

Engaging Women in Games Using Emotional Stimuli

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ABSTRACT

Although games are increasing becoming a large part of culture, it seems that women show much less interest in digital games, play less and for shorter timeframes than men. A study in the Journal of Computer-Mediated Communication concludes that many women are put off playing digital games, because they lack meaningful social interactions. (Hartman, Klimmit, 2006) However, according to The ESA, Forty-two percent of all game players are women (2011). These statistics suggest that although women are playing games, they are perhaps not being satisfied with the current state of games today. Research and sales data suggests that women engage more with media that is emotionally stimulated. As women are increasingly becoming a large segment of the gaming market, it is important to ensure that the games industry responds to the type of games they want, in order to ensure healthy market growth, help engage women with technology and in turn, seeing more women in technology-related jobs – a field mostly dominated by men.

This paper investigates past and present games that express social relationships and highlights why it would be very beneficial for the industry to invest time and resources in creating meaningful social interactions in games. By looking at past games that deal with social simulations and relationships, it is possible to analyse which themes and mechanics have been successful (including commercially and critically). As well as looking at games as case studies, games development studios Purple Moon and Ruby Party are also investigated, regarding how successful their approaches have been. In addition, some examples of game literature is researched. For instance, according to research by Sheri Graner Ray, women tend to prefer games that have interesting and deep stories, a claim proven correct by several other theories and studies.

The results of the investigation show that instances of social interaction in games are becoming more popular and are present in small, indie games such as Prom Week, popular titles by large studios such as Bioware's Mass Effect series, as well as niche games like Ruby Party's Angelique. Therefore, it is reasonable to assume that there is a place for social simulation games in the market. Games by Ruby Party, a development team fully comprised of women, has had great success in creating games for a female audience. Therefore, when making games for a female audience, it seems to be best to employ a large quantity of women for developing the game. As the number of women in the games industry is very low, this may be problematic. Another successful move by Ruby Party is that the themes of their game reflect current trends of the time, taking feedback from their consumers and their approaches with how to deliver their product, such as picking the most popular platforms. Further research could be carried out in regards to if games made by women are more attractive to female players and their emotions. Also, questionnaires and focus groups could be carried out to see what

kind of story elements and characters they would prefer to see in games.

General Terms

Theory

Keywords

Gender, Social Simulation, Emotion, Stimuli

1. INTRODUCTION

According to The ESA, more women are playing games than ever before (2011). However, women are not as involved with games culture as men. They also do not play games as often as men and play for shorter time periods. Research suggests that this may be because women prefer to play games with more social interactions, and less violence. (Hartman, Klimmit, 2006) In addition, studies say that women are more receptive to emotional stimuli, rather than visual stimuli (Ray, 2004). This paper will explore how existing games have used emotional stimuli to engage women in games. There will be a focus on how social simulations and relationships in games are expressed. By looking back over past games as case studies, and well as trends and movements, it will be useful to identify which games and game mechanics, have had commercial and critical success. In addition, relevant games theory will also be studied. After researching and analysing these case studies, the successful games mechanics, ideas will be summarised. These case studies could then be used as reference to make games that women may enjoy more than most AAA games that come out today.

2. LITERATURE REVIEW

2.1 Thesis

According to the ESA, 'Forty-two percent of all players are women and women over 18 years of age are one of the industry's fastest growing demographics. Today, adult women represent a greater portion of the game-playing population (37 percent) than boys age 17 or younger (13 percent).' (2011) It is evident that women make up a large segment of the gaming market, but are their tastes being accounted for? The games industry has a history of trying to appeal to a female audience and it is a much debated topic. This project will explore how the games industry can make more enjoyable games for women.

2.2 Methodology & Argument

The methodology of this project will mostly be theoretical, looking at books, journals and existing games to identify what techniques games developers can use to engage women in games. The subject of making games for women has been discussed as early as 1997 and still continues today. This document will focus

on a few (of many) ideas about making games for women, referencing gender in games specifically, as well as other forms of gender studies.

Games developer Sheri Graner Ray's book called "Gender Inclusive Game Design: Expanding the Market" questions why the games industry is limiting its growth through gender bias.

Although this book was first released in 2004, with some stats being outdated, and some criticisms being no longer relevant, it has a lot of great theories and ideas about gender in games.

