

Chapter 11

Getting girls into the game: Towards a “Virtuous Cycle”

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 (“Ludica”)

This paper was authored by Ludica, a game design and art collective devoted to developing innovative design concepts that explore the potential of games to express women’s narratives, aesthetics, culture and play. Ludica’s members combine experience in virtual reality, art and technology collaboration, game design, computer science, academic research, the game and theme park industries, fine art, photography and graphic design. A critical component of Ludica’s mission is to identify and develop methodologies and organizational contexts that provide more inclusive and productive environments in which women can actively contribute to the game design process. In this paper, we bring to bear our own experience as designers, authors, researchers and teachers, as well as conversations with women in industry, academia, and current and former students, to outline a vision for a future in which the culture of game design is more conducive to female participation

The “Ideal” Work Environment

Imagine a job description that looked like this:

Wanted: Talented game designers. We have your ideal job in the perfect workplace!

Our environment is: *A casual yet intimate setting, with lots of floor space and comfortable open areas designed to encourage*

spontaneous brainstorming sessions. Semi-private office spaces surround these areas and allow for reflective or focused working time. Décor includes abundant plants, windows and lots of light with fun accents, including a display of historic games from across the centuries. Group gathering areas for eating and talking boast comfortable, fun and sometime wacky seating arrangements. Outside garden seating area also available and a variety of nutritious food is brought in for purchase daily.

We pride ourselves on creating excellent products in a collaborative development environment. Overtime is kept to a minimum by setting realistic production schedules. Several excellent childcare, and eldercare facilities are located nearby.

Our people are: *Talented, passionate, good communicators, respectful of others' ideas, and supportive. They offer constructive, helpful criticism that challenges rather than intimidates. We look for self-motivated, intelligent, intellectually curious talent that is diverse, both in ethnicity, gender, backgrounds, expertise, breadth and ideas. Applicants should have a great sense of humor, and be tolerant, empathetic and non-judgmental. Supervisors are encouraged to offer guidance and feedback but also to listen and help draw out creative ideas from their team members. We expect a mutually supportive environment with time for both group and individual work and contributions.*

Our philosophy includes emphasis on methods to:

- *Empower people to act on their ideas*
- *Relieve the creative team from administrative details so they can focus, without locking them out of the decision process*
- *Challenge everyone to rise beyond their ordinary expectations of competency and achievement.*
- *Build time into the work week for experimentation and learning.*
- *Support conference travel; encouragement to present and publish, if possible.*
- *Promote personal and professional development.*
- *Encourage everyone to present ideas and try their hand at different roles or projects to stay fresh.*
- *Focus on quality of work and the workplace as critical elements of quality of life.*

The ideal work environment described above was assembled based our own experience and conversations with women in game-related industries, arts and academia about what inspired their interest in game design and how their ideal work environment for making/designing games might look. In our conversations with women we identified “chicken and egg” problem that more women would be

interested in games if more games existed that girls and women liked to play, and if work environments could be found that were more supportive of their values and work styles. Far from being an academic exercise, we see this description as a goal that industry must aspire to in order to increase the appeal of games to a broader audience. Consalvo (this volume) explicates the distressing state of working conditions in the gaming industry, in dramatic contrast to the idealistic vision here. Below we provide evidence that this ideal working environment does not currently exist, describe some of the reasons why, and highlight how this state of affairs has implications for women's involvement in gaming.

The Current Industry Scenario

Women are the fastest-growing group of video and computer game consumers, making up an estimated 43% of players (The ESA, 2005). A recent study by the Consumer Electronics Association (Brightman, 2006) found that in the 24-35 year old age group, women outnumber male players by a factor of nearly two to one, largely based on the growing popularity of web and downloadable ("casual") games. Yet a survey by the International Game Developers Association found that only 11.5% of the digital game industry workforce in North America is female. What's more, while 30% of game writers are female, women's roles tend to be weighted heavily towards operations and human resources (47%), public relations, and marketing (25%) and production (21%). In the roles of executive, artist, designer, and audio producer, women occupy 10%-12% of roles, while they comprise a mere 5% of programmers; in the UK this figure is even lower (Haines, 2004). The IGDA report also found that women earn on average \$9,000 less than their male counterparts, even with equivalent tenure in the industry. The low representation of female programmers and the salary discrepancy are consistent with national data.

