In J. Cassell & H. Jenkins (eds.). (1998). *From Barbie to Mortal Kombat: Gender and Computer Games*. (pp. 2-45). Cambridge, MA: MIT Press

Chess For Girls?: Feminism and Computer Games

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Chess for Girls: A Parable for our Times

A recent *Saturday Night Live* show (Dec. 6, 1997) featured a pseudo-commercial for 'Chess for Girls.' The skit opens with a brother and sister playing chess; the boy soon moves to checkmate his sibling. The girl replies, "Chess is no fun!", and sweeps the parts off the board in disgust. An announcer comes on and says, "Don't worry, now there's Chess for Girls!", and the commercial launches into a montage of images: a chessboard filled with doll-like pieces, girls brushing the hair of the queen, girls prancing around with the knights, which are beautiful ponies, the brother exclaiming, "Hey, you can't move like that!", the pieces driving around in a convertible and relaxing in their beach house.

The issues raised by this parody parallel, and serve to introduce, the issues discussed in this book. It is true that more boys play chess than girls. It is also true that chess teaches skills that are important for other arenas of life—skills such as logical thinking, strategic planning, and memory. It might therefore be argued that girls, because they are not enjoying chess, are also not enjoying the cognitive effects of chess. Should this worry parents and teachers? Should this push educators to "open up chess to girls?" If so, what would this opening up look like? Would we encourage girls to take pleasure in the (often minimally social, and not-always-cool) activity of chess by pointing out the benefits to be gained by chess playing? Or would we start companies designed to bring chess closer to pursuits that are more associated with girls—perhaps, as this parody did, by constructing chess pieces that resemble dolls? Or, finally, would we look into the contexts in which girls might appropriate chess, leaving the rules the same but setting up clubs that had the purpose of beating boys at their own game? Might chess-set companies realize that only 50% of the youth population was spending its dollars on chess sets, chess books, and electronic chess teachers and implement advertising campaigns aimed at cultivating girl players? Which of the above three strategies would educators and parents choose, and which strategy would the game industry choose? As cultural theorists, psychologists, and theorists of education, which strateg(ies) would we stand behind, and which strategies would we criticize?

Why does a 'Chess for Girls' movement seem absurd, while a movement to bring computer games to girls has evoked such strong allegiances? The difference may stem from the fact that while chess has been around long enough for our parents to be familiar with it, the computer has not. The personal computer, and digital media in general, have

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come into our lives very recently. Consequently, our children are more likely than us to see the computer as an essential part of their lives, and we are less likely than our children to be entirely comfortable with the technology. This situation leads naturally to parental discomfort: what is this technology, and what is it doing to/for my children? and how do I get my children comfortable with this technology (when I am not) so that they can reap the benefits that I see touted everywhere? In addition, whereas it would be difficult to argue that chess—as it is played today—reproduces and reflects inherently sexist images of women (except through exclusion), there are abundant reasons to judge the video games of today as reaffirming sexist ideologies and circulating misogynistic images. For this reason too, parents may worry about the ubiquity of such technology, knowing that the game console may represent the technological equivalent of a 'head-start' program, preparing children for participation in the digital realm, and yet at the same time potentially socializing boys into misogyny and excluding girls from all but the most objectified of positions.

In this volume we have united essays representing diverse points of view on each of the questions posed above: chapters by cultural theorists (Jenkins; Kinder), educational theorists (de Castell & Bryson), developmental psychologists (Subrahmanyam & Greenfield; Kafai), academic technologists (Brunner, Bennett & Honey; Cassell), computer game industry representatives (Duncan & Gesue; Kelley; Laurel; Martin; McEnany), and female game players (the Game Grrlz). We hope this anthology will encourage all of us to examine our core assumptions about gender and games, and propose different tactical approaches for bridging the digital gender gap. This introduction outlines some of the basic factors motivating a critical analysis of existent video games, and the desire to design new ones, and explores some of the political contradictions that surround the initiative to create girls games.

The "girls games" movement has emerged from an unusual and highly unstable alliance between feminist activists (who want to change the "gendering" of digital technology) and industry leaders (who want to create a girl's market for their games). Some question whether it is possible to fully reconcile the political goal with the economic one. Some argue that the core assumptions of the girls game movement involve a "commodification of gender" which will necessarily work against any attempts to transform or rethink gender assumptions within American culture. However, these issues represent less a divide between academic and entrepreneurial feminism than mixed feelings and competing impulses that everyone involved with this movement must confront. In many ways, these debates within feminism mark feminism's successes in reshaping public opinion and gaining a foothold in the competitive marketplace (as well as setbacks and areas of concern which feminists hope to address by redesigning technologies and by reconstructing the culture of childhood). This introduction will map the range of different feminist responses to the girls game question, offering a picture of competing and fluid ideological visions which suggests the inadequacies of media stereotypes of American feminists as doctrinaire and "politically correct." As women gain control over the means of cultural and technological production, they are having to struggle with how to translate their ideals into material practices. This book documents one moment in that process of translating feminist theory into practice.

What Do We Mean by Gender

In this chapter we introduce the concepts that will arise again and again in the essays that follow. Our approach in this introductory essay is openly feminist in two senses. First, we concentrate on the representation of women in computer games—both their cultural representation (how they are portrayed as characters and the options women are offered as players) and the proportional representation of women in computer game companies (as entrepreneurs or programmers, producers or CEOs). In this context we examine the new wave of women-owned computer games companies as examples of 'entrepeneurial feminism.' The second sense in which we are feminist researchers comes from our belief that equity between boys and girls, men and women, is a laudable goal. 'Equity' here refers to equity of access to education and employment, equity of access to the tools necessary for education and employment, and equity in opportunity to be successful in the path that one has chosen, whatever that path might be. In this context we examine the different ways in which we might strive for equity: equity through separate but equal computer games, equity through equal access to the same computer games, equity through games that encourage new visions of equity itself.

We are conscious that the word 'gender' is often used in feminist research where the word 'woman' or 'girl' might have substituted. And, in line with this observation, all but one of the essays in this volume (Jenkins) primarily addresses the experience of girls. We defend our choice of title in two ways: in terms of a rejection of biological determinism, and in terms of an acceptance of the the study of women and girls as fundamental to the study of culture. The use of the word "gender" among feminists in the 1970s was meant to underline the fundamentally social or cultural quality of distinctions based on sex. The word denoted a rejection of the biological determinism underlying the earlier term "sexual difference." In this book we are fundamentally concerned with one relationship between sex and culture—between girls and the form of popular culture known as computer games. Too often, the study of computer games has meant the study of *boys* playing computer games. In fact, too often the very design of computer games for children has meant designing computer games for boys (Huff and Cooper, 1987, described further below). Here, on the contrary, the study of computer games entails the study of girls. This study will lead us further in the understanding of what computer games can be, and what girls are (and are not). It also leads us to examine the hidden gendered assumptions that have existed in the design of computer games, which in turn leads us to understand better what boys are and are not.

One of the primary issues dealt with by the chapters in this volume, then, is the difference between boys and girls, who they are and what they want in their computer games. What leads us to ask this question in the first place? Would it occur to us to question the difference between light-haired and dark-haired children, who they are, and what *they* want in their computer games? Or, as one (male) computer game company executive told HerInteractive's Sheri Granier, "I have more left handed players than I have female players and I don't make games for left-handed people. Why should I make games for you?" (Weil, 1997). In fact, gender as an analytic category has only emerged in the late

twentieth-century (and even more recently for some industriy executives). Though earlier theories may have depended on what they described as a primary opposition between men and women, or may have treated the "woman question," they did not employ gender as a way of talking about systems of sexual or social relations (Scott, 1986). Today, however, the binary opposition between the sexes carries much weight, and leads us to speculate about 'masculine' and 'feminine' qualities, likes and dislikes, and activities. We are used to seeing 'masculine' and 'feminine' as natural dichotomies—a classification system that mirrors the natural world. This classification is so omnipresent, and so binary, that people have no problem characterizing pairs of inanimate objects with genders (e.g., given the pair 'knife/fork,' subjects characterized 'knife' as masculine and 'fork' as feminine). This so-called metaphorical gender is highly relational, however. When people were asked to characterize the pair 'fork/spoon,' then the word 'fork' became masculine (Rosenthal, cited in Cameron, 1992).

And, indeed, much empirical research—as well as market research—finds that boys and girls like different things, act in different ways, have differential success at various tasks. However, we need to be careful that the lens not obscure the view. Hurtig and Pichevin (1985) showed that when asked to categorize the people in a photograph of "successful executives," viewers named the photo as being of "men and women." When different viewers were asked to categorize the people in the same photograph, this time called a photograph of "a group of friends," the categories of male and female did not come into play. Hurtig and Pichevin conclude that sex is only a variable when gender is at issue—that is, only when socially constructed categories are evoked having to do with what we expect of men and women. The binary opposition between masculine and feminine is a purely cultural construct—and a construct that is conceived of differently in different cultures, historical periods, and contexts. Thus, in some cultures fishing is women's work, and in others it is exclusively the province of men. In medieval times, women were considered to be sexually insatiable; the Victorians considered them naturally frigid (Scott, 1986). The Malagasy of Madagascar attribute indirect, ornate, and respectful speech that avoids confrontation to men; women are held to be overly direct and incapable of repressing their excitability and anger (Keenan, 1974, cited in Gal, 1991). In the U.S., however, men's speech is described as "aggressive," "forceful," "blunt," and "authoritarian," while women's speech is characterized as "gentle," "trivial," "correct," and "polite." (Kramarae, 1980, cited in Gal, ibid). In fact, recently it has been shown that even the terms 'man' and 'woman' do not describe as clear-cut a dichotomy between biological sexes as was once thought (Fausto-Sterling, 1993 and Kessler, 1994 on biological sex as an infinitely divisible continuum).

