

Why Don't Women Play Video Games?

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Abstract

Purpose — The premise of this research is that there is a large untapped market for video games that appeal to women. The purpose of this research is to determine to what extent that is reflected in three specific cases, and to find potential areas for further research into video game development that could eventually lead to commercially successful titles.

Methodology — Taking an interpretivist approach, I conducted three long interviews with different women in order to find out about their experiences and perceptions of video games and play and how they express their gender. I gave separate group of six women a type of video game to play that has traditionally appealed to a female market in the past and asked them to complete a short questionnaire on their experience of the game and some more general questions about their leisure time.

Findings — While some women's experiences support the findings of existing research into games that appeal to women, individual women may have tastes quite at odds with the common perception of what makes a 'girls game'. All the women who took part in the research enjoyed at least one type of video game, but universally they reported that they did not see themselves as the target audience of games publishers. I conclude that women might consume video games as avidly as men if they were actively marketed to women.

1. Introduction	1
2. Literature Review	4
1. Background	4
2. Gender	4
3. Marketing	5
4. Relationships	5
3. Methodology	7
1. Theoretical Perspective	7
2. Research Context	7
3. Sample Selection	7
4. Procedure	8
5. Analysis	8
4. Results	9
1. Participants	9
2. Constructing Gender Identity	9
3. Childhood Play	9
4. Exposure to Technology in Childhood	10
5. Favourite School Subjects	10
6. Adolescent Years	11
7. Early Adulthood	11
8. Relationships	11
9. Play Preferences and Hobbies	12
10. Stories	12
11. Current Technology	12
12. Current Gaming Habits	13
13. Relaxation Techniques	14
14. Experience with Video Games	14
14.1. Angry Birds	15
14.2. Bejewelled	15
14.3. Grand Theft Auto	15
14.4. Nintendogs	15
14.5. Rally Master Pro	15
14.6. The Sims	16
14.7. Solitaire	16
14.8. Super Mario	16
14.9. Tomb Raider	16
14.10. Unnamed Fighting Game	17
14.11. Wii Sports	17
15. Secondary Group	17
5. Discussion	19
1. Defining Gender	19
2. Early Play and Schooling	19
3. Socialization in Relation to Technology	19
4. What Is Fun	19
5. Violence and Addiction in Games	20
6. Getting the Product to Market	20
7. The Viability of Adventure Games	20
8. Conclusion	20
Bibliography	21
A. Consent Form	23

Chapter 1. Introduction

This research takes the common perception that women do not play video games and asks if this is really true and to what extent the video games industry serves the needs of women. In fact women do play video games; most social gamers are women and around half of online gamers are women. Also, Nintendo has created family friendly games. However, after a brief period of success in the 1990s with titles like *Barbie: Fashion Designer*, it can be argued that the video games industry no longer puts serious effort into making games for computers and consoles that appeal to women. This project aims to investigate how this market, if it exists, can be best served.

In 1996, *Barbie: Fashion Designer* became the most successful game of the year and Justine Cassell and Henry Jenkins wrote *From Barbie to Mortal Kombat* (2000). It discussed "how most games featured narrow gender stereotypes, how few games on the commercial market were of interest to girls and women, how female players wanted different gaming experiences, and how women were not a visible part of game production." (Kafai et. al. 2008)

The success of this title gave rise to what came to be known as 'pink and purple box' games. Pink games emphasized "traditional values of femininity" often involving girls' "apparent interest in appearance and clothing," while purple games, named after Purple Moon — the company that pioneered the concept, "built on girls' real life interests in sharing secrets and building friendships." (Kafai et. al. 2008)

However, by the end of the 1990s, publishers that targeted a female audience had closed (Purple Moon) or been absorbed by larger publishers (Laurel 2008). Developers went back to concentrating on the core male audience and traditional games designed specifically for females disappeared from the marketplace. In the area of console gaming, recently Nintendo has led the way in creating platforms and games that appeal to a non-gender specific audience. However, the most popular games, in terms of sales, remain fighting, racing, sports simulation, and strategy games.

At the same time as the decline of 'pink and purple box' games, the Internet was undergoing rapid expansion. In 1994 the Netscape Navigator Web browser was launched heralding the change of the Internet from a primarily text based network to a much richer visual experience. Just a decade later Facebook was launched, and the term Web 2.0 was coined to describe the massive changes in the way the Web was being used. The Internet had been transformed from websites containing static information to interactive sites that enabled individuals to connect with their existing friends and to make new friends all over the world. The social network had arrived, and with it social gaming — games of all types from card and board games to 3D role playing games, played using the infrastructure of social networks to enable users to play together, competitively or co-operatively, synchronously or asynchronously. It has been claimed that the average social gamer is a 43-year-old woman. (Ingram 2010) In 2006, according to the Entertainment Software Association, 38% of players were female, while 42% of online players were female. (Ingram 2010) According to Macrovision Corporation, 71% of its players were female and the most popular games were puzzle games, followed by card games. (Ingram 2010)

Assuming an even distribution of the population by sex one would expect women to make up around 50% of the overall market if games appealed equally to men and women. Making the further assumption that the mens' market has been successfully captured and that their numbers represent half of the potential market, then if the existing market was worth \$10 billion, reaching the missing potential market could add \$2.4 billion to that figure. These figures are entirely speculative, but serve to demonstrate that in a business which generates the kind of revenues that the video games market does, as we shall see later, even a small increase in market can lead to a large return.

Until recently, the traditional games companies seemed uninterested in the biggest area of growth; social gaming. In 2011 Zynga, creators of Farmville, has been valued at \$7 - \$10 billion dollars, surpassing the value of traditional games company Electronic Arts. (Tsotsis 2011) In July 2011, Electronic Arts bought PopCap Games for an undisclosed sum thought to be valued at around \$1.3 billion. (Rao 2011)

The selection of online games from one provider (gamesgames.com 2012) includes the following genres:

- interior decoration
- dress up
- cooking

- time management
- dating
- quizzes
- hairdresser
- caring (pets and horses)
- restaurant
- celebrity games
- nail studio
- farming
- make up

It has been argued that there is a market for traditional video games specifically targeted at a female audience. (Laurel 2008) However, the counter argument is that this approach is of limited value and that game developers should concentrate on making gender-inclusive games. (Lazzaro 2008). In the early days of video games, titles were far less gendered. (Ray 2004) One genre that had roughly equal sales to male and female consumers was the adventure game, now known more commonly as interactive fiction.

In addition to determining potential areas of further research to determine how to best access the untapped market, a secondary aim of this research is to discover if the adventure game is still a viable form with female consumers by having a small group play an adventure game they have not previously experienced and to record their experiences with the game.

If the large game studios are not interested in providing games that will appeal to this audience then it may fall to the lone developer to create a game for that audience, and the adventure game is one of the few types of game where this remains possible with modern technology. Veteran video game designer Chris Crawford (2005) describes the structure of an "adventure games" as follows: "Several dozen rooms are populated by a variety of objects, obstacles, and antagonists. Players see only a textual description of the room they occupy; their goal is to wander through the maze of rooms to reach some desired goal." From their beginnings in the 1970s, parsers developed from handling only verb- object pairs to recognizing synonyms and extended sentences. But Crawford (2005) argues: "Despite their name, adventure games were really intricate puzzles, not games."

