Australian models of the CI is that they grant attention to technological development of the creative arts both within the government and the
academy. Richard Alston, who was the Minister for Communications, IT and the Arts until October 2003, identified that within the Department’s 2002 Creative Industries Cluster Study, an emphasis upon “digital content includes the output of the computer games industry, web sites, digital video arts, digital film and television production covering text, graphics, special effects, animation and post-production”\(^{22}\) was included. Consideration of the Web is a small, but significant aspect of QUT’s Creative Industries, with courses such as Communication Design and Visual Arts promoting the study of digital and new media units. An article about the launch of QUT’s CI states that it is “the first tertiary institution in the country to replace its faculty of arts with a Creative Industries faculty to take advantage of the opportunities created by the information revolution.”\(^{23}\) This focus upon new media, and “new applications of creativity”\(^{24}\) is differentiated from the *cultural industries*\(^{25}\) which involved contemplation of “subsidised ‘public arts’ and broadcast era media.”\(^{26}\) The CI programs in Australia direct attention to distinctly technological areas of creative development in fields such as the Internet, television production, music and design.


\(^{25}\) See Stuart Cunningham (“From Cultural to Creative Industries: Theory, Industry and Policy Implications”, *Media International Australia Incorporating Culture and Policy*, No 102, February 2002, pp 54 - 65) for a more comprehensive investigation into the differences between notions of cultural and Creative Industries - particularly how the CITF does not emphasize the distinguishing features between each.

\(^{26}\) *Ibid.*
In comparison to Australia, website design as a creative art is not as important within the UK’s CI. The information supplied on the UK government’s website emphasises music and film as the foremost priorities of the Creative Industries, while digital media - including software and computer games - receives only a brief mention. Nothing is mentioned of the Internet or the World Wide Web; website design is not included as an artistic priority.

**Gender and Politics in the Creative Industries**

The need for more women within the government and the Creative Industries is crucial if they are not to be sidelined from the developing digital field. Women must be involved in both the implementation of digital content in cyberspace and in the policy-making aspects of the CI. As Spender writes: “If we don’t want a repeat of the gender bias in the old law of the land, we have to insist that women are equally represented in the development of the new laws of cyberspace.”27 The Creative Industries provides potential for the advancement of women in positions of importance. However, in both the Australian and UK versions of the Creative Industries, there is an absence in addressing women’s interests. It is almost as if the CI project is so overtly masculine that they are not even aware that ‘the problem’ of a gender imbalance is a problem.

As discussed in Chapter Seven, women are still under-represented in the upper echelons of technology-oriented workplaces. With only a few exceptions (including women such as Carly Fiorina), men generally hold the most powerful positions of control and management in both public and private organisations. Alternatively, the Creative

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Industries are comprised of many fields in which women have greater participation. Occupations in areas such as writing, art, music and drama are conventionally perceived as insignificant ‘feminine’ activities, and are consequently more accepting of women than scientific and technology-oriented fields. However, my investigation found that there exists a significant gender disparity between Australia and the UK in the influential positions of the Creative Industries.

As the Creative Industries is being organised in academic and government modalities, a consideration of gender is crucial. Spender writes about the development of authorship constituting a similar situation in the eighteenth century. As males were better educated and thought of as more intelligent than women, print culture became an industry developed, governed and controlled by a masculine ideology. Spender notes:

At the same time that men were signing their names to thousands of copies of a text, and claiming identity, reputation, and a privileged place in the world, women were renouncing public acclaim and profits. There was a pervasive sexual double standard when it came to the creation of the author, and women had to face the fact that, far from enhancing their lives, the achievement of a public reputation (and the acceptance of money) spelt social death.28

There exists a danger of the same ‘sexual double standard’ repeating itself in the Creative Industries discourse. The dominance of men at the higher positions of management and strategy in the Creative Industries suggests that the policies they develop will ultimately be masculine inflected. This inequality will also influence digital policies involving the Internet and the World Wide Web.

Gender bias is particularly evident in the Australian CI. Women have significantly less influence in positions of decision-making and control. In the ‘People’ page of the QUT

28 Spender, op. cit, p. 78-79.
CIRAC website, the domination of male academics is blatant. Professors John Hartley and Stuart Cunningham positions are listed foremost, while names such as Greg Hearn, Brad Haseman and Michael Doneman also signify how male academics occupy significant roles in the university’s programme. Of the twenty-five names listed on the webpage in the CIRAC division, only nine are female. Ellie Rennie, a Research Fellow at the CIRAC in Queensland, provides a possible reason for this:

My guess is that CIRAC’s male-dominated leadership has to do with women not being employed in research positions in general, or not getting promoted through the ranks in research centres. Research is nearly always contract work and doesn’t provide the ongoing stability of lecturing which would discourage many with families (men and women, but probably more women) from choosing a research career over lecturing.

In a study of the academic profession, Anthony Welch also considered a bias in universities which favour academic staff with a foreign degree. He noted that women had less opportunity to travel overseas to study and in consequence: “While universities may value staff with international experience, the lesser likelihood of female staff having such experience means that this factor exacerbates the gender discrimination already in the system.” This is observable in the experiences of the CI staff at QUT. John Hartley is English and was educated at the University of Cardiff. Stuart Cunningham has studied at McGill University in Montreal, Canada and the University of Wisconsin. Greg Hearn has been a visiting fellow at Brunel University’s Centre for Research in Innovation, Culture and Technology in the UK, and Cornell University in the US. The gender discrimination

30 Being Jo Tacchi, Megan Jennaway, Jenny Mayes, Leanne Blazely, Judith McLean, Angela Romano, Christina Spurgeon, Cheryl Stock and Angelina Russo. Ibid.
31 Ellie Rennie. Email sent 1/12/03 from CIRAC in Queensland to Carrie Kilpin in Perth, Western Australia.
Welch identifies is a significant reason for the lack of female academics in influential positions both within the academy, and in the Creative Industries.

The tradition of a dominating group of senior male academics as seen at CIRAC is part of a Cultural Studies tradition, witnessed forty years ago at the Birmingham Centre for Contemporary Cultural Studies. It was there that men such as Richard Hoggart, Stuart Hall and Richard Johnson directed the foundation and development of what is now known as Cultural Studies. While the BCCCS academics were often from the peripheries of British society, including the working class and racial minorities, there essentially remained a patriarchal framework to the field’s construction. It was not until Hall’s leadership during the 1970s that feminist research in Cultural Studies gained an opportunity to grow. This was due to an increasing interest in the study of subcultures. Scholars such as Dorothy Hobson, Charotte Brunsdon and Angela McRobbie gained prominence for their research about the marginalisation of feminist work in Cultural Studies into the 1980s. Following this work, women gained more visibility as Cultural Studies academics. This spilled into Australian institutions, as feminists such as Meaghan Morris and Catherine Lumby became publicly prominent in their research about women’s inequality to men.

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34 Examples of this work include:
Catherine Lumby is Associate Professor of Media Studies at Sydney University. She wrote a book which is often cited in Cultural Studies papers. It is called Bad Girls: The Media, Sex and Feminism in the 90s (St Leonards, Allen & Unwin, 1997).
Although Cultural Studies has incorporated feminist and Women’s Studies agendas into its curricula, women rarely occupy influential senior positions. Thirty years later, they still reside in the lower positions of teaching across the academy. The following table illustrates the concentrated clusters of women in the lower echelons of the university hierarchy.

<table>
<thead>
<tr>
<th></th>
<th>Above senior lecturer (Level C)</th>
<th>Senior Lecturer (Level B)</th>
<th>Lecturer (Level A)</th>
<th>Below Lecturer (Level A)</th>
<th>Total: Academic classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>15.3%</td>
<td>15.2%</td>
<td>16.5%</td>
<td>7.7%</td>
<td>54.8%</td>
</tr>
<tr>
<td>Women</td>
<td>3%</td>
<td>6.4%</td>
<td>13.2%</td>
<td>8.7%</td>
<td>31.3%</td>
</tr>
</tbody>
</table>


The fact that women constitute only three percent of associate/professors in the academy reveals the influence of an over-arching patriarchal dominance in the Australian educational discourse. In all categories, the only time women outnumber men is in the ‘Below Lecturer’ column. Social norms and stereotypes dictating the type of work women ‘should’ perform are constructed to naturalise women’s place as belonging at the lower end of the scale in work environments.

In UK universities, the statistics of female academics also reveal stark inequalities.

Barbara Bagilhole of Loughborough University identified that:

> Despite the introduction of Equal Opportunities (EO) policies by many universities in the 1990s, academic staff continue to be male-dominated. Overall women hold only 35% of full-time academic posts (including both teaching and research), and account for only 10% of professors.35

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35 Barbara Bagilhole “Ten Years of Studying Equal Opportunities”. Department of Social Sciences, Loughborough University. This paper is based on a speech held at the project’s reunion in London in April 2002. Downloaded from: http://www.women-eu.de/download/BagilholeCP01_01.pdf. Accessed 4/4/04.
Although these figures reveal that British women are also inadequately represented in the higher echelons of university placements, they are nevertheless higher than the Australian statistics. Women constituted 10% of professors in the United Kingdom in the 1990s - a seven percent increase above their Australian counterparts in the early 2000s.

This inequality is also reflected in the parliamentary structures of Australia and Britain. In contrast to the domination of men in the academy, the UK’s governmental CI provides a more balanced participation in terms of gender in the Creative Industries Division.\(^{36}\) Of the eight members, there are four women.\(^{37}\) The importance of having equal representation of women and men in a nation’s government is emphasised in an article by Fiona Mackay. In a study of European parliaments, she found that “Evidence from Scandinavia and elsewhere suggests that once women are found in sufficient numbers, or ‘critical mass’ within politics, they begin to make a difference of style, agenda and promoting positive changes for women.”\(^{38}\) This ‘difference of style’, ‘agenda’ and ‘change’ is paramount in promoting women as competent leaders in the workforce. A strong representation of women within the political arena is essential in order to achieve the implementation of policies for challenging gender discrimination both in the workplace and everyday life.

In a move towards this ideal, one of the UK’s Labour Party’s pledges during their 1997 election was to raise the number of women in parliament. One method Labour employed

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\(^{37}\) Being Sally Edgington, Liz Sweet, Michelle Braidwood and Anna Mansi. \textit{Ibid}.

\(^{38}\) Study by Drude Dahlerup, as cited by Fiona Mackay, “The Zero Tolerance Campaign: Setting the Agenda”, Parliamentary Affairs, Januray 1996, Volume 49, Number 1, full text.
in achieving this goal was to create women-only shortlists for particular parliamentary seats. This policy was a positive move for Labour. They implemented a strategy designed to influence direct action and change. As a result of this new policy, the number of women in parliament rose to record levels (101 women out of 418 MPs)\(^{39}\) in 1998. However, the system was widely criticised as discriminatory and made illegal a year later. As a part of this backlash, the women who had gained positions in parliament due to these shortlists were derogatorily termed ‘Blair’s Babes’.

Following the abandonment of the shortlists for female MPs, the number of women in parliament dropped significantly. To compensate, Blair promised to re-legalise the shortlists in his 2001 election campaign. In a statement that caused much controversy, Tory leadership contender Iain Duncan Smith responded to Blair’s promise by remarking that the lists were “crude and patronising”\(^{40}\) and that they had promoted the careers of “poor quality politicians”.\(^{41}\) Fiona Mactaggart, one of the so-called ‘Blair’s Babes’ was amongst Labour’s female MPs who called upon Duncan Smith to apologise, claiming that his words were “patronising nonsense.”\(^{42}\) Historic traditions relegating women to domestic and subservient positions still remain in the attitudes of men such as Duncan Smith, who find it difficult to agree with the notion of a woman occupying a powerful position. The ability for women to maintain credibility in political roles is still questioned. It is the result of ‘men only’ shortlists, existing for hundreds of years in

\[^{40}\] Iain Duncan Smith, as cited by Benedict Brogan, “Blair Babes Upset by Duncan Smith”, *The Telegraph*, London, 4 August 2001. Full text.
political history which explain why women are now excluded in such large numbers from parliament.