What Do We Mean by Computer Games[1]

What exactly do we mean by computer game, and what were computer games like before the girls game movement? In this section, we examine the nature of the portrayal of women in traditional computer games, and the nature of the action or plot in these games. We take as examples some of the top-selling console (or video games) and computer games from the late 1980s until today. First, however, a question of terminology. There are two kinds of home electronic games: console & PC. Console games are played on a television set with a converter box: Nintendo NSES is a console system, as is the Sega Saturn and the Sony Playstation. PC games, on the other hand, are loaded into personal computers and started up much like any other software. Both genres arose from electronic arcade games, but they became top-selling household products in the late 1980s. Despite the advent of the home PC, console systems remain big sellers, as does software for these systems. Currently, around 35 million homes in the United States own one of the console systems—that means that 30% to 40% of American homes own a video game play console (and another 10% to 20% rent these consoles, or share with neighbors). And the total amount spent on console and PC games in 1997 was $5.8 billion—so it's big business.

Let's turn now to look at what computer games have been like—until now. Video games provide a prime example of the social construction of gender. Women rarely appear in them, except as damsels requiring rescue or rewards for successful completion of the mission. Most feminist analysis of gender and video games to date has been concerned with the proliferation of violent, aggressive, gory, and often overtly misogynistic images within the video game marketplace. The game "Nighttrap" (with its slasher movie premise, featuring the bloody murder of scantily clad young coeds), for example, became the focus of a nation-wide protest by feminist activists.

In a study of 100 arcade games (cited in Provenzo, 1991), 92% contained no female roles whatsoever. Of the remaining 8%, the majority (6%) had females playing the "damsel in distress," and 2% had females playing active roles. However, of these active roles, most were not human (such as "Ms. Pacman" and "Mama Kangeroo"). A study of the cover art of videogames turned up similar findings: in looking at 47 videogames currently on the market, Provenzo (Provenzo, 1991) discovered that representations of men outnumbered representations of women by a ratio of 13 to 1 (115 male, 9 female) and that twenty men were depicted in "dominant poses," while no women adopted similar postures. There are some inherent problems in Provenzo's methodology, starting with the fact that video game ads and covers are more likely to exagerate the gender address of the product in order to reach their dominant market. There is some evidence that video game companies are making progress towards including more powerful and competent women in their action games. However, a more recent study by Christine Ward Gailey found that characters continued to be constructed according to a fairly traditional set of gender stereotypes, including the portrayal of good but passive princesses as objects which

[1] A short note about terminology. In this essay we will use the terms "computer game" and "video game" more or less interchangeably. In truth, "computer game" refers strictly to games that are played on a home computer, while "video game" refers to games that are played in arcades or on game systems (such as Sega or Nintendo).

motivate the action, and bad, eroticized women as competitors who must be beaten back by the protagonist: "The urban violence games imply that women in the streets are dangerous, lower-class and, like the males in the games, sexually mature.... The implied message is that, if women are going to be in public (in the streets), they have to be like tough men and expect the hard knocks (literally) that men deliver." (Gailey, 1996). In 1998, *Next Generation* magazine concluded that despite dramatic increases in the number of female game characters, "they all seem to be constructed around very simple aesthetic stereotypes. In the East, it's all giggling schoolgirls and sailor uniforms, but in the West the recipe appears to be bee-sting lips, a micro-thin waist, and voluminous, pneumatic breasts." The article cited a number of female game company executives, on and off record, as protesting the continuation of "degrading and offensive images of female characters [that] are still being promoted in games."

As far as plot is concerned, most computer games have depended on a plot that motivates violent action or the exploration of space (see Jenkins, this volume). The top-selling video and computer games—until very recently—have all fit into the following categories: action, adventure, driving or flying, fighting, airborne combat, sports, role playing, simulation. And within each category it is often the more violent of the games that has sold the most copies. When one of us (Cassell) advertised for an undergraduate research position on the topic of gender and computer games in 1995, one young man replied:

> It sounds really fascinating, as I am an avid video game player, having both a Super Nintendo and a Sega. What caught my eye about your ad is that it isn't quite right. Take my girlfriend and I for instance: I buy mostly combat/fighting games, which she doesn't really care for. But, I have a game called "Donkey Kong Country" that she just loves to play. So most of the time we sit there like "I want to play Mortal Kombat" and she answers "How about Donkey Kong?" I don't think that it's not so much video games that girls/women don't want to play, it's the kinds of games they want to play that make the difference.

The "Mortal Kombat" that this young man references is a classic example of a top-selling game in the fighting category—perhaps *the* example of what computer games have been. In "Mortal Kombat," the player uses his warrior skills and powers to kill each of eleven opponents, so as to remain the last warrior alive. The player can choose which warrior he wants to be, and each warrior has a distinct appearance and unique fighting style. None of the warriors that one can choose to play are female. As the player kills off his opponents, he is rewarded with more fighting powers. In some cases the warrior rescues helpless damsels, but no women play active roles. The pace is rapid, and the game is accompanied by graphic images of spurting blood and exploding bodies, as well as vivid sound effects of blows. Top-selling games of a similar style are the "Virtua Fighter" series from Sega (recently updated with a female street fighter; see McEnany, this volume) and the "Street Fighter" series from Nintendo, the action games "Quake", "Doom," "Duke Nuke'm," and "Maximum Carnage," and the role playing games such as "Ogre Battle" and "Lunar the Silver Star."

Of course, some games have always been attractive to girls as well as boys, although they were not explicitly targeted for the girl's market. The most successful examples of

androgynous games have been abstract pattern games, such as “Tetris” or “Baku Baku,” puzzle-based games, such as “Myst,” or exploration games, such as “Donkey Kong Country,” “Sonic the Hedgehog,” “Ecco the Dolphin” and “Nights into Dreams.” The premise of “Donkey Kong Country” is that somebody has taken the ape’s stash of bananas, and he is looking for them with the help of his friend Diddy, a smaller ape. The duo advance through every habitat imaginable, from jungles to abandoned mines to underwater landscapes, in search of the bananas. As the characters make their way through each obstacle course, they win extra lives and extra powers. The draw of “Donkey Kong Country” is beautiful 3D graphics and lush sound effects linked to everyday objects in the environment. In most of these cases, girls were an incidental part of the intended market—a lucky byproduct rather than a consciously pursued demographic.

The arrival of games from the small company Sierra On-Line changed things somewhat. The co-founder of Sierra On-Line was Roberta Williams, one of the first women in the computer games field. By 1989, with her fourth title in the “King’s Quest” series, she started incorporating female protagonists into her games—although she admits that she was worried that she would lose her male audience in doing so (LaPlante, 1994). Following her lead (and after it became apparent, through the stunning sales of “King’s Quest IV,” that men were not turned off by such a game), other companies began providing one female character for the user to choose. This character was not always a draw for girls, but it was a nod in the direction of the female audience. As one 12- year-old girl said after switching from the single female character in the game “Odyssey” to one of the male characters, “I don’t like the way she dies. The male characters scream when they’re slaughtered. The female character whimpers.”

Then, in 1994, a new company called Sanctuary Woods released the first game targeted specifically to girls, “Hawaii High: The Mystery of the Tiki.” Its designer was Trina Roberts, a writer for Barbie Comics and designer of Wonder Woman. The game was not successful, probably due to the low budget accorded such a ground-breaking project. It was followed, however, by four or five other games targeted towards girls, and it did introduce some of the features that would dominate the girls games movement discussed in this volume: more character-centered plots, issues of friendship and social relationships, and bright colorful graphics. Until “Barbie Fashion Designer,” none of the games targeted towards girls sold significant numbers of copies. In fact, until very recently, for both console and PC games, girls made up no more than 25% of the market.

Violent games without positive representations of women, on the other hand, continued to dominate the field. Parents and critics began to suggest that if video games are a primary means of socialization for young boys in our culture, then feminist mothers and fathers needed to be concerned about their content. Some argued that games reaffirmed or reinscribed dominant and patriarchal conceptions of gender roles through their frequent dependence upon rescue plot structures with male heroes and female victims, or more frighteningly, games foster a culture which sees violence, especially violence directed against women, as acceptable. And given the link between early use of technology and later facility with technology, parents and educators also needed to be concerned about the lack of computer games appealing to girls.