Crawford (2005) argues that while there is interaction, and fiction "in the sense of being made up", it is not storytelling. He illustrates this with an example from the Infocom game *Planetfall*: "Floyd the robot befriended the players early in the game. Floyd helped out in all manner of ways and provided lots of hummers diversions. But then, in a moment of danger to the player, Floyd charged forward and sacrificed himself to save the player. Players were overwhelmed with the moment's emotional power. This great moment, I must point out, was absolutely non-interactive. There was nothing players could do to avert it. Players could insult Floyd, abuse Floyd, ignore Floyd, and he'd still nobly sacrifice himself. This behavior was programmed into the game."

Crawford is trying to illustrate why "interactive fiction" will not lead to interactive storytelling, but in doing so he acknowledges that something that is essentially a puzzle has the power to provoke an emotional response in the player. Steve Meretzky was one of the 'implementers', as the game developers at Infocom were known. Discussing *Leather Goddesses of Phobos* in an interview with veteran game designer Sheri Graner Ray (2006), he said: "At that time, the majority of the game audience was less than five percent female. The audience for Infocom games was roughly 25%-30% female. So we knew we had a female audience and designed the title accordingly." Ray (2006) observes that early socialization often leads to girls being discouraged from using computers. "Many researchers believe that the concept of the computer as a 'male' object is reinforced in children at a very early age." Arguably, like the motor car before it, commoditization means computers are now for everyone. However, this was not the case in the 1980s and yet more than a quarter of Infocom's customers were females.

Ray (2006) suggests that one possible reason for this may lie in the evolution of the female brain: "While females do have the same binocular vision as males, their role as gatherer did not require the development of an adrenal

response to visual stimulation. Therefore, females do not have the same physiological response to visual stimuli." She says it is not that females cannot appreciate the visual, it is simply that they do not have the same physiological reaction to it. According to Brigitte Rescher and Peter Rappelsberger, to provoke an equivalent physiological reaction in females there must also be either emotional or tactile stimuli. (Ray 2006) Perhaps the death of Floyd the robot is just such an emotional stimulus. However, this rather simplistic binary division of male and female ignores the gender continuum that may lead either sex to identify as 'butch' or 'femme' or somewhere between the two. Indeed, Edley and Wehterell (1995) dispute these physiological effects and find them mainly inconclusive. They suggest that gender socialization of men and women means that gender may not be fixed and may change over time.

Ray (2006) states that another factor in discouraging females from playing games is the selection of avatars, the representative of the player in the game. She argues that while male players are content to play any female character, the opposite is not true. In most Infocom games the gender of the character was never mentioned while in *Leather Goddesses of Phobos* the player was given an in-game mechanism of determining gender; a visit to the rest room. Professional puzzle designer Scott Kim defines a puzzle as "a problem that is fun to solve, which means that the goal is to find the right answer." (Ray 2006) He contrasts this to the goal of a 'game'; "to beat another player." According to Kim, 70% of crossword puzzle players are female. Kim attributes the appeal of puzzles to females to the use of the "diffuse skill of putting things in order" and the "lack of violence and action of traditional computer games." So if, as Crawford suggests, adventure games are puzzles, then this could also explain their appeal to a broader audience, perhaps due to the absence of power struggle.

Ray (2006) also notes the importance of backstory; the background behind a creative work. "While fiction authors would never consider starting on a new work without doing the back-story first, it is often an element that is overlooked completely in game development, particularly in genres that do not traditionally have strong story elements." In 1984, *Elite* became the first game to include an entire novella, by established writer Robert Holdstock, in the packaging. Infocom's approach was to include 'feelies', with their games — objects that related to the game. For example, *Planetfall* included an ID card, three postcards, a stellar patrol recruiting manual, and letters home. Crawford (2003) believes the problem with many games is the absence of the 'human factor' and that 'people, not things' are important. He has the following to say about his geopolitical strategy game in which the player has to avert nuclear war: "I believe the real emotional kick in Balance of Power came from the feeling during the crisis that you were confronting a real person with a puzzling but consistent psychology. You were sure that, if you could only get underneath his skin, you'd have the upper hand and win every game."

Games that appeal to females do not need to be devoid of conflict, argues Crawford (2003). "Female conflict over issues that are vital to female interests can be just as ferocious as male conflicts, but they differ in two respects. First, women don't go around with a chip on their shoulders, seeking out conflict as men are wont to do. Second, 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 toward social conflict."

In theory, the text adventure offers the puzzle challenge of putting all the pieces in place, and if coupled with strong story elements also has an emotional element that enhances the experience. At Infocom, Amy Briggs created *Plundered Hearts*, a romantic adventure game. It received high praise for its characterization and story telling, although there were some complaints from players that they felt restricted in their actions (a player could not "take the dueling pistols" as it was "unladylike").

Ultimately, no-one wants to play a game unless it is fun. Richard Rouse (2005) stresses the importance of the design document to the development of the video game but observes that, unlike the screenplay, there is no agreed format. Rouse also emphasizes the importance of play testing: "When play testers look at a game, they try to see if the game is any fun and to find faults in the game mechanics." He notes that players prefer "a game that plays really well and crashes occasionally" than one that is bug-free, but no fun to play. It is therefore important to identify what kind of games women might enjoy playing.

Chapter 2 contains a review of current literature on the subjects of gender, marketing and relationships as they relate to video games. Chapter 3 contains an overview of the research methodology used to conduct the interviews and group activity. Chapter 4 contains the consolidated results of the research. Chapter 5 contains a discussion and possible interpretation of the findings.

Chapter 2. Literature Review

1. Background

Kafai et. al. (2008) quoted Entertainment Software Association figures that show that, overall, 38 per cent of game players were female, but for online games that figure rose to 42 per cent. However, when looking at the PC and console market the figure is lower. Lazzaro (2008) argues that 'boy games' are unnecessary: "They are violent. They chase an increasingly narrow demographic. They require a lot of energy, time, and skill to learn how to play and offer a limited range of emotions." She argues that not only do these games target only a small number of potential players, but "the games are quickly exhausting the creative possibilities of their main themes of fighting, warfare, sports, and racing." She notes that in 2005 the 20 best selling games in each of three platforms fell into one of these four themes. She argues that the gaming industry's reliance on demographic data means it does not focus on understanding gamers and their behaviour. "Rather than understanding what is unique about gamers and why they play, market segmentation efforts rest on identifying gamers' sex, age, and income demographics, and making assumptions about their gaming preferences based on sex-stereotyped interests and tastes."

If the assumption that these kind of games are aimed at a narrow group of men are valid, and yet some women do play these games, then it would appear that games are gendered rather than sexed. This would seem to agree with the findings of Edley and Wehterell (1995) that gender is mutable.

2. Gender

In their study on the intersections between gender, technology and computer-mediated communications, Maclaran et. al. (in Ekstrom 2004) draw the following distinction between sex and gender: "Gender is often conflated with sex but the two are not the same. Sex refers to whether a person is biologically male or female. Gender is socially constructed and notions of masculinity and femininity vary across cultures."

Referring to Lorber (1999:417), Maclaran et. al. (in Ekstrom 2004) state that gender involves "status, identity and display" and is derived from socialization and social context. They note that while earlier studies often portrayed women as "the passive victims of technology, which was seen as embodying patriarchal and capitalist interests (Lubar 1998; Wajcman 2000), current research focuses on "a two-way mutually shaping relationship between gender and technology in which technology is both a source and consequence of gender relations and vice versa" (Faulkner 2001:81). The relationship between gender and technology is examined by looking at structures, gender symbols and identities.