The UK currently has a New Labour Government in power. Considered more radical than its major opposition - the Conservatives, Blair’s government and his women-only shortlist policy did have a positive influence upon the number of women in UK politics. However, the lack of so-called ‘radical’ policies from New Labour has attracted criticism. At a 2002 party conference, Blair promised to make bolder moves in modifying public services, such as improving health, education and transport. He stated “The radical decision is usually the right one… The right decision is usually the hardest one.” This statement implies an implementation of strategy rather than an ephemeral tactic, and involves undertaking a Gramscian-inflected method of long term effect - as opposed to theoretical, symbolic assertions resulting only in short term affect. In line with their election promises, in 2002 the Blair government passed “new legislation in elections, and Labour bosses promised to revive all-women shortlists in half of all seats where the incumbent retires.” However, despite the battles Labour politicians fought since the beginning of Blair’s term in government, women comprised only 18% of British lawmakers in 2002. Although women have had some encouragement into the political arena, a significant discrepancy still remains between the number of male and female politicians representing the UK’s population in parliamentary debates.

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45 Ibid.
In comparison to the UK’s position, the Australian federal government has an even poorer representation of women in politics and much less interest in addressing this inequality. The Howard government’s conservative ideologies do not encourage women into sites of power in Australian politics, and this is obvious in a comparison of each country’s Cabinet members. For example, in the 2003 Australian Cabinet Ministry, there are only two women (Amanda Vanstone and Kay Patterson) and fifteen men.\(^{46}\) In the October 2003 UK’s Cabinet, there were five female MPs compared to seventeen men.\(^{47}\) Although there is an under-representation of women in Her Majesty’s Government, there are more inequalities on the Australian front bench. The Department coordinating the Australian Creative Industries is also male dominated. Senator the Hon. Darryl Williams and Senator the Hon. Rod Kemp are the figureheads of the Australian Department of Communications, Information Technology and the Arts. In the UK however, the Secretary of State for Culture, Media and Sport is a woman - The RT Hon. Tessa Jowell MP.

Australian culture is still a patriarchal one - as the domination of men in leading political positions proves. The lack of women in the government reflects a similar under-representation in QUT’s CIRAC where men comprise the majority of the controlling group of academics. The number of positions women in the UK hold does not necessarily mean it is any less unequal than Australia. It is however, more progressive in its political attempts to promote women as Members of Parliament and in the CI. As such, policies

\(^{46}\) The twelve men include: John Howard, John Anderson, Peter Costello, Mark Vaile, Alexander Downer, Robert Hill, Nick Minchin, Tony Abbott, Philip Ruddock, David Kemp, Daryl Williams, Warren Truss, Brendan Nelson, Ian Macfarlane, Kevin Andrews.

being developed for the laws relating to the Internet and web may show less masculine assumptions in the UK than in Australia.

**Middle Management and Creative Industries Policy**

There are many more women to be found within the middle management of the Creative Industries than in other sectors. These women dominate positions within institutions such as television production companies, multimedia/Internet companies and art galleries. As managers, they have some influence upon the creation and circulation of values and ideas concerning gender equality issues in the workplace. As Spender notes, “[top levels of management are] where the new communities are being formed; this is where the new human values are being forged.”48 However, women still do not significantly populate the top positions in most companies - even within the Creative Industries.

An article published in a 2001 human resources magazine in the USA found that women “make up nearly 50 percent of the middle management pool.”49 This figure was estimated across the workforce as a whole. However, another article published in the same year discussed how there was a “concentration of women in clerical and administration positions”,50 involving a “movement of greater numbers of women than hitherto up the administrative hierarchy to junior and middle management positions, but with the existence of a 'glass ceiling' allowing only a selected few to pass into senior

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management.”51 The admittance of only few women into senior management is a cause for concern regardless of the industry. The level of control upon policies and decision-making is not as effective at middle levels. The domination of these top positions by men means that the traditionally formed patriarchal structure is not being challenged enough by women. This is a phenomenon not only limited to the USA. The Women in Management Review found that:

Although women are now graduating in higher numbers than men from educational institutions (Fagenson and Jackson, 1994) and more women are entering the paid workforce (Hind and Baruch, 1997) and taking up managerial roles (Parker and Fagenson, 1994), the poor representation of women at senior management level continues. For example, in the USA women fill less than 5 per cent of top management positions (Aguiñis and Adams, 1998), in the UK the figure is estimated to be less than 4 per cent (Davidson, 1996) and in Australia the figure is approximately 3 per cent (Uren, 1999). It appears that sex differences exist in promotions to senior management, and this occurrence is noted worldwide.52

Important decision-making positions are still privileging men and not providing enough resources for women. The fact that Australian women comprise only three percent and British women less than four percent of top management positions indicates that patriarchal values supporting the domination of men are overwhelmingly still in practice. Even though these figures are between four and seven years old, the numbers of women at high positions have not skyrocketed since these studies. Women remain in lower level administrative jobs and middle management positions, which permit limited decision and policy making opportunities.

There has been a shift in attitudes towards women in the workforce in the past few years. Women’s involvement in the Creative Industries, for example, has altered. A group of

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51 Ibid.
scholars in 1999 believed women were not allocated enough significance in the CI. This was a significant point discussed in a working group of a conference (attended by Chris Smith) titled *Mind the Gap - Connecting Creativity for the 21st Century*. Tom Fleming reported that the “role of women in the Creative Industries should be recognised; the spaces from which they are marginalised should be opened.” The group discussing this matter suggested that women were sidelined in the Creative Industries and deserved greater recognition for their contributions.

However, in 2001 opinions regarding this marginalisation were quite different. Women were seen as constituting the majority of workers in the CI. In a paper at the Second International Conference on Critical Management Studies in Manchester, Clodagh O’Brien inquired: “Do you believe that the different nature of organisations working within the Creative Industries affects how they’re managed, with particular reference to the high concentration of women in management in the Creative Industries?” Within the paper, which involved a discussion between three people working in the Irish Creative Industries (including an academic and two practitioners), O’Brien’s question was considered by the two other participants - both of whom were men. Donncha Kavanagh posited that the influence of the large amount of women working within the CI was a cause for the elevated numbers of female managers, and Maurice Linnane also suggested that higher female concentration in the industries overall was a probable reason. This concurrence from all participants in observing a high number of women in management

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of the CI exemplifies that women have much more influence in this field than others. They even compared the managerial structure in other industries as having a “more robust glass ceiling”\textsuperscript{56} than the Creative Industries.

Although men dominate the controlling group of the Australian CI, there is nevertheless a proliferation of women throughout the Creative Industries in middle management. It is in these positions that women have a leverage to confront patriarchal structures of power and allocate more control to other women. Through a cooperation of the academy and the government, policies debated in Cultural Studies will be granted a pathway through which to make wide-reaching, practical changes affecting the roles of women in the broader social consciousness.

\textsuperscript{56} Ibid.
The Teacher
The Teacher is in her mid twenties. She teaches music to high school students as a full
time job. She has not had any formal training of computers or the Internet and finds that
her students often know more about the technology than she does. Her comments
illustrate a generation gap between her education and that of her students'. It also
highlights that many teachers do not receive instruction in this medium, even though they
must incorporate it in their teaching methods.1

Do you remember when you first heard about the Internet?
When I was approximately 17 which was 1997 when I started university. I cannot
remember having previous knowledge apart from the odd mention of it.

How often do you use the Web?
At least three times a week.

How would you assess your own level of web expertise?
I feel that the knowledge I have is enough for my everyday life.

What activities, sites or topics do you engage in during your periods of web usage?
Olga sites for music and google as my search engine. I also use hotmail and
commonwealth bank websites very often.

How often do you use the World Wide Web in a classroom teaching situation?
Approximately once to twice a week. More often at the beginning of term when planning.

Do you actively instruct the students as they use the computer, or are they left to
their own initiative?
Yes usually for research during assessments and for lyrics and guitar tabs. I find that they
usually have more knowledge of the Internet than I do. I often only help them with the
keywords that they are basing their assignment on.

In your classes, who is generally more confident at using the computers - the boys or
girls?
I find the boys are more fearless overall.

Do you think girls would learn subjects like maths and science better if they had
separate classes from boys?

1 ‘Chapter Nine Participant’. Interviewed by Carrie Kilpin in Perth, Western Australia. Email interview
conducted 28/3/04.
I feel that boys are often a distraction though in my knowledge all girl environments can be quite bitchy and aggressive and this can be distracting in itself.

As a teacher, what sort of training have you received about computers and the internet?
I never received formal training about the Internet or how to use it. A trial and error method was most effective for myself.

Do you think an education using an online curriculum is a good idea for students?
No. Feedback and life experience cannot be taught over the Internet and also students learn a lot off their peers and gain confidence in this setting. Especially in music I feel that classroom interaction is essential.
Economics professors Carl Liedholm and Byron Brown found that students in a virtual economics learning program fared far worse on examinations than their counterparts who took the same course in live classrooms. The problem with cyber-training sessions? Online courses are fine at teaching basic concepts but aren't effective at developing complex analytical skills.¹

Brian O'Connell

O’Connell’s statement presents the drawbacks in online learning. For the past several years, many ‘revolutions’ of Internet-based pedagogies have been promised. With the growing influence of the Internet in university and K-12 teaching methods, educational practices are supposedly undergoing a radical transformation. As online education is deemed a positive alternative to traditional campus-based instruction, many academics speculate that face-to-face lectures and classes are no longer required to dominate teaching methodology. Dale Spender, a leading advocate of this maxim, states in *Nattering on the Net* that “in a very short space of time, students won’t need to go to a school or college for information.”² However, the implications of this digital vision must be researched and discussed, not assumed and unconditionally accepted. Aspects of electronic education - such as the text-based mode of communication, the lack of a teacher’s presence, and a deficient interaction with other students impacts greatly upon an effective pedagogy. As O’Connell notes, a result of this digital divide is a failure in the development of complex analytical skills.

Spender’s analysis of education is of particular interest to this chapter. She actively promotes a digitisation of education, and in *Nattering on the Net* presents an enthusiastic account of the advantages of learning from a computer and the Internet. In critiquing current pedagogical standards, she inquires:

So why would you physically travel to an educational institution when you can do some virtual travel to cyber-education? Why would you listen to teachers in classrooms? Why would you want to learn the limited curriculum that is currently imposed in regimented educational institutions?^3^ Spender believes that the future of education is electronic. Her views are supported by writers such as David Cohen and Julia K. Ferganchick-Neufang. However, there is also much criticism of these optimistic outlooks. Melanie McGrath, for example, makes an important realisation about online education:

Information isn’t the same as knowledge. You can fill every classroom in the country with a thousand computers and link them all up to the Net, and you won’t have taught anyone anything…Data doesn’t mean anything on its own. You have to be able to interpret it, relate it to the world.\(^5\)

There is much more to learning than simply having access to information. Students must be taught how to analyse and interpret information in order for it to become *knowledge*. Pedagogical theorists, such as Rena M Palloff, Keith Pratt, Fatemeh Bagherian and Warren Thorngate\(^6\) examine the detriments of advocating an uncritical digital education.

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In modifying the processes of education from traditional methods to a digital means, consideration of possible detrimental effects to pedagogical curricula must be considered.

The aim of this chapter is to investigate if the Web provides a space for women to gain an education that disrupts hegemonic structures and undermines patriarchal standards. This project takes into consideration studies that have investigated whether women learn more and contribute better in a classroom situation or in the virtual environment. The gender politics involved in an online pedagogy are significant to this thesis in terms of questioning whether there is space on the Web for women to evade restrictive gender values circulating in everyday life. As an institution, education is responsible for actively structuring a gender divide and assembling the conveyance of gender differences within a culture. This is discussed in Nola Alloway’s *The Construction of Gender in Early Childhood*. The classroom teaches hierarchies relating to social and cultural hierarchies. It perpetuates unequal and unfair gender divisions. This chapter considers if emerging Web-based pedagogies may provide a disruption to traditional classroom ideologies.