The Facts (and Ramifications) of Girls' Differential Use of Computer Games

Parents might argue (and many do) that there is nothing wrong with the fact that girls are not attracted to computer games. Perhaps, they simply don't like computer games. Maybe this will mean that they'll spend more time with other children, or playing outdoors. Isn't this a good thing? There is also a substantial difference in numbers of men and women who use power mowers, but no 'girl power mower' movement has arisen. The problem in the differential attraction to computer games stems from the fact that here, as is often the case, the cultural constructions of gender are not separate from those of power. It is not just that girls seem to like current instantiations of computer games less than boys do, but these differential preferences are associated with differential access to technological fields as the children grow older, and this differential access threatens to worsen as technological literacy becomes increasingly a general precondition for employment. Thus, approximately 75% to 85% of the sales and revenues generated by the $10 billion game industry are derived from male consumers. And men hold the more powerful jobs in technology-related fields, both in companies that design computer games, and all other kinds of digital technologies. This pattern continues despite the fact that the notion of a binary computing system was invented by a woman, Ada Lovelace, and ENIAC, the very first full-scale computer, was initially programmed by women, including Grace Hopper. In fact, strikingly small numbers of women hold high positions in the computer industry, or in academic computer science. Meanwhile, President Clinton has pledged to connect every school in the United States to the Internet by the turn of the century, ensuring at the very least that there will be more computers around for some children to experiment with.

The relationship between boys' comparatively higher interest in computer games and their comparatively larger representation in high power computer jobs is not accidental. Computer and video games provide an easy lead-in to computer literacy (Loftus and Loftus, 1983; Greenfield, 1984; Greenfield & Cocking, 1996; Kiesler et al., 1985), and so those children who aren't playing them at young ages may end up disadvantaged in later years. In addition, girls report stress when working with educational software that has violent themes (while in the same study, boys report stress when working with software that requires verbal agility and cooperation, and does not contain agressive content) (Cooper, Hall, and Huff, 1990). Girls may not simply avoid computers but actually experience stress when using them, even in educational situations. In terms of video games, it has been shown that the violent nature of many video games specifically alienates girls (Malone, 1981; Greenfield, 1996), reducing the number of female game players (although see Gailey, 1993; Sherman, 1997). Finally, psychologists have discovered that children learn important cognitive skills by playing video games, skills such as the ability to maintain attention and to orient things in space, and these skills differ between boys and girls playing video games, apparently because of their differential exposure to this medium (Subrahmanyam & Greenfield, 1994).

We might argue that video games are not attractive to girls, but that they can catch up by using computers in school. This is not the case, because computers in general are used

more by boys than by girls, and perceived to belong more to boys than to girls. Even kindergarten children assign a gender to video games, viewing them as more appropriate toys for boys (Wilder, Mackie, & Cooper, 1985). This perception can become a self-fulfilling prophecy: among fourth through sixth grade students, "heavy users" of computers are overwhelmingly boys—the ratio of boys to girls is 4 to 1 (Sakamoto, 1994). Among secondary-school aged children (eleven to eighteen years), boys are at least three times more likely than girls to use a computer at home, participate in computer-related clubs or activities at school, or attend a computer camp. In 1982, only 5% of high school girls, as opposed to 60% of boys, enrolled in computer classes or used the computer outside of class time (Lockheed, 1982). And despite the increasing prevalence of computers in schools and homes, these figures have not changed significantly since 1982 (Goldstein, 1994). While the majority of studies have examined the state of affairs in North America, the same situation is found internationally (Reinen & Tjeed, 1993; Makrakis, 1993). Thus, in school as well as at home and in after school programs, boys use computers much much more than girls do.

Things don't look much different when we ask adults how they feel about computers. Men are more interested in computers than women are (Giaquinta, Bauer & Levin, 1993; Morlock, et al., 1985), and men are more likely to work in computer-related fields. In 1990, approximately 70% of all employed computer specialists were men, a figure which had not changed throughout the 1980s, despite the fact that the computer fields were growing rapidly. In addition, the 30% of women in these fields appear to be concentrated in lower-paid, less prestigious jobs (Kramer & Lehman, 1990). Although the computer industry continues to grow and to diversify, the statistics are still dismally weighted towards men. According to the most recent (1996) CRA Taulbee Survey, only 16% of the Bachelors degrees in Computer Science were awarded to women. Women received 20% of the Masters degrees, 12% of the Ph.D.s, and were 16% of enrolled Ph.D. students. In addition, 19% of assistant teachers, 10% of associate professors, and 6% of full CS professors were female in the universities surveyed. An example comes from the department of new media technology at MIT where Justine Cassell works. Out of 24 faculty members, 4 are women, and none are tenured.

Is the disparity one of inherent ability, of interest, or something else? Are girls biologically less able to use digital technology, or is our culture steering them away from it? There is evidence that at the earliest ages, the problem is not one of inherent interest or ability but of access. Kiesler et al (1985) report:

> Even in preschool, males dominate the school computers. In one preschool, the boys literally took over the computer, creating a computer club and refusing to let the girls either join the computer club or have access to the computer. As a result, the girls spent very little time on the computer. When the teachers intervened and set up a time schedule for sharing computer access, the girls spent as much time on the computer as the boys.... Apparently, girls can enjoy the computer and do like to use it, but not if they have to fight with boys in order to get a turn. (p. 254)

This anecdote reflects the conclusions of a growing number of studies that in the school context, girls are not getting to try out computers, and boys are appropriating the computer as their own. Remember, however, that both boys and girls participate in

naming the computer a boy's toy. For whatever reason, by third grade differential access to computers has resulted in different attitudes towards the technology. Giacquintta, Bauer, and Levin (1993) found that boys conceptualize computers differently than girls. Boys 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 (Ogletree and Williams, 1990; Culley, 1993). In fact, when a group of educators with software design experience was asked to design software specifically for boys or for girls, they tended to design learning tools for the girls and games for the boys. When they were asked to design software for generic "students," they again designed games—the type of software that they had designed for boys. That is, "[male and female designers] may have been simply using "male" as the default value of "student." (Huff and Cooper, 1987). Kiesler, et al (1985) describe this phenomenon as creating an alien culture for girls, a culture that makes them less likely to get involved in the new technology. An informal study of children in an inner city computer afterschool program (Cassell) showed that the few girls who attended did so because they thought that learning about computers would help them "get ahead in the world," while boys attended because they enjoyed playing with the computers. Adult women are also more likely than men to report that they see the computer as a tool rather than as an interesting artifact in its own right (see Bennett et al, this volume).

But none of this research shows that girls are inherently less skilled at computer tasks than boys. In fact, continued exposure to computer games decreased pre-existing gender differences (Greenfield, 1996), and when educators really make an effort to ensure that girls have equal time to spend on the computer, girls show equal ability in programming (Linn, 1985). Woodrow (1993) found that boys' greater experience and more positive attitude towards computers did not result in higher performance in computer courses. And Kafai (this volume) shows that gender differences in computer game preferences may be context dependent: in a study of children's computer game design preferences, girls and boys designed very different educational software for teaching math but very similar educational software for teaching science.

In sum, although boys and girls can be equally skilled at using computers and computer games, boys are more likely than girls to choose to play with them, and children of both sexes consider both computers and computer games to be boys' toys. The fact that more boys play computer games means that more games are targeted towards boys. As a spokesperson for Nintendo said, "Boys are the market. Nintendo has always taken their core consumers very seriously. As girls get into that core group, we will look for ways to meet their needs" (Carroll, 1994). And the fact that more boys play computer games leads to more men in computer-related fields, fields that are growing in scope and importance every day. The problem becomes compounded as more and more fields (commerce, science, journalism, law, etc.) are becoming heavily dependent upon computers.

Why Are Things Changing Now: A New Market, A New Entrepeneurial Feminism

So parents and educators have reason to wish to change the nature of the technological playing field through the design of new kinds of computer games. The game industry has its own reasons for exploring this issue. The widespread success of video games with young boys has resulted in almost total market penetration. As described above, 80% of American boys play video games on a regular basis. And between 30% and 50% of families in American own or rent game systems and buy or rent games. This saturation has occurred at the same time that Sony Playstation, Sega, and Nintendo have entered a phase of heightened competition. A context like this requires some means of expanding the market, of reaching new consumer groups, particularly if all three "major players" hope to enjoy continued economic growth rather than stagnation, and this problem has turned their attention back towards the long dismissed "girl market" as an potential outlet for new products. Game industry representatives claim that one of the biggest obstacles in creating a girls market has to do with the gatekeeping functions played by chain toystores, such as Toys 'R' Us and Kaybee. Most of the chain stores demand almost immediate success or the game is taken off the shelf. The window of opportunity can be as narrow as a few weeks, a period hardly long enough to introduce a game and create a new market aimed at girls. Many industry leaders suggest that parents are eager to find games and software which will interest girls in taking their fair share of time on the family computer, even if they were reluctant to invest in the stand-alone platforms for their daughters. Thus it is possible that the increase in PC-based games provides a golden opportunity to open the girls' market. The challenge remains, then, to convince chain toystores and computer stores to stock and showcase the new girls titles, and then to draw these girls and their parents to the computer stores and game counters, which remain largely male ghettos. HerInteractive's Sheri Granier Ray (Weil, 1997) argues that girls are no more comfortable in computer stores than they would be in "a men's underwear department." Purple Moon has sought tie-in arrangements with girls' fashion companies, such as Adrian Martin, as a way of breaking their "Rockett's World" and "Secret Paths" products into more female-friendly sections of the stores.