Maclaran et. al. (in Ekstrom 2004) note gender differences in the consumption of technology (Cockburn 1992; Hocks 1999). They state that 'white goods', such as washing machines, are more commonly used by and associated with women, while 'black/brown goods', such as music centres and power drills, are more commonly used by and associated with men. They refer to the Cockburn and Ormrod (1993) study of the microwave oven which found "the product was designed by male engineers and female input to technological development was limited to the contribution of (female) home economists." (p146)

In examining gender symbols, Maclaran et. al. (in Ekstrom 2004) refer to Pacey (1983) who found that "high-tech areas such as space technologies emphasize hegemonic masculine values such as the power of humankind to control the universe, whereas low-tech areas such as household technologies developed to improve living conditions for the elderly are more likely to stress hegemonic feminine values such as care and user-friendliness. The microwave was originally sold as a brown good aimed at young men, but after low sales was redesigned as a white good aimed primarily at women (Cockburn & Ormrod 1993). Maclaran et. al. give examples of other products that have gone from masculine to gender neutral such as the radio and telephone. They could equally have included the Apple iPod or iPhone. Although they do not provide an example of a product that was once gender neutral becoming masculine, Sarkeesian (2012) does. She notes that in the early days of Lego it was promoted as being for boys and girls but that over time it has changed its marketing to appeal exclusively to boys.

In discussing identity, Maclaran et. al. (in Ekstrom 2004) quote Wajcman (2000: 454): "men's affinity with technology is now seen as an integral to the constitution of male gender identity and the culture of technology." They note that McIlwee & Robinson (1992) found that male engineers gained pleasure from working with technology and it formed part of their identity but that female engineers did not exhibit this obsession with technology.

They quote Faulkner (2001:86): "Plenty of women do jobs that are extremely technical, just as plenty of men are technically incompetent. In short there are huge mismatches between the image and practice of technology with respect to gender."

Maclaran et. al. (in Ekstrom 2004) refer to Turkle (1986:41) when they state that "although the computer has no inherent gender bias, computer culture is not equally neutral" and "women's traditional relationship with technology influences their reactions to computer culture, a culture that has been dominated by male-associated images of competition, sports, violence and pornography, aspects that she highlights as keeping women 'fearful and far away from the machine.'" They see boys as socialized into the use of computers from an early age supported by a large choice of games that cater to male needs. Conversely they see few games designed to appeal to girls. They refer to Hocks (1999) and note that "even an innocuous, but highly popular computer game such as Tomb Raider reinforces stereotypical images of women, with its central character portrayed as a sex object complete with bursting bust line."

Referring to research by Yates & Littleton (2001) they note that development of 'girl-oriented' software has been criticized for being based on "the assumption that girls and boys have different preferences" and for doing nothing to "challenge the assumptions that underpin traditional gender dichotomies." An alternative explanation for the apparent lower interest of women in computer games is that as they are not seen as the target demographic, and as such no effort is being made to market games to them that they might enjoy.

3. Marketing

Molesworth (2003) observes that in 2001 the video games market was worth "more than \$17 billion worldwide, and more than £1 billion in the UK alone." but that increasing development costs were driving game developers to "look for alternative sources of revenue and to minimize licensing costs". He quotes an article on games industry website Gamasutra (2002) which states that both Mitsubishi and Nissan made a decision to introduce car models to the US market on the basis of interest generated in those cars by the Sony Playstation game Gran Turismo.

Molesworth describes video games as a form of play that provides an alternate reality for the player, but he also sees them as a product of consumer culture. He quotes the findings of Nelson (2002) that consumers do not object to brand placement in video games, but adds "consumers may quickly learn that brands in games also aim to persuade." He states that "games give players the opportunity to live out their fantasies and at least some of these are related to consumption."

Stevens et. al. (2003) explored the concept of self for women in consumer culture, through an experiential advertising campaign for UK women's magazine Red. They state that "a key element of the ideology of women's magazines has been that they legitimize women's right to self-indulgence and 'me-time'". In their research they conducted in-depth interviews with women in their 30s and 40s (the magazine's target market). They believe that consumer culture has "had a key role to play in the construction of womanhood, as have advertisements." It is therefore interesting to note while that Red carries adverts for and reviews of films, music, books, DVD releases and television, it does not carry adverts for or reviews of video games. It may be that video games simply do not figure at all in women's construction of self, except through their absence.

Stevens et. al. quoting Friedan (1965) locate the origin of the "happy housewife" myth in the late 1940s and see it as "the dominant discourse on femininity through the 1950s and 1960s. In the 1980s they identify the three key themes in women's magazines as 'self-help', 'self-determination', and 'individualism'. However, by the 1990s they see women's magazines providing women with "a means of focusing on themselves and shutting out the demands of the external world." As a result of women leading increasingly complex lives "women's magazines needed to provide their readers with an oasis of calm and pleasure." On the face of it, it would seem that video games would also be ideally suited to cater to these needs.

Another aspect to consider is the impact of video games in relationships.

4. Relationships

Molesworth et. al. (2011) examined how video game play interacts with relationships with partners and children and suggested a "triadic theory of human relationships that consist of the people themselves, their consumer practices, and ideas about what love means." They refer to Miller (2009) who "points out that what matters most to

people is their relationships to others, and that material culture is integral to such things" and note that consumption practices may bring people together through a shared interest or keep them apart. Referring again to Miller (2009) they state that "those who form strong relationships with things also form strong relationships with other people." However, they note that "although the rhetoric of commodity purchase is about individualism, hedonism, and materialism, the reality is that most shopping is done by self-sacrificing housewives provisioning for their family."

They believe that consumption facilitates intimacy between a couple and ask "if we did not go out for dinner, or to a museum, or stay in with a take away and a movie, how would we practice love?" Further, they suggest that consumption is used to cope with the discrepancy between "normative idealized notions of the perfect boyfriend/girlfriend, husband/wife, mother/father, and the actual experiential meaning of everyday relationships, which are often far from ideal and normative."

Molesworth et. al. interviewed 36 subjects and found a number of common realities: relationships where only one partner plays games while the other is absent, relationships where both partners are present either with both partners in an active role or with one taking a passive role offering encouragement, situations where video game playing ceases at the end of a relationship, and parents who play video games with their children. Molesworth et. al. argue that the characterization of video game consumption as "violent and addictive" is a misrepresentation. They state that video games may be "a way to either bring lovers or loved ones together, or to keep them together," and note that "Nintendo seem to have spotted this earlier than other manufacturers with consoles that are easy for a family to play together and that may make the most of human interactions."

Chapter 3 contains an overview of the research methodology used to conduct the interviews and group activity. Chapter 4 contains the consolidated results of the research. Chapter 5 contains a discussion and possible interpretation of the findings.

Chapter 3. Methodology

1. Theoretical Perspective

To answer a question as broad as why women do not play video games, and the other question that raises: how do women construct gender identities through gaming, how do women experience gender through video games, in what ways are games perceived as gendered, how are women's gender identities socialized through gaming and technology, a qualitative approach seemed the most practical way of probing deep into the subject to gain a better understanding.