In the chapter 'Stimulation and Entertainment,' Ray addresses the physiological differences between men and women – in particular, stimulation responses and how important they are to game designers. She says that 'Understanding the different stimulation types and the response each elicits is a valuable tool for building motivation and interest in computer game titles.' (2004, pp.52) Perhaps all game designers should learn about these differences, in order to create gender-inclusive games? When addressing male and female stimulation, Ray references the earliest forms of human society and evolution by talking about how males predominantly served as the hunters, and females were the gatherers. According to the book, the traits and characteristic developments that males developed included good vision, depth perception and an 'enhanced ability to judge movement.' Ray explains that this skill for visual stimuli is prevalent in the traditional computer games market, alongside increasing realistic action in the game, including 'visual stimulation through more spraying blood, more flying debris, and more 'moving parts' in general.' This is done because male gamers react strongly to this kind of stimulation. (2004, pp.53-54) On the other hand, Ray says that women do not have the same kind of reaction to visual stimuli. Instead, according to research, to get a strong stimulation response, women react well to emotional stimuli and tactile stimuli. In traditional games, an emotional stimulus is achieved through story.(2004, pp.54-55) For example, games like 'Gabrial Knight' and 'Myst' emphasise on story and have had a higher percentage of female players compared to the market average (Ray, 2004, pp.55-57).

A few of the books researched, including "From Barbie to Mortal Kombat" and "Gender-Inclusive Game Design," often cite Barbie Fashion designer (1996) for PC as the first successful game for girls and responsible for making designers think more about expanding their market. (Cassel and Jenkins, 1998 pp.30; Ray, 2004 pp.31) This started what is known as the 'Girls Game Movement,' where games companies were set up to make games for girls exclusively, in hope to expand the games market, as well as making computing more accessible for girls (Laurel, 2001, pp.17-25). The book From Barbie to Mortal Kombat, is the result of two years worth of research into what kind of games girls would want to play. Although it is very important to look at the Girls Game Movement, with its innovations as well as its criticisms, it is important to look at other cultures, as perhaps new ideas can be discovered. In Japan, a genre called "Otome Games" (Girls Games) have been available since the early 90s and have had great success. Most of these games are very story-driven and often include social relationships and dating. The otome game "Angelique" for the SNES, came out in 1994 and its success went onto create TV shows, comic books and sequels. Although this game was originally aimed towards young and pre-teen girls, Angelique became extremely popular with young women too.

(Kim, 2009) It is important to note that Angelique is in the 'Dating Sim' genre of games. Dating Sims are often non-violent games that often focus on story and building relationships with other characters, and can be made for both women and men. This supports Ray's theory of emotional stimuli appealing to women. It would be interesting to take on mechanics and conventions Angelique has created, and build on them to make not only a more immersive game, but also something that could appeal to a wider range of women (regardless of their background and gender identities, as Angelique only focuses on heterosexual relationships.)

Ray also talks about how most female characters are designed only for men in mind. In the chapter "Avatar selection," she says that "Male characters are presented as males would like to be in the game – young, strong, and virile. Likewise, the female characters are presented as male players would like them to be – young, fertile, and always ready for sex." Ray argues that although both genders are often displayed unrealistically, male characters are never presented as overly sexual. (2004, pp.104) This concern about female characters is also expressed in the Journal of Computer-Mediated Communication in the article 'Gender and Computer Games: Exploring Females' dislikes.' The article states that 'most digital games rely heavily on stereotypes and archaic role models to portray female characters' and 'Many female characters in computer games are weak victims who are protected or rescued by powerful males.' (Hartman, Klimmit, 2006.) The article also comments on the fact that many female characters in games concentrate more on psychical attributes and exaggerated sexuality. Like Sheri Graner Ray, the article acknowledges that these design choices are to the benefit of men and are likely to repel and even annoy female players. (Hartman, Klimmit, 2006)

In our society today, it is becoming increasingly pressing to start seeing women of different ethnicities and gender identities in media products. In the book 'Media, gender and identity: an introduction,' Gauntlett talks about the importance of identity in the media. Although the author does not specifically mention games, his points are still very interesting and could apply to games. When talking about prejudice in our society, Gauntlett says 'It seems likely that as the media introduces the general audience to more everyday gay and lesbian (and bisexual and transgendered) characters, tolerance should grow.' If inclusion of gay, lesbian, bisexual and transgendered representations in the media has the potential to stop discrimination, then perhaps an emerging media like digital games should be encouraged to include these kinds of characters.

