Troubling 'Games for Girls': Notes from the Edge of Game Design

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ABSTRACT
This paper presents notes from the field focused on a large project to design an activist, multi-user game aimed at middle school girls. A thorny issue in developing games for girls is the categorization of female players and universalizing their preferences. In the paper I provide diverse feedback on current game-based research project, RAPUNSEL, hoping to provide a multiplicity in the category of "girl" so that new game designs may challenge the many stereotypes inherent in computer culture. I then discuss the game design in RAPUNSEL and how a designer may provide for multiple play styles.

Keywords
gender, game design, activism, human factors, pedagogy, social issues

In the last decade there has been a great deal of commotion about gender and gaming. On the one hand, female characters in games are flourishing, with slutty monsters on the attack and tough girl heroines or harlots proliferating in action, adventure, and first person shooter games. On the other hand, women are barely involved in the creation of computer games. In this paper I present notes from the activist and educational game design context in the US. Many of the themes emerging are likely to speak to those interested in diversifying games world wide. This short paper offers some notes from the field from the midst of a current game-based research project, RAPUNSEL,[1] documenting the informal work with design partners. Large-scale assessment and research begins shortly as we develop prototypes that can track user input carefully and monitor knowledge transfer from our project on out to the rest of the world.

CATEGORIZING "GIRL"

There is insufficient room to engage in the data about women's underrepresentation in technological and scientific fields in this essay, but the figures are not positive. In addition, a mere 10 percent of all game industry workers in the US are women, and most of these do not have their hands in the design process (even fewer are programmers) (Hafner 2004). Women in the software industry overall have little voice in what content, interaction styles, character representation, and reward systems go into games, and this affects what is created and how such games are perceived. Aside from industry figures, Jenkins among others notes that video game spaces are gendered spaces (1998). Digital worlds are great importers of content from the real world, including negative social constructions such as racism and sexism.

A central difficulty, however, in challenging gender stereotypes inherent in computer culture is that one may inadvertently create new problems. Categorizing "girls" together in a group is certainly a problematic effort for which there must be a clear reason to do so, such as working overall for gender equity issues

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science and technology. Attempting to create something for "girls" as a category obviously navigates a dangerous border zone between personal, specific, lived experience, and generalization. 'Girls' are as diverse in their interests, abilities, and tastes as any other category of people (e.g. "students" or "the French"). In gender research in the games industry, designers must be able to work towards gender equity without falling into stereotyping traps, realizing the inherent breadth and contradictions of categorization. The goal of this approach is to design for a multiplicity of experiences, parts of which could be co-opted or rebuilt entirely by the users. Focusing on a few of the broader interests expressed by girls involved in this work, then, may help diversify all kinds of game goals and address numerous play styles. Therefore, one way to address designing for girls is designing for a multiplicity of play styles and providing diverse thematic content.

REAL WORLD DESIGN

Wyatt notes that researchers frequently question why so few women choose science-related fields; reasons for this include the lack of female role models, girls' underdeveloped spatial visualization skills, and learning styles incompatible with the methods practiced by men (Wyatt 1993). If one examines differences in learning styles and role models, we should also look to play styles as a meaningful difference when developing software for girls, for so much of the enjoyment of computer technology is focused culturally on computer games.

Continuing research into middle school girls and educational gaming (see *The Adventures of Josie True*, http://www.josietrue.com). RAPUNSEL (http://www.rapunsel.org) is an online computer game / learning system research project to enable children, especially underprivileged girls, learn to program computers. It is being developed by researchers at the Tiltfactor Laboratory at Hunter College, New York and the Media Research Laboratory at New York University. The goal of the project is to make a "self-teaching" environment where children are motivated to learn Java programming incrementally through a game environment in which they will be able to master fundamental programming concepts and hopefully transfer this knowledge to situations outside of the project.

The RAPUNSEL research is resulting in a game prototype. In the role of game designer and engaged with design partners in schools and computer clubhouses, I observe first hand aspects of girls' play interests and girls' play styles. So many influences infuse the reading of a game: the local culture, neighborhood, state, school, economic upbringing, family activities, siblings, and lived experiences of the girls involved. In the RAPUNSEL research, the team first surveyed products and experienced already popular with women and girls and compare national statistics and sales figures to what our New York based design partner group tells us.