The research was carried out according to interpretivist principles and this in turn led to the chosen research methods. The role of this research is to provide avenues for further exploration, not to come to fixed conclusions. The research will not be generalizable. While it should have internal validity, it cannot claim external validity unless further research is conducted in this area owing to the sample size. Internal validity is ensured through conducting the research under repeatable conditions and documenting the methods used. An inductive approach was considered the most appropriate given the small size of the group.

It is inevitable that my own gender will have affected my findings to some degree, given the different interactions between men and women. To provide as much distance between myself and the subjects I conducted interviews in formal settings and tried so far as I was able to avoid asking leading questions. While my interpretation of the results may be subject to my own unconscious gender influence, by providing a comprehensive set of results, others will be able to examine the research and draw their own conclusions.

2. Research Context

Two separate pieces of research were carried out. The first piece of research was a set of long interviews as described by McCracken (1988). Three women volunteers were found who were current or former students at the University of London at the time of the interviews. Each of the interviews was approximately three hours in duration and conducted in classrooms at the Mallet Street building of Birkbeck, University of London. While it would have been preferable to interview the subjects in their own homes, to be able to draw on the subjects personal effects and surroundings, this proved impractical due primarily to time constraints on the subjects and travel distances involved. However, a benefit of interviewing each subject in similar surroundings is that the surroundings themselves should have had a similar skew for each subject and thus can be discounted as a likely source of different responses from the subjects .

The second piece of research involved six women volunteers playing a video game that they had never played before for about an hour, and then completing a questionnaire. Initially it was hoped to carry out this part of the research in a single sitting with all the women together at a single location. However, again due to practical considerations this proved impossible to organize within the time frame of the research. As an alternative, it was decided to enable the women to complete the task in their own homes on their own computers. It is therefore not possible to comment on how the women would have interacted as a group. However, the findings may be a truer reflection of how women would respond to games in a setting that they might reasonably be expected to play a video game in. To get the most value from the research a game was chosen that could output a transcript of the women's interaction. This provided information on how the women had attempted to interact with the game, whether their attempts were successful or not, and may provide an indication as to the expectations of the subjects.

3. Sample Selection

The sample selection was constrained by the number of available volunteers who were prepared to take part in a three hour interview. The interview subjects were all current or former students at the University of London. However, they came from different national and ethnic backgrounds and different disciplines of study. With a sample of this size the aim was simply to discover the relationship that these individual women had with video games and to see to what extent that confirmed or contradicted the predictions based on the literature review. For the second piece of research, volunteers were taken from the general population.

Of the three women who agreed to take part in interviews, one was of Western European, one was of Eastern European, and one was of African descent. In some regards they had much in common. They were all in their

30s. They were all in employment. They were all current or former students of the University of London. In other regards they were quite different, in terms of upbringing and life experiences. While generalization is impossible from such a small sample, the individual experiences of these women may provide avenues of inquiry for further research and help to confirm or contradict existing research in the field.

Participants in the second piece of research may be more representative of the general population, but it should be remembered that these are women who are at least somewhat computer-literate, with access to technology, and with sufficient free time to participate.

4. Procedure

In the first piece of research subjects were asked the same series of preliminary questions before the conversation was allowed to develop. A set of topic areas was used to direct the interview to the desired research areas, but as far as possible the subjects were allowed to volunteer information. During the interview the subjects were given the opportunity to express themselves in their own words, and to further explain their meanings without words being put into their mouths.

The second piece of research involved volunteers following instructions to install software on computers running Microsoft Windows or Apple Mac OS X to play the game *Floatpoint* by Emily Short. The game was the winner of the 2006 Interactive Fiction Competition organized by members of the Usenet community `rec.arts.int-fiction`. It also won that year's *XYZZY Awards* for Best Settings and Best NPCs (non-player characters). In the game, the player is a diplomat who is tasked with persuading the colonists of a planet to return to a massively depopulated Earth. The game was chosen for featuring a number of elements that, according to existing literature, are likely to appeal to a female audience. It was also chosen because of the ability to record a transcript for later analysis.

The interviews lasted approximate three hours in duration. The interviews were conducted over a period of a week. The volunteers who played the game were not expected to complete the game but were asked to play the game for about an hour before answering the questionnaire. These results were collected over a period of a month.

All participants were given a consent form. Participants in the second piece of research were given a set of instructions and then asked to complete and return a questionnaire.

5. Analysis

Participants from both groups were given a consent form (see Appendix A) and informed of their rights. Those in the first group were assigned pseudonyms and personal details excluded from the report except where relevant. The responses from the long interviews were categorized to determine which areas of existing research they pertained to. They were then grouped into categories so that the results could be compared and contrasted with the expected findings.

The transcripts from the second group were analysed to attempt to discover if there were any common themes or notable behaviours outside the expected norm. The questionnaires were analysed to find similarities or divergent behaviour. No personal references are made to this group.

With both groups, the principal aim was to determine suitable areas for future research by looking for exceptions to commonly held conceptions on the role of gender and games but also for looking for unexpected correlations.

Chapter 4 contains the consolidated results of the research. Chapter 5 contains a discussion and possible interpretation of the findings.

Chapter 4. Results

1. Participants

Three participants each took part in a three hour in-depth interview. Here they are referred to by pseudonyms.

Annabel is 30-year-old business analyst of Eastern European descent. Bethany is a 33-year-old network engineer of African descent. Caitlin is a 33-year-old arts administrator whose parents were both born in Britain. None of the women are married and they do not have children.

2. Constructing Gender Identity

Each of the participants was asked what it meant to them to be a woman and how they saw themselves within society.

Annabel said that being a woman was about physical features, sexual orientation (she identified herself as heterosexual), and looking and acting like a woman. "I think there are certain rules in society in relationships between women and men and there are differences in the society you live in and gender issues." She said she defined herself by "profession, circle of friends and hobbies."

Bethany said that for her being an African woman was about "being married and having kids and having a husband who is there for them." She said that she wanted these things despite society's expectations, not because of them. "I have a career already but I want that for myself. I want my own home, having my own nuclear family, but the career will definitely be there." She said that if an activity was normally seen as being a male she would be more likely to try it. "I like challenges. It gives me more reason to try it and see if it's going to be possible or not." She described herself as highly independent. "I think it's the way I was brought up because my mum was very independent as well." But she feels that she has to balance her life. "I want to settle down and once I start having kids it's going to limit me more because I have to split my time. Looking after kids is more of a woman's thing to do than a guy. It's more of a woman's role to have that extra time for the kids."

For Caitlin, the ability to have a baby is at the heart of her gender. "Having the ability to have a child is a major part of who I am. I'm very conscious of that fact a lot of the time even though I don't have my own children yet." She uses clothes and makeup to express her gender. "I do like dressing in quite a female way especially more as I've got older and I take more care of my appearance than I used to." She sees communication as a strongly defined female trait. "I think women have a different way of communicating with people." She also sees herself in the role of homemaker. "I like doing things for other people. It's a thing that I naturally do without thinking about it too much." She said that her view of herself was strongly influenced by her mother. "As a child I watched my mother being a home maker which I am still am today even though I don't have my own family yet but I live with people that I look after in whatever way I can whatever that might be with cleaning washing, I arrange a lot of the bills in my house." However she feels that she is different from her mother in some respects. "I still haven't got married or had children at 33. She was 26 when she had me." She aspires to have lifestyle like that of her parents. "Get married, have children have some kind of fairly nuclear family set up. That is what I'm aiming for."

