During the mid-1990s, feminists, policymakers, and educators expressed concern about ensuring equal access to the Internet for women. Various studies assessed why women were online in such low numbers. Factors included technological temerity, socioeconomic reasons, a paucity of content to attract women, and time constraints. In 2000, statistics indicated that, at least in the United States, there was no longer a gender gap in access to the Internet. As various Pew Internet and American Life reports also established, women are using the Internet for activities that reinforce and correspond to their everyday lives such as e-mailing friends and relatives, searching for health information online, and for engaging in leisure time activities. In a sense, then, the Internet has become domesticated, similar to other communication technologies in the household such as the television and the telephone.

This chapter examines some of the facets of gender online. First, however, it grounds the discussion by focusing on the gender-technology dynamic. A significant body of contemporary research has looked at how communication technologies have been gendered, both via their social uses and through design. Some of this research, particularly on the telephone, shows similarities to the current adoption of the Internet by women. Data from various Pew reports describing how American women use the Internet, and the gendered nature of how men and women use the Internet, are then discussed. Given that men and women seek different kinds of information online, the chapter then looks at online content designed for women, particularly some of the mechanisms by which corporate interests are attempting to attract the “feminine audience.”

There is a sense of optimism that the Internet, despite the still-present “digital divide,” has reached a level of gender parity for the American population. But is access to the Internet the only determinant of gender equity? Is the Internet really a level playing field for men and women? What other considerations should we consider in terms of equity? Even though women might be on an equal par with men in terms of Internet use (despite the differences in
information-seeking behavior), is there equity in terms of design, administration, ownership, and governance of this infrastructure? The chapter concludes by considering issues that affect women, including the digital divide, education, and employment.

**Research on the Gender-Technology Relation**

Before describing some of the research on gender and the Internet, it is helpful to situate it within a significant body of research that has examined how communication technologies have been gendered, both through their social uses—which have often been unintended—and their design. The telephone, the radio, and the television have been the focus of much of this research. The use of these technologies to both forge new communities and nurture existing place-based communities has been a recurrent theme (Shade, 2002).

The telephone is particularly illustrative here. As Rakow (1992) and Moyal (1992) showed, women have used the telephone as a tool of community bonding and family “kin keeping.” Rakow’s 1985 ethnographic study on women’s use of the telephone in a small community in the midwestern United States revealed how the telephone is a gendered technology:

> The telephone is a site on which the meanings of gender are expressed and practiced. Use of the telephone by women is both gendered work—work delegated to women—and gender work—work that confirms the community’s beliefs about what are women’s natural tendencies and abilities. (Rakow, 1992, p. 33)

Moyal’s (1992) research for the Australian federal government on the prospective impact of timed local calls on women concluded that there was a distinctive feminine use of the telephone. Women’s use of the telephone was primarily for keeping in touch with family: “The study has revealed a pervasive, deeply rooted, dynamic feminine culture of the telephone in which kin-keeping, caring, mutual support, friendship, [and] volunteer and community activity play a central part” (p. 67).

However, as Martin (1991) demonstrated in a historical study of the rollout of telephone services in Canada, the original purpose of the telephone, envisioned by Bell Canada, was as a tool for businessmen. The feminization of the telephone became apparent first when women were hired as operators and then later when a viable culture of the telephone developed for socialization. Telephone technology and design has since changed considerably so as to appeal to the female consumer, reflecting its status as an indispensable domestic artifact through stylistic trends, including colors (from plain black to pale hues), design (from the Princess telephone to the cartoon-licensed telephones), and technological innovations (from push-button telephones to portables) (Lupton, 1993).
Gender, consumption, and technology relations have also been documented by scholars (Cockburn & Furst-Dilic, 1994; Cowan, 1985; Horowitz & Mohun, 1998; Oldenziel, 1999). They have pointed out how technologies that exist in the women’s sphere (e.g., domestic technologies) are often not considered “real” technologies. It is assumed that these “technologies of consumption” (Lubar, 1998) are to be consumed by women in a passive fashion. Technological designers and promoters rarely consider that technologies can be used or resisted in unforeseen ways.