Both the IGDA and the Haines reports cited above, as well as Consalvo (this volume) identify a number of factors relevant to the disparity in female participation in the game industry, especially in creative and technical fields. These include: extreme working conditions and poor quality of life; a misconception that girls don't play games; the industry practice of making games that makers (most of whom are men) like to play; an unfriendly workplace environment and "garage hacker" culture; and alienating business practices, such as "booth babes" at trade shows. Both reports also noted a general decline in female participation within the IT industry. (In the UK, only 22% of IT workers were female in 2004, as opposed to 50% in 1960.) Clearly, women appear less interested in computers and games because they seek a more balanced lifestyle and are not as willing to work the long hours that have become standard in the game industry.

Comments culled from the IGDA and Haines studies suggest a general tenor of apathy among the majority of the largely male practitioners of the game industry. Respondents to the IGDA survey, 88.5% of whom were male, felt that diversity was not an issue; more important was a “good quality team” or “creating a good quality game,” the definition of which is driven by the current workforce make-up. A female game industry worker in the UK reported a manager stating that women were “more trouble than they’re worth.”³ Many men in both reports asserted that they were “gender neutral,” even though the data regarding hiring, promotion and salaries suggest otherwise. Many of the men surveyed argued that since the target market is largely male, an assertion we now know to be untrue, it is appropriate that the designers should be male.

Improving working conditions in the game industry would benefit male and female workers alike. Attracting more females to the game industry is critical to expanding the nature of games, the breadth of their appeal, and the size of the market.

How to Get More Women in the Game: A Roadmap

Perhaps the greatest challenge for greater gender equity in game creation is that women would aspire to be game designers more frequently if they played more games they enjoyed. This is the classic “chicken-and-egg,” or as we like to term it, “hen-and-egg” problem. The inclusion of female game designers is expected to result in game designs that appeal to females. In an empirical study, Heeter and colleagues (2005) found that girls rate games envisioned by all-girl teams more favorably than games envisioned by all-male teams, without knowing the gender of the design team. Commercial game design teams that included more women in key design and production roles have produced products that women enjoy. For example, Maxis, makers of *The Sims*, a game estimated to have between 40% and 50% female players (Becker, 2001; Dickey & Summers, 2005) described it this way:

On the original Sims game (Feb. 2000), 50% of the people credited as designers are female (2 of 4). 40% of the people credited as producers are female (4 of 10 producers),

Since then, The Sims development teams tend to have more women on average than other teams here at EA. After the base game, I think lots of women were drawn to work for Maxis (myself included) because we like The Sims. It is a cycle: make a game that appeals to women, draw more women to work on games, make more games that appeal to women.

We refer to this as the “virtuous cycle.” Making games that appeal to women and girls attracts more women to work on games, resulting in the creation of more games that appeal to women and girls.

Through our experience and conversations, we have identified the presence of a “tipping point” that attracts women to game design: this is the notion of games as “entertainment plus.” Without discounting the notion of pure entertainment or “escape from reality,” games and play can also have other values. The power of play to change the world and have a positive impact on society as a whole can inspire a generation of game designers. For instance, cognitive and educational possibilities of games appeal to female game design students, as do games that allow for altered states of consciousness. This perspective is consistent with Margolis and Fisher’s research on female computer science majors, that helping the world rather than just learning algorithms is most motivating to female students (2002).

Our discussions revealed that female (and male) students are inspired to create games because doing so provides the opportunity to explore, experiment and fail safely. They typically enjoy the game development process, describing it as challenging, interdisciplinary, collaborative, engaging diverse skills, and integrating creativity with structure. One female student described the practice of making games as:

...an odd amalgam of all disciplines and knowledge sets. They mix creativity and technology to form something that can transport people to other worlds, convey deep messages, and cause real emotion in people for little more than sprites on a screen.