As long as the boys market was sufficient to fuel the growth of the game industry, corporate executives felt little motivation to market to girls. And early games, such as "Hawaii High," did nothing to change their minds. The extraordinary success of Mattel's Barbie Interactive line, however, called attention to the potential market that could be reached by spanning the gender gap. "Barbie Fashion Designer" sold more than 500,000 copies its first two months, outstripping such industry megaliths as "Doom" and "Quake," and demonstrating that interactive media aimed specifically at girls might have strong market appeal. Part of Mattel's success had to do with the figure of Barbie itself. Barbie enjoys a 99% market share of American girls between three and ten. On average, the typical American girl owns 9 Barbies (Weil, 1997). However, there have been many previous and largely unsuccessful attempts to exploit the Barbie trademark via video games. Many argue that the product's success has as more to do with the kinds of activities it facilitates than the Barbie name per se. As Subrahmanyam & Greenfield (this volume) discuss, "Barbie Fashion Designer," unlike earlier digital representations of

Barbie, is less a computer game than an accessory for play with physical Barbies. As such, "Barbie Fashion Designer" is less subject to the attitudes of girls—and their parents—concerning the appropriateness of playing with the computer. On the contrary, as Nancie Martin, executive producer of the BFD, suggests, (this volume) both parents can feel good about purchasing the program for their daughter—mothers may make the association with the Barbie of their youth, while fathers may feel good about giving their dauthers a leg-up into the technological domain.

The new focus on creating the "girls' market" also reflects another significant and broader trend in the American economy, the emergence of what has been called "entrepreneurial feminism." Between 1975 and 1990, women started businesses at more than twice the rate of men. Women now own more than 7.7 million firms, and it has been estimated that by the year 2000 nearly half of all American businesses will be owned by women (Moore and Buttner, 1997). Advocates of entrepreneurial feminism (Barrentine, 1993) point to the private sector as offering a new site for the empowerment of women, one where economic successes may compensate for political setbacks in the struggle for equal participation and equal compensation. According to Goffee and Scase (1985), "Setting up a small business...can represent an explicit rejection of the exploitative nature of the capitalist work process and labor market. In this sense, then, business proprietorship may be seen as a radical—albeit short-term and individualistic—response to subordination.... Thus, women who both own and manage business enterprises—especially those in male-dominated sectors—serve to undermine conventional and stereotypical notions about 'woman's place'" (p. 37). Some female entrepreneurs have entered into traditional feminine spheres of activity (such as beauty products, catering and food services, or child care); others have embraced economic enterprises which further the political and social goals of the feminist community (ranging from women's health clinics to feminist presses and bookstores or female-oriented pornography and sex toy shops); still others have sought to open a female market for goods and services traditionally associated with men (including growing interests in cars, investments, computers and sports) (Edwards and Stocker, 1995). Economists argue that female entrepreneurship has often been most strongly felt in relation to the expanding information and service sector, which has been open to new management techniques (based more on collaboration than on competition, more on networking than on hierarchy) and new forms of customer relations (based on stronger "community ties" to potential consumer groups and a greater dependence upon humanistic modes of audience research).

Many of the companies which have been central to the girls game movement, such as HerInteractive, Girl Games, Girltech, and Purple Moon, closely parallel these trends—smaller start-up companies which are female-owned and largely female-staffed, which are motivated both by a desire to transform gender relations within American culture and to create a new and potentially profitable market. Their founders fit the profile of female entrepreneurs in other industries—women who had struggled to get their ideas accepted within the male-dominated fields, which they found largely closed to female-oriented products. Their focus on the girl market reflects an economic reality (the need to open new consumer demographics in order to gain a competitive foothold in a largely closed

market) as well as a political commitment to female empowerment, one consistent with their own nontraditional career choices. One sign of a management strategy oriented towards collaboration is the collaboration between the companies themselves. In the fall of 1997, 11 game and software publishers, including not only girl-specific companies such as HerInteractive, Purple Moon, and Girl Games, but also major industry players such as Broderbund and IBM, joined forces to create GIRL, the Girl Interactive Library, working in cooperation to increase visibility for their efforts to broaden the female game market (Just4girls, 1997). Their website, Just4girls, became a central source of information about girl-oriented software, a carefully crafted collaboration which allowed all of them to promote their products. The site was designed so that its opening screen would prominently display a different product every 30 seconds, while age-specific categories helped parents to locate appropriate software for their daughters.

In this context, we can't maintain any simple division or split between the feminist academic and the media industry insider. An increasing number of game designers and producers are women, many work for female-run enterprises, and many make their choices based as much on their political commitments as economic goals. Even the lines between academic and market research are blurring. Most of these smaller companies have grounded their design and development of girls games upon extensive sociological, psychological, and cognitive research into girl's cultural interests and their relationships with digital technologies. Many of the key players in the girls game movement have written dissertations or books exploring their ideas about gender and game design. The existence of such articulate and thoughtful feminist industry leaders enables the kind of dialogue which is represented by this book.

It is too easy for academic feminists to stand on the outside of this complex process doing ideological critiques rather than struggle with the pragmatic challenges of putting their politics into practice in the marketplace. Some academic feminists, including Marsha Kinder, Justine Cassell, Ellen Seiter, and Henry Jenkins, have actively consulted with the game companies as they have sought to rethink what a feminine (and feminist) approach to digital media might look like. While some other academics are critical of these activities as reflecting the "corporate takeover" of higher education, they defend their interventions and collaborations with industry by analogy to the role which political activists and academics play in shaping government policies affecting media and culture in Canada, Australia, and the United Kingdom. Such collaborations are necessarily "risky," since they are compromised from the start and are sure to produce "ideologically impure" results. However, just as cultural scholars elsewhere have been willing to work hand-in-hand with government officials, who often come from profoundly different political backgrounds, to shape cultural policy, media academics need to join forces with industry insiders in the American context, where cultural policies are shaped less by government intervention and more through private enterprise. Scholars need to be asking the same practical questions that the industry people are asking, if we hope to set a realistic agenda for social and political change.

Computer Games to Change Gender Relations, or to Satisfy the Girl's Market

For many industry people, the goal of creating a girl's market involves identifying the existing predilections of girls, often through extensive focus group research, and then catering to their tastes and needs. Purple Moon's Brenda Laurel told *Wired* (Beato, 1997), "I agreed that whatever solution the research suggested, I'd go along with. Even if it meant shipping products in pink boxes." A press release for Purple Moon (1997) describes its products as "guided by the complete and unique understanding of girls and girls' play motivations" which emerged from "thousands of hours" of research. Feminism, on the other hand, has been historically committed to transforming rather than simply responding to existing gender roles. As MIT's Sherry Turkle explained during a *Nightline* (1997) discussion of the girls' games movement, "If you market to girls and boys according to just the old stereotypes and don't try to create a computer culture that's really more inclusive for everyone, you're going to just reinforce the old stereotypes....We have an opportunity here to use this technology, which is so powerful, to make of ourselves something different and better."

As Susan Willis (1991) notes, feminists in the 1960s saw children's toys, books, and media as playing a major role in socializing children to accept gender-specific and highly restrictive social roles. Therefore, hoping to create a "nonsexist" environment in which their children could grow and learn, as Willis writes, "Dress codes were condemned, coed sports flourished, fairy tales were rewritten, and toys were liberated." *Ms.* magazine instituted a special column aimed at feminist mothers which provided gender-neutral or pro-female fairy tales, often drawing on earlier folk traditions or reworking traditional stories to create more empowered images of girls. (For a review of this process, see Zipes, 1989.) Marlo Thomas's *Free to Be...You and Me* (1974) as a book, record, and television special, encouraged boys to explore their feelings and to play with dolls, and sought to encourage more competitive attitudes in girls. *Free to Be* broke down the fixed ascription of gender roles, promoting a unisex ideal where everyone was free to choose identities and activities they found most comfortable. Despite this rhetoric of individual choice, the focus was clearly on transforming the play environment to foster a transformation of traditional stereotypes and to encourage a fusion of masculine and feminine identities. Echoes of this politics of transformative play can be seen in the recent efforts of the Barbie Liberation Organization (Spigel, 1994) to switch the voice boxes on talking G.I. Joe and Barbie dolls so that consumers would be more aware of the ways they encouraged stereotypical gender traits, such as a distaste for math and a pleasure in shopping (Barbie), or competitiveness, aggression, and militarism (G.I. Joe). Despite this push towards a unisex vision of play, Willis (1991) finds "a much greater division of toys defined by very particular gender traits [in the contemporary toy market place] than has ever existed before." The feminist goal of encouraging boys to play with dolls so they will become more nurturing caregivers was coopted by toy companies which marketed "action figures" for boys which reflected traditional masculine public sphere identities, such as professional wrestlers or crime fighters.