These points about representation are extremely important in regards to emotional stimuli. The lack of different representations in the media can be very harmful, leading the affected individuals to feel unimportant and powerless. (Williams et al, 2009) Therefore, if certain individuals are not represented in games, there may be a negative effect on the engagement with a game.

Another important point raised in the Journal of Computer-Mediated Communication raises is that most games aimed at teenagers and adults feature violence (that is often realistic). This is problematic, as research suggests that men are more interested in violent entertainment and that women tend to have a very low tolerance for violence and aggressive conflicts. The article states

that 'Many computer games do not satisfy females' preference for non-violent content. The lack of suitable non-violent games may also help explain women and girls' low interest in such games.' (Hartman, Klimmit, 2006.) Therefore, if game developers wish to create gender-neutral games or games for women, it would be necessary to avoid violent themes. It would be interesting to see more recent studies on this subject, now that social and mobile games are now becoming popular with women. This research is mirrored in the book "Chris Crawford on game design." In the chapter 'conflict,' Crawford states that 'women don't play out their conflicts in the same dimensions that men do. Where men rely heavily on physical forms of conflict, women tend towards social conflict.' (2003, pp.56) Later in the chapter, Crawford expresses his disappointment with the game industry's reliance on violence as a form of conflict, calling it overdone and distasteful. The challenge for game designers is how to effectively create conflict without violence.

The article also suggests that women may be less likely to be involved with games, as they do not feature enough social interaction, especially in single player games. 'Television research has revealed that females value programs with considerable amounts of meaningful dialogue and character interaction, and are less attracted by action-oriented formats with taciturn people who ignore each other.' (Hartman, Klimmit, 2006) This raises similar issues concerning emotional stimuli that Ray brought up in her book, as well as comments by Crawford.

2.3 Proposal

To conclude, many of the researched sources share similar ideas and theories about the topic of engaging women in games. This gives a clear indication of what topics to research further; Representation of women, violence in games and emotional stimuli. Since there are so many topics to consider, the paper will just focus on one aspect. Emotional stimuli will be looked at, by researching games as case studies and seeing how successful certain themes and mechanics have been. The games looked at will vary from games made exclusively for women, independently developed games, big-budget games and early games about emotion and human interactions.

3. GENDER PREFERENCES & EMOTIONAL STIMULI

This study has chosen to use emotional stimuli as a means to engage women in games, as it is a stimulus that women strongly respond to. In 'Gender-Include Game Design,' Ray talks extensively about evolutionary psychology, including how it has shaped men and women's preferences when it comes to games. This research is very important, and serves as the impetus for this paper. Ray says in chapter the chapter 'Stimulation and Entertainment,' that 'Understanding the different stimulation types and the response each elicits is a valuable tool for building motivation and interest in computer game titles.' (2004, pp.52) The research suggests that men enjoy more visual stimulation, due to their roles as hunters in the past. Women, on the other hand, are more stimulated by emotional stimuli and tactile stimuli. According to Ray, most games achieve an emotional stimulus by using story. Games like 'Myst' and 'Gabriel Knight', which rely on storytelling, have had a large percentage of female players,

compared to the market average at the time of their release. (Ray, 2004, pp.55-57).

As for features in games that women generally do not enjoy, many studies have already been carried out. Such studies are useful to this project, as it will be important to know what themes and mechanics not to use for the game prototype. In the literature review, it was discovered that, according to Sheri Graner Ray, many female characters in games are 'hypersexualised' and designed for a male audience exclusively. (2004)The Journal of Computer-Mediated Communication supported mirrored this concern, saying that 'Many female characters in computer games are weak victims who are protected or rescued by powerful males.' (Hartman, Klimmit, 2006) In addition, the study also revealed that women tend to have a very low tolerance for violence and aggressive conflicts. The study also spoke about how women want more social interaction in games.

This essay will greatly explore social interaction in games, as a way to make women more emotionally involved, and therefore have a better gaming experience. Throughout the history of digital games, many developers have tried to make games more emotional, by creating stories about people.