In the context of university programs, students and professors tend to view game design as a kind of “renaissance” discipline that requires not only artistic and technical aptitude, but also higher orders of thinking that integrate disciplines from mathematics to sociology to history to visual arts. Thus it would appear that for women, games and game design provide a challenging form of interdisciplinary expression that combine imagination, creativity, social interaction, and can also have cultural, educational or personal value in addition to their merits as a form of entertainment.

From the Home to the World

For many people, games and playfulness can be traced back to early experiences with family, friends and peers. For many girls, fantasy and imagination often spring from role-playing with dolls, reenacting scenes from treasured books, such as Louisa May Alcott's *Little Women*, and creating festive events, including tea-parties and playing dress-up. In many cases, girls devise their own games. Pamela Dell, creator of the Purple Moon characters recalls spending ..."long unsupervised summer days outside (and sometimes inside) creating games by myself or with my sisters and a few neighborhood kids. We imagined ourselves into all kinds of worlds, making props from whatever we had on hand and playing various roles, depending on the game and who was available to join in." Barbara Stafford, curator and author of *Devices of Wonder*, acknowledges "Games of make-believe provide opportunities for risk taking, pattern making, puzzle solving, as well as offering powerful models for the child's future self." (Smith & Stafford, 2001)

Most of the women we talked to remembered playing video games, such as *Pong* and *Zork*, with their families. In *Joystick Nation*, dedicated to her "vidkid little brother," author JC Herz states: "When it comes to videogames, teenage boys are the ones with positive female role models. It's painful to say this, but boys' games have the only female characters worth playing. They always get the cool stuff first." (Herz, 1997) Elina Koivisto, a game designer from Nokia Research Center, recalls: "When I was a kid, even single-player computer gaming was quite social. Our friends did not have computers, so often it was me and my brother and sometimes his friends sitting around the computer and watching one person playing and others commenting. I did not know any girls who played computer games. When I was a teen, I started to play more pen & paper RPGs [Role Playing Games] (again with boys) and then later started to play more computer games again." Another game designer recalls "Some of my best memories are of hanging out in the arcade, playing *Galaga* while holding an ice cream in one hand, roller-skating from game to game. It was great. Later, I got into *D&D* [Dungeons and Dragons], and was the only girl "allowed" to play in our group."

Rebecca Allen, artist and UCLA professor commented in Malloy's book *Women, Art and Technology*. "I always like to go where I am not supposed to be. I was very much a part of the computer graphics research community, but I did not see why I shouldn't go to this very commercial 'low' art form and find out what was driving it . . . I also thought that maybe I could change some of the video games and make them more artistic, but 3D games were so expensive to build that the industry did not want to experiment. They wanted to play it very safe, imitating *Doom*-like games that were already popular. When I first started at Virgin Interactive Entertainment, there was a lot of potential for new and different

ideas, but it changed quickly; I lost my interest because I knew there was no way to really express my ideas." (Malloy, 2003)

The Role of Education in Getting Women into the Game

Recently, a number of universities have begun to offer both graduate and undergraduate degrees in game design and development. Although the game industry has not traditionally looked to academia for new talent, that trend is beginning to change because of these programs. Electronic Arts (EA), the largest single employer in the game industry today, has said that they plan to dramatically increase their university hires over the next several years. USC's Interactive Entertainment Program and Georgia Tech's IDT partner regularly with EA and other game companies on research projects, classes, conferences and internship programs. What this means for young women interested in the game industry is that academia now offers a potential entry path to industry via internships and recruitment relationships. Currently, the primary path of entry into the game industry is to take a junior position as a game tester, a job that requires being a "hard-core gamer," thus ruling out most women. This new academic avenue may have the effect of offering young women improved opportunities for employment, because they can prove themselves on student development teams, build confidence and skill sets, and explore their own creative interests and insights in game design in the academic environment before trying to break into the game industry. Thus educational programs can serve to attract young women to the field, help them to gain employment and train them to contribute effectively once they have entered the game industry. Of course, these programs offer the same advantages to male students who want to get into the industry; however, if properly leveraged, the effect on young women could be far greater. Although women come to the subject with equal interest and talent, they often lack confidence in their ability to gain access to a male-dominated industry. This is where academic and educational institutions can make a significant impact on shifting the "vicious cycle," or "hen-and-egg" syndrome mentioned previously, creating a bridge between aspiring female game designers and the game industry clubhouse.