Willis (1991) concludes that "It matters little that many nursery schools now mix the dolls and trucks on their play-area shelves if everyone—children in particular—perceives

toys as originating in a boy-versus-girl context." The color-coding of products, the narrow casting of children's programs, and the targeting of advertisements for specific genders results in a culture which gives children very clear signals about gender appropriate fantasies and desires (Fleming, 1996). Not surprisingly, the market research which supports the growth of the girls' game movement has located fairly stereotypical conceptions of feminine taste. It is no accident, for example, that girls *do* want their products shipped in pink or purple boxes rather than in royal blue (associated with boys) or black (favored by academic feminists); such desires are manufactured by the toy industry itself long before the researchers get a chance to talk with the girls and find out "what girls really want from technology" (Groppe as cited in Weil, 1997). It's difficult to carry out empirical research that doesn't result in children giving as answers what they think they're supposed to say (see de Castell and Bryson, this volume). Appeals to such empirical research as a justification for design and development decisions runs the risk of reinforcing (and naturalizing) this gender-polarized play culture rather than offering girls an escape from its limitations on their choices.

Girl game companies defend their choices by arguing that one must get a foot in the door first, start with existing consumer tastes and try to broaden them, not shoot towards an ideal which might meet resistance in the marketplace. Girl Games' Heather Kelly argues that the risks surrounding the production and development of girls software at this point are too high to base decisions on anything other than market research. Rather than shape change, industry insiders hope to respond to girls' shifting tastes as they have greater exposure to digital technologies: "If new representations of gender, including new software designs, emerge, we're going to be responding.... We'll always be listening to them and, as they change, because they're more techno-literate, we will change along with them.... In some ways, we are pushing the cultural envelope for these girls but in other ways, we're responding to where our culture is right now. We're not trying to change the world from a small company of seven women."(Kelley, this volume) Throughout the interviews in this book, game developers cite instances where their own political commitments—such as the desire to provide more frank information about birth control or queer sexuality—ran up against imperatives of the marketplace or the threat of boycotts by schools and parent groups. These developers argue for some pragmatic compromises in order to foster girl's interests and access to the technology. As many of these entrepeneurs argue, it's exactly the girls who are attracted to pink and lavendar, hairspray and nailpolish, who need to be turned on to technology. Of course, there are exceptions, girls who are already playing the games made and marketed to boys (i.e., the women who constitute 14% to 25% of the existing market). The challenge is to reach girls who would previously have displayed little or no interest in technology. Girls' game developers hope to reach a female consumer that Purple Moon (Press Kit, 1997) describes as "a contradiction in terms: adventurous, smart, competitive and shy, self-conscious and unsure...a mystery to most adults." These particular consumers, according to game designer Heidi Dangelmaier, are searching for "experiences where they can make emotional and social discoveries they can apply to their own lives," and often respond to male-centered games as a "waste of time" (Weil, 1997; Dangelmaier, u.d). Building on these properties, Purple Moon markets its products not as games but as "friendship adventures for girls." Such designers and developers hope to accent features of digital

technology which have been ignored in the push for the male market and to develop software which reflects a fundamentally different conception of what a computer can do. However, the impulse to specifically attract the girl consumers results in everything from the creation of pink and lavender control pads to the development of prettier graphics and lusher soundtracks which reflect a perceived feminine aesthetic sensibility. *Salon* magazine documented a story conference for HerInteractive's "Nancy Drew" game which started with ideas that radically broke with traditional girls' culture themes and motifs (Nancy Drew as a hacker, Nancy using plastique) before settling back on the discovery of a purse (complete with lipstick and compact) as a major plot device. One of the designers protested, "We're going to get hit with, it's so stereotypical. It's such a girl game. But what are you going to do, you know? Girls like lipstick" (Weil, 1997).

Moreover, we need to be careful about dismissing traditional girls' interests too easily. Much feminist scholarship in recent years has centered around reclaiming and revaluing women's traditional cultural interests and competencies, recognizing, for example, the political power of gossip or the community building functions of quilting. As Ellen Seiter (1993) has suggested, broad-based attacks on sweet and frilly girls shows, such as *My Little Pony* and *Strawberry Shortcake*, as "insipid" often resemble earlier dismissals of adult women's genres such as melodrama, romance, or soap opera. These criticisms are grounded in a distaste for women's aesthetic preferences towards character relations and emotional issues, and they are rooted in the assumption that nonprofessional women (whether they are the housewives who read Harlequin romances or their daughters who buy Care Bears) are mindless and uncritical consumers of patriarchal culture. But, as Radway (1984) shows, if one examines not just the content but also the social event of reading, one finds that for many romance readers reading itself is a combative act, carried out during stolen moments of privacy, and contesting the usual self-abnegation of their lives. Seiter (1993) calls on us to value girls' cultural tastes and interests, even as we push towards more empowering fantasies, since there are so many other forces in society that belittle and demean girls. As Seiter notes:

> Something was gained and lost when marketers and video producers began exploiting little girls as a separate market. Little girls found themselves in a ghettoized culture that no self-respecting boy would take an interest in, but for once, girls were not required to cross over, to take on an ambiguous identification with a group of male characters.... The choice is not made out of identification with an insipid and powerless femininity but out of identification with the limited sources of power and fantasy that are available in the commercial culture of femininity.

Game producers defend their efforts on precisely these grounds, insisting that they want to respect and value aspects of traditional femininity even as they seek to open up new spaces for girls. Girl Games' Laura Groppe argues, "I want girls to know that it's OK to be a girl!" (Russo, 1997). Often, they cite books like *Reviving Ophelia: Saving the Selves of Adolescent Girls* (Pipher, 1994) or *Schoolgirls: Young Women, Self Esteem and the Confidence Gap* (Orenstein, 1995) which point towards a devastating loss of self-confidence experienced by pre-teen girls as they enter into a culture which consistently devalues their interests, skills, and abilities. Games and software which reaffirm girl tastes are offered as an attempt to counteract such pressures, to help girls recognize that

they are not alone and that the things they like are not stupid. Many of the commercial products, such as Girl Games' "Lets Talk About Me!", struggle to reconcile an expanded sphere of activity for girls with their traditional interests in fashion, personal appearance, and dating, offering information about women in sports or about the professional lives of successful women, developing role models like Tech Girl, who combines pink lips and cheeks with a "can-do" attitude towards technology.

One implication of Seiter's analysis of *My Little Pony* in this current context is to guard against knee-jerk feminist horror over Barbie and to reflect on what kinds of pleasures and interactions young girls' interests in Barbie enables. Erica Rand's remarkable *Barbie's Queer Accessories* (1995) and Lynn Spigel's Paper Tiger video, *Twist Barbie* (1994), both point the way towards queer and feminist reappraisals of Barbie which complicate any easy account of her place in young girl's lives. After an extensive investigation of Barbie Culture, Rand concludes: "one thing I learned from talking to people about Barbie is that we need to be very humble about our own ability to inscribe meaning in objects, to discern the meanings that others attribute to them, or to transfer conclusions about resistance, subversion, and hegemony from person to person, object to object, context to context" (p. 195). Mattel's Nancie Martin (this volume) adopts a similar argument in defending Barbie as opening up a broad range of fantasies for young girls, including both traditionally feminine careers (such as cheerleader and fashion model) and more unconventional ones (such as astronaut or corporate executive): "We girls can do anything! Barbie started out with a career. She began as a teenage fashion model. So there's a long history of saying, 'Your job is not to get married. Your job is not just to be pretty. You can have a job. You can do stuff in the world. And if you want to wear a hat and high heels while you're doing it, you can do that, too.'" However, much of Rand's defense has focused on the prospect of appropriative play in the hope that girls can use Barbie to enact a broader range of fantasies (including "dyke coming out" stories) than Mattel can commercially market. Increasingly, guidebooks for progressive parents, such as Dr. Montana Katz's *The Gender Bias Prevention Book* (Ivinski, 1997), encourage teaching children to "play games with Barbie in which she engages in assertive, self-determined behavior and words.... Just because Barbie has been manufactured and marketed to fit and encourage a certain mindset doesn't mean we need to keep her stuck there for good." Some of the girl-oriented websites promote an active questioning of the media's constructions of femininity. For example, a Tech Girl website (Ivinski, 1997) encourages readers to "send Disney an e-mail and ask it to make more animated movies featuring girls who have more to think about than finding someone to fall in love with." However, as Pamela A. Ivinski (1997) notes, the structured interactivity of "Barbie Fashion Designer" restricts the potential for appropriative and resistant play, facilitating the creation of "miniskirts and wedding dresses" but not of the work clothes needed to create "Barbie Auto Mechanic or Barbie Police Officer."

Working outside the commercial context, USC's Marsha Kinder (this volume) has been able to prototype a game, "Runaways," which radically questions cultural assumptions about sex, gender, and sexuality. Although Kinder hopes to turn her prototype into a commercial product, she recognizes that her academic-based production context frees her to experiment with digital media in a way that would be difficult for those working in

more commercial settings: “This is an experimental project. And if you’re already thinking about how it’s going to be censored from the time that you’re beginning to design it, you’re not going to be able to really do anything different. You’ve got to be willing to take some risks.” Kinder hopes that her game will be able to take more risks because it will build on the proven track record of Barbie Interactive and the other girl games, yet she concedes that many aspects of the game’s design will prove controversial with parents.