The advantages and disadvantages of face-to-face education versus online education are considered in the context of high school and university students. While researching the use of the Web amongst school-age children, I conducted an interview with three teenage girls. Many assumptions I held regarding male and female dynamics in the classroom were viewed differently by these students. They provide an evocative perspective about Generation Y’s gendered use of computers. The second part of this chapter is situated in

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the context of university education. This section views the perspective of university teachers. Interviews were conducted with the unit co-coordinator, website designer and three tutors of a first year course available both internally and online. I examined female participation in classroom tutorials in comparison to the online discussion forum. The tutors’ opinions regarding gendered behaviour in both contexts are examined in order to determine whether the online discussion forum provides a positive space for female participation in the course. The construction of the unit’s website is also investigated. It is significant that a male designed it, while it was used mainly by females.

The relationship between the classroom and online pedagogy can be considered through the theories proposed by Henry Giroux. He writes about the development of a radical pedagogy in his book *Critical Theory and Educational Practice*. Historical forms of education, which have evolved into contemporary teaching standards in classrooms, often lack critical analysis or reflexivity. A curriculum that traditionally privileges male students is perpetuated in contemporary teaching practices. Robert Connell refers to this as a ‘hidden curriculum’; an implicit patriarchy involved in teaching practices. However, Giroux identifies a method of *critical theory* in education which is aimed at informing teachers of the inadequacies in mobilising traditional pedagogical standards. He writes:

> Unlike traditional and liberal accounts of schooling, with their emphasis on historical continuities and historical development, critical theory points educators towards a mode of analysis that stresses the breaks, discontinuities and tensions in history, all of which become valuable in that they highlight the centrality of human agency and struggle while simultaneously revealing the gap between the society as it presently exists and society as it might be.\(^9\)

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This ‘society as it presently exists’ in the context of my analysis is a ‘real life’ classroom, whereas a virtual pedagogy is considered ‘as society might be’. Giroux’s critical theory disrupts historical continuities, thereby stressing the importance of new developments and radical perspectives. The comparison of modern teaching methodologies to traditional scholarship assists in identifying whether women are favoured by developments in education that concentrate upon the future rather than the present.

*Electronic pedagogy* is a term that has been applied to teaching methods on the Web. As face-to-face teaching practices are no longer utilized in the virtual teaching environment, a new pedagogy is required to address how teaching is performed on the Web. The purpose of an electronic pedagogy is applicable in varying Web activities, including student use of virtual discussion forums, websites dedicated to providing information about a particular course, and access to the entire Web itself as a research tool. Rena M. Pallof and Keith Pratt recognise the implications of a different set of teaching practices that are required online. They note: “[W]hen the only connection we have to our students is through words on a screen, we must pay attention to many issues that we take for granted in the face-to-face classroom.”¹⁰ An electronic pedagogy is focused on a *text-based* form of communication between the teacher and student. Elements of classroom teaching practices, such as body language and direct conversation, are redundant in this pedagogy.

This absence of the corporeal affects how students and teachers perceive notions of gender. Pedagogical practices in virtual environments have the potential to *appear* gender

neutral. As there is no physical presence of teachers or students, discussions and learning techniques do not privilege certain students based upon tangible evidence of gender. However, there are many factors that contribute to the Web’s reinforcement of existing gender inequalities in education. All students use computers to access the Web, but this medium is one that has been traditionally masculine controlled. Computers are a part of the technological, scientific realm that men historically dominate.

My investigation ponders whether the introduction of online learning can disrupt patriarchal values. The virtual environment provides a space in which a physical presence indicating gender is no longer apparent. Identity is reduced to words on a computer screen. There are many potentials in this new modality. For example, it allows a space for female students to speak without the consciousness of embodiment. It also allows a method of anonymity that may provide the speaker with more confidence than in everyday situations. However, the current gender values circulating within society restrict women from having knowledge of computers equal to that of men. I examine if the new generation of students is overcoming this limitation and how this is occurring.

The K-12 School System

The children in the school systems at this particular moment are the first true ‘dot.com’ generation. Don Tapscott recognises the significance of the Internet to this age group: “The Net Generation have arrived! The baby boom has an echo and it’s even louder than the original. Eighty million strong, the youngest of these kids are still in diapers and the
eldest are just turning twenty.”¹¹ These children have grown up with the Web as a part of their everyday life and unlike preceding generations, most do not remember when the Web was first introduced into their lives. The influence of the Web on their education is of vital importance when considering if the digital space provides an alternative to gender divisions.

In order to research the influence of the Web in the education of female students, I interviewed three female high school students. Student A is sixteen years old, Student B is fourteen and Student C is twelve. The interview was tape recorded in an informal question-answer format. All of these students are of a middle-class background and have unlimited access to a computer and the Web at home and in school.¹²

Traditionally, female students have been marginalized and their status disenfranchised in classroom methods of teaching. Patriarchal values maintain attitudes that boys have a greater intellectual ability than girls. As Thorne identifies: “Teachers frequently give boys more classroom attention than girls.”¹³ Cultural and historical prejudices in teaching methodologies privilege the opinions and views of male students. These hegemonic power structures, however subtle, pervade the pedagogic system and female students are ultimately disadvantaged. Robert Connell writes about education perpetuating this social history:

¹² I acknowledge that these girls are from privileged backgrounds and therefore do not ‘represent’ all students. However, for the purposes of this chapter (questioning the use of the Web by school-age girls) their unlimited access to computers and the Internet are beneficial to the investigation.
A curriculum as an ongoing social organization and distribution of knowledge helps to constitute social interests and arbitrate the relations among them. A common learnings program, i.e., a curriculum which seeks to operate across the whole population, embodies and negotiates relations of hegemony among interests in the society it deals with.  

Teachers implicitly educate their students about hegemonic structures through a curriculum’s construction that is based upon traditional ideologies. Curriculum, pedagogy, marking criteria and staff identity all teach ‘lessons’ frequently perpetuating notions of unequal gender differences that are inherently constructed as ‘natural’ truths. The ideologies contained in teaching practices within the classroom are inhibiting female students from recognizing their full potential.

This hierarchical system promotes a division in which subjects are considered most appropriate to each gender. Scientific and mechanic fields - those awarded a greater credibility within an industrialized society, are perceived as subjects in which male students perform with a greater ease than female students. Areas of study considered less intellectually challenging, including the humanities and social services, are deemed appropriate for female students. This divide is part of the ideology that undervalues the capabilities and intelligence of female students.

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15 I acknowledge that even though boys are often privileged through patriarchally formed curricula, many male students in the K-12 schooling system are facing difficulties. For example, a *West Australian* newspaper article cites “self-proclaimed men’s rights activist” Glenn Sacks as identifying that: “Everyone always says girls in school suffer; they have low self esteem; teachers make them feel second best, blah, blah, blah … But it’s obvious that, in general, girls are doing better in school and boys are falling behind.” (Danna Harman, “One Size Doesn’t Fit All”, *The West Australian* Weekend Extra liftout, 17 April, 2004. p. 3)

The level of competency female students feel in operating computers is one aspect that contributes to determining their success in the Web. As a technological and scientific field, girls are traditionally discouraged from using computers. Kendra Mayfield identified a part of popular culture responsible for promoting traditional feminine ideals that do not correspond to scientific areas: “‘Math is hard,’ a talking Barbie doll told a generation of girls who grew up thinking they should be afraid of math and science.”

Traditional dichotomies denigrating female capabilities in this context are evident. Sexist attitudes permeating children’s education perpetuates the cultural belief that females do not have abilities equal to males in understanding technological advances such as computers. Mayfield further states that “the educational system is keeping them from achieving equality” reinforcing the important role education plays in determining unequal gender divisions.

Studies into whether there exists a gender gap in terms of “different technology-related attitudes, behaviors, and skills” between males and females have had difficulty revealing or pinpointing any major differences. The comparison of schoolgirls’ use of computers to their male counterparts does not provide any evidence of a ‘natural’ biological basis for a female inability to use computers. Dale Spender also took this concept into consideration and came to the realisation that

[t]he fact that all the students at Methodist Ladies’ College, Melbourne, are extremely computer-competent is confirmation that there’s nothing wrong with the girls. The presence of so many geekgirls defies any myths or mutterings about

18 Ibid.
20 Ibid.
girls lacking spatial ability, left-brain sophistication, or technological genes. Any barriers to girls’ entry are strictly man-made, in the form of harassment, software and hardware.21

The reluctance many girls display in learning about computers is based in ‘man-made’ cultural perceptions - not biological as historical ideals have dictated. As Sherry Turkle states: “Girls are getting a distorted view of the intellectual power of what the computer can do… It doesn’t have to do with the computer. It has to do with the cultural image of the computer.”22 This cultural image is a product of the ideology privileging male ability in scientific fields. This view is further reinforced from a statement by Katie Dean, “[i]n general, girls' self-esteem plummets during adolescence, which can translate to shying away from technology in classroom activities, even if they are skilled at it.” 23 The cultural restrictions built on the differences between boys and girls are promoted heavily in institutions like schools and have a large influence upon students’ attitudes in learning about new technologies.

The lower level of competency these girls feel was observable in the interview I conducted. Student A remarked: “I know two guys who are really computery and not many girls. They give us email advice… They know how to do it better.”24 This assumption that the males in the class are better on the computer and Internet is evidence that girls allocate boys a greater control over this technology. The difference between female and male students’ use of the computer and the Web is also representative through gender inequalities in certain subjects. Enrolments in computer science classes remain

22 Sherry Turkle, as cited by Kendra Mayfield, op cit. 20/4/2001
low for female students. Gail Crombie identified the participation rate of female students in a typical high school as being ten to fifteen percent, or “in a computer lab with 30 students, there would be only 3 or 4 girls.”

These statistics reveal that girls, even in the new generation who have grown up with a knowledge and familiarity with computers, are still lagging behind in gaining a more developed understanding of the technology. Computer-related subjects are still designated as ‘unfeminine’ and discourage females from participating in them. Classroom pedagogy is not providing a space for girls to move beyond current unequal gender representations.

Separating boys from girls is a decision many educational institutions have taken to encourage greater female participation. Limiting the class population to a single gender is a method of avoiding sexist distinctions between male and female students. Lisa M. Bowman spoke to a teacher who believed in this principle: “‘We don't have any boys, so we can't give them all of the attention,’ she said. ‘The girls aren't ambivalent about how smart they can be, how assertive they can be, how many risks they can take, because that element doesn't exist of worrying how popular they're going to be with the boys.’”

It is proven that without the influence of males in the classroom, school-age girls are able to use computers with more comfort and competence. Crombie reiterates this maxim by identifying how a grade eleven computer science course at a United States high school gained an increase in female enrolment when the class was divided by gender:

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When they began offering the all-female class, the number of girls who enrolled increased to approximately 40 percent, which is a substantial improvement. This increase in the number of girls has been maintained over the last three years, and they obtained similar results again this spring when enrolment choices were made for next year. Thus, solely from an enrolment standpoint, the all-female class clearly has been a success, but there have also been some positive effects on girls’ attitudes and future intentions.27

The ‘positive effects on girls’ attitudes and future intentions’ are an important result from this separation. Their fluency with computers places them at an equal level to male students when using this technology. Greater female participation and expert knowledge in this realm will positively effect how the Web develops.

In contrast to this positive finding, the students in the interview I conducted were divided in opinion about removing boys from the classroom:

Question: Do you think it would be easier to learn about the Web if there weren’t any boys in your class?
B: “No.”
A: “There’s friction in the room because the girls all hate each other.”
C: “I’ve got an all girls maths class. And it’s okay for maths because if you make a mistake all the guys tease you.”28

Student C identified the element of discomfort (in being teased) many teenage girls experience when learning with boys in the same room. The rejection of this hypothesis by the other two students however, suggests that boys are not as great an impediment to their learning. Instead, Miller and Slater’s statement seems to have a greater resonance:

[A] 15-year-old schoolgirl noted that girls would commonly send viruses to each other, often in the belief that they were already victims of a virus sent by the girl in question. Girls would come to school also moaning about how their computer had been messed up and how they would wreck revenge on the girl they believed had sent the virus.29

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27  Crombie, op. cit
28  Students A, B and C, op. cit
29  Daniel Miller and Don Slater The Internet: An Ethnographic Approach, Oxford & NY, Berg, 2000, p. 79.
The ‘friction’ recognised by Student A is evident in this example. This behaviour is identified by Miller and Slater as a part of school culture - a culture in which females are represented as destructive to technology and unable to mobilise it with the same credibility as male students. Student A finds this culture limiting in her education and prefers a balance of both genders in her learning experiences. For Student C however, the separation of male and female students is an advantage. She obviously feels more comfortable learning in an environment without the presence of boys to ‘laugh’ at her.