3. Childhood Play

While children engage in play regardless of gender, as they grow into adults they may see playing games as a childish activity. Therefore participants were asked what they played when they were children to find out what types of play appealed to them in their early years.

Annabel remembered playing volleyball, football and badminton, and having swimming lessons at school and going for bicycle rides, mostly with boys. She didn't particularly favour group play or solo play. "I don't remember having a preference. Whatever was practical."

"Outside school I played with kids my age that were my neighbours. We visited each other, stayed over, and put on theatre puppet plays at each others houses." At home she played with construction sets. "I was always quite a curious child so I always enjoyed playing with them. I had a kit for a clock and I thought that was really interesting."

Wondering how things were made and taking them apart and putting them back together." In her teenage years she began playing card games and recalled playing a lot of chess and card games with her father.

The first electronic game Bethany had was a Speak & Spell. She also used to play Monopoly, Ludo and Scrabble. Outdoor games she played included ten-ten (a co-ordination game involving clapping, chanting and foot positions) and an African variant of hopscotch.

From the ages of 9 to 15 Bethany attended boarding school where children were grouped by "houses" and took part in three-monthly inter-house sports competitions. "I was doing the 100m race and relay. I was a runner. That was the only activity I did." However she did not enjoy the weekly "endurance trek" which consisted of "leaving the school compound and jogging down the road for an hour and then coming back."

As a child, Caitlin used to enjoy skipping, rounders and playground games. However, she didn't enjoy the team games like netball ("boring and repetitive") that she had to play at school. "Things like sports day and being forced to take part in events and coming last. I found that totally humiliating."

She grew up with a brother who was close to her own age and they used to play cricket together with other local children. At home she played Scrabble, Monopoly and Cluedo. From the age of nine until 14 she was a Girl Guide and took part in outdoor activities including camping, canoing, abseiling and rock climbing. She enjoyed it and became a young leader for the Brownies until she was 18.

4. Exposure to Technology in Childhood

Each of the participants had a different level of exposure to technology in their childhood which can be seen to have affected their relationship with technology as adults.

As an only child, Annabel did not have to compete for access to technology. "Growing up I had a computer and some games. I would share with family friends. The console was in my room." She recalled playing *Tetris* and, by the age of 13 or 14, *Super Mario*.

Bethany's parents divorced when she was five and she lived with her mother, her step-father and three younger siblings (two step-brothers and a step-sister). It was not until she was in secondary school that the family had a computer in the home and access was restricted to two hours a day, three days a week. "I didn't use the computer as much as I would have wanted." Her mother was the main user of the computer, but as the eldest child she took a lead in showing her siblings how to use it. "Mainly they used it to learn how to type."

Caitlin's father was an Information Technology professional who had a laptop computer he brought home from work. "We were allowed to use the laptop under supervision. It was mainly for my dad to use for work so it was kind of like a golden chalice, something that we weren't allowed to play with too much. There probably wasn't much opportunity for me to engage with the technology because it was either my dad using it for work or my brother playing on it." Although she occasionally played a few games she wasn't very interested. "I didn't know anything about computers at that age apart from some very boring and basic IT lessons at school." She did a few short IT courses while she was studying for A-Levels. "I probably created a Word document or something like that." By contrast her brother now works in the Information Technology industry. "I was more interested in girly things like sewing, knitting and drawing."

5. Favourite School Subjects

Because gender identity is formed over time, the participants were asked to name their favourite subjects at school, to see if they conformed or contradicted social norms.

Annabel enjoyed subjects that are often considered masculine. "I really did enjoyed physics and biology. One of my favourites when I was 12 was maths and geometry."

Bethany grew up wanting to do accounting. "I really liked the business courses I did in secondary school." Her favourite subjects were "Economics, Commerce and Business Administration."

Caitlin's favourite subjects included geography, history, design technology, and French. "I loved French. I did really well I probably had the best teachers all the way through my education. I found it quite difficult but I did enjoy it."

6. Adolescent Years

It is perhaps during puberty, that young people experience the greatest pressure to conform to peer group expectations (Ray 2006), and at the same time may be at their most experimental with notions of identity.

While Annabel had enjoyed more technical subjects when she was younger, this interest tailed off as she grew older. "As I grew up into my late teenage years certain things became more for boys that I couldn't do any more. I wasn't interested in riding a bicycle any more. It was more about getting together with female friends and going out dancing and clubs." However, she said she didn't feel pressured. "There were things that were girly and things that boys were good at. The more technical subjects were for boys and humanities were for girls. I didn't go for anything very technical from the outside which is why I did my first degree in linguistics." This may have been influenced by her mother who was a role model for her. "It was my mother's profession. I had the background; I speak five languages so that really helped."

Although Bethany had wanted to pursue accounting at degree level, she did not achieve the required grades and instead studied business management.

At university, Bethany's main access to computers was through one of five or six privately owned cybercafes on campus. These were well lit halls with rows of computers there were slightly more women than men, which Bethany put down to there being a higher proportion on women than men in the student body as a whole. "The school did have its computer lab but it was mainly for those studying computer science. The lab was free but there was a long queue. At the cybercafe you had to pay but it was still cheap." She used the computer primarily for sending emails and completing course work. "I never played games."

Caitlin describes her family as "very musical". She was encouraged to play the piano, although she did not particularly want to. However, she found the experience of taking the musical grade exams rewarding. "It was my first experience of something like that at that age. It was very exciting. I think being tested made a difference. I felt that I'd achieved something and I could see where my practice was leading, I had an end goal, I think it was my first exam, I was probably about 7 when I did my first grade. To have an official certificate at the end of it was a fantastic feeling."

7. Early Adulthood

After Bethany completed her degree she did youth service which is compulsory in Nigeria for graduates under 30 years of age. This consisted of three weeks of orientation and military style physical training, followed by a placement lasting a year. "I was posted to local government so I was doing more admin stuff." After that she moved to the UK to find work in a bank. "While I was looking for work I decided to do an IT related programme because I noticed that being IT literate was in all the job descriptions." She completed a course in four Microsoft packages and a Cisco networking qualification. "I decided to get my Cisco Certified Network Associate and that's how I got my first job in IT." She hadn't previously considered IT as a career but has subsequently gone on to gain her Cisco Certified Network Professional accreditation.

For Caitlin, who was born in the early 1980s, entering the world of work was their her exposure to using computer technology on a regular basis "I had my first job when I was 22 when I was working in an office then. I was then using a computer every day which I'd never done before. I didn't even know how to use the computer so I don't know quite how I got the job. That was a bit of a shock and it was a major learning curve. When I applied for the job I remember I didn't know how to attach my CV to an email.. I had very limited access to computers during my degree because I did fine art." She mostly taught herself how to use the computer. "I went on a few training courses which I felt totally overwhelmed in and didn't really learn a lot." At work she didn't get any training. "It was just a case of trying to teach myself. I did go on a couple of training sessions but I didn't really find them that useful. I came away feeling even more confused." She said that becoming computer literate had been an important step for her. "I think it's opened up a whole new world and I feel much more comfortable with technology now."

8. Relationships

Annabel said used to play a fitness game on the Nintendo Wii with a former boyfriend. "I tried a Wii with hula hoops. I tried it at my boyfriend's house. He had the console and I competed at it. It's one thing that I was better at. I really enjoyed it. We played a couple of times a week for a month or so. There were other games we played

together, taking turns. Other kinds of exercises that came with it. To do with stepping on it in a different order. I was just good at hula hoops." She said he played a lot. "Friends would visit him and they would play at his place. He played maybe three hours a week but no more than that." Of that three hours, she estimated their time playing together was around half an hour.