Some game industry insiders have been critical of the over-reliance upon market research from another angle. Theresa Duncan, one of the creators of “Chop Suey,” has been one of the sharpest critics of the new “girl games,” suggesting, “I feel like they take their inspiration from MacDonalds and I take mine from Maurice Sendak” (Weil, 1997). Duncan stresses the need for less market research-driven development and more creativity in inventing the game genres to satisfy alternative tastes and sensitivities. In a *Feed* forum on the state of video games (Feed, 1997), she attacked the “earnest blandness” of the girls games, which she suggested reminded her of “the filmstrips we had to watch in junior high health class.” Market research, Duncan argues, “ensures the maximum return on investment, but it also seems to ensure the minimum amount of personality and warmth,” resulting in a “perfunctory” feminism she finds even more meaningless than “slapping the pink bow on ‘Pacman.’” Game designer Heidi Dangelmaier agrees: “What all these new girl products should have done was open up different ways the interactive medium can integrate into our free time and our social time, and instead what’s being produced is really cheesy and petty. What needs to happen is for girls games to get out of the realm of gender and into the realm of design” (Weil, 1997). These critics argue that the call for girl’s games should be an invitation to explore new formats, to develop alternative models of software rather than simply to conform to assumptions about gender already created and reinforced by existing market pressures. They fear that the market research-driven development will result in too narrow a conception of what girls’ games might be, leading to stale and formulaic products and an over-harvesting of the potential girls market. Market research of this sort may also perpetuate an essentialist position on the difference between what boys and girls want from digital media, which is but one short slippery step away from the biological determinist position that argues that boys and girls want different things because of the fact that they are boys and girls.

Computer Games for Girls (Whatever Girls Are)

For the most part, the girls game movement has operated under the assumption that girls and boys want something fundamentally different from digital media, that it is possible to find out what they want from market research, and that the best way of responding to this situation is to create girls-only or girl-directed media that stands alongside more boy-centered media. One girls game designer has suggested she wanted to give her product “Cooties” so that boys would stay away, and girls would see it as their own space and feel comfortable playing there without boy interference. Time referred to the movement as an attempt to create “a rom of their own” (Krantz, 1997). On the other hand, as we have

seen, feminists have often been harshly critical of the widening separation of the pink and blue sections of the toy store, pushing for a more unisex approach to children's toys and play. Jan Russo (1997), a mother writing for *Superkids Educational Software Review*, expressed concerns that the labeling of girls games might encourage girls to shut themselves off from the broader range of products on the market: "Why create gender-specific software? Doesn't its generation imply that the myriad of excellent educational programs already in existence is not for girls—the underlying message being that girls can't truly enjoy the currently popular math, science, reading, and problem-solving titles? Or more pointedly, that those titles will prove to be too difficult for girls, that we need to paint computer software pink to make it girl-friendly?" Cascade Pass's series of software aimed at preparing girls for entry into professions, such as "You Can Be a Women Engineer" or "You Can Be a Woman Architect," suggests the tightrope to be walked: on the one hand, potential for marginalization and ghettoization; on the other hand, a "leg up" into traditionally male fields. Women's professional organizations have long fought against such gender-specific designations, hoping for women to gain recognition as "architects," not as "women architects." Such products may unintentionally reinforce the perception that technical, scientific and professional fields are predominantly male turf, even as they try to provide girls with earlier access to the skill sets and knowledge bases necessary to compete in such vocations.

Underlying the position that there are fundamental differences between what boys and girls want from computer games is a discourse that posits essential differences in girls' and boys' cultural tastes, interests, and competencies, entering into what *Wired* jokingly called "the land of sweeping generalizations" (Beato, 1997). Throughout most of the essays and interviews in this book, you will encounter phrases such as "girls like...," "girls prefer...," or "girls want...." Despite the clear dangers of such "sweeping generalizations," the ability to determine what girls want may seem necessary at the current moment when we are trying to open up a space for girls to participate within this media at all. Historically, gender was an unexploited category in video game design, with male designers developing games based on their own tastes and cultural assumptions without considering how these approaches might be anything other than gender-neutral. *Nightline* (1997) quoted Id's Todd Hollenshead, "What we try to do is make games that we think are fun and they're not targeted to any specific gender." Yet, as feminist critics note, as long as masculinity remains the invisible norm, the default set within a patriarchal culture, unselfconscious efforts are likely to simply perpetuate male dominance. And, this does seem to have been the case with videogame design—remember Huff & Cooper's finding that when game designers designed for "children," they designed products identical to those they designed for boys (and different than those they designed for girls). As game designer John Romero (*Nightline*, 1997) explained, "Men design games for themselves because they understand what they know is fun. They don't understand what women find fun." Female game designers consistently complain that their ideas were rejected because they did not conform to their company's often implicit assumptions about what made for a "good game" or a "fun" product.

The development of market research which examines girls' actual tastes and preferences may help to challenge the stereotypes and assumptions which shaped previous attempts to

market games for girls. Those initial attempts amounted to putting boys' game iconography and structure in drag (an approach parodied by a series of "Byte Me" (Stamatiadis and Passfield,1997) cartoons which depict game designers introducing "Barbie Quake" or painting the tanks in their combat games pink) or simplifying the game for girls, an approach which Brenda Laurel (this volume) argues took the game industry in exactly the wrong direction. Laurel protests that girls seek different kinds of complexity than boys, complexity in terms of the character relations, not in terms of the action elements. The recognition of gender-differences in tastes and preferences may be the first step in broadening who has access to the technology and expanding the range of functions which digital media play in our lives.

However, we run the risk of flattening the diversity of girls cultural interests. British sociologist Angela McRobbie (1991) notes that from an early age, male-centered magazines start to differentiate boys according to hobbies, sports, professional ambitions, etc., while girl- centered publications have tended to be organized purely around age-levels, assuming that all girls are interested in romance, make-up, physical fitness, cooking, and fashion. McRobbie traced women's magazines across a lifecycle which starts with teen romance, acknowledges the budding of late adolescent sexuality, and then settles into "marriage, childbirth, home-making, child-care, and Woman's Own." Girl Games' "Lets Talk About Me," with its sections devoted to "my body," "my scene," "my life," or "my personality," comes eerily close to the British teen girl's magazines (such as *Jackie*) which McRobbie critiqued almost two decades ago. As McRobbie notes, these female-targeted publications establish "the personal" as "the sphere of primary importance to the teenage girl," treating it as an "all embracing totality" which precludes other forms of social and political intervention and which acknowledges only a narrow range of acceptable lifestyle choices. "Let's Talk About Me"'s morphing, multicultural logos reflect a conscious attempt to expand the range of female identities, yet it has done little to broaden the range of topics deemed central to girl's lives, except to add "my computer" to the mix.

Feminism has struggled to break down univocal conceptions of gender and open a space for many ways of being masculine and feminine. The development of girls' games needs to be careful to reflect the diversity of women's lives and to foster acceptance of a range of different feminine styles and identities. Industry insiders, however, note that to do so would necessitate fragmenting an already small, marginalized, and developing market, insisting that such specialization of interests will be possible only when the girls' game industry is more firmly established. For the moment, they claim that they are forced to market to a "normative" or "average" conception of femininity, while inserting alternative interests around the margins. Purple Moon's "Rockett's World" series reflects this impulse, casting the red-haired, thin, middle class, and white Rockett as the American everygirl around whom is arrayed a broader range of gender, racial, and cultural types.

In addition, we might wish to question the very essentialist binary opposition between boys and girls. That is, we might ask in what contexts girls play with computers differently than boys do, and in what contexts their play styles are similar? How do race and class intersect with gender in explaining differences in play styles? Laurel (this volume) describes focus group research that entailed bringing a girl in with her best friend

"in order to keep her honest." What if the presence of two girls, instead, perpetuated a girl's need to act in the manner that she thought was consistent with her evolving sense of gender roles?

Recent feminist inquiry suggests that the behavior of men and women is often explained in terms of gender differences, regardless of its content, and despite the fact that the same behavior might be explained in terms of any one of a number of other analytic constructs. Books such as *Men Are from Mars, Women Are from Venus*, and Deborah Tannen's best-selling book on men and women's language differences, *You Just Don't Understand*, testify to the special interest that gender-based explanations hold for Americans in the 1990s. In this sense, the theory of gender differences constructs gender practices. That is, when one looks for differences between the sexes, and does not take into account other cross-cutting variables, one is likely to find those differences. An alternative position might posit that we "do" gender, and that we do it differently in different contexts. This performative view of gender (in the sense that we perform particular gender roles, as described by Butler, 1990) is discussed further in deCastell & Bryson, and Cassell (both this volume). In terms of the issues discussed here, we might analyze computer games in terms of their reproduction of static forms of gender identities, noting that certain computer games allow girls to feel comfortable in their girlhood. Those games fit comfortably into what a girl believes (consciously or unconsciously) is expected of her in order to merit the label "girl." For example, Martin's analysis of how girls play with Barbie (Martin, this volume), suggests remarkable similarities in the way that all girls play with Barbie, and remarkable constancy between how different generations of girls have played with Barbie, as well as remarkable loyalty to ensuring that if one has a Barbie doll, one's daughter should have one too. Such a description leads us to the conclusion that Barbie play is a central part of the construction of girlhood. These meanings do not so much arise from the Barbie doll itself as from social norms about the appropriate way to play with Barbie. Martin's analysis of "universal" Barbie play contrasts with Rand's account (1995), which sees the Barbie doll as an object that lends itself particularly well to appropriation, and to a variety of self-identifications and types of gendered behaviors. Such analysis does not deny that there may be empirically observable associations between certain kinds of behaviors and children of a particular gender. We simply question the "single-genderedness" of these associations by asking what other variables are present (race, class, sexual orientation). The computer game "Runaways" (Kinder, this volume) challenges the notion of gender by splintering it, demonstrating that biological sex and gender are not the same, and that neither of those is the same as self-perceived gender identity or sexual orientation. SAGE and Rosebud (Cassell, this volume) take an alternative approach to challenging the notion of binary, ontological gender by creating access to computer games for children who engage in a variety of gendered activities. In fact, these games rely on the computer, which so readily reflects us to ourselves (Turkle, 1984), as a site for the very construction of gender and other aspects of the child's social reality.

