Ethical Considerations in Gender-Oriented Entertainment Technology

by Melissa Chaika

No longer an issue confined to sociological and educational debates, the issue of a gender gap in math, science and computing is finally gaining attention from those in industry and academia. However, amid the chaos of politicized issues such as affirmative action, some equally important historical and ethical considerations are being lost.

It is an established fact that women are not entering technical fields in anywhere near the proportions of men. What is often assumed, however incorrectly, is that this has always been the status quo. People believe that women have never entered careers in science, engineering, or computers in large numbers. This inaccurate assumption is based on linking computer use with science and engineering fields of study. While most technical disciplines do require some knowledge of computers, computer knowledge does not necessarily demand an understanding of science or engineering.

The first step in understanding and narrowing the gender gap in the technical fields is to consider technology separately from science and math. Unlike math and science, which have traditionally attracted disproportionate numbers of men to their ranks, the computing industry has not always been this way. In its early stages, computing was considered an ideal occupation for women. It was clean, did not involve manual labor and could be conducted from the home [1]. In the 1950's and 60's women comprised almost half of all system analysts and programmers, while by the 1980's they comprised only one fifth [2]. In a survey of 17- and 13-year old students, Collis [3] found that although the majority of girls believe in the abstract that they can be as competent with computers as boys can, when the question concerns themselves as individuals, this confidence decreases. Though the girls believe that other girls are as good at computers as boys are, the girls do not believe that they personally fit into this category.

Edwards [4] argues that many women avoid computing due to the historically military focus of technology in this country and the male fascination with defense. Indeed, the more information technologies are linked with defense (as in computer war games) and with the engineering and science domains, the more girls tend to distance themselves. Girls are more likely to transfer their feelings about math and science to their assumptions about computer use [3]. The obvious solution seems to be an effort to disassociate the gender gap in technology from the gender gap in math and science. I am not trivializing the need to attract women to math and science. Efforts must continue, but the information

technology industry is growing so explosively that ways must be found immediately to show girls how to become technologically proficient. If for no other reason than an increase in earning potential, women must learn to use the technology around them [5].

The efforts to encourage women to enter math and science disciplines should be different from the attempts to attract women to computer use. Linked efforts to encourage females into math, science and computing also link the areas mentally. Society already teaches females to hold negative images of math and science; their opinions of computers, however, are still malleable. Here I make a distinction between computers and the computer sciences. The computing sciences, such as computer science, electrical engineering, and applied mathematics, are sciences and should continue to be treated as such. Computing proficiency, however, is a different skill altogether. It simply requires ability to use the machine, as opposed to programming knowledge or an understanding of how the machine actually works. In today's technology-reliant society, computing proficiency is essential to success in practically every professional pursuit. Women are already sparse in a variety of occupations; they do not need to be excluded any more. It is important that this distinction between computing sciences and general technological proficiency be understood.

In order to attract women to computer usage as I have defined it, women must first see how the activities they already enjoy can be augmented with the use of technology. For example, Collis found that though boys have more self-confidence with their math and science capabilities, girls have more confidence in their abilities to write stories, essays, and compositions [3]. Many females excel in the humanities and social sciences. Women can be introduced to the values of technology through historical and political outlets on the Internet, foreign language practice in electronic chat rooms and pen (email) pal services, and through other integrations of computer technologies into the humanities and social science curriculums. Logical as this sounds, the reality is that in many American public K-12 schools, computers -- particularly those with Internet access -- are largely confined to administrative purposes. When the computers do reach the classroom, they are generally used in computer literacy classes and rarely incorporated into the general curriculum [6]. Girls need to understand that anyone, regardless of individual strengths and weaknesses, can benefit from the use of technology.

Schools cannot be expected to bear the entire responsibility for the gender disparity in computer usage. Home environment is in part accountable for the differences. A 1985 study found that while 50 percent of the boys questioned had access to computers at home, only 22 percent of the girls had such access; and the girls who did have access in the home were less likely to utilize that opportunity [2]. Also, inequities exist in the qualitative as well as the quantitative use of technologies. Within the home, the males are more likely to make decisions regarding the computer, such as which one to buy, and are likely to feel responsible for bringing it into the home. The females in the home are less inclined to use the computer, and mothers are likely to feel estranged from the rest of the family on technological issues [7]. Perhaps the most timely difference involves the way each group conceptualizes computer utility.

Girls tend to see computers as a means of achieving a concrete goal. Girls are likely to conceptualize computers as a tool, be it for email or wordprocessing, but still a medium with which to accomplish a

task. Boys, meanwhile, are more likely to conceive of computers in broader terms, and to see them as playful, recreational toys [7].