Bethany visits her boyfriend on weekends. Sometimes they play squash, although she would rather be playing tennis. "For tennis you have to run but for squash you don't have to. He'd rather do that than play tennis. I don't mind playing squash though because it's something we do together." He does not play video games. "If we do things together I'd rather go to the cinema and if we are at home we watch television."

As a teenager Caitlin had a boyfriend who had a PlayStation games console. This was her the first time she had seen someone playing a lot of games. "I was encouraged to play the game, whatever it was." Her boyfriend lived in shared accommodation with another teenage male and a teenage girl, each of whom also owned a console. When they held parties these included playing games on the consoles. She remembered playing car racing games and fighting games. "I remember I tried to play a game I was really bad at it so it was quite funny really. People would take it in turns and there was certainly competition going on. Whoever was winning or doing the best would be at the top. It was just kind of fun everyone just hanging out together." The group of friends would meet at around 7-8pm and then stay until between 1-2am in the morning. "At the beginning the boys were competing against each other and then after a few drinks they weren't so interested and other people hopped on for a go."

9. Play Preferences and Hobbies

Regardless of gender, some individuals prefer to take part in group activities, some prefer solo activities and others prefer a mixture of both. Participants were asked if they had a preference and what their current play activities were.

Annabel's hobbies include capoeira (a Brazillian martial art combining elements of dance and music), cycling and running. She takes part in these activities with different groups. She became interested in capoeira because classes were available at her gym. "I thought it was interesting and beautiful and I gave it a try. I went by myself and joined a class that was already quite good at it and I had to catch up." She learned by observing other class members. "They were very welcoming, helpful and understanding. It was a very open and comfortable environment. I found people very friendly."

Bethany spends a lot of her leisure time watching films and television. "I'm a movie freak." She describes herself as an introvert. "I'm not really into socializing. I'm more of being into my own company. If I'm in someone else's company it has to be something I enjoy doing, like going to the cinema or a restaurant." She sometimes plays lawn tennis, but does not take regular exercise. "I don't do sport. I've never seen the inside of a gym. People just think I do because of my stature." She also plays squash with her boyfriend and occasionally plays tennis.

10. Stories

Research has shown that stories can make games more compelling for women, so the participants were asked about books and films they had enjoyed recently or were likely to read or watch again..

Annabel's list of films included 'The Usual Suspects', 'Twelve Angry Men', 'Some Like It Hot' and 'Limitless'. Her list of books included 'Nineteen Eighty-Four' and 'The Girl With The Dragon Tattoo.'

Bethany's list of films included 'Nightmare on Elmstreet', 'The Fin' and 'The Eye'. She particularly liked "old horror films." Her list of books included Steven King's 'Green Mile' and 'Carrie'. She said: "I used to read romance but now I'm into horror and science fiction and sometimes thrillers."

Caitlin said she had recently watched Machete. "I couldn't actually watch some of it, I had to hide away because it was too violent for me. I am also quite squeamish. But I thought Machete was a very good film." She also listed The Artist (a silent film), The Iron Lady, American Psycho and The English Patient. "I like the psychology rather than the visual side. For me it's more about coming up with your own ideas about what's happening with the character." She used to read

11. Current Technology

The participants were asked what technology they currently own.

Annabel owns a Samsung Galaxy smart phone, for which she has an eBook reader application. "It's one of the latest phones, not the latest. It's my first smartphone and I got it because I thought it would be a replacement for a mobile but also it would mean I wouldn't need to get a tablet or a portable computer so I use it for emails and to take files with me so it's great as a storage device." She describes it as a very practical item. "I have it with me all the time. If I lost it I would feel very upset because I've been taking photographs from trips on it. I trust it with so much information and pictures it is very important so I really guard it." While she thought that it wasn't entirely intuitive, she found the help system very useful. She has also installed the Swype application that enables a user to draw through letters on a virtual keyboard to enter words instead of typing them out letter by letter. "When I got this I thought to myself I don't know how I ever lived without a smart phone because it's such a great piece of equipment." She also uses the phone as a calendar and to listen to FM radio while she is walking between places. She was introduced to the phone by a friend who owned one. "I played around with it and thought it was great." She also has a laptop computer with a broadband Internet connection at home, but she doesn't play games on it. "I spend a lot of time on the Internet finding interesting curious things and watching small videos. I spend a lot of time on YouTube if I find some subject that interests me."

Bethany has both desktop and laptop computers but does not play games on them. She has a Nintendo Wii console. The colour was an important factor in her decision to buy it. "It was a limited edition in red. I decided to go for it for that." However, she does not really use it any more. She also has a red Nintendo DS but she cannot remember where she has put it, although she remembered preferring to use the stylus on the touch screen over the standard game pad. Besides the colour she was influenced to buy it because she had seen other people using it "on the train." Her first smartphone was a BlackBerry Bold, but it was stolen soon after she got it. She replaced it with an iPhone 3G. "I used that mainly to download movies, to download music." Initially she used it to connect to the Internet but she switched off that functionality because she found herself going over her bandwidth limit. However she did play games on it. Later she gave away the iPhone and replaced it with a Samsung Galaxy S3. "I went for it because it was a wow for me in regards to the way it works, like when you're sending a text message and you decide not to send the message and you put the phone up to your ear and it dials the number." She had seen an advert for the phone showing off its functionality before she made her purchase but she felt she was more influenced by the physical design of the phone. "Appearance is very important to me." She found it less intuitive to use than the iPhone. "It was more user friendly and easier to get used to than Android." She also felt that the graphics were better on the iPhone even though the screen had a lower resolution. But she did not think that she would change back to a newer model of iPhone. She also owns an Apple iPad which she carries with her most of the time. "I downloaded an eBook onto it five months ago and I still haven't finished it." She has downloaded games from the Apple iTunes store and the Google store. "The name of the game can get me curious, like The Stupid Test. In the app store they show you images of the game and they give you a description of what the game is about so I do read those." Her boyfriend uses a BlackBerry and so she has recently bought a luxury BlackBerry Porsche Design P'9981 costing many times the functionally equivalent BlackBerry Bold 9900.

Caitlin owns a laptop computer with a home broadband connection, a BlackBerry phone and an iPod music player. She uses the computer primarily for communication. "I contact a lot of friends all over the world using Skype, chat and email." She also spends time browsing the Internet including social networking sites LinkedIn, Facebook and Twitter. She is aware of the games content in Facebook but has avoided it because she is concerned about how addictive it might be. "I noticed that one of my Facebook friends was playing Farmville all the time because it came up on my feed. I don't know how many hours a day but every time I logged onto my Facebook account it had an update from her." Caitlin has thought about buying an iPad. "It's something that's a little bit more accessible than having to log on to a computer. It's just a different kind of way of interacting with technology. I would like that it looks nice and streamlined and sexy." Although she does not use her computing devices to play games, she has thought about buying a console. "I've actually thought over the years quite a lot about computer games around whether or not I would like to get my own Playstation but I never have done. And also with the Wii I thought that was an amazing invention. I certainly would consider buying a Wii."