4. CASE STUDY: EARLY GAMES ABOUT PEOPLE

In 1982, Game Designer Chris Crawford wanted to make a game about people and their behaviour. He felt that current games were only about 'things.' He says that 'You acquire things, expend things, utilise things, shoot at things, but it's always things, things, THINGS! There are never any real people in our games! My goal was clear: I must perforce design a game about people.' (2003, pp.260) As a result of this he created 'Gossip,' an experimental game released in 1983. Although it may have never been released due to the Video Games Crash of 1983, it was none of the less a very innovative game and a milestone in games about people and interaction. Crawford managed to create a small part of human behaviour onto an Atari computer. He explains 'A great deal of gossip boils down to statements of affinity: "I like Jane," "I hate Tom," and so forth. Such statements have a pronounced effect on the listener, serving to alter the listener's own affinities.' (2003, pp.262) Gossip focused on these declarations of affinity.

1985 introduced another game about people; Activision's 'Little Computer People.' (Or 'Apple Town Story' in Japan, featuring a girl and her cat rather than a male character) The game is also known as a 'low-interactive' game (Crawford, 2005). The game was very much like an interactive dollhouse, and has little plot or gameplay. However, Little Computer People has been cited as the 'mother' of 'The Sims' and was played by the Sims creator. (Wright, 2000)

The Sims was one of the most revolutionary games to involve people. The first entry in the series has sold over 16 million copies, according to its publisher, Electronic Arts. (Business Wire, 2005). According to Journal of Computer-Mediated Communication, 'The Sims' success as a top selling video game has been attributed to its attractiveness to female players' (Carr, 2005 cited in Hartman, Klimmit, 2006) Rather than using a linear, pre-determined storyline, The Sims uses 'emergent narrative,' where the player creates their own story though play. For example, the player creates their own character, which they can name and customise, as well as make their family and living environment. The player can then explore their character's jobs,

relationships and general living. As the gameplay mechanics are so free, the story comes through the user playing and experimenting with the characters that they have created and customised.

Media scholar Henry Jenkins said of the Sims in his paper 'Games design as narrative architecture' 'Most players come away from spending time with The Sims with some degree of narrative satisfaction. Wright has created a world ripe with narrative possibilities, where each design decision has been made with an eye towards increasing the prospects of interpersonal romance or conflict.' (pp. 128, 2004) Therefore, the success of the Sims has shown that games about people not only give players narrative satisfaction, without the use of violent conflict, but that it can also be extremely successful on the market.

To sum up, games developers throughout the years have experimented with different forms of interactive storytelling to express narrative about people. This idea was first expressed by Chris Crawford, who wanted to see more games about people and social situations, rather than games about 'things.' By 2000, The Sims, a game solely about people and relationships, saw critical and commercial success. This success proves that there is certainly a place for games about people and their relationships. Emergent narrative is an interesting narrative device used by the Sims Designer Will Wright to create appealing game play to women. Present games such as Animal Crossing by Nintendo also use emergent narrative as a storytelling device.

5. CASE STUDY: GIRLS' GAMES MOVEMENT

During 1996, 'Barbie Fashion Designer' for PC by Mattel surprisingly sold over 500,000 copies, competing with high profile games like 'Quake.' Before this time, games were considered to be a male hobby, but the success of Barbie Fashion Designer encouraged the industry to think about expanding their market. What is known as the 'Girls Game Movement' is the result of games being made exclusively for girls. This move was not only to make money and expand the games market, but to also introduce girls to games, so that they may take an interest in computers, engineering and technology.

Purple Moon was one of the most well-known games companies in regards to the Girls Game Movement. Before starting development on their games, Purple Moon spent two years doing extensive research on how to make games that girls would like. This type of research included interviews with girls and their parents and teachers, focus groups, cognitive psychology, spatial recognition, gender studies, play theory, sociology and primatology. (Laurel, 1998) The research carried out to make these games was documented in the book "From Barbie to Mortal Combat," by Justine Cassell and Henry Jenkins. This research spanning two years revealed that girls prefer game play activities such as creating, collecting and constructing, and preferred emphasis on story, characters and relationships, rather than goal-based game play (1998). This book had a substantial impact on games, and a follow up called Beyond Barbie and Mortal Combat: New Perspectives on Gender and Gaming was written ten years later (Y. Kafai, C. Heeter, J. Denner, J. Sun, 2008).