When the Internet first burst onto the public screen during the mid-1990s, popular culture and the media tended to reflect women as cyber-phobic, victims of harassment, or potential online pickup material. Early academic research on gender online examined the participation of women in computer science and computer networking, noting the paucity of women in the educational and industrial sectors and paying particular attention to access issues, social interactions, and pornography (Balka, 1993; Herring, 1993; Shade, 1994). Thus, questions of access and equity were seen as a major issue, with the goal to ensure gender parity.

Other academic studies have since examined the interpersonal dynamics of online gender/computer-mediated language use such as conversational analysis in Internet relay chat (IRC) and listservs (Herring, 1999) and gender negotiation in a multi-user domain (Kendall, 2002). Identity and issues of “gender bending” in virtual environments have also been a recurrent theme (Roberts & Parks, 2001). The intersection between feminist theory and cyberculture has also created a significant corpus of work (Flanagan & Booth, 2002; Kirkup, Janes, Woodward, & Hovenden, 2000).

What Do the Pew Data Tell Us?

More than 9 million women have gone online for the first time during the past 6 months, and this surge has led to gender parity in the Internet population. It has also reshaped America’s social landscape because women have used e-mail to enrich their important relationships and enlarge their networks. The Internet has the opposite of an isolating effect on these users. Women report that e-mail has helped them to improve connections to their relatives and friends. More women than men say that they are attached to e-mail and pleased with how it helps them (Tracking Online Life, 2000, p. 7).

Access

Examining several Pew reports that touch on the demographics of gender and the gendered use of the Internet, we might conclude that gender parity has been reached. Data reinforce the view that the Internet has become domesticated; it is now woven into the daily lives of Americans. For many women, information and communication technologies (ICTs) have become a
routine part of the mundane (Green & Keeble, 2001).

*Tracking Online Life* (2000) revealed that gender parity had been reached; women make up half of Internet users, with older women getting online at a slightly higher rate than other users (*Wired Seniors*, 2001). Women are characterized as “Instant Acolytes” because they are the fastest growing group of people getting online; three of five women (58%) were Instant Acolytes in 2000, compared with 50% of the entire Internet population (*New Internet Users*, n.d. 2000). Instant Acolytes were further characterized as “more female, less wealthy, and less educated than the overall Internet population” in March 2000 (p. 6). In particular, the percentage of women ages 18 to 24 years who became Instant Acolytes grew from 44% in 1998 to 59% in 2000. Women between 30 and 45 years of age were 61% of Internet Acolytes in 2000, compared with 57% in 1998. Furthermore, more women today are “Net Joiners” (i.e., people who join various online groups after being on the Internet for a while), particularly those who are younger, are non-white, have a lower household income and less education, and are relatively new to the Internet (*Online Communities*, 2001).

Gender differences in access are revealed, however, when ethnicity is taken into account. Among African Americans, women are more likely to be online than are men (56% vs. 44%), with women comprising 61% of Internet newcomers (*African-Americans Online*, 2000). African Americans online tend to have lower incomes and lower educational levels than their white counterparts, and 56% of African American users are under 34 years of age, compared with 40% of white users.

Among Asian Americans, more men are online than are women (58% vs. 42%), with Asian Americans who speak English the largest and most experienced group of people online (*Asian-Americans on the Internet*, 2001). Asian Americans are the most experienced racial and ethnic group on the Internet, with more veteran users (55% of them came online more than 3 years ago). Of those, 40% of Asian American women are veterans, with nearly three quarters of them having 2 or more years of experience; this is contrasted with white women (29%), African American women (23%), and Hispanic women (25%). New Asian American user women (i.e., those who have been on the Internet less than 6 months) comprise less than 10%; this is contrasted with white women (15%), African American women (23%), and Hispanic women (20%).

**Applications and Patterns of Use**

Despite the gender parity in gender access, Pew reports revealed differences in the various Web activities of men and women. The most popular use of the Internet for women was e-mail, which was used to keep up with distant family and friends and served as an “isolation antidote.” Popular Web activities for women included looking for health or medical information, checking out job information, playing games online, and hunting for religious or spiritual information. Men, on the other hand, listed as their favorite Web activities looking for news and financial information online, selling and buying stocks online, looking for information about products or services, participating in online
auctions, looking for information about hobbies or interests, seeking political information, and checking sports and information.