Jen Hollcroft, an undergraduate student at USC majoring in East Asian Languages and Cultures with double minors in Game Design and Development and Game Programming, exemplifies this idea. "I came into college with very little understanding of what I wanted to do," says Hollcroft. "I was a bit interested in everything." Similar to the stories we heard in our interviews of experienced designers who graduated before game programs were available, Hollcroft found herself interested in "physics, chemistry, programming, calculus, English,

Spanish, Japanese, history, electronic music, etc.” In her junior year she decided to take a game design class. “The concepts really were interesting,” she says, “and I found it quickly became my favorite class. It fascinated me to study the way games worked, and to come up with game concepts of my own ... After that class, nearly all the classes I took were related to game design. The more I studied, the clearer it became that this was the right fit for me.” Hollcroft is currently interning at Electronic Arts helping to define concepts and prototypes for an as yet unannounced project. Although she had both the technical and creative talent to work in the games industry, the classes in game design offered her an entry point into the game industry as a career choice, via an industry internship. In the background of Jen’s story, among other characters, are two women professors who recognized her talent and took deliberate steps toward helping her succeed. It is this type of difference that academia can make for young women who may have all the same skills and talent as the young men who aspire to be game designers, and yet don’t think this career is a possibility for themselves.

But can these academic programs offer more than just an environment that will attract female students to the current game industry? Can they also provide an environment for these young women to experiment creatively, to question accepted wisdom about what games “are,” and to imagine not only a game industry in which they can participate, but also a range of games that addresses their own unique interests and perspectives? Or, do they merely provide female game students with an opportunity to experience firsthand the same lack of diversity that currently exists in the game industry before embarking on their careers? Of all the game design students we interviewed, not one had taken a class, had an assignment or exercise that dealt specifically with gender in terms of design process, workplace environment, team dynamics, or inspiration. Hollcroft says “it seems to me to be a gross oversight in the curriculum and the industry, even taking into account that it’s a male-dominated field.” Estefania Pickens, a graduate student from the Entertainment Technology Program at Carnegie Mellon University now working at Disney Imagineering, says “most of the females at the ETC complained that there was nothing at all addressing gender issues within our program or the industry. How are we ever going to get it to change if we don’t address it at the academic level?”

The eventual effect of academic programs on the overall number of women in the industry remains to be seen. However, these new design programs provide several promising elements. The first is a comfortable place for those with interdisciplinary interests to coalesce those interests into an industrial perspective. Coursework provides girls important opportunities to “prove themselves” as valuable team members. They encourage a dialog about critical recognition and analysis of gender issues in games. And perhaps most important, they present girls with positive role models and mentorship. For

example, one of the co-authors, Tracy Fullerton teaches game play mechanics and design that surmount gender stratification to get at the heart of what games can offer. Many of the respondents in our survey pointed at mentors, including Fullerton and co-author Pearce, as providing the necessary support to encourage them to go for their dreams.

Margolis and Fisher (2002) call upon educational institutions to take concrete action to address such gender issues:

Our analysis of the nexus of confidence and interest leads to an emphasis on institutional responsibility. We do not blame the student or expect her to toughen up, turn a blind eye, or adjust. We believe that educational institutions and their culture, curriculum, faculty-student relations, norms, and standards must change.

Thus, academics are in the unique position of training the next generation game professional, and can potentially influence *all* their students both male *and* female to critique, reconsider and possibly reconstruct the status quo of male-domination in the game industry. The authors of this paper, all “culture workers” (Laurel, 2001) who have worked in industry, academia and the arts, feel that it is critical to provide positive models for students and faculty alike, and have hosted a number of workshops to this end (see Figure 1).