Figures 1 and 2: Sims Online, Left, and some scary Neopets, right. Girls report in our design partner meetings that they love scary and macabre aspects of games

On a national scale across the US in early 2005, games such as *The Sims II* and the Internet based game *Neopets* prevail with the target demographic. Locally, design partners disclose different preferences. For many of the 11-13 year old girls we are working with as design partners in the RAPUNSEL research, most girls have never heard of *Neopets*, and favorite games include *Mortal Combat* and *Grand Theft Auto*. Most of the design partners on the team are African American girls who live in housing projects in the metropolitan New York area. Households predominantly contain several siblings, and depending on the group, and all have access to one or more game consoles at home or at a friend's home. Interestingly, girls who report growing up in all-female households with mothers and grandmothers seem to have access to fewer game consoles and report playing more off-screen games such as card games and board games. Almost every child we've worked with (appx 60 in late 2004) enjoys some kind of game, on or off screen. Crazy Eights and Solitaire are popular card games.

The design partners report that if they were to choose what they wanted in a computer game, they would like action, they want to be challenged, they want to judge or compete, and they want to be scared. Many participants think that some sort of action, violence, or fighting should be in any good computer game. Extreme situations and narratives win out in our research over more traditional kinds of play. However, in every group we work with, there are always a few girls who appreciate caregiving games, who like to decorate things in *The Sims*, and who play games like Solitaire.

Figure 3. Games favored by the 11-13 year old design partners in 2004 include the notorious Grand Theft Auto: Vice City

JUST PLAYING ALONG?

So it seems while some girls still like traditional 'girls' play", many others prefer more mainstream "masculine" or violent games. But this observation merely scratches the surface. When one probes to ask what girls *do* while they play such games, we find that girls are playing in their own ways. A significant number of girls we've worked with play *Grand Theft Auto: Vice City,* which primarily involves stealing cars and killing people. One design partner plays for several hours per sitting upwards to 3 times per week; when asked what she likes to do in the game, however, she (like several other players) responded that she pays no attention to the mission structures in the game, but rather, prefers to "just drive." Another partner noted that she "wanted to just help people" after her brother went on a rampage with a baseball bat in the game. In some first person shooter games, girls will just go off on their own, and test out the virtual body to "see what I can do." Another theme that emerged over the project is girl's tendency for subversive play -- girls have historically taken on the "hacker" position, challenging the status quo through their play.[2] "Play can cure children of the hypocrisies of adult life," notes anthropologist Brian Sutton-Smith; he argues that the earliest forms of children's play, from when children are toddlers to teen years, offers narratives which negotiate the risks of the real world: "These stories exhibit anger, fear, shock, sadness, and disgust" (2003*)*.

In the RAPUNSEL design, the themes for the game design centre on the balance between collaboration/cooperation, empowerment, and autonomy - creating the most apparent game and learning system possible to teach programming concepts. It is paramount that we actively use the project goals—learning programming-- as essential components of the game goals and reward system. The game economy, which focuses on technical, social, and creative currencies in the game system, offers multiple reward tracks.

A brief synopsis of the game is important to look at the game economy. The Peeps game takes place on a dance-driven planet which is populated primarily by two groups of creatures: Peeps and Gobblers. Both groups like to dance because it's just what they do, but Peeps learn their dances the hard way, while Gobblers learn through copying moves from Peeps. These two groups are enemies. Gobblers live in the Underworld, while Peeps live primarily in their own "home base." Players control Peeps to become good dancers within short lessons, at first learning short sequences of moves, then saving these and learning progressively more complicated programming concepts such as loops and conditionals to ultimately prepare for dance competitions with Gobblers and with other players in the Underworld. Gobblers intervene, however, threatening the Peeps by stealing their code, or "what they know." While dance is the main theme of the game, it is loosely defined, as moves are also be defensive and offensive martial arts, and particular combinations of moves can concoct voodoo like spells which can put a "trance" on Gobblers so players can protect their moves. Players may choose to play along with this narrative in a competitive, "battle" mode of play, or players may also play in an "exploratory" mode, choosing to decorate their home base or make music (avoiding confrontations like the dance competition).

Players are motivated to move to more advanced levels in multiple channels. First, players may wish to rise up in PeepsPoints, Creds, and Originality stats in the game, and the way to do that is to learn more code and dance moves, save them, and invent great new ones that others will use. Second, players may be motivated to advance in order to earn PeepsPoints and find pods to facilitate home base decoration and music gathering. Third, players may be motivated to move between levels due to a need to retrieve code from Gobblers. Fourth, social recognition in the system on any number of levels is a strong motivating factor.