Laurel and her team made the game 'Rockett's New School,' based on their research. Laurel wanted to make something to 'exercise the love of social complexity and narrative intelligence that drives most of their play behaviour; and which embeds in it

values about noticing that we have lots of choices in our lives and the ways we can conduct ourselves.' (Laurel, 1998) In Rockett's New School, which plays similar to visual novel games, players can experience the story by choosing how they react to certain social situations, and experiencing the character development.

The Purple Moon games were heavily criticised for perhaps reinforcing stereotypes and behaviours that could keep girls out of computing and engineering. (Gurak, 2001) However, Laurel defended her design choices by simply citing her own research: "Girls shouldn't think about this, and so we shouldn't encourage them. After talking to thousands of girls and seeing survey results from thousands more, I say "horsefeathers." Popularity is a pervasive concern for preadolescents. Emotional health is not about whether preteens think about popularity, but how they think about it and what kinds of values they employ in deciding how to behave." (Laurel, 2001, pp. 26)

To conclude, from looking at the Girls Game Movement, it is clear that girls were initially drawn to these games due to being able to identify with the characters. Laurel's research directly asked girls and parents what kind of elements they want in the game and the findings became influential in games academics. However, the games received a large amount of criticism, due to their seemingly stereotypical subject matters.

6. CASE STUDY: JAPAN'S GAMES FOR WOMEN

The Girls Game Movement, or 'Pink Games' received a lot of criticism at its time of release. Games designer Ernest Adams called into question the need for games designed and marketed exclusively towards girls. He asked 'If the number of games for girls is a tiny fraction of the total, it tells the girls that they are second class cybercitizens, who have to make do with what they are given...why make 'games for girls?' why not just make good games for everybody?' (Adams, 1998) However, Japan's Games for women have been very successful since their inception and therefore could act as a counter-argument to Adams' claims.

Prior to the Girl Game Movement in western countries, Japan had also explored the possibility of making games for girls, by focusing on themes of social interaction. Japan's "Women's games" enjoyed much more success than the Girls Game Movement, and are still popular today. By looking at this genre of game and comparing it to the Girls Game Movement, perhaps it is possible to see what kind of themes and mechanics would be successful in helping girls and women becoming more involved with games, using emotional stimuli. Unlike the Girl's Game Movement, Japan's games for women were not created from a feminist standpoint. Instead, it simply wanted to expand to a new market, and done so by taking female members of other games teams at Koei, and telling them to make a game that would interest them.

An interesting fact about these games is that their themes are based on current trends of the time. For instance, Ruby Party's "Angelique" was inspired by Shōjo manga, or comic books for girls. Therefore, the game used very similar artistic styles to Shōjo manga, and included its common conventions, such as romance, relationships and emotions. (Toku, 2006) Likewise, with newer games like the "Harukanaru Toki no Naka de" series, the game is set in Heian-era Japan, during the Genpei war. The Heian period and the Genpei war have been fictionalised and dramatised throughout Japanese history, (Arnn, 1979 cited in Kim, 2009,

p.179) especially during the 'Yoshitsune boom' of 2004-2005, which saw many different Genpei War media released, including TV shows and games. (Yomiuri Shinbun, 2005 cited in Kim, 2009, p.179) By using familiar themes and media, popular medium, the developers successfully familiarised girls and women with games.

To conclude, looking at Japan's Games for Women has proven very useful in this study. Considering these types of games are still being released to a large fan base, they must be successful engaging their audience. The games mostly use character interaction-focused scenarios in combination with other, more common forms of game mechanics to create story and result in emotional, narrative driven situations. Further research for this topic could investigate whether a team of female developers could make more appealing games for women, or whether female authors or directors would make more engaging books/films and other media for women.

7. CHOICE & DECISIONS – MODERN GAMES

Some games in the past five to ten years have explored making more complex conversations and relationships by adding choices in the game's dialogue, which have the potential to change the story/experience for the player. As referenced earlier The Purple Moon games and Japan's games for women used these decision making mechanics to simulate conversations and relationships in the 90s, and the latter today. However, it is now becoming common for these mechanics to become more complex and also mixed with other types of gameplay.