Both men and women use the Internet as a tool for sociability. Men are drawn to online groups whose subject matter is politics, sports, or professional activities, whereas women are drawn to online groups whose subject matter is health information (e.g., medical support groups), local community associations that are online, or entertainment sites (Online Communities, 2001).

More women than men use e-mail on a daily basis (19% vs. 5%) (Getting Serious Online, 2002). More than half of women (57%) find e-mail to be a useful way in which to keep in touch with family, compared with 44% of men (Tracking Online Life, 2000). More than half of African American women (56%) say that using e-mail has helped them to strengthen intrafamily connections and 37% say that e-mail has strengthened family connections, compared with 43% and 20% of African American men, respectively (African-Americans Online, 2000). Nearly two of three women (65%) say that they use e-mail to keep in touch with family and friends because it is efficient, compared with 59% of men. More than half of women (53%) use e-mail to reach out to geographically dispersed relatives, compared with 43% of men. And more women than men are apt to use e-mail to communicate a variety of messages (Tracking Online Life, 2000). Women are more likely to go online from home rather than from work (New Internet Users, 2000), and they spend more time online than do men (33% vs. 25%) (Time Spent Online, 2001).

Pew reports revealed differences in how ethnic groups use the Internet for entertainment and leisure activities. For instance, Asian American women are big consumers and users of financial information, with nearly half of them (44%) at one time accessing this information, including 15% on a regular basis. Approximately 16% of Asian American women have sold stock, and 4% have done so on a typical day. This is twice the rate for Hispanic American women and four times the rate for white and African American women (Asian-Americans and the Internet, 2001).

Pew reports also revealed differences in how men and women seek news as well as government and civic information. Two thirds of men (66%) have received news online, compared with 53% of women (Tracking Online Life, 2000). This rate increases as socioeconomic factors are increased. More Asian American men (72%) have gone online for news than have other men, with 42% going online on a typical day, compared with only 24% of Asian American women (Online Communities, 2001).

However, more women than men seek out health-related information on the Internet, particularly information related to a specific illness, material related to symptoms, or after visiting a doctor (63% vs. 46%). Two thirds of women between 30 and 49 years of age have gone online for health-related information. Women are twice as likely as men to look for material related to the health needs of their children (16% vs. 7%), but both men and women seek out health information related to parents or other relatives. Women are more concerned than men about the reliability of the health information they find online. More women than men are “very concerned” that Web sites will give out personal
information about the women (73% vs. 65%). Men are slightly more privacy conscious in that they tend to read the privacy policies of Web sites more often than do women. Because of the anonymous nature of the Web, more men than women search for sensitive information online (The Online Healthcare Revolution, 2000).

**Content: Toward the Feminization of the Net?**

In many traditional ways, women’s and men’s behavior on the Web mirrors their behavior in consuming other forms of media, in performing everyday chores, and in enjoying leisure time. Just as women and men tend to watch different television shows, read different sections of the newspaper, and purchase different types of magazines and books, they also gravitate to the online activities that resemble the media products they like (Tracking Online Life, 2000).

What do the Pew data tell us? First, they reveal that gender parity, at least in terms of access to the Internet, has been achieved (although a digital divide in access for lower income women is cause for concern). This is reason for optimism. However, more disconcerting is what the Pew data tell us about how women and men differ in their use of the Internet. There are tensions in gender differences, whereby women are using the Internet to reinforce their private lives and men are using the Internet more for engaging in the public sphere. Women are avid users of e-mail, often for the purpose of connecting with family and friends. This use is similar to how women adapted the telephone as a social and domestic utility, and this also replicates what other studies have told us (see Boneva, Kraut, & Frohlich, 2001). When men use e-mail, they are less inveterate users, at least so far as informal and familial sociability is concerned.