Thus, we might understand the kinds of activities that have been described as "what girls really do" not as neutral or isolated acts but instead as involving the person becoming and acting in the world as part of the construction of a complex identity. In this case,

designing ‘games for girls’ misses the point. We should, rather, expand the range of activities we can perform on a computer so as to encourage identity formation as a part of the game. Otherwise, we are teaching girls to act like girls are supposed to act.

New Computer Games for Girls, or a New Look at the Old Games

In much of what’s been said above, it’s been assumed that the existent selection of game genres are fundamentally wrong for building female access to the technology. We are told that girls simply don’t like to play fighting games or that they don’t respond well to sport and violence. However, a closer look at trends in popular culture suggests that every one of these generalizations is subject to challenge. The success with women of self-defense classes and of female-centered action films, such as *Thelma and Louise* or *Aliens*, show that violent imagery is compatible with not only feminine taste but feminist politics. Female action protagonists, such as television’s Xena (Sheff, 1997) and the comic book heroine, Tank Girl (Wheelhan and Sonnet, 1997), have attracted strong female followings, including many lesbians, who celebrate their refusal to conform to traditional gender roles and their ability to hold their own against male opponents. Much of what gets read as female empowerment within popular culture represents feminist appropriation of violent images for their own ends. The popularity of women’s sports, the emergence of “soccer girls” and “soccer moms” as increasingly central categories of social analysis (Gailey, 1997), suggests a potential girl’s market does exist for sports-centered games. If we consider the dominant genres of video and computer games, such as horror and the supernatural, science fiction, sword and sorcery, mystery, each of them have historically had tremendous participation by women as writers and attracted strong interests by women as consumers (Penley, Lyon, Spigel and Bergstrom, 1991; Jenkins, 1992; Bacon-Smith, 1992; LeFanu, 1989; Donawerth, 1997; Wolstenholme, 1993; Pinedo, 1997). Many of the female-authored works in these genres offer untapped sources for stories, characters, plots, and iconography which might be exploited by the game industry in its search for games which display a strong cross-over potential.

Some industry insiders, such as Sega’s Lee McEnany (this volume), argue that what is needed to breach the gender gap are not new game genres designed specifically for girls but the successful development of traditional boys games with stronger female characters. Sega’s approach has been to introduce female protagonists into many of its fighting games, giving them strengths and capabilities that are attractive to both male and female players. McEnany, who is herself an enthusiastic fan of traditional video games, believes that better marketing of existing game genres to female consumers may help to close the gap between male and female players. Fantasy role-playing games have proven especially successful in attracting female gamers to games designed and developed primarily for male consumers.

Core Design’s “Tomb Raider” (Whitta, 1997) hit the shelves around the same time as “Barbie Fashion Designer” and with sales stretching well past 2.5 million has done its own part to shake up industry assumptions about gender. “Tomb Raider”’s protagonist, Lara Crofts, a female archeologist modeled loosely after Indiana Jones, has become one

of the most familiar icons in the contemporary game industry, spurning not only game sequels but discussions of other spin-off products, including feature films and television series. Core Design sought to center its action-adventure game around a strong female protagonist, one who is muscular and acrobatic and capable of holding her own in all kinds of dangerous situations. "Tomb Raider" creator Toby Gard told *The Face* (as quoted in Whitta, 1997): "Lara was designed to be a tough, self-reliant, intelligent woman. She confounds all the sexist cliches apart from the fact that she's got an unbelievable figure. Strong, independent women are the perfect fantasy girls—the untouchable is always the most desirable." Gard sought to balance traits which would make Crofts an attractive role model for game-playing girls and a sexually attractive figure for their core male market, a balance not that radically different from the formula which made *Xena* such a cult success on television. Female gamers have objected, however, to many of the company's efforts to promote the game to male players, including their hiring of a scantily clad female model to impersonate Crofts at computer trade shows, or the development of an ad campaign based on the theme "Where the Boys Are" and showing lusty boys abandoning strip clubs in search of Lara (Brown, 1997; Jones, 1997; Game Girlz, 1997). An underground industry in home-developed nude shots of Lara Crofts, including a Nude Raider (1997) website, and rumors that someone has developed a hack which allows one to play the game with a totally naked protagonist, suggest the dangers in linking female empowerment to images couched in terms of traditional sex appeal (Whitta, 1997). And game magazine coverage of Lara Crofts and the attempts of other game companies to imitate "Tomb Raider"'s success explain the phenomenon almost entirely in terms of her erotic appeal to young male players. Corrosive Software's Kate Roberts asks, "Would Tomb Raider have sold as many copies if Lara had been wearing a nice warm sweater and sweatpants?" (Next Generation, 1998). Crofts' popularity may represent the success of a female protagonist (albeit one conceived in terms of male visual pleasure), but she would seem to have done little to alter the relations between girl gamers and the game industry.

Arguments explaining male gamers' close trans-gender identification with Lara Crofts closely parallel Carol Clover (1992)'s discussions of the "final girl" convention in the 1980s slasher films. In both cases, male identification with a female figure allowed a heightened sense of vulnerability or risk which did not endanger conventional conceptions of masculine potency and courage. The result was, in the case of films like *Halloween*, *Friday the 13th* or *Scream* and video games like "Tomb Raider," a more thrilling experience for male players. In other words, Clover's analysis might suggest that Lara Crofts (the digital equvilent of the "final girl") exists not to empower women but to allow men to experiment with the experience of disempowerment. Interestingly, Clover argued that the androgynous personae of the 1980s slasher heroines (including tomboy traits and gender neutral names in many cases) were a key factor in enabling male fans to overcome their resistance to transgender identification, while "Tomb Raiders"' success has been linked to the exaggeration of Lara Crofts' feminine characteristics. Clover's attempts to explain the appeal of such figures for male horror film fans, however, may foreclose too quickly the possibility that women may also find such figures sources of identification (however compromised by male interests and fantasies) within scenarios of empowerment. Increasingly, research into the horror audience suggests strong female

participation, and the recent success of the *Scream* films has been ascribed in part to their popularity with teenage girls. When Jenkins teaches a class in Horror and the Supernatural at MIT, female students consistently outnumber male enrollees in the course.

In general, though, male- and female-centered examples of these genres reflect different interests and reward different kinds of competencies. If we compare Anne Rice's vampire novels with splatterpunk horror, for example, we see a difference between traditionally female interests in character relations and emotional issues and traditionally male interests in action and gore. Studies of female fan fiction based on male-centered action-adventure series find that the women often use the existing genre elements as a backdrop for elaborating on themes of romance, friendship, partnership, and community (Jenkins, 1992 ; Bacon-Smith,.1992; Penley, 1992; Clerc, 1996). Henry Jenkins (Tulloch and Jenkins, 1995) asked male and female fans of *Star Trek* to say what came to mind when the names of series characters were mentioned: in most cases, male fans identified the character's capacities as "autonomous problem-solvers," while women consistently fit the characters into a web of complex relationships (romances, friendships, mentorships, partnerships). Those commercial products which have built strong fan followings—*Star Trek* is a classic example—consciously build in both action and character elements and thus reward multiple reading competencies. On the other hand, digital manifestations of *Star Trek* systematically strip away the elements most attractive to female fans, while preserving those which have high appeal to male consumers (Jenkins and Murray, forthcoming). "Star Trek" games have been innovative in their use of Quick-Time VR, for example, to reproduce the ship as part of an interactive technical manual, show a relentless focus on issues of hardware, and depend—like most other video games—on situations of conflict rather than negotiation and exploration. In most cases, the technical choices made by the game designers strip character differentiation to its bare minimum and focus on iconographic rather than cultural differences between the series' alien races. As in the example of Barbie, the digital manifestations of *Star Trek* allow a far narrower range of interactions and appropriations than its previous manifestations.