The difference between how boys and girls are treated in classes is essential in considering the level of confidence girls feel when learning new technologies. Boys have been traditionally privileged in classrooms. Although teaching standards in contemporary pedagogical forms attempt to avoid differentiating between genders, cultural values resulting from a patriarchal discourse are implicitly conveyed from the teacher to the students. Katie Dean discussed this issue with a teacher, who remarked: “The subtle gender bias was overwhelming to me … As I began to analyse my own behaviours, I was shocked to find how my perspective may have been a limiting factor to female students.”

Although the privileging of male students over female students may not be a conscious action, it is more prevalent than many parents and teachers are often aware of. During the interview with the three students, I asked if anyone had ever assumed they would not be competent using computers because of their gender. Student A replied, “[a]t school they think you’re better if you’re a girl because you’re more artistic. Or that’s what my teacher says.” A sexist discourse frames this statement. Although the student

31 Student A, op. cit
may feel she is being favoured due to her ‘artistic’ abilities, she is again being
marginalised as the feminine - she is not valued as having scientific or rational
capabilities. Teachers are implicitly denigrating female students by saturating them in
traits traditionally designated as feminine.

**The Teacher’s Influence**

The attitude of teachers play a large part in determining female students’ interest in
technology such as computers and the Internet. Kendra Mayfield believes that “By
infusing technology across the curriculum, teachers can re-engage girls who might be
disinterested in traditional computing courses.”32 Teachers have the potential to redefine
the equilibrium defining gender distinctions. Giroux’s critical theory is of benefit in this
analysis. Introducing new methods of teaching that incorporate elements of an electronic
pedagogy may assist in overcoming this historically influenced gender bias. However,
many schoolteachers are themselves unsure of the technology they are teaching. As Katie
Dean points out:

> [A]ltering a teaching style and incorporating new technology can be rough.
> ‘For some teachers it’s very uncomfortable,’ Finn said. ‘They don’t have the
> answer in front of them on page 42. It can be hard to get them to change.’33

Spender also identifies many teachers’ lack of knowledge of the medium: “A significant
number of educators in positions of power and privilege aren’t computer proficient - and
they are not supporting or doing research on this topic.”34 Teachers are not of the same
generation as their students, and did not have the same upbringing in which computers

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32 Mayfield, *op cit.*, 20/4/2001
33 Katie Dean “Net Experience is Best Teacher” *Wired News*, June 28 2001, found at
http://www.wired.com/news/school/0,1383,44869,00.html, Accessed 27/7/01
34 Spender *op. cit.*, p. 176.
were commonly used both at home and in school. They are learning something entirely new. In many cases, the students have a greater literacy than the teaching staff - a paradox not previously confronted in such vast numbers in the education system. As Students A and C identified:

A: “Our teacher … she’s like ‘Ooh, I don’t know how to do that’ and … our other teacher always gets us to teach her because she doesn’t know how to do it.”

C: “Only the IT teachers know how to actually turn on the computers. They [teachers of other subjects] don’t know how to turn it on. They don’t know how to get the Internet up.”

A: “All the computer teachers are female, but the actual IT people who fix the computers when they break down are male.”

The students discuss a division in gender role designations. The female is presented as the teacher, helpless when the technology fails. The ‘expert’ in this instance is the (male) IT technician who fixes it. The ideology of males having the knowledge to fix the computers while female teachers are presented as helpless does little to challenge dominant stereotypes of gender differences these students are presented with in the classroom. Their teachers’ activities are instructing them about more than how to operate a computer system; they are also being educated about specific gender behaviours.

Despite these classroom disadvantages, school-age girls are amongst the largest growing sectors of Web users. There are many positive actions being taken to encourage girls to gain a comprehensive knowledge of computers and the Web. For example, there are many schools in the US who actively recruit female students to become involved in the

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35 Students A and C, op. cit
36 An article released by Macroview (Michael Tchong, “Iconocast”, found at http://www.iconocast.com/issue/20000810.html, dated August 10, 2000, Accessed 19/3/01) stated that in terms of Web usage in the USA, “Greatest gains came from teen girls 12-17, up 125%.”
Web and learn how to use computers with skills beyond a basic knowledge. Katie Dean writes about a camp specifically designed for girls in her article ‘Building Web Pages, Not Campfires’:

What can they learn from the Web? Instead of setting up tents and building campfires, girls at IBM’s EXITE camps (Exploring Interests in Technology and Engineering) will learn to set up computers and build Web pages this summer. More than 600 sixth- and seventh-grade girls will gather at 21 camps around the world for weeklong sessions led by female technologists from IBM. The company hopes to encourage girls to pursue careers in math and science, at an age when girls often lose interest in those fields. Hands-on activities will include robotics, Web design, computer chip design, laser optics and animation.37

Women who were not given this opportunity at a younger age are encouraging these girls to participate in activities that will enhance their abilities to use computer technologies, thereby disrupting traditional gender values. By educating girls to claim this field, it is a space becoming less male-dominated as women gain knowledge about the Web in equal quantities to men.

There have also been many websites set up on the Web specifically to provide school-age girls with information to learn about the Internet and its associated technology. For example, an organisation known as Cyber Sisters is designed to assist younger women gain confidence learning about fields such as mathematics, science and computer technology by teaming them up with older women who are more advanced in the field. The project was formed to help these students, as the founders discovered that “teenage girls are much more likely than boys to say they are ‘not smart enough’ or ‘not good

enough’ to achieve their dreams.” Through a Web modality, younger women are given the chance to learn about subjects which they might otherwise shy away from. As noted in the ‘Mission’ page of the site:

The mission of CyberSisters is to invite and encourage middle school girls to engage their minds, their curiosity, and their imaginations in mathematics, science, and computer technology by matching a middle school girl with a university woman mentor. Student and mentor develop a project, to include one or all of the three disciplines, which is formally presented. CyberSisters also builds gender equity in these disciplines through inclusion and greater awareness.

Mentoring is a positive step in encouraging female students to learn about technology and other male dominated disciplines. Other websites, such as Girl Geeks (http://www.girlgeeks.org - the site is officially called ‘Girl Geeks: the source for women in computing’) and Girl Tech (http://www.girltech.com) also encourage female students to become involved in disciplines normally considered irrelevant for females.

When I asked the three students whether websites designed specifically for girls would be beneficial, all answered with a definite ‘No’. They were unable to see the point of generating female-specific sites when they already considered the Web to be a medium that did not discriminate against their gender. Despite their previous statements about the male students in their classes having greater knowledge about computer technology than themselves, the girls do not recognise any need to improve their own expertise. They were introduced to it in a co-educational classroom and used it in their homes much more than their parents. The gender distinction operating in terms of the (masculine) audience the Web was designed for and by whom its (male) creators were, has not been significant.

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39 Ibid.
in their use of the medium. These girls do not consider the Web a patriarchally dominated space. In consequence, they are unable to view the influence the Web has in terms of excluding their gender from gaining any educational advantage.

These three students have unlimited access to the Web. It is a part of their school curriculum - they use it for projects relating to subjects such as biology and history, and yet they do not value the educational improvements the Web may provide for their gender. Rather, the Web is considered as another realm of entertainment, much like an amalgamation of the television and telephone, where they may interact with their friends, download their favourite songs and research information about their favourite actors. When asked which parts of the web they liked the best, Student A replied “Chatrooms. TV Shows and everything.”40 While Student B remarked “MSN, email. Looking up stuff for school without having to go to books. And NeoPets.”41 As far as these students are concerned, the Web is yet another tool for their amusement. How girls, compared to boys, use the Web as conveyed through popular texts and the media, has a potential to further reinforce negative gender stereotypes. When schoolgirls are promoted as using the Web for entertainment only, their utilisation of the technology is discredited compared to masculine ‘worthwhile’ efforts. These girls operate within dominant gendered ideologies by using the Web as a form of entertainment rather than mobilising its potentials for increasing knowledge. Although it holds potential, as the lessons and camps designed specifically for girls in the United States have illustrated, the Web does not provide a significant alternative to gender values for contemporary school students.

40 Student A, op. cit.
41 Student B, op. cit.
University Education

The education of students via the Web is significant site of influence and concern from a teacher’s perspective. The second part of this chapter concentrates upon use of the Web in the university from a teacher’s point of view. In order to contemplate the pedagogy, literacy and gender theory in this context, I am using a first year course at Murdoch University as a case study. This unit is a Cultural Studies course, focused upon providing a foundation for students in areas such as social semiotics, contemporary cultural politics and reading practices. It is offered via distance education, on-campus and online. Approximately seventy percent of the students are enrolled are female. The teaching staff in the unit were all female.

Research was conducted in this field via interviews with the course’s tutors, unit coordinator and Website Designer. Analysis of the access students have made to the online component of the unit is also considered. The website designed for the course includes an outline of each lecture and topic of the week, guides to correct essay writing, and a discussion forum. This section of the chapter concentrates upon how the students and teachers interact in the unit website’s discussion forum compared to the education on-campus students receive in the classroom. Throughout the discussion, consideration of whether this forum provides a space for women to further their knowledge is raised. The design and use of the website by the teachers is also an influential factor in examining if the online site is effective in pedagogical practice.

In various published articles, many theorists have enthused about the potential of education via the Web. JB Arbaugh, for example, identified many benefits of education in an online context. He found that the collaborative style of communication amongst the
students was advantageous, especially to women. As he explicates: an “aspect of electronic communication that favours women is that the medium lets everyone speak equally, instead of one person dominating a conversation…As a result, the social cues and presence that may favour male participation in classroom discussion are diminished in electronic format.” Arbaugh, writing from the perspective of an MBA course that was dominated by male students, found that this online discussion forum was particularly advantageous to women. The pedagogical style of collaborative learning in the forum reinforces ideologies of females as more communicative in a shared learning environment. The ‘social cues’ that privilege male students in the classroom are not as evident in this virtual space. However, in the Cultural Studies tutorials, where women outnumber men two to one, female students are more often the dominating presence in class discussions. The traditionally masculine teaching space is subverted within contemporary humanities courses. As such, the discussion forum is not necessarily required to grant women a particular advantage. The tutors of the course realised it functioned instead to allow these students an opportunity to develop and extend their understanding of the course concepts. Tutor A found that “I have noticed some of the more advanced students use the forum to further the discussion from a tutorial if they felt it was not exhausted or that it was a topic they had further researched and wanted to discuss.” The collaborative style of the online forum in this instance is beneficial to both the female and male students of the course. Pedagogical practices that traditionally privilege male students are not apparent.


43 Tutor A, email interview by Carrie Kilpin. Perth, Western Australia. 4 September, 2001.
Julia K. Ferganchick-Neufang also exemplifies the virtues of online education: “Students gain more experience writing when their discussions take place online; those who are afraid to speak up in face-to-face discussions have found the freedom of voice; isolated students now have access to courses; some disabled students are more easily accommodated in virtual space; and our efforts to neutralize the teacher-centred classroom have gained new ground in the virtual world.” The online discussion board provides a space for students of varying literacies to contribute towards the discussions. The classroom privileges those who speak English fluently and discourages differing literacies. The Unit Coordinator stated that international students, who perhaps do not have the verbal language skills to contribute fluently in class discussions, valued the space of the forum. This was evident in the Cultural Studies discussion forum. One particular student from Singapore, who did not contribute a great deal in the classroom tutorial, brought up many significant points in the forum. Similarly, Tutor K identified that the online space for student interaction benefited external students who, disadvantaged by distance, time constraints, family commitments or full time work, were able to interact with other students and the teachers of the unit. This was valuable in terms of discussing course concepts and theories with others who are experiencing a similar education. It is a benefit which external students are rarely given in non-Web related courses.