Bioware's Mass Effect is an action role-playing series of games that mixes more traditional gameplay elements (such as shooting and a cover system) with multi-choice dialogue options for its narrative. The Mass Effect games use a conversation wheel where the player can choose a social response when interacting with other characters. Some decisions merely give the player information about the story, game world or quests. Others help develop the player's character, named 'Shepard' (Who can either be male or female) into a paragon or renegade personality. Certain decisions on the Mass Effect games some have a great effect on the story; sometimes making the story vary from player to player.

It is important to note that these choices made by the player can carry forward into the latter parts of the series, making the player's choice sometimes very difficult and, depending on how immersed the player is, emotional. For instance, at one point in the story of Mass Effect, the player must decide which of his/her two human supporting character to save on a suicide mission. Depending on the player's choice, the character that dies would not appear in the next two instalments of the franchise. Similarly, the player can choose to have a romantic relationship with a choice of the NPCs (non-playable characters). Again, this decision carries forward to future games.

Mass Effect's detail to social situations is highlighted by the direction and staging of the game. When the player talks to another character, the game's camera will often zoom in, and frame the character's head and shoulders. Due to this framing, the player can clearly see all of the different facial expressions the characters demonstrate. According to Schmidt and Cohn, the face is a 'visible signal of others' social intentions and motivations, and facial expression continues to be a critical variable in social interaction,' (2001). It seems that facial expressions are very

important in games, in regards to social interactions and therefore in creating emotions.

To conclude this case study of Mass Effect, it seems that today's more advanced technology in games has allowed for another level of emotional stimuli in games. With better technology and bigger development teams, games can now have more cinematic scenes, including realistic facial expressions and voice acting. In addition, Mass Effect also uses player choice to shape the main character and to possibly change the events of the storyline slightly. These elements, combined with a main character that the player can customise, creates an interesting and emotional game experience. Bioware has combined this interesting way to express emotion with action-oriented game play, making the series a commercial success.

8. RELATIONSHIP FOCUSED GAMES – INDEPENDENT GAMES DEVELOPERS

So far, this paper has looked at the success of commercial games in regards to emotional stimuli, storytelling and relationships in games. However, due to the way in which the games industry rapidly changes, it is necessary to research the impact of independent games developers on this topic.

There are several examples of games that have relationships and social interactions as the focus of the game play. For example, Facade, a PC game released in 2005, is a game celebrated for its revelations in human interaction simulation, winning the Grand Jury Prize at the 2006 Slamdance Independent Games Festival. In the game, the player takes control of a guest visiting a married couple in their apartment. The couple, Grace and Trip, are heard having passive-aggressive conversations and occasionally arguing. The player can try to help the couple by typing responses during certain moments of the dialogue. The game has a variety of different endings, depending on what the player says, including the couple breaking up, and the player being kicked out of the apartment.

A newer game, "Prom Week" is a game for web platforms, like Facebook, developed by a team of students and faculty at UC Santa Cruz. The game is about social relationships and was nominated for technical excellence award at Indie Games Festival for its unique artificial intelligence system. It operates in a similar fashion to The Sims, where the player can make characters communicate with each other by selecting different options that pop-up around the character. However, unlike The Sims, the player can see what the characters are saying to each other, rather than the Sim's gibberish language (known as 'Simlish'). In addition, the game's artificial intelligence system generates specific responses depending on which characters are conversing. It also remembers all of the social interactions from all the characters in the game, making an ever developing back story that the player has created. Each level of the game is a different character's story, where the play must achieve certain goals, but these goals can be won in many different ways, due to how the game operates.

To sum up, these independently developed games have made a lot of progress in regards to conversation simulations, despite being heavily inspired by games like The Sims. Perhaps independent developers are in a better position to take risks with gameplay and content, as they often do not have to be concerned with publishers. Both Facade and Prom Week have advanced social simulation systems. It would be very interesting to see how people

respond to these systems, but with higher budgets and better art production, such as in games like Mass Effect. It seems as though some games are slowly moving in this direction anyway, and as such, further research into this area could easily be conducted in the future.

9. CONCLUSIONS

This body of research has explored how games in the past and present have used emotional stimuli to engage players with digital games. Research has shown that while men react strongly to visual stimuli, women are more receptive to emotional stimuli. Also, studies have shown that women dislike violent conflict, sexualised female characters and want to see more social interactions in games. This paper has looked at ways how different games have simulated social interactions, and created emotion through characters and storytelling.