Because boys see computers as toys with boundless opportunities, they are more likely to push existing boundaries to excel in the technology world. Likely responsible for this difference in conceptualization is the disproportional availability of entertainment software for children. Boys learn that computers are fun toys as they play one violent shoot 'em up game after another. The female market does not have an equivalent medium. Almost every game on the market is geared toward males, whether explicitly or implicitly. They feature male characters and almost always show men on the covers of the packages. The more violent and graphic the boy game is, the better it seems to sell. This appears to support the theory that the male fascination with technology is linked to their obsession with warfare. But where does this leave little girls?

Right now girls can play violent games, and some even like them. They can also play some of the less-threatening educational games (e.g., the Lion King CD) and adventure games (e.g., Myst). For the most part, though, very little has been designed just for them, and many of the games popular with the female market, such as Tetris, Where in the World is Carmen San Diego, and Oregon Trail, have been available for several years. While the male-oriented market constantly diversifies, the female market remains relatively stagnant. A study by Huff and Cooper [8] identified sex bias in computer game design. They found that programs designed by educators with programming experience for "seventh-grade boys" and for "seventh graders" were similar and game-like; meanwhile, games designed for "seventh grade girls" were classifiable as "learning tools."

Finally, though, a few game makers are beginning to realize the untapped potential of the female market and are slowly beginning to target it. Everyone stands to benefit: game makers make more money off of a new market and girls learn to conceptualize technology as a source of positive, fun entertainment. Unfortunately, a new ethical consideration emerges from industrial developments.

During summer 1995, I helped run a market research project for a company called Girl Games, an entertainment software company exclusively dedicated to tapping into the female market. If any business has a heart, it is this one. The members aim to introduce girls to the joys of computers and to extricate games from the male domain. As part of the study to find what girls of varying ages want from entertainment software, we had focus groups describe the ``ideal game.'' In one group, the consensus opinion was that someone should market a man-hunting game. It would be a soap opera-like adventure in which the main character, a woman, would select from an assortment of men to choose as her ``goal.'' If she wins the game, she wins the man.

The girls were quite enthusiastic about their idea. Of course, the idea was not exactly original to them. They had suggested it as a derivation of a popular nighttime television soap opera. They suggested what appealed to them given their previous exposure to other popular media forms. It is only logical that they would desire a computer game which simulates the themes of their favorite movies and television shows. And as far as they were concerned, if someone really wanted to sell them a game and really

wanted to expose them to computers, that person should create a soap opera-like game along the lines they suggested. In order to accomplish the long-term goal of associating computers with fun for girls, must we reinforce what many of us would consider to be negative, stereotypical gender attitudes? Doing so, while this is certainly no justification, is no different from how other entertainment industries already capitalize upon stereotypical gender roles.

While only one of the six focus groups suggested such a dramatic image of negative gender roles, most groups did recommend more subtly stereotyped suggestions, such as simulated shopping and cooking experiences. While these sorts of games would not teach girls to distrust other females as, for example, a man-hunting exercise could, the games would still reinforce existing gender roles. Then again, is this not what it takes to attract the female market? Ethically speaking, is it worthwhile to reinforce gender types if done under the guise of social concern? Would a game about shopping or make-up really make a proportional difference in reinforcing a girl's overall gender scheme? This Catch-22 traps even the most socially conscious. The reality is that many girls want exactly what society has taught them to desire: looking pretty, wearing fashionable clothes, attracting cute boys, applying make-up properly--and avoiding technology.

Although not personally advocating a soap-opera-like game, I could temporarily place one concern aside while the more immediate one is addressed. Just as I am willing to address female flight from science and engineering later in order to concentrate on the wide-felt antipathy toward information technology among women and girls, I am also grudgingly ready to place aside a distaste for gender stereotypes in order to address the more pressing concern of equality in technological proficiency.

Ideally, of course, all issues could be addressed at once. If we show girls early enough that technology is fun, more may choose to enter computer-intensive disciplines. In other words, the reassociating of technology with areas unrelated to science and engineering may decrease female flight from those disciplines most dependent on computer technology. Similarly, some games could reinforce positive feminine socializations such as travel and verbal reasoning. In fact, some games could (and do) emphasize positive attributes of both sexes, for example strength and intelligence as ``male'' qualities, and sensitivity and language as ``female'' traits. This theoretically brings both sexes closer to a goal of androgyny, whereby both acquire the positive attributes of each gender.

After all, not to be lost in this quandary is the fact that boys' games also reinforce negative gender stereotypes of violence and male power in exchange for high technological comfort levels. This give-and-take is really no different from the feminine version; it is just more established. In both cases the free-market economy creates an ethical impasse. We could create socially conscious games, but the appeals to gender stereotypes will always generate the greatest revenue. I hope some ethical median can be reached soon.

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