Spender, in her promotion of electronic learning, went so far as to state that the entire role of teachers in the future digital classroom will change. She notes:

45 Unit Coordinator, email interview by Carrie Kilpin. Perth, Western Australia. 1 September, 2001
46 Tutor K, email interview by Carrie Kilpin, Perth, Western Australia. 31 August, 2001.
Computer-mediated education will be a whole new world to teachers; one where teaching is subordinated to learning. Teachers will not have the status of being a knower, an authority figure, the active agent in the process, but will be called on as back-up for the questioning students. The task of staff will be to serve student needs, rather than impose teacher dominance.  

The role of ‘teacher’ for Spender will become redundant. However, the idea of a computer and the web as primary educators, while teachers remain as a ‘support system’ is problematic. Marietta Giovannelli identifies several reasons why teachers remain necessary for many students in the learning process: “Teachers who were successful at producing high student achievement gains were identified as those who were more active in presenting, explaining, illustrating, and reinforcing concepts than less successful teachers, whereas those teachers with lower student achievement gains relied on seatwork more than the successful teachers did.”

‘Seatwork’ refers to lessons assigned by teachers to be completed by students at their desks in the classroom. It usually infers a passive mode of learning of material which does not involve active instruction. In view of this, the teachers who are actively involved in their students’ education, and take a significant role rather than ‘back-up’, have a better chance in influencing to their academic success.

The economic benefits of a Web education however, are often viewed as positive by employment agencies, employers and governments. For example, in investigating women in South Korean education, David Cohen found that “new technologies also offer a cost-effective way for the government to achieve its plan of making postsecondary learning

47 Spender., op. cit. p. 115.
available to all South Koreans, especially women.”

Large institutions, such as governments, value university education gained through the Web as less expensive and therefore more convenient. In line with Giroux’s critical theory hypothesis, women are able to break away from historical narratives perpetuating masculine privilege in education. In a country like South Korea, where women may be unable to access funds or be able to oppose gendered cultural limitations in order to gain a tertiary education, learning from a Web-based course is a beneficial process. However, they do not receive the same standard of attention their male counterparts receive in on-campus lessons. These women miss out on a vital part of interaction with other students and teachers in the learning process.

In countries like both South Korea and Australia, the option of Internet learning is not always viewed as beneficial. Many students may not have the knowledge or available resources to utilise the website. As Tutor K remarked, “I find the assumption that everybody has a computer and net access very worrying.” Tutor A identified this issue in terms of class. She questioned the assumption that students from a lower socio-economic background would gain empowerment from this site. Fatemeh Bagherian and Warren Thorngate also found this issue problematic, stating: “the medium creates new requirements. For example, students must find a computer to participate in a newsgroup, which might be difficult if school computers are heavily used by other students, or if

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50 Tutor K, op cit.
51 Tutor A, op cit.
home computers are heavily used by other family members.” 52 This concern is echoed by Spender, who notes that “At the moment, there are many barriers ... it costs money to purchase a computer, training and, for most people, time on the net. Because women have on average less money than men, they can be disadvantaged.” 53 In this instance, the Web creates a gap between students within the education system. There results a discourse of class division that privileges those with private access to computers and those who must find other ways of accessing their online course. The Web, in this context, has the potential to divide students from gaining knowledge because of access disabilities.

An additional shortcoming of online education may be observed alongside this division of the student community. The sex-gender distinction operates as a traditional attitude excluding women from using computers. There is an overarching concern that women do not have adequate knowledge of how to operate computers. This is evident in many published articles. 54 Arbaugh however, presents a positive view. He states that “Recent studies have found that while gender differences toward computer usage may exist among school age children, they tend to disappear once people are old enough to enter the workplace...As computer usage has become commonplace, women have gained more experience with computers, thereby reducing their general level of anxiety toward them.” 55 The assumption that computer usage is commonplace may apply to women in

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53 Spender, op. cit, p. 170.
54 Articles include:
  JB Arbaugh, 2000, op cit.
  Julia K. Ferganchick-Neufang, op cit.
55 Arbaugh, 2000, op cit.
the workforce. However female mature-age students who have stayed at home to rear children, or school leavers who did not gain sufficient interaction with computers during their schooling, may find that education via the Web is more difficult than advantageous.

The fact that computers and the Internet have historically been male dominated is also a factor that must be considered in the different approach between genders to computer and Web use in education. Margie Wylie re-iterates this: “Make no mistake about it, the Internet is male territory. Considering its roots are sunk deep in academia and the military-industrial complex, that’s hardly surprising.”\textsuperscript{56} The attitude that women are unable to handle computers has affected generations of women. This bias also exists within ideologies of pedagogical values. Women are not taught to have the same depth of familiarity with the computer as men are. In general, female students are therefore ultimately disadvantaged when contemplating online learning.

A division between the abilities of different students in Web-based education is also a result of their varying ages. In view of this segmentation, teachers have a large influence in how these students may approach the Web. As Eileen Ariza identifies: “Teachers must know how to source information, integrate the information into the curriculum, and be skilled in addressing technophobia.”\textsuperscript{57} The Cultural Studies instructors realise this emphasis upon the role played by the teacher. All answered that they actively encourage their students to contribute to the discussion forum. The Unit Coordinator stated: “I


prepare a sheet and embed discussions of the Web into internal and external teaching."^58

However for many students, especially mature age students who have not grown up with
the knowledge of computers as many school leavers have, the Internet may only add
confusion and stress to gaining their degree. When questioned about women’s knowledge
of the Web, the Cultural Studies Website Designer, who also works in an academic
library, provided this story:

Yesterday I spoke to the husband of a woman that I had spoken to earlier in the day.
The woman was crying in the background because she couldn’t get through to the
databases that we (the library) subscribe to, and she was so distressed with the
technology that she needed to get her husband to call us back. It was a problem with
her password. I reproduced the problem, confirmed that there was an issue with her
password, redirected the husband’s call through to Information Technology Services,
and they re-set it for them. He called back later to say that all was well. The point that
I want to make is that this mature-age woman was frustrated to the point of tears with
the Internet. While she lived close to the University, her familial situation restricted
her to the home, and she relied on the printed resources distributed to her by Flexible
Learning Services. Earlier in the day she exclaimed that she couldn’t find anything
useful ‘on the Internet’, and wanted to know if we had copies of the books that were
listed in her study guide. She didn’t know that she could search the library catalogue
via the World Wide Web for herself, and she didn’t know that she could access some
of our journal subscriptions via the Internet. She needed to have her husband call up
another man (me) to forward him onto yet another man (Glen, in IT) to fix a minor
problem. She was apparently stuck at home, studying at home, and relying on the
patriarchy to fix her problem with ‘the Internet’.^59

The gender distinctions revealed in this account are indicative of the influence of
traditional values placed on women attempting to gain an education from the Web. The
influence of the patriarchy is evident in how women are made to feel incompetent with
technology. This student did not have access to the knowledge that the Web Designer and
her husband took for granted. Her frustration is an example of how patriarchal dominance
operates to subordinate women in technological fields. Age and gender are two
significant factors in how the Web is viewed by different students. This narrative is an

^58 Unit Coordinator, *op. cit*

example of the Web’s potential to hierarchically divide students based upon certain
abilities and knowledge. A major disadvantage of education from the Web is therefore
the lack of ability certain students may have with using computers and the Internet. This
is especially resonant in consideration of women and the lack of attention they have
received in learning about these types of technologies.

The Discussion Forum

The use of fora for virtual discussions in online university courses has proliferated in
many university undergraduate courses within the last few years. The Cultural Studies
discussion forum is a popular site for dialogue between instructors and students. The
Website Designer identified several statistics about the use of the forum in the year 2001
course:

Broadly speaking, there are two ways to ‘use’ the Discussion Forum: (1) reading
messages, and (2) posting messages. Each could be addressed separately. Of the
total number of messages read by students (and this assumes that a message is
read only once, but by many people) females do 80% of the reading, and
obviously males do the other 20%. When it comes to posting messages, females
post 88% of the messages, where males post 12%. However one particular female
student has posted approximately 33% of all messages posted by students,
completely skewing the significance of those numbers. Further analysis reveals
that 24% of male students that login to the site post at least one message, and
similarly 23% of female students will do the same. When it comes to reading
messages 82% of male students will read at least one message, and 84% of
females will do the same.

When the Cultural Studies tutors were questioned as to who they guessed contributed
more often to the forum, all except one answered ‘females’ (Tutor K was unable to make
a decision). However, the Website Designer’s analysis reveals that the differences
between each gender’s use of the forum are not significantly distinct. A reason for the
The tutors’ decision in choosing women as the predominant users of the forum may be because of the higher enrolment of female students in the course.

How students use the forum in terms of gender is nevertheless important in ascertaining who is gaining the most from the discussion space in terms of educational advantage. The space of the forum is open and there are few restrictions on what is posted. Students are therefore able to talk in an informal manner. This often leads to tangents of conversation that have little to do with the course itself. For example, there was a discussion thread titled “Am I the only one here who hates Buffy???”60 In general however, the discussions concerned the topics being discussed in the course. Threads focusing upon subjects such as textual poaching, hegemony, notions of Australian culture and definitions of semiotics gained many responses. The distinction between those who prefer to use the space for education as opposed to conversational chatter is important in considering the effectiveness of the site in terms of educational advantage.

The tutors’ opinions upon the forum’s demarcation by gender centred upon women’s use being more closely aligned to the set topic, while the male students were seen to be more easily distracted. Tutor L identified a very definite gender distinction: “I find the women tend to be more focussed on the issues within the course. Many of the men are concerned with asserting their intelligence within this forum rather than interrogating alternative truths.”61 Similarly, Tutor A agreed that male students avoid discussion of the course concepts: “To be honest in the past I found that a lot of the guys wanted to post ‘gos’

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topics - if we were talking about sport they WERE talking about sport and not really trying to link it to the theory. Whereas the women were able to combine both theory and gos in the one posting - discuss the theory and then use an example from their own lives.”62 In contrast to dualisms that state men have more intellectual and educational advantages, women appear to have used this space much more effectively in the tutor’s experiences of the forum. They are involved in the actual practice of Giroux’s critical theory by using the forum to break with historical continuities by placing their own opinions into the educational discourse. Men have always had an implicit advantage in their education. The discussion forum is perhaps not considered necessary for their contributions as students. Rather, this forum is acting as a space where they dominate in terms of leisure rather than intellectualism.

When I examined the discussion forum, I found that contrary to the tutor’s perceptions, the male contributors preferred mostly to engage with concepts of the course. There were several exceptions, such as threads concerned with missed tutorials and chat about the tone of the lectures. However, many preferred to discuss the unit’s concepts, such as one male student who identified that “the terminology is probably my biggest problem.”63 Another male student began a topic entitled “why are some writings so difficult to understand”64, evoking a long thread about the complexities of academic writing.

Despite these messages, female students comprised the majority of the forum’s users - indicating that they held dominance over the direction of the conversation. These students

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62 Tutor A, op cit.
63 Cultural Studies discussion forum, op cit., posted Monday, August 6, 2001.
64 Ibid. Posted Tuesday, August 14, 2001.
were likely to engage in discussions about the course and in conversation that had little relevance. Many issues relating to the topics in the course were brought up by female participants, such as the politics of fandom, notions of cultural identity and problematic gender distinctions. However, the topics of several threads moved away from the initial subject into conversational areas such as opinions about favourite movies or television shows. The division between the subject matter of the discussion topics shows that there is no definite pattern of behaviour that can be ‘naturally’ expected of the female gender. There were some women who preferred to discuss intellectual subjects, while others were more easily distracted by non-scholastic topics.