The most common ways that games in the past and present have used to create emotional stimuli is through story. Games like Myst and Gabriel Knight had a large portion of female players, compared to the market average. Therefore, the paper looked into what kind of themes and techniques past games have used to create stories and emotion.

In the early days of video games, designers already wanted to see examples of games about people, and human interactions. Crawford spent a lot of time on his unreleased game Gossip in 1983, which saw a basic form of a conversation simulation games. This was followed by games like Little Computer People by Activision, released in 1985; known as a low-interactivity game, which is primarily about life at home.

By 2000, Will Wright released The Sims, inspired by Little Computer People, which went on to be highly successful and saw many sequels and expansion packs. This game saw a high percentage of female players and its story was directed by the player through emergent narrative.

This paper also explored the impact of the Girls Game Movement. Although the Girls Game Movement was highly criticised and eventually came to an end in western countries, the two year research conducted to make the games by Purple Moon was very valuable, confirming that girls prefer different gameplay themes and mechanics to boys, some of which being a focus on characters and story. The narrative in games like Rockett's New School, mainly focused on popularity, clothes and boys, yet the way the game was structured allowed young girls to choose how they would react to certain social situations.

As a counter argument to some of the criticisms of the Girls Game Movement, this report also researched the successful games for women from Japan. These games strongly featured character relationships and story, alongside more traditional gameplay features, such as a strategy game in the case of Harukanaru Toki no Naka de. The success of these games may be contributed to the fact that the development team was 100% women, which could prompt further research to if a game designed by women is more attractive towards women.

Newer, big-budget games like the Mass Effect series of games are also making an effort with character interaction, story and creating emotion. Even though Mass Effect is not exclusively targeted towards a female audience, certain elements of the game are important to look at, due to its emotional stimuli techniques. Mass

Effect has a linear storyline, yet players can choose how their main character reacts to certain situations, and choose to build relationships with various characters. In addition, the games realistic graphics and animations can convey character facial expressions and emotions, allowing a deeper empathy with the characters. Looking at games like the Mass Effect series has also been useful to this research, as its success of blending action-oriented gameplay with social situations has earned it commercial and critical success, proving there is a place for stories and conversations simulations in the mass market. On the other hand, the games industry has seen independent games developers experiment with social interactions as well, with innovative games like Prom Week and Facade receiving awards and recognition.

To conclude, looking at these different case studies has shown that through time, games that place a high emphasis on story and characters has been slowly increasing. It has also proved that the games are very capable of pleasing a female audience, with games being designed exclusively for women/girls having story and characters as its focus (such as Angelique.)

From looking through the case studies, the most prominent themes and mechanics that contributed to emotional stimuli include **conversation simulations through player choice** (Angelique, Mass Effect, Prom Week, etc), **relationship building, including romance** (Prom Week, Mass Effect, Harukanaru Toki no Naka de, The Sims), **non-violent conflict resolution** (Rockett's New School, Facade) and **using character facial expressions to convey emotions** (Mass Effect, Facade, etc).

In the case of further research, questionnaires could be conducted towards women, asking what kind of story elements and characters they would prefer to see in games. These findings could then be used to create a prototype game demo, to be shown to a focus group and discussed. In addition, more theoretical work could be assessed, including looking at women's preferences in books, TV and film, and measuring their emotional responses.

10. REFERENCES

- [1] Activision, 1983. Gossip. [computer game] ZX Spectrum, Commodore 64, Amstrad CPC, Atari ST, Amiga, Apple II. United States, Activision.
- [2] Adams, E. 1998 Games for Girls? Eeeeewww! [Online] Available from: http://www.designersnotebook.com/Columns/004_Games_for_Girls/004_games_for_girls.htm [Accessed: 2nd March 2012]
- [3] Atari, 1983. Gossip. [computer game] Atari 400/800/XL/XE. United States, Atari.
- [4] Bioware, 2010. Mass Effect 2. [computer game] PC, XBOX 360 PlayStation 3. United States, Electronic Arts Inc.
- [5] Brown, R. M., Hall, L. R., Holtzer, R., Brown, S. L., & Brown, N. L., 1997. Gender and video game performance. *Sex Roles*. [e-journal] Volume 3 Available through: Springerlink [Accessed 7th May 2012]