Women’s information-seeking behavior tends toward health or medical information; again casting women's Internet use into a caregiving mode. Women tend to go online for religious or spiritual information (again possibly falling into the “warmer and fuzzier” role of mothers/caregivers). In contrast, the favorite Web activities of men include seeking news and financial information, selling and buying stocks, looking for information on their hobbies, seeking political information, and checking out sports information. Thus, men’s Internet use falls into activities that tend to reside in the public sphere.

Although these data are based on telephone surveys and subtleties in Internet use (e.g., multitasking while using the Web in the home might not be revealed), the premise of gendered use is disturbing. Women are not using the Internet for the purpose of civic participation. The Internet has been promoted as a way in which to increase social capital (for optimistic and pessimistic scenarios of Internet use for increased political participation and community involvement, see Rice, 2002), but women apparently are not using it for this purpose.
However, this void could be merely a limitation of the Pew studies. Acknowledging that gender is a complex and contested concept, one must ask whether the quantitatively driven Pew data provide an accurate portrayal of gender online. Van Zoonen (2002) argued for a mutual shaping of gender and technology where “social meanings of the Internet will emerge from particular contexts and practices of usage” (p. 20). Because Pew data are reliant on telephone surveys, there is no way in which to ascertain the gendered nuances of the Internet in everyday domestic life. Thus, ethnographic studies examining the use and negotiation of the Internet in domestic spaces could yield some rich and surprising aspects of gender use and negotiation (Bakardjieva & Smith, 2001).

One must also be cautious of generalizing and essentializing the category of “women.” Many women and women’s groups have been actively using the Internet as a way in which to produce and consume feminist communication. Use of the Internet by the global women’s movement as a method of facilitating policy-oriented activism is quite vital (Shade, 2002), and this is particularly the case with initiatives to ameliorate the digital divide for women in developing countries. One such example is provided by the International Research and Training Institute for the Advancement of Women (INSTRAW), which has hosted a virtual seminar exploring the use of ICTs for women in terms of empowerment and disempowerment, the “neutrality” of ICTs, the digital divide, and social capabilities.

What is clear is how the Internet has been increasingly feminized. Web content has been designed and created for a particular audience of women—middle to upper class white women. This includes portals adapting a magazine-type format featuring health, beauty, cooking, parenting, and shopping tips; “interactive” discussion forums; quizzes; and e-commerce ventures (e.g., clothes, makeup, toys). An example of this is i.Village.com, whose partners include America Online, Clairol, Milano Cookies, Dewey Color System, and Maternity Mall. Other examples abound; Handbag.com, Oxygen.com, and Women.com are just a few of these types of portal sites. The Internet is also becoming feminized via the design of multimedia products where ideas about the female gender are incorporated into the process (Spilker & Sorenson, 2000) as well as through the design of Internet appliances that feature e-mail and calendaring devices that have been developed and marketed as a specific female consumer item.

Pew data also reveal that American women are ethnically diverse and that their Web use differs. One example is Asian American women. Pew data reveal that they are more likely than other women to go online to listen to music and to seek out sports information and financial information. But are the various interests of these women being met (or courted) by portals? Or, is there an erasure of race? One can argue that there is. As Nakamura (2002) contends, “Gender and race can just as easily be co-opted by the e-marketplace. Commercial sites such as these tend to view women and minorities primarily as potential markets for advertisers and merchants rather than as ‘coalitions’” (p. 328). “Cybertyping,” Nakamura also argued, is apparent in the deployment of
Internet services such as broadband, resulting in the redlining of neighborhoods not considered affluent enough for micro- and psychodemographic marketing.

**Conclusion: Real Equity?**

So, is there really gender equity online? If we consider issues of women using the Internet for civic participation (a rich research question to tackle), factor in the demographics of the digital divide, examine the entry of women into computer science programs, and look at how women are designing information technologies and participating in governance issues, the answer is less optimistic than a resounding yes.

**Digital Divide Issues**

The Internet population looks increasingly like the overall population in the United States, but there are notable exceptions; income and age determine who is online. Fully 82% of those in households with incomes of at least $75,000 are online, compared with only 38% of households with incomes less than $30,000. Those in the lower economic range, however, are getting online quickly (More Online, Doing More, 2001).