12. Current Gaming Habits

Annabel has quite a negative view of video games. "I don't play computer games partly because I think that it's a bit of a waste of time and so I try to stop myself from getting into playing them and partly because I just never really got into it." She is concerned about the potential addiction. "I have many friends that play different types of games some of which offer incentives for playing every day, or at least logging in, and I don't want to be in a place where I have to stop whatever else I'm doing, sports or anything, and feel obliged to play. It should be something spontaneous. If I do play it's when I travel if I have a bit of time to spare." She said that she prefers to read a book

or an eBook. "It's about the usefulness. I want to feel that my time was well spent because I think it's an asset." She added: "If there was a game that could give me something like a new skill, that would make it more attractive." However, she does sometimes play games on her smart phone. "I play games sometimes on my smart phone but apart from achieving some points, I don't think they're worthwhile. The achievement and the value from playing are not as great as from other things. I never play games on the computer."

The game Annabel plays most frequently is Paper Toss (2009). "The way it works is you have this imaginary fan that blows at various speeds so you have to adjust the direction to which you throw the paper so it gets into the bin." The game contains different levels with different backdrops including an office and an airport. "It gets more difficult because the distance between the point where you're throwing from and the basket changes." She said that if she got stuck she would go back a level to practice rather than asking someone for help.

She has tried other games on friends' phones but has not liked them enough to buy them herself. However, she would try games if they were recommended to her by friends. "Because it's part of pop culture, if a lot of people talk about a particular game then I need to know about it as well." Annabel said she might be interested in games based on films but that she wanted an alternative to violence. "Maybe some kind of detective story, discovering and investigating things." She also wanted games to be more physically engaging. "Anything that makes a game more interactive physically." She expressed an interest in game where she could learn something new or develop a skill. "I like flight simulations. I like those kind of games but the ones I've tried are actual flight simulators for training and therefore they're not very interesting or engaging. Something like that if taken to the next level with sound and beautiful scenery."

If Annabel were to buy a game she would prefer to do so online. "It's a bit intimidating going to a computer games stores it's like a peer membership society. I wouldn't know what to say." However, on three occasions she has bought games for male friends in a traditional games store. "I have this perception of games being violent where there are loads of guns involved and fighting and I don't personally find this interesting but then the couple of games I did find and try out they were actually good."

REF: Paper Toss (2009) Boulder, CO: Backflip Studios Inc.

Bethany owns a number of gaming devices but primarily plays only a small number of games on her smartphone and iPad. She sees games as divided by gender with games including car racing, shooting, fighting being primarily aimed at boys. However, she said she would not be put off playing a game because of this.

Caitlin does not play video games at all. She plays Scrabble with flat mates but she does not like card games.

13. Relaxation Techniques

Because video games provide an alternative to reality, participants were asked what else they might do to relax.

Annabel said: "I watch films, listen to music, I read books. I don't consider them to be a waste of time because after you've watched a film there's something to it."

Bethany said: "I can spend hours watching television. If I'm home on a Saturday or Sunday I can spend the whole day watching television, 12 hours. I don't do it every day. I work from home most of the time. In the evening maybe five to six hours, but not every day. If I'm not watching television I'm on the laptop watching streaming movies. She also likes to read women's magazines but is more interested in the pictures of celebrities than reading all the details of the story.

Caitlin said she liked to relax by cycling or swimming. "I've always enjoyed swimming and as an adult I've taken it up again and now swim about twice a week." She prefers to swim by herself "I don't really like swimming with other people unless it's on holiday." She would like to have a more "outdoorsy" life but feels that this is not possible because she works in an office in the city. "I very much enjoy being outside and try to take walks in the countryside whenever I can." She also enjoys spending time with friends. "I try and go to cinema as much as often as possible, one or two movies a month have lots of dinners with friends and go out to pubs a lot "

14. Experience with Video Games

Participants were asked to talk about games that they were familiar with.

14.1. Angry Birds

Angry Birds is puzzle game with realistic physics where the aim is to destroy targets (pigs) by launching missiles (birds) at them with a catapult.

Bethany was introduced to the game by a fellow student. "It's such a funny game and it's really addictive. I just like getting rid of the pigs. I downloaded it first on the iPad and I cleared all the levels and got the golden eggs. Then I got it on the [Samsung Galaxy] S3."

14.2. Bejewelled

Bejewelled is a pattern matching game where the aim is to swap jewels on a grid to form vertical or horizontal lines of three or more of the same type of jewel.

Bethany was introduced to Bejewelled by her step-brother who had the game on his computer. She has subsequently bought versions of the game for all three of her smart phones and her iPad. "When I got the iPhone I went to iTunes to check the games I could download." She played the game for a year for between 45 minutes and an hour at a time, reaching a total score of 20 million points. "Mostly I was playing on the bus or the train." She liked it because it was easy to learn but said it was addictive. "I played it to kill time but at home I didn't play it. I watched television instead but I'd rather play a game than try and watch a movie on a bus. On a flight I'd watch a movie." She prefers the

14.3. Grand Theft Auto

Annabel played Grand Theft Auto III (Rockstar 2001) when she spent a summer with a friend in Spain. "I liked the driving. That was about it. I didn't really like the violence." She also said she was put off by the advertising in the game. "I think advertising in games in principle across all games is a bit patronizing to the consumer. If you're a consumer and you're buying a game there should not be any extra ways for the companies to profit from that." However, GTA III contains no advertising for real products. All of the brands within the game are spoofs or parodies of real world brands. The game is set in Liberty City, a fictionalized version of New York. "I always liked practising the driving and the speed and recognizing New York or trying to make it look like Brooklyn and there were places I recognized so that was interesting." She had spent some time living in Manhattan. "I liked that it was a real place especially because I wasn't in New York at the time so it was bringing back memories. Because of the familiarity I probably liked the game rather than not liking it at all." However, she said that if it had just been about the driving there would not have been enough content to keep her interested. "I think there needs to be more of a storyline to it than that."

14.4. Nintendogs

Bethany bought Nintendogs, a pet care game, when she bought her Nintendo DS. "It was the only game I bought. I played with it for a while and got tired of it." For two years she played it every day. "I used to go to the office so I played it on the bus and it was always in my bag." The game requires the player to feed, wash, and play with a dog. "Where you actually get gaming activities is when you take the dog to compete in the game like disc throwing where the dog has to catch it. I liked playing it." Bethany bought the game in a video game store. "I asked someone where I could get games for the DS and they showed me and I glanced through and I saw the popular Mario and other stuff but I didn't go for it but when I saw the dog game I went straight for it." Bethany said she loves dogs and that influenced her choice. "I didn't think twice. I was just curious as to what the game was going to be about so I just bought it."

14.5. Rally Master Pro

Rally Master Pro is a realistic car racing simulation with 27 different tracks and a number of different cars for the player to choose from.

Bethany bought the game for her iPad. "I'm still trying to get to the third level which I'm struggling with. The first level is easy. The second level isn't so easy." The detail of the graphics are very important to her. "I don't enjoy it unless it really looks real. If it was more like a cartoon I wouldn't enjoy it that much."

14.6. The Sims

The Sims is a virtual dolls house where the player has control over the characters and the environment. It is open ended play without any specific goal or scoring.