- [6] Business Wire, 2005. *The Sims Franchise Celebrates Its Fifth Anniversary and Continues to Break Records*. [online] Available from: <http://nms.sagepub.com/content/11/5/815.full.pdf+html> [Accessed 7th May 2012]
- [7] Cassel, J, & Jenkins, H., 1998. *From Barbie to Mortal Kombat: Gender and Computer Games*. Massachusetts, USA. MIT Press.
- [8] Crawford, C., 2005. Chris Crawford on Game Design. Indiana, USA. Newriders.
- [9] Expressive Intelligence Studio, 2012. Prom Week. [computer game] PC. United States, University of California.
- [10] Gauntlett, D., 2002. *Media, Gender and Identity: An introduction*. New York, USA. Routledge.
- [11] Graner Ray, S., 2004. *Gender Inclusive Games Design: Expanding the Market*. Advances in Computer Graphics and Game Development. Massachusetts, USA. Charles River Media.
- [12] Gurak, L.J., 2001. *Cyberliteracy: navigating the Internet with awareness*. Indiana, USA. Yale University Press.
- [9] Hartmann, T. & Klimmt, C. (2006) *Gender and Computer Games: Exploring Females' Dislikes*. *Journal of Computer-Mediated Communication*. [e-journal] 11 (24) Available through: Wiley Online Library [Accessed 10th January 2012]
- [10] Information Solutions Group (2011) *2011 Social Gaming Research*. [Online] January 2011. Available from: http://www.infosolutionsgroup.com/pdfs/2011_PopCap_Social_Gaming_Research_Results.pdf [Accessed: 10th January 2012]
- [11] Kim, H., 2009. *Women's Games in Japan: Gendered Identity and Narrative Construction*. *Theory, Culture and Society*. [e-journal] 26 (2-3) Available through: SAGE Journals Online [Accessed 10th January 2012]
- [12] Laurel, B., 2001. *Utopian Entrepreneur*. Massachusetts, USA. The MIT Press.
- [13] Mateas, M., Stern, A., 2005. *Facade*. [computer game] PC. United States.
- [14] Maxis, 2003. *The Sims*. [computer game] PC. United States, Electronic Arts Inc.
- [16] Purple Moon, 1997. *Rocket's New School*. [computer game] PC. United States, Purple Moon.
- [15] Schmidt, K. Cohn, J., 2001. *Human Facial Expressions as Adaptations: Evolutionary Questions in Facial Expression Research* [pdf] Available from: <http://www.pitt.edu/~kschmidt/schmidtcoh> [Accessed 20th March 2012]
- [14] Ruby Party, 1994. *Angelique*. [computer game] Super Famicom. Japan, Koei
- [15] Ruby Party, 2000. *Harukanaru Toki no Naka de*. [computer game] PlayStation. Japan, Koei.
- [16] TED, 1998. *Brenda Laurel on games for girls* [video online] Available at: http://www.ted.com/talks/brenda_laurel_on_making_games_for_girls.html [Accessed 20th March 2012]
- [17] The Entertainment Software Association, 2011. *2011 Games and Family Life*. [Online] Available from: <http://www.theesa.com/games-improving-what-matters/families.asp> [Accessed: 2nd March 2012]
- [18] The Entertainment Software Association, 2011. *Essential Facts about the Computer and Video Game Industry*. [pdf] May 2011. Available from: http://www.theesa.com/facts/pdfs/ESA_EF_2011.pdf [Accessed: 10th January 2012]
- [19] Wardrip-Fruin, N. and Harrigan P. eds. (2004) *First Person: New Media As Story, Performance, and Game*. Massachusetts, USA. The MIT Press.
- [20] Williams, D. Martins, N. Consalvo, M and Ivory, J.D, 2009. *The virtual census: representations of gender, race and age in video games*. *New Media Society*. [e-journal] Jul 21, 2009 Available from: <http://nms.sagepub.com/content/11/5/815.full.pdf+html> [Accessed 2nd March 2012]
- [21] Wright, W. (2000) *A chat about the "The Sims" and "SimCity"* [Online] Available from: <http://edition.cnn.com/chat/transcripts/2000/1/wright/index.html>