Figure 1. Ludica game design events that seek to create a more female-friendly ethos for game creation. *Ivana Murder*

Positive Steps: Games That Motivate Women to Make Games

The Sims was cited earlier as an example of a game that could counter the vicious cycle (of women not being interested in game play, so not interested in game design) with a virtuous cycle: girls who like to play *The Sims* were inspired to design games. Below we provide examples of projects specifically designed to reconfigure gameplay paradigms, representation and even game-creation itself, to inspire girls to engage with the game development workforce, are beginning to grow and it is our hope that their presence will have a positive influence on the paths games will take.

Brenda Laurel (this volume), a long-time pioneer of computing, interface design and game design, who worked at both Apple and Atari, and who introduced the notion of “computers as theater,” has been a pioneer in this area. In the mid-1990’s, she launched Purple Moon Software, producing interactive games designed specifically for tween girls. Laurel describes some of the challenges of creating games that are both innovative and address the real-world concerns of contemporary girls:

At Purple Moon we played with various structures for interactive narrative and tried to do positive work for girls in the context of popular culture. I took a lot of heat from some people who call themselves feminists for portraying girl characters who cared about such things as appearance, popularity, belonging, betrayal, and all the other strum and drang of preadolescent friendship. Some people thought I shouldn't do that because girls shouldn't behave in this way. Bu they do, you see. And who they become depends a great deal on how they manage their transit through the narrows of girlhood.

When we had to choose, we sacrificed political correctness in order to meet girls where they were, in the realities of their own lives. (Laurel, 2001)

”Meeting girls in the realities of their own lives” is exactly what is needed, still, today. More recently, Mary Flanagan (another contributor to this volume) has been awarded grants from the National Science Foundation to create games that rethink girls’ relationship to science and technology. About her series of web-based games for girls, *The Adventure Josie True*, Flanagan states: “representing adventurous, smart, and scientific women of color is very important to enhancing all player’s exposure to what constitutes a hero.” (Flanagan/Lecetti Interview, 2006) (Figure 2)



Figure 2. Mary Flanagan's *Josie True* is an adventurous girl who likes science.

Flanagan's newest project, *RAPUNSEL*, is a game that teaches tween girls how to program by developing dance steps for their game characters.

Instead of matters of representation...my attention has turned towards thinking and reworking computer-media specific things such as 'game goals' and 'architectures' as important sites for social change and activism. How we participate in digital culture, how we are framed — as consumers or as producers — is fundamental to this notion.

Other pioneers, such as Kelleher (this volume) are also enacting successful approaches to interesting girls in games and programming. Hayes (this volume) takes a broader perspective, using games and productive activities related to game play to develop girls technology skills and interests. There is much work to be done and we hope these ideas help point the way to what needs to be done. It is a multi-dimensional challenge, targeted in part by the words of Mary Flanagan:

My belief is that by changing who authors systems, there may be some kind of change, at least through empowering and sharing knowledge. In part IT is a knowledge economy. Therefore, this certainly means networking women together to support their success in technological arenas as much as possible as they become authors. I think it also means shifting how we teach technology, as well as who designs hardware and even programming languages, too.

(Flanagan as quoted by Lacetti, 2006)

Conclusion

The job description that introduces this chapter is a way to begin a dialog about how to draw women into game creation. We identified some of the challenges, and began to point out some of the solutions. Over and over again, we have heard the industry lament: “We would include more women in the game development process; we just don’t get qualified applications.” Our “ideal job environment” serves as an initial vision that both teachers and industry can use to begin to craft an environment that is more female-friendly. In addition, as we’ve pointed out, creating more games that appeal to women will help to create a “virtuous cycle” to draw more women into game creation. This includes games that meet them where they live and by doing so bringing them into the process of future creation.

It is this “virtuous cycle” that we encourage educators, mentors, employers and game designers of all genders to make the rule and not the exception.

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