Figure 4. Screenshot of a work in progress prototype used to see if girls relate characters to programming.

The Peeps game reward system incorporates a familiar, points-based system, but also incorporates alternate reward routes. This combination game economy system was devised to address divergent game goals. First, we incorporated PeepsPoints, which represent the technical currency in the game. PeepPoints are earned through doing the interactive lessons. Lessons offer more points for activities the higher the level of the lesson; therefore, in the introductory levels, points are accumulated very slowly. Points can be gathered up and exchanged for new music loops or editing time in the music editor studio in the Underworld, or players can exchange PeepsPoints in the Underworld for items to decorate the home base. PeepsPoints can also be exchanged for a Peep in adoption if a player has had all but one of her Peeps kidnapped by Gobblers. Players may also adopt extra Peeps to incorporate them into complicated dances using PeepsPoints.

Second, we incorporated "creds," or credibility, which represents the social currency in the game. Creds are based on reputation and respect within the game and are earned when a player's dance or music is used by another player in the system. If someone in the system uses a player's code (which is watermarked with original author), the originator get to make new music and save it in the system. The player's name is stamped into a saved piece of code. Players post their sequences and characters in the Library, which has a voting forum, and other players rank the moves or dance sequences. This social system of exchange provides a key motivation in the game, as 12.4 million US teenagers use instant messaging regularly, and social software is especially popular with teens (Chmielewsi 2004, Palen and Grinter 2002).

Finally, the design involves a reward for creativity. Originality represents the creative currency in the game. The sheer number of unique, modified pieces of saved code in a player's repertoire constitute the originality index. Saving any dance move automatically saves it to the public library—players must save into the correct category, etc. However only modified pieces of saved code – things that are not exactly

like what the system has given a player – will help the player develop Originality points. Originality rank allows the players to visit other peep's home bases to check out new moves, and get special trance spells against the Gobblers. To reward creativity, players automatically "donate" items to the shared library when the items are saved. Home base designs, new music loops, dance moves, and character designs are saved into the shared library, and new players can select to use, for example, someone else's characters instead of their own once they reach the underworld.

CONCLUSION

In research into play systems, I looked at the ways in which girls participating in play environments historically (such as doll play) worked against these systems, and how players in popular computer culture use intervention in games as a play style. "We can manifest a different future. And we must. …It is not enough to simply call for this and then hope for the best; we need interventions at the level of popular culture. Culture workers at their best make just such conscious interventions –mindfully creating technologies that cause us to produce new myths, and mindfully making art that influences the shape of technology" (Laurel 103). Every game is social engineering, and mechanisms for such social mechanisms are inherent in the game goals, interaction styles, and architecture of each and every game. Subversion requires the shifting of authority and power relations towards a non-hierarchical, participatory exchange, disrupting our belief in the overly naive picture of social reality that hegemony depends. We can help make systems that change things, and RAPUNSEL design is a step in this direction.

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[1] RAPUNSEL is a large multi-disciplinary collaboration aimed at designing and implement an experimental game prototype intended to encourage interest and competence in computer programming in middle-school aged girls. This ongoing, three-year project includes a variety of interlinked components: engineering, pedagogy, interface, graphics, networking and more. These components map roughly to core expertise of the three project Principal Investigators (PIs): coding tasks primarily managed by the computer science team led by Ken Perlin (New York University); game design led by Mary Flanagan (Hunter College), a new media designer; and educational assessment led by Andrea Hollingshead (University of Illinois).

[2] I look at this type of play as a kind of philosophical subversion, extending the term from other feminists who use Raymond Williams and Antonio Gramsci's notion of subversion as those behaviors which work against the monolithic structures of "culture" and "state" dominance through hegemony. The feminist work of Jane Kenway on Gramsci is especially an important, for she argues that notions of hegemony can be applied to technology culture; while many postmodernist theorists (Hebdige, for example) have given up on the possibility of anything but an ironic position on the idea of subversion; this stance is in keeping with Jameson's description of late capitalism and power systems co-opting change into its own matrix so that subversion is simply not possible. Theorists such as Antonio Negri, however, and his postmodern Marxism, bolster the possibility of subversion by insisting that there are alternative modes of perceiving and producing social forms and culture. This is a useful proposition when designing activist games.