Pew studies reported that half of adults (age 18 years or over) in the United States are not online (49% of men and 54% of women). This corresponds to lower socioeconomic and educational levels, and age plays a factor as well:

Part of the reason more women do not have Internet access is that women make up a large proportion of the elderly in the United States and that is also the group most likely to be outside the Internet population. Thus, 55% of those not online for any reason are women, and 45% are men. (Who’s Not Online, 2000).

Race and ethnicity are also factors both in terms of access to the Internet itself and in terms of Internet use itself.

**Education and Employment**

Women are underrepresented in the networking field (concerned with the design, development, and production of hardware and software), and fewer young women are entering into computer science programs. De Palma (2001), citing research from the American Association of University Women (AAUW), reported that a mere 17% of female high school students take advanced placement examinations in computer science and that they receive only 28% of the undergraduate degrees. Ascertaining why these numbers are so low and designing a more inclusive computer science curriculum was the goal of Jane Margolis and Allan Fisher at Carnegie Mellon University. They reported on a program to “unlock the clubhouse” through the creation of specific policy changes that resulted in an increase of women computer science majors from 7% in 1995
to 42% in 1999. These initiatives included more flexible admission requirements and curriculum changes (Margolis & Fisher, 2001). Kramarae (2001), in another report for the AAUW, examined barriers to women partaking in distance education and other online programs and found that a veritable “third shift” existed for working mothers who were pursuing higher education in this fashion. Juggling the demands of family and other domestic responsibilities, coupled with work outside of the home and heavy course loads, proved to be onerous for many women. Thus, the touted benefit of flexible, just-in-time lifelong learning facilitated by networking technologies has proved to be a bust for many women.

Even though young women and girls are using computers and the Internet on a par with young men and boys, females are not majoring in computer science or engineering at the same rate as are males and so are not represented on an equal basis in the workplace. One such consequence is that consumer products tend to be designed with the needs and desires of men in mind. This is not to say that the needs of women are dismissed; quite often, the unintended consequences of women’s use and appropriation of a technology changes its consumer trajectory. One merely needs to remember the early development of the telephone and when it switched from being a male business prerogative to one that encompassed female sociability. Indeed, this is the case with broadband Internet development. A recent press release from AT&T Broadband reported on “anthropological research” that revealed a pattern dubbed by AT&T as “Web snacking,” an activity whereby household members leave their broadband access on all of the time but frequently and sporadically log on to cruise the Web or send and receive e-mail. Mothers are the main “snackers,” and according to Cheryl Persinger, an AT&T Broadband applied mathematician and mother of three, access to “high-speed Internet connection has made many mothers more efficient and is revolutionizing the way they connect with the world.” Mothers “nibble” at Internet services throughout the day, multitasking at various chores and most frequently “checking news, reference sources, banking, e-mailing, and communicating with other parents in an online community” (reported in AT&T News Release, April 28, 2002).

Governance

Who is responsible for the administration and policy coordination of the Internet? The Internet Corporation for Assigned Names and Numbers (ICANN), which acts as the Internet’s central coordinating committee, has been embroiled in debates about representation of countries (currently the United States dominates) and organizations (commercial vs. nonprofit). But gender plays a role here as well. Few women have registered as voting members of ICANN. According to Emerson Tiller, a professor of business law at the University of Texas at Austin, in North America, women represent 9.9% of ICANN registrants, whereas men represent 78.2% (11.8% did not report their gender).

Diffusion of the Internet into the daily lives of Americans has proceeded at a quicker pace than have other communications technologies. During the past decade, we have seen women go from a paltry 10% of Internet users to more than half of the users in the United States. Is this equity? Yes, there is reason for
optimism about these numbers, but it is even more optimistic to envision the next 10 years as an era of truer equity for women online—in content creation, education, civic engagement, policymaking, and governance.

Notes


2. Examples of these new domestic technologies include the now defunct Audrey, released with great fanfare by 3Com in 2000 but shelved a mere 5 months later, and the cordless MailStation.

3. The press release reporting Tiller’s finding can be found at www.bus.utexas.edu/news/pressreleases/disparity/asp.

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