A core question we need to ask is whether opening the girls market involves changing the generic base of the game industry (focusing more on romantic, melodramatic, and fairy tale genre traditions, moving from a male sphere of public action towards a female sphere of domestic relations) or shifting the kinds of cultural competencies recognized within the existing generic repertoire (creating horror games which are more like Anne Rice, imagining games which facilitate play on multiple levels, or developing strong female protagonists, like Lara Crofts, without the overt pandering to adolescent male interests in "tits and ass"). Both scenarios require more responsiveness to female consumers than has historically been visible from the major games companies. The first approach, however, presumes the need for a girls-only game market (the approach taken by Girl Games and Purple Moon), while the second presupposes the possibility of expanding or broadening the existing game market to include both male and female consumer interests (the approach taken by Sega).

The most powerful challenge to the separatist logic behind the girls game movement has come from an unlikely corner—organizations of female gamers who have embraced

traditional fighting games, especially "Quake," as a space where they can confront men on their own terrain and literally beat them at their own game (Abroms, 1997; Brown, 1997b; Sherman, 1997; Brown, 1997c; Kavanaugh, 1997). Embracing an ethos of empowerment through head-on competition, celebrating their pleasure in "fragging" men, these women have formed all female clans, such as Die Valkarie, Clan PMS (Psycho-Men-Slayers), and Crack Whores, to do battle in on-line "Quake" tournaments.

In some cases, these groups see themselves as loosely linked to the Riot Grrls, a post-feminist, post-punk movement which has stressed female empowerment through participation in traditional male spheres (from motor cycle-racing to punk rock and computer games). (For more information on Riot Grrls, see Duncombe, 1997; Riot Grrls, 1997). Like the Riot Grrls, the Game Grrls seek to escape all fixed identities, whether they are the exploitative images of scantily clad women fostered by the traditional game industry ("Babette, the curvaceous redhead with giant overflowing cantaloupe boobs who had to be melted and poured into a glistening black latex bodysuit and has all the muscles of a limp noodle" (Gilbert, 1998)) or the "stereotypical 50s "nice girl" images promoted by the girls' game industry (Douglas, 1997). The Riot Grrls have been overtly critical of the "victimization" approach taken by many "second wave" feminists, an approach which they see as destroying female confidence and fostering the ghettoization of women. Responding to a comment made by Sherry Turkle on *Nightline* bemoaning young males' interest in militaristic games, Game GRRL Nikki Douglas (this volume) protested, "Maybe it's a problem that little girls don't like to play games that slaughter entire planets. Maybe it's why we are still underpaid, still struggling, still fighting for our rights. Maybe if we had the mettle to take on an entire planet, we could fight some of the smaller battles we face everyday."

Often, Game Grrls play with juxtapositions of traditional feminine iconography and aggressive fighting game images, as can be suggested by such persona names as Fear-No-Man, Goddess, Hellkitten, Icequeen, Killer Bitch, or Lethal Lady. As one of the Crack Whores told *Wired*, "Under every floral print dress lies a lady wearing black garters, carrying a big fucking gun!" (Brown, 1997c). The Crack Whores (1997) construct on-line personas based on the cliches of pornography, stressing their measurements and their pleasure in "fucking" and "fragging." Responding to a woman who wrote to say she was uncomfortable with the overtly sexual tone of their website, a Crack Whores (1997) spokesperson explained, "Part of the online multi-player gaming experience is the use of wild and extreme personas. Who would you rather deathmatch against, sweet Barbie from Clan Doll or Street Fightin' Mona from the CrackWhores. The name IS intended to shock and stimulate. My suggestion? Don't bother explaining it to your friends. :)" Such play with overtly sexualized identities reflects the Riot Grrls' political stance as pro-sex feminists who urge women to claim control over their own bodies and who are sharply critical of what they see as the repressive morality of anti-porn activists. Other groups embrace amazonian imagery, drawing on a whole tradition of images of women warriors or mythological goddesses. The Crack Whores website plays with this tradition, running a contest for the best digital transformation of "Quake"'s beefy protagonist into a warrior princess.

Although their all-female membership might suggest some forms of separatism, these Game Grrls proudly report on their victories over male clans as well as acknowledge their partnerships with male gamers. Q. Girlz (1997) features a special "whipping boys" section, where they acknowledge what they have learned from the men in their lives and jokingly suggest the following "whipping boy" requirements: "1. Do what we say; 2. Don't think; 3. Pick up after us; 4. Bring us gifts; 5. Kiss our ASSes." Their websites provide a location for discussions of male and female interests in digital media, including such regular features as "he sez, she sez" game reviews, as well as occasional discussions about how female players may deal with online harassment. The Game Grrls refuse to give into ridicule or harassment from male players, many of whom are reluctant to believe they "really are" female "Quake" players. As Mona of Crack Whores explained to *Wired*, "Since you're a girl, the guys expect you to really play poorly. So we take pride in ripping them to sorry little shreds" (Brown, 1997c).

The "Quake Grrls" movement gives these women, who range in age from their mid-teens to their late thirties, a chance to "play with power," to compete aggressively with men and to refuse to accept traditional limitations on female accomplishments. Their rhetoric may be unconventional, especially in the ways it playfully flaunts their militarism, yet their ties to traditional feminism remain firm. Q. Girlz website (1997), for example, quotes Sylvia Plath ("out of ash I rise/with read hair and/eat men like air") and includes links to both Riot Grrl and traditional feminist sites. The "Quake Grrls" represent a radically different conception of the girls' market than proffered by girls game industry insiders, refusing a separatist culture based on feminine interests and fantasies, insisting that women can hold their own in the realm of traditional fighting games and that they may take pleasure precisely in doing things that are not "prescripted" for women in our culture. The "Quake Grrls" are, on the whole, older than the girls being targeted by the girl games movement, more self-confident, more comfortable with technology, and more mature in their tastes and interests. These Quake Grrls are actively lobbying the game industry to generate games which more directly reflect their desires, games which treat their female characters neither as victims nor as sex objects but "a vicious, bloodthirsty, take-no-prisoners kind of grrl" ready to fight for her place in the world.

Conclusion

In this chapter we've presented arguments from all sides of the console on how to construct a space for girls' play with computer games. The comments of the Game Grrls allow us to boil the issues down to their essentials: do we encourage girls to beat boys at their own game, or do we construct a girl-only space? The problem is that both sides, ultimately, start from the assumption that computer games are boys' own games, and thus both scenarios can result in the pejorativization of girl's interests. Girls have always enjoyed greater freedom than boys to engage in trans-gender play. Tomboys carry far less stigma in our culture than sissies do. This ability to cross gender boundaries may be related to the fact that girls have had fewer choices: there are more games and activities that feature boys or cater to their play styles (Vaughter et al, 1992). In more general terms, boys' tastes constitute the unmarked option in the world. Markedness is a concept taken

from linguistics to express the nature of relationships between members of a binary opposition where one member is more regular or simple than the other, more frequently found, more neutral in meaning, and more generic. For example, in grammar the singular number of the English noun is unmarked with respect to the plural—the singular is simpler in that it doesn't have the suffix (for example the 's' in 'pots'), it is more often found than the plural, and it does not have the added meaning that the plural does. This concept is applied to gender in the following manner. In terms of dress, it is clear that the way in which boys dress is seen by American society as the unmarked option. That is, girls can dress as boys do, but the opposite is not true (girls can wear jeans, but boys don't wear dresses). Thus, boys' dress is found more frequently, is more generic (found on boys and girls), and more neutral in meaning (it means nothing for a girl to wear jeans, but there is always some kind of meaning attached to finding a boy wearing a dress).In the computer game case, the unmarked association between children and computers is that boys play with computers and girls don't. Note that girls can play boy games ("Quake," "Tomb Raider"), but it is highly marked behavior for boys to play with girl games (imagine giving your son "Barbie Fashion Designer").

Thus, in playing with computers games that are not explicitly targeted for girls, are girls simply showing their increased flexibility—their ability to engage in both girls' and boys' play—or are they making of computer games a real girls' space? The danger is that when girls take over games that have been traditionally male, the norm is not questioned. Game Grrls can always be read as a harmless abberation. Boys games remain the norm, and they remain games for boys. Independent of the personal benefits that playing "Quake" might bring them (experimenting with power and autonomy), the presence of girl gamers might do nothing to lessen the identification of "Quake" with boys. Still then, "men and women are not simply considered different from one another, as we speak of people differing in eye color, movie tastes, or preferences for ice cream. In every domain of life, men are considered the normal human being, and women are 'ab-normal,' deficient because they are different from men" (Tavris, 1992). On the other hand, if we target games towards girls, we may find ourselves falling into the trap of targeting only the most stereotypical aspects of current girlhood. In doing so, we are ensuring that boys will not play with girl-targeted games, once again ghettoizing girls' interests as the marked option. Judging from this summation, it looks like we are caught in an impossible impasse: play will always be gendered, and female play will always constitute the marked option. How to avoid the impasse? Our answer has to do with the highly unstable situation that we examine in this volume. The girls' game movement is brand new, as is the presence of Game Grrls. With time we expect that, by pushing at both ends of the spectrum of what games for girls look like, a gender neutral space may open up in the middle, a space that allows multiple definitions of both girl- and boy-hood, and multiple types of interaction with computer games of all sorts. We haven't found *the* answer yet. There is almost certainly not a single answer to the challenges surrounding gender and games, but as we broaden the range of available options, we also open up new space for a broader range of experiences and identities for both girls and boys.

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