The Unit Coordinator did not believe gender was an influencing factor in terms of different students’ contribution towards discussion of the course. She saw it as an issue involving age differences: “It is not purely gendered. I think that female external (distance education students) and/or mature aged students are more likely to stay on topic. I think young men and young women use it for general chat.”65 The postings on the discussion forum reinforced her belief. Students who identified themselves as completing the unit on-campus and aged in their late teens to early twenties, were more likely to move away from the more ‘serious’ topics, while the mature-age students preferred to concentrate upon the course objectives. One female mature-age student contributed in a significant amount of postings. The majority of these were about course relevant topics such as textual analysis, the ideologies of Cultural Studies and issues regarding authorship. A mature-age male student also focused on the unit’s concepts. Although his contributions were not as regular, he preferred to discuss terminology, the assignments

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65 Unit Coordinator, *op cit.*
and he also added thoughts to discussions about writing and a debate about Australian culture. It is significant to note that neither of these students were internally enrolled. The female mature age student studied by external means, while the male was an online student. These students’ contributions may have been more subject-focused due to the lack of their interaction with the unit’s instructors. The non-internal students receive advantage from an electronic pedagogy as they have a space in which to engage with other participants of the course.

There has been much debate as to whether face-to-face education is considered more beneficial than education received over the Web. In the context of the discussion forum, there have again been varying views of the advantages of each teaching methodology. In the article ‘Horses to Water: Why Newsgroups Fail’, Fatemeh Bagherian and Warren Thorngate examined the benefits of a newsgroup participated in by a class of internal students. One favourable aspect the students remarked upon was that the instructor did not lead the discussion. Rather, the students were allowed more control. In the Cultural Studies discussion forum, this was not so evident. The tutors were most likely to initiate a topic and encourage the students to contribute. One of the tutors was responsible for posting questions relevant to the week’s topic and initially, the other tutors engaged more with these messages than the students. In this instance, the instructors maintained their control over the direction of the forum. The instructors’ behaviour presents a form of educational modelling. Their examples demonstrated how to approach the questions and formulate effective responses. As the course developed, the progress of the students’

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66 Fatemeh Bagherian and Warren Thorngate, *op cit.*
knowledge was identifiable as they began to engage as much as the tutors in the topics discussed each week.

Another advantage of the discussion forum is that it presents an extra space for students to talk about topics they find to be of special interest. The Cultural Studies tutors observed this benefit in the course discussion forum. Tutor A found that “a lot of the bright women realised that the discussion did not have to finish after an hour and a half and that they could go online and seek further info or just state their concerns.”67 While the Unit Coordinator believes that the discussion forum has little “clear or definitive”68 benefits and that its “advantage can be overstated”,69 she does admit that keen students “have an opportunity to further the discussion and deal with terms and ideas in greater depth.”70 The ability for students to interact intellectually is a great advantage and an example of how Giroux’s critical theory can be put to practice. Many of the students did further their thoughts from the tutorials in the discussion forum and conferred about more specialised topics. For example, one female student who was a very active contributor to a class discussion about the politics and gender discourses operating on a dance floor also brought up the subject in the forum. She identified and discussed a theory and then asked for other participants’ opinions. In this way, the brighter students are positively benefiting from the Web’s space for further analysis.

The textual (rather than oral) mode of the Web also provides time for contributors to construct well considered responses to the topics that are being discussed. Bagherian and

67 Tutor A, op cit.
68 Unit Coordinator, op. cit
69 Ibid.
70 Ibid.
Thorngate identified that “the convenience of communicating … when the time is available”\textsuperscript{71} is an advantage of the discussion forum. Having the time to type out answers or questions, and therefore place a greater amount of consideration into a topic than the discussions in the tutorials allow for, generates a depth of space for more articulate academic thought. Tutor K concurs: “The fact you can draft your posts changes the nature of the discussion.”\textsuperscript{72} The availability for attention to detail is conducive in encouraging students to think fully and reflexively. It provides a space for an extension of expression and literacy. Students pay more attention to their writing skills and concurrently gain familiarity and confidence with using the computer and Web.

The forum also provides a space for a multitude of responses to a student’s inquiry. Rather than having one instructor’s viewpoint - as traditionally structured in classroom pedagogy, the discussion forum provides students with the opportunity to obtain various perspectives from the course’s several tutors, the Unit Coordinator and other students. As Tutor A notes: “the fact that students get access to a team of experienced scholars allows them to formulate arguments and opinions not normally based on one person’s point-of-view. In other words students must think a little more critically in the space rather than just digesting what a tutor says in class.”\textsuperscript{73} The literacy involved with the student’s formulation of their contribution to the forum is an advantage of this online space. They are encouraged to think \textit{critically} in response to these opinions, rather than passively absorbing information that is often the case in classroom situations.

\textsuperscript{71} \textit{Ibid.}
\textsuperscript{72} Tutor K, \textit{op. cit}
\textsuperscript{73} Tutor A, \textit{op. cit}
There are also several disadvantages with having an online discussion forum. Interestingly, it was the course coordinator and the Web Designer who focused upon these. One factor that was identified as detrimental to students in an online context is the inability to read body language. The Web Designer realised that “So, while there will be some instances where a contributor will offer a thorough or well thought out response to a question, there is equal opportunity for a contributor to make an off-the-cuff remark that can be more easily misunderstood than in a face-to-face situation. Body language, mannerisms and aural tones do not translate well into emoticons and dodgy punctuation.” The lack of bodily presence and the signs that indicate expression beyond words, such as a smile or laugh, are therefore disadvantageous in a virtual context. The literacy involved in corresponding through these devices is often an inadequate form of communication. Richard Peregoy identified the importance of body language to pedagogical practice:

> When students and professors are connected via technology, weaknesses do appear. The feeling of being together in a classroom may be missing. This lack of presence makes the educational experience seem impersonal. For example, the professors have no way of reading the students’ body language, which, in the classroom, allows them the opportunity to adjust to the audience in real-time. Also, the students cannot interrupt the professors at the moment they have questions. There is a high cost per unit of time when using distance learning technology, requiring the professors to be very concise in their explanations, perhaps at the expense of clarity for some students.

Peregoy identifies several drawbacks of the discussion forum, including the opportunity for interruptions. The ability for students to stop the class and ask for clarification of a subject is vitally important to an effective pedagogical process. Bagherian and Thorngate investigated students who participated in a university-based newsgroup and found that

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74 Website Designer, *op. cit*
lack of body language does contribute to misinterpretation: “Four females and two males noted that face-to-face discussions reduce the degree of misunderstanding because body language allows them to realize whether a person is being serious or sarcastic, but this is difficult in newsgroup discussions.”76 The text-based form of communication is often an awkward mode of expression. In this particular example, the female students were twice as likely to find that the lack of body presence affected them negatively. Learning through a face-to-face context would have been more beneficial for these students. This is an example of how the Web, as a space for online education, is not always advantageous to women.

In direct conversation, the student and instructor are able to clearly articulate what their question is, and immediately correct any misinterpretations. In the Cultural Studies discussion forum, there was occasionally uncertainty in understanding a message. Participants do not know how others react to certain statements or responses. If someone does not ask for clarification of a certain term or concept, it may be left untouched and the inquirer will never know who understood their message, and who did not. For example, one student placed a question on the Cultural Studies discussion forum concerning the ambiguities of authorship. The thread remained untouched for several weeks, until the same student again asked for a response. In the replies that followed, the participants identified that they were confused by the question, providing a reason for why it had been avoided. If the student had spoken directly to an instructor, this delay may have been avoided.

76 Bagherian and Thorngate, op. cit
Bagherian and Thorngate considered the unpredictable response time to students’ questions unfavourable. They identified several students who preferred to speak directly to an instructor rather than spend the time typing: “As one male said ‘It takes five minutes to answer a question in face-to-face discussion while it takes about three weeks to answer the same question through newsgroup discussion.’” If a student had a question about an upcoming assignment, talking directly to a teacher would obviously provide a much quicker response. Tutor L also agreed with this notion, stating that education requires “discomfort, time and interrogation.” In this instance, online learning is inadequate. The uncertainty as to whether a student’s question will be answered immediately is dissolved in a real-time conversation. The classroom contains many pedagogical advantages that the virtual forum is unable to provide. Students benefit from direct interaction with their teachers in order to gain a more effective and productive education.

**Administration**

The support of the university’s administrators and departmental heads is essential in providing a successful online course. As a recent development in education, many of the academic staff who are directed to publish their courses on the Web do not have the skills and knowledge of the medium. As Ariza *et al* identify: “all the best intentions in the world are impossible to carry out if teachers are not trained sufficiently, are not comfortable enough with the software and equipment, and do not really believe in the benefits of current technology.” Both the Unit Coordinator and Web Designer found

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77 Ibid.
78 Tutor L, *op. cit*
79 Ariza, *et al*, *op. cit*
that support was inadequate in terms of training and financial contribution by the university in developing Cultural Studies as an online course. The Cultural Studies Unit Coordinator views education from the Web as “an expensive ‘add-on’ to internal and external programmes.”\(^{80}\) This dismissal of the Web’s potential was based upon the time needed for the course coordinators to set up and maintain the website. The Unit Coordinator explained that the expense and effort required to support the website outweighs the advantages it provides for students. Authority figures, such as the government or directors of university departments, fail to consider the shortcomings of placing units online. The administrators and the academics view the discourse of economics differently in Web-based education.

The unbalanced power relations between the educational managers and teachers in the Humanities department of the university incurred a gendered struggle in placing courses online. The Unit Coordinator stated that she had no say in placing Cultural Studies on the Web. She responded, “I was told to. I had no choice … the men who insisted that my courses were put on line - did not have their own courses on line.”\(^{81}\) The administrators of the university, who most likely lacked the knowledge of creating a course on the Web themselves, demanded that their subsidiaries take the time out of their schedules to find out how to do this. The interests of the dominant class - the (mostly male) administrators, are being served to the detriment of the (mostly female) teachers. The Unit Coordinator further explicates the gender distinction between the teachers and educational managers, “[w]as this a gendered situation - yes. Women teach at universities and they teach a lot. The people who told me to put these courses online were men - and empowered men,\(^{80}\) Unit Coordinator, \textit{op cit.}\(^{81}\) Unit Coordinator, \textit{op. cit}
who taught a hell of a lot less than me.”\textsuperscript{82} Support from the university would therefore have been a necessity to the Unit Coordinators in these positions. However, as the Cultural Studies Coordinator stated: “the support has been NOTHING - no workload provision.”\textsuperscript{83} Furthermore, the Web Designer identified that there were no “significant pedagogical advantages for initiating the development of these courses for the Web.”\textsuperscript{84} Politics within the gender biased hierarchy of the university are unfavourable in the construction of online units.

The creation of the course’s website was also a gendered process. While the teachers of the unit were all female, and seventy percent of students enrolled in the course were female, the website’s designer was male. He had the knowledge and power as creator of the site, while the women remained in a secondary position as the users of the technology. When asked if he considered the varying abilities students have in using computers and the Web, he replied that “Ideally, if you can read, point, click and type with at least one index finger then you should be able to get around without too much difficulty. Consequently, I did not cater to different abilities, but I did try to make using it as simple and painless as possible.”\textsuperscript{85} As a male educated to a much higher degree in digital technology than most of the website’s users, his ideas of simplicity may not be on the same level as the female students. However, in the example of the Cultural Studies discussion forum, students rarely identified any problems in navigating their way through the website or in their use of the discussion forum. There were several complications with password access however, which was beyond the control of either the Website Designer

\textsuperscript{82} Ibid.
\textsuperscript{83} Ibid.
\textsuperscript{84} Website Designer, \textit{op. cit}
\textsuperscript{85} Website Designer, \textit{op. cit}
or instructors in the course. Rather, they were the responsibility of the administrators of
the university’s online course structure.

**The Pervading Patriarchy**

So we have created an educational culture in which girls who do well doubt their
ability, while boys who do poorly have no doubts about their potential to perform
at the highest levels. We have artificially created anxiety among women students.
We have handicapped them with our expectations. And we are on the way to
recreating this pattern of significant inequality all over again - but with computer-
performance this time round.  

Dale Spender

This chapter has outlined many advantages and disadvantages of online education.