Bethany bought Sims 3 for her phone because it was popular with other people. " I find it a cumbersome game to play. I'd heard about it, read about it in magazines and saw an advert on television." She had not played it before. "When I tried it a few times I really didn't understand what the game is all about. You've got the avatars, you can dress them up and all that stuff. The one I've tried to get interactive with was the one with someone in the house. If you want the avatar to have his bath or to eat or to go outside the house or to kick a can, but because I thought it was more of a game where you get points but I don't think that's the case. I want something that lets you know that you've won. I thought it was like that but it's obviously not."

Caitlin remembered seeing a friend's daughter playing The Sims. "That looked very interesting and I can see why it's very addictive because it's about setting up a virtual life. You can design the characters and you can design the house and it's just like a whole reality recreated." She found the game's bright colours and visual style appealing. "It looked very sophisticated in terms of the quality of the game and the characters and the design of things in the game."

14.7. Solitaire

The card game solitaire has been included with every version of Microsoft Windows, the most widespread computer operating system for desktop computers, since 1990. It could be the most widely played video game of all time.

Bethany still plays the game. "First and foremost it's the first computer game I played. It is addictive. I just love the game. I don't know why I like it. It's just a nice game."

14.8. Super Mario

During the interviews no titles of games were mentioned to the participants, yet they all named Super Mario as a game they had played or were at least familiar with.

Annabel had a copy of the game for her console. " I always played with other people. Family friends' kids or neighbours. Usually two or three of us and we would share as there were only two joysticks." She particularly enjoyed the group aspect of playing the game. "I always remember two of us playing and we would stay up until 5 o'clock in the morning if we could." For her the fun came from "getting to the next level" and the competition of "trying to outdo the other." Despite not having played the game since she was a child she was able to recall the game-play involving 'traps and pitfalls' and level progression that was rewarded with points. She remembered the game being 'low resolution' but she said: "There wasn't anything advanced about how it looked but it was quite interesting."

14.9. Tomb Raider

Tomb Raider is a first-person action adventure game where the player takes the role of a 'Indiana Jones' type archaeologist. It was notable for being the first game of its generation in this genre to feature a female lead character. Interestingly none of the participants identified this game by its actual title, instead referring to it as Lara Croft (the name of its protagonist).

Despite stating an aversion to violence, Annabel was less put off by the violence in Tomb Raider. "Are you so much a bad guy in Lara Croft? If you're the good guy, like James Bond, if you're defending yourself then I guess violence is ok." This was in contrast to her feelings about the violence for personal gain in Grand Theft Auto. She came to the game having already seen the film adaptation. "To me it was a character that I knew what the aim was." She was not bothered by appearance of the character. "It's a game that I think is aimed at men so I don't have any objection to a woman being portrayed with exaggerated physical features making here even maybe not very realistic." She also liked playing an empowered female character. "Because she is a woman I think and she's a hero it's kind of makes it more inclusive." While she could identify more with a female character, she said that playing a male character wouldn't necessarily have put her off the game.

Caitlin played Tomb Raider when she had a boyfriend who owned the game. "I thought it was quite cool that there was a female character in a computer game because I think that was probably one of the first representations of a female." She expected games to be male oriented. "That was quite a surprise I think. It sort of broke the norm really and I quite liked the idea of maybe opening up computer games to women." She found the depiction of Lara Croft somewhat sexist. "Obviously she's got huge boobs and long brown hair but at the same time I thought why not. If you're going to have a woman computer game character obviously she's going to look beautiful." She liked the presentation of Lara as an action hero. "She was very active, going off discovering things which I thought was very good." She also felt that the character's gender helped her to form a connection with the character. However, she was concerned at the level of violence. "In general I do think computer games are very violent which is probably something that puts me off starting to play."

14.10. Unnamed Fighting Game

Besides Solitaire, Bethany could only recall having one game on the family computer when she was growing up. She described it as being "like boxing or taekwondo". The game was played against the computer and there were a number of characters to choose from. Bethany said the avatars reminded her of Japanese children's cartoon *Voltron: Defender of the Universe*. The player could choose from a variety of characters of both sexes although Bethany only ever played as a female character. "Knowing that it's a female playing a fighting game gave me that feeling of winning." However she said she would still have played the game if there had not been the option to play as a female. The player could also choose their opponent from the same selection. Bethany mostly chose a male opponents. "The joy of winning is not as much when it's not a male opponent."

Depictions of the characters were stylized and "athletic", but not strongly sexualized. Bethany would have preferred more realistic depictions had the technology been more advanced but she was not put off by the violent nature of the game. "I just accepted it and learned how to play the game." She recalled her 14-year-old sister also playing and enjoying the game. Bethany described the game as "really addictive" and said that if she had been permitted she would have played the game all the time.

14.11. Wii Sports

Wii Sports includes tennis, golf, boxing, baseball and bowling. Players use wireless controllers to simulate using the equipment associated with each sport and can play by themselves or with up to three other players, providing they have the required number of controllers. The game is included with the Wii console.

Bethany felt the tennis and the boxing were the most engaging. "In tennis you swing your hand and you actually feel the effects of it on your body but the most effective is the boxing." Although she used to play the game for an hour to two hours, she eventually lost interest and does not play the game now. "I'd mostly play in the evening before going to bed. The problem is it's so addictive and you just keep on going and going and you just feel tired but you don't feel that achy part until the next morning."

15. Secondary Group

A second group of six women volunteers, aged between 28 and 65 with a variety of backgrounds, were asked to install a video game on their home computer, play it for an hour and then answer a set of questions about their experiences and some broader questions about their leisure activities. The original intention was to have a larger number of women play the game together in a lab at the same time and observe them but this proved logistically impossible to organize.

The game chosen was Floatpoint, winner of the 2006 Interactive Fiction Competition. A text adventure was chosen because it this made it possible to take a transcript of the women's progress through the story to see how they interacted with the game, based on what they tried to do in the game. Floatpoint in particular was chosen because it includes help for those who have never played this kind of game before, and for its strong story and characters.

Five of the group enjoyed the game. Three of the group said they particularly liked the story and that they thought it was well written. "It was interesting enough that I didn't get bored," said one. "It seemed gripping at times," said another. They described it as easy to play and well explained. One of the group particularly liked the text format. "It was very interesting. I liked how you had to use your imagination to picture the mountains, lakes etc. and their location." However, another member of the group commented on the title screen, the only graphics in the game: "The start up picture was beautiful."

One woman said she did not really like the game although thought that perhaps an hour was not sufficient. "I didn't really get into it." It was very boring at first, just wandering around picking up objects that might be useful later, no exercise of intelligence or skill." She found it annoying that the game told her an object she needed was in a specific location but when she went there she couldn't find it. Although she said that towards the end of the hour "it started to get more interesting".

Criticisms from the women who enjoyed the game overall were varied. "I kinda outgrew pure text adventures many years ago. They were among the first I ever played as a young gamer, and I suppose I view them as more of a relic than something I would desire to play these days," said one. One woman found the game had a steep learning curve. "It was slow in the beginning, and it took a while to get used to. You really had to keep track and concentrate throughout the game." Three women identified the lack of graphics as something that would put them off playing this kind of game and said there was too much text to read.

The transcripts provided by the group record their interactions with the game. For example, all the women quickly mastered the example instructions provided by the game (look, examine, inventory, and directions). What is perhaps more interesting is the ways they attempted to interact with the game that were not successful. Working out how to interact with non-player characters (NPCs) seems to present the greatest difficulty. Having to type long words without making spelling mistakes also