Gender was a significant factor in considering who had control of the medium - including
the IT technicians, male university administrators and the Website Designer in
comparison to the dominantly female teaching staff. The schooling system, as an
institution, is a source of patriarchal discrimination. As Spender noted, the educational
structure has always reinforced attitudes that make its female students feel inadequate.

With the introduction of computers and the Web in the curriculum, this inequality is
being even further reinforced.

The disadvantages of online learning are still very much defined by contemporary
attitudes and standards promoting patriarchal values. As Ferganchick-Neufang identifies:

“It is a mistake … to ignore the problems that online instruction creates for women while
unconditionally celebrating this new technology.”  

The Cultural Studies instructors

identify that the patriarchal ideology is impossible to evade. Tutor K bluntly states that

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86 Dale Spender, *op cit.* p. 180
87 Ferganchick-Neufang, *op cit.*
“there is no outside of patriarchal discourse be it virtual space or not.”\(^{88}\) The permeation of patriarchal ideals are infested in Web-based pedagogical practices. The Unit Coordinator also supports this notion: “I believe that the Web will reinforce and perpetuate patriarchy. And further, I believe that it is patriarchy in a reified form - nasty, economically rationalist and people-blind. I think it is going to be a disaster for women - and a disaster for education.”\(^{89}\) Pedagogy is acknowledged as implicitly promoting patriarchal standards, and it appears that these will continue to be transmitted in virtual learning practices as well.

Education on the Web allows little space for women to escape patriarchal restrictions. The courses and schools encouraging women to use the Web for their education are perpetuating a standard of pedagogy that privileges male students. Historical influence upon scientific and technological fields as exclusive masculine realms has had too great an impact on the development of contemporary electronic pedagogy to adequately avoid these ideals in any shape or form. However, the entertainment values the Web offers to some women, such as school students, is at least contributing towards their knowledge and familiarisation of the medium. Although women will not gain an education on the Web free of gender restrictive biases, the education some are currently receiving will advantage them and allow future generations to continue to challenge these ideals.

\(^{88}\) Tutor K, _op. cit_

\(^{89}\) Unit Coordinator, _op. cit_
Conclusion

The voices of women have played an important part of this thesis. In a patriarchal society, women are not often given space to express their views and opinions. Cultural texts, such as films, novels and newspapers, have also greatly contributed to the evidential base of my thesis. They provide a valuable source through which to criticise or praise popular representations of women. Recently I read a book which unites many of these elements, ideas and theories. The novel is called *The Da Vinci Code*, and is written by Dan Brown. It raised some profound considerations of empowerment and gender in history.

I attended Catholic schools for my education. Throughout this schooling, I was reticent in agreeing with my teachers’ lessons advocating an uncritical belief of the ideologies presented in the bible. I could not understand why it was a group of men who were all so wise, and responsible in teaching a group of young women about sin. Why had there not been any women teaching positive affirmations of life, identity and sexuality? Women are often vilified in religious teachings. In the bible, Mary Magdalene is cast as a prostitute ‘rescued’ by Jesus from a life of wrong-doing. In the film *The Passion of the Christ*, Satan is represented by a distinctly feminine appearance. The ‘real-life’investigations discussed in *The Da Vinci Code’s* narrative disturbs these negative images. Research into who the real Mary Magdalene was has been largely concealed from the public consciousness - certainly from Christian schools. I was very interested in

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1 The ‘Satan’ character is played by actress Rosalinda Celentano. Mel Gibson (Dir.) *The Passion of the Christ*, Icon Productions. Screenplay by Mel Gibson and Benedict Fitzgerald. 2004.
Brown’s description of the Catholic Church’s oppression of the ‘sacred feminine’. He notes:

Two thousand years ago, we lived in a world of Gods and Goddesses. Today, we live in a world solely of Gods. Women in most cultures have been stripped of their spiritual power. The novel touches on questions of how and why this shift occurred…and on what lessons we might learn from it regarding our future.²

Brown’s opinions, particularly about how women have been ‘stripped of their power’ ignited my enthusiasm in contemplating how gender roles evolved to become so unequal in the past two centuries.

In considering The Da Vinci Code’s challenge to the Vatican’s ideals, I acknowledge that all interpretations of history are subjective. All narratives shield alternatives. Brown recognises that history is recorded (and distorted) by the winners.³ The challenges made by historians and researchers to the authenticity of the bible are no doubt also tainted by individual interpretations. However, it is worthwhile considering the social and cultural influences of The Da Vinci Code beyond these criticisms of Christian history. Women’s oppression throughout history is discussed at length in the narrative. The Da Vinci Code has been number one on the bestseller lists of books in Australia, the United Kingdom and the United States of America. Its subject matter is highly controversial, and yet it is being consumed by audiences in phenomenal numbers. Whether the ‘facts’ are right or wrong in each account, the willingness of academics and popular texts to challenge the Catholic Church is a positive step in encouraging the deconstruction of unfair patriarchal attitudes towards gender. Women and men are confronting an institution which has advocated female oppression for centuries.

³ Ibid.
It may seem odd or inappropriate to mention the Roman Catholic Church in a dissertation about women and the World Wide Web. The institution, however, has served as a basis for the oppression of women for centuries. Throughout this thesis, I have frequently referred to women’s gender roles as having ‘traditional’ or ‘historical’ lineage. This mode of phrasing has aided in my framing of female oppression as being caused by patriarchal discourses that are perpetuated through contemporary structures and ideologies. The patriarchy does not only oppress women however; it also dictates particular standards of behaviour for men. Men are not ‘the problem’. Structures and institutions that invest meaning and connotation in the masculine over the feminine instigate nodes and sites of oppression and inequality. Andreas G. Philaretou and Katherine R. Allen state:

> In patriarchal sociocultural environments that continue to reward men with strong masculine personas, those with weak masculine identities tend to become marginalized…The hierarchical nature of patriarchal masculine relations dominant in industrial/post-industrial systems have been pitting men against one another as both competitors and communal participants in the acquisition of power.4

In order to successfully participate in the patriarchy, men must enter a competitive and hierarchical culture. They are pressured to conform to certain standards of ‘masculinity’ in order to gain acceptance and power in social organisations. Males are controlled, limited and restricted by the same values which have evolved over time to oppress women. However, these values benefit men in that cultural ideologies operate to maintain their dominance over women. For example, men have a supposedly ‘natural’ intelligence which gives them greater dominance and credibility in areas relating to technological

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development. Although many men are not as adept as some women in this field, they are nevertheless granted credibility and authority in the so-called ‘masculine’ sphere.

One of the most disturbing aspects of the relationship between women and digital technologies is the lack of women in technical fields such as computer programming and computer science. While most women now use the Internet in equal numbers to men, they do not have an equivalent knowledge of the medium’s construction or aligning processes. Throughout this thesis, I explored many reasons for this anomaly. I have found that it is chiefly due to the poor encouragement women received in pursuing interests in technological and scientific fields. Digital technologies are owned, operated and controlled by men. The institutions that could intervene to problematize this easy coding of technology with masculinity, such as education, the media or the workplace, do not have strategies in place to manage change. Women remain secondary citizens in this sphere - as they have in much of historical progress.

This inferior status is recognised and critiqued by Dale Spender in *Nattering on the Net*. Spender contributed many insightful and constructive comments to my study of women’s relationship to the Internet and the World Wide Web. Many of her theories about the historically-framed masculinity of digital technologies, the unfair representations of women in print media, and the privileging of male students in the classroom, have framed my analyses. Spender’s overall argument is observable in the statement she makes in the book’s introduction:

> It is imperative that women become involved in the cyber-community in the same numbers and on the same terms as men … There is no other way of ensuring that
wisdom or knowledge can emerge from all the masses of information and data that are currently being produced.\footnote{Dale Spender, \emph{Nattering on the Net: Women, Power and Cyberspace}, Melbourne, Spinifex Press, 1995. p. xxv.}

This wisdom and knowledge is an important contribution to cyberspace. Women’s input into the developing nature of the new technology is vital if they are not to follow in the familiar patterns of history and remain subjected to masculine domination and control.

Despite Spender’s perceptive analysis of gender and the Internet, she did not explore one of the most important areas of women’s relationship to the Web - their under-representation in its construction. Even in the subsequent articles Spender has written for publications like \textit{The Australian},\footnote{Dale Spender, “Where's the disgrace if you cut and paste?” \textit{The Australian}. Canberra, ACT, Aug 20, 2003. p. 36.} she fails to comprehend that women need to be educated and encouraged to learn about the technicalities of the Web and its development. In \textit{Nattering on the Net}, Spender lacked an in-depth analysis of the poor representation of women in information technology fields relating to the Internet and Web. She did not consider the low number of women in Web construction. That absence has provided the topic and basis for my research.

Throughout her examination of women’s place in cyberspace, Spender engaged very effectively with case studies and conversations with non-academics, as well as published resources, to produce a well researched book. I admired the techniques she used in studying ‘real life’ sources such as the Methodist Ladies College in Melbourne.\footnote{Spender, \textit{op. cit}, pp. 110 - 114} The students at this school disprove notions of females having any ‘natural’ inability in computer use. Spender also cites a letter she received from a woman disturbed by the
definitions found in the Macquarie Dictionary correlating “female: weak”\(^8\) and “bitch: female dog, woman.”\(^9\) Spender’s engagements with these examples provide an effective empirical resonance in support of her arguments. This is an approach that I mobilised in my own analyses of women and the Web.

The research methodology in this thesis comprises oral and email interviews, messages from discussion fora participants, and a survey. Although I initially engaged in these strategies because of the lack of published information in the developing field, I soon realised how important it was to my analyses. Having the voices of women from a variety of backgrounds contribute to an academic dissertation provides a balanced approach to my investigation. Both are important and provide a valuable equilibrium of evidence to my own hypotheses. A positive outcome of this research methodology is that the voices of women are recorded and carefully considered. On many occasions, women in the course of formulating their answers gained a flash of insight and consciousness, commenting that they have never thought about these issues - in this way - through their lives. This lack of reflexivity in feminine experiences is common. For women to effectively challenge ideologies that discourage their interest in digital technologies, they must gain a wider recognition and be allowed much more credibility. Their thoughts and opinions require more research and inclusion.

In considering women’s behaviour in and on the Web, I found that analysing the comments of the survey participants provided an illumination into their views of the medium. Women’s online behaviour often reinforces conventional gender identities.

\(^8\) Spender, op. cit., p. 29.
\(^9\) Ibid.
Studies of women’s use of the Web in Chapter Two reveals that a large amount of women use the medium for traditionally ‘feminine’ activities, such as shopping, chatting and searching for information related to gossip, fashion and beauty. In this manner, women are replicating gender archetypes in virtual space. They consume the medium much like reading a magazine or watching a television show. This behaviour indicates that the Web is not necessarily a space women may use to challenge unfair assumptions which have historically imbued them with ‘weak’ traits such as being shallow and unintelligent. Rather, it is a tool constructed within a masculine discourse to further aid in the subjugation of women in a patriarchal world.

Not all women use the Web in this manner. Although the Internet and World Wide Web remain patriarchal in grammar and applications, many women are challenging this paradigm. My interviews in Chapter Seven indicate that many women prefer to utilize the Web only for research relating to their work. These technologies provide opportunities for these professional women to challenge boundaries tied to conceptions of gender that have restricted their intellectual potential throughout history. Carly Fiorina for example, has broken through the glass (or silicon) ceiling which has prohibited most women from reaching empowered positions. She achieved this in the field of information technology. Compared to other industries such as car manufacturing which are older and much more patriarchal in structure, the relatively recent field of technology does provide some leeway for females to challenge masculinist paradigms. However, strong (but frequently invisible) social and cultural ideologies continue to prohibit other women from enacting this challenge. In most workplaces, women are still tied to administrative and lower-end positions of the social hierarchy.
As the internet and the Web become significant aspects of everyday life, their prevalence in cultural texts is also increasing. Magazines and journals dedicated to discussion and debate of these technologies proliferate. The films I studied in the fourth chapter show that the Web is increasingly becoming a part of popular culture. With this permeation, a consideration of gender values in these texts is important. In my analyses of several media texts, I found that gender representation is varied. Although some cultural productions present female characters in positive and equal terms to their male counterparts, other texts are complicit in maintaining unfair patriarchal values degrading women’s ability in technological areas.

In Hollywood cinema, the perpetuation of women as secondary to intelligent male heroes is frequently reinforced. The female characters rarely embody independent, strong characters; if they do, then they are usually shown as deficient in other areas, such as in their personal lives. In *The Net, The Silence of the Lambs, Aliens, My Best Friend’s Wedding, Hackers* and *The Matrix*, the female characters are constructed as clever women with an above-average aptitude for operating technologies in traditionally masculine dominated fields. However, they do not compare to male heroes who manage both a family and a successful personal life. Traditional attitudes confine women to domestic realms. If women wish to pursue a career outside of this sphere, these cultural texts show that they cannot handle the challenge. Women are represented in film as unable to balance a successful personal and professional life.
This representational matrix is not as overtly demeaning in print sources. Although the print media maintains dominant social and cultural ideologies of women as incompetent technology operators, there are exceptions breaking away from this. In the 1930s and 1940s for example, Eleanor Roosevelt was instrumental in providing many women with an alternative to the stereotypes of the housewife at the time. Her press conferences for female journalists presented a resistance to the gender hierarchy of the inter-war years as women were able to read the views of female writers. They saw women were also capable of performing in the masculine realm of journalism. Another resistance to gender archetypes can be viewed in fictional books written about the Web. As a much older medium than the Internet and Web, books are complicit in presenting traditional ideologies to their readers. Many modern authors are challenging this paradigm. As theorised by Paul Virilio, cultural texts such as novels document the era in which they are written. Many novels now record women’s challenges to gender inequality. For example, books written by Enid Blyton in the 1950s contain much more gender discrimination in their plots than those written by more modern authors such as Michael Coleman. *Cyberkiss* and *Man or Mouse* are examples of narrative which present the female characters as intelligent and independent in relation to the technology they operate. These texts present positive representations for women. They prove that not all women are incompetent at utilising a medium historically considered too complex for women’s understanding. Change can occur. It is ironically appropriate that the ‘old’ medium of print has been more open in its acknowledgement and recognition of digital women.

The Web provides a space for discussion and debate about the effectiveness of female characters in popular texts. Discussion fora are spaces where women can examine the
construction of female characters in popular cultural texts. When I studied several online fora, I discovered that the space allows women the ability to criticise and praise female television characters on television. Many of these characters, such as Captain Janeway from *Star Trek: Voyager* and Dana Scully from *The X-Files*, are not confined to the realms of traditional women. They work in fields of authority and science. They embody rational, ‘masculine’ traits, while their male counterparts are presented as more spiritual and ‘feminine’ in nature. This inversion of gender binaries stimulates much debate in online discussion fora. In my investigations, I found that contributors who identified as women were often supportive and admiring of the female characters. They criticised statements about conventional gender constructs. In this context, the online space provides a positive space for women to confront patriarchal standards. However, several of the male contributors to the discussion posted derisive messages. They disrupted the debate by making irrelevant and sexist comments about the female characters. They are an example of how the Web allows anyone access to its spaces of communication.

Spender also realised this in an example of a journalist who received a ‘flaming’ email:

> This awful experience (which continued to haunt this hardened journalist) prompted John Seabrook to look more closely at communication on the net. As he points out, it is the very egalitarian qualities of cyberspace (once you get connected) which are both the benefit and the drawback. For the ‘same anonymity that allows the twelve-year-old access to the professor, allows a paedophile access to the twelve-year-old’ he writes. And the ‘same lack of inhibition that allows a woman to speak up in on-line meetings allows a man to ask the woman if she’s wearing any underwear’. ¹⁰

Virtual space is open to anyone with the literacy to operate it. This includes males who wish to maintain patriarchal standards and exclude and discourage women from the digital sphere.

Representation of politics has been important to this thesis, continuing Cultural Studies’ theories of popular culture. I have also addressed areas and discourse neglected within the field’s palette of concerns. One of the most obvious sites in which women remain excluded is the workplace. This segregation not only refers to their numbers, it is also in the configuration of technologies designed as masculine. Although libraries are female-dominated spaces, the computer technology they use in their work is owned and maintained by males. Paula Span confronts this:

> If I never progressed beyond the half-dozen commands necessary to send my stories to The Washington Post, I don’t think that will be true for my daughter, though, or any of our daughters. They’re entering a world in which card catalogues have already vanished from the public library, replaced by terminals and keyboards.

> Perhaps they won’t need to be whiz-bang programmers (though it wouldn’t hurt). But they can’t afford to see computers as toys for boys, to see ignorance as feminine, to wring their hands over the keyboard and worry they’ll break something.11

Databases of library books are organised in Web browser programs that have been built in male-dominated industries. If the system breaks down, the (female) librarians are often reliant on (male) computer technicians to fix it for them. More importantly, the spectrum of skills possessed by librarians are undermined through the coding of the field as female-dominated.

Even in workplaces that advocate gender equality, such as universities and government departments, men still outnumber women in the upper echelons of decision making and influence. In Australia for example, the Federal Government’s Cabinet is dominated by men. There has never been a female prime minister - there has never even been a serious contender for the job in Australian politics. Instead, women dominate administrative

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positions at the lower end of the workplace hierarchy. Initiatives such as the Creative Industries appear to provide a solution to the gender gap. As a field which has involvement with the university, the government and the arts, the CI has the potential to make a difference in the poor representation of women in male dominated areas. In the developing field of digital technologies however, the lack of policies addressing gender considerations indicates that this shift is not occurring. Examining the members of the Creative Industries at the Queensland University of Technology reveals that men continue to dominate influential positions in the academy and government.

Perhaps if this thesis has a singular imperative for intervention, there is a desire for change in and through education. Representations of women as secondary and inferior to men are configured during their schooling and university years. Due to the patriarchal values inherent in school curricula, girls are taught - even implicitly - that they do not have the same ability as boys in learning about computers. They do not receive an education of computers that is as comprehensive as boys. Computer games - which may stimulate their familiarity with computers - are aimed at boys. There are also very few female role models in the computer industry. Women’s names are rare even in mathematic and scientific fields. As a result, many girls do not view the Web as a medium in which they can make a difference. It has become another medium for ‘nattering’.

This exclusion and undermining of women is also observable in tertiary education. Masculine ideologies are shaped and maintained by patriarchal ideologies discouraging female participation in a ‘masculine’ sphere. In the university message board, the
collaborative and interactive style of communication appeared to favour a variety of voices. However, access to the realm is dependent upon the student’s knowledge and comfort with the technology. Mature age students, or those experiencing economic difficulties, are at a disadvantage compared to the other students. Women’s education in computers was poor when they were first introduced to university curricula in the 1980s, and it is still this way twenty years later. In Australia, statistics of women’s participation in information technology remains low, as “[i]nformation from the tertiary sector shows that less than 15 per cent of IT undergraduates are women.”12 Women remain under-represented in all fields relating to digital technologies, including the Web.

There have been many warnings about the consequences of unequal representation. Rather than evolving as a medium which has the ability to release women from unfair and unequal ideologies that have always privileged men, the Web is a space which replicates conventional standards of gendered behaviour. Men remain dominant in the technical and complex areas of its construction, while women are only ‘users’ of the Web. In response to this paradigm, Paula Span advised that:

> Women have to be in it [the computer world] because incompetence is an unattractive trait. Women have to be in it because decisions about language and culture and access are being made and we should be involved in making them. Women have to be in it because, although nobody really knows what form all this technology will take, there shouldn’t be any clubhouse we’re afraid to climb into.13

Decisions are being made - about government, work, education and leisure - that require an informed citizenry with a literacy to contribute to political debate, not only to shop in the virtual mall.

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Women have to be more involved in computer and digital discourses. The last three years of my life have involved ‘talking’ to women - either virtually or in person - finding out their goals, hopes and disappointments. It is clear from the surveys I have conducted, the media I have analysed, the policies I have reviewed and the scholarship I have created that intervention is necessary. My concern is that there are so few sites for change and positive affirmation of women and the Web that move beyond a damaging inversion of gender dualisms. Information technology is an increasingly significant part of our cultural and social semiosphere. Although the Web is historically and ideologically masculine dominated, women must continue to fight to gain prominence and credibility alongside men. This thesis has captured some of their voices, so that women can claim a web of their own.
Appendix I

Survey of Internet Users

Questions for Participants

Please circle the following relevant answers:

<table>
<thead>
<tr>
<th>Sex</th>
<th>F</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 - 44</td>
<td>45 -49</td>
<td>50 -54</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive/managerial</td>
<td>Professional (Doctor, lawyer, etc)</td>
<td>University Student</td>
</tr>
<tr>
<td>High School Student</td>
<td>IT/ Engineering</td>
<td>Service/customer service</td>
</tr>
<tr>
<td>clerical/administrative</td>
<td>tradesman/craftsman</td>
<td>homemaker</td>
</tr>
<tr>
<td>self-employed</td>
<td>unemployed</td>
<td>retired</td>
</tr>
<tr>
<td>Academic/educator</td>
<td>Commerce</td>
<td>Health</td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Do you feel competent using a computer?
   - Yes
   - No

2. Do you own a computer?
   - Yes
   - No

3. How did you first hear about the World Wide Web?
   - Work
   - University
   - Other (please specify)______________________________________________

   - School
   - Word of mouth___________________________________________________

4. How often per week do you log onto the Internet?
   1. Never
   2. 1 to 2 times
   3. 2 to 3 times
   4. 3 to 4 times
   5. 5 to 10 times
   6. 11 to 19 times
   7. More than 20 times
5. Do you log onto the Internet to:
(Circle as many as you like)

1. Check email
2. Surf the Web for entertainment
3. Participate in chatrooms/ Join a MUD (Multi User Domain)
4. Research specific information
5. Check for updates in the news/weather, etc
6. Download music/software/etc
7. Shop on the Web
8. Pay bills/ Internet Banking, etc
9. Other (Please specify)

_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________

6. Do you think the Internet is easy to navigate?
Yes   No

7. Do you prefer the Internet for business or leisure?
Business   Leisure

8. How much time per day do you spend on the Internet?

1. Under 1 hour
2. 1 to 2 hours
3. 2 to 3 hours
4. 3 to 4 hours
5. 5 to 10 hours
6. 10 to 20 hours
7. 20 hours +

9. When surfing the Web, which sites do you prefer to visit?

   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

10. On average, how many Websites do you visit in one session?
   1. Less than 5
   2. 5 to 10
   3. 10 to 20
   4. 20 to 50
   5. More than 50

11. Is the Internet an important part of your everyday life?
   Yes  No  Don’t know

If no, do you think the Internet will eventually become an integral part of everyday life?
   Yes  No  Don’t know

12. When online, do you feel particularly conscious of your gender identity?
   Yes  No  Don’t know

Comments (if any)
__________________________________________________________
__________________________________________________________
_________________________________________________________

13. Do you feel that the WWW was designed for a male target audience?
   Yes  No  Don’t know

14. Would you say that more men, or more women use the WWW?
   Men  Women

Can you think of any reasons for this?
__________________________________________________________
__________________________________________________________
_________________________________________________________

15. Have you created a Web page before?
Yes  No

If yes, how would you categorise it?

Business  Personal  Informational  Entertainment  Other

(Please specify)_______________________________________________________________________

____________________________________________________________________________________

16. **Would you generally prefer to use email or the telephone to communicate for:**

**Business:**  Email  Telephone  Neither  Both
**Personal:**  Email  Telephone  Neither  Both
**Overseas friends:**  Email  Telephone  Neither  Both

17. **If you have ever chatted in a chatroom, on these occasions -**

Were you honest about exactly who you were?
Yes  No  Sometimes

Do you regularly create a false identity?
Yes  No  Sometimes

Did you change your gender?
Yes  No  Sometimes

Can you tell if someone you are chatting to has changed their identity?
Yes  No  Sometimes

Do you feel more comfortable in this situation than in ‘real life’?
Yes  No  Sometimes

Thank you for your participation in this survey. The results will assist me greatly in completing my Ph.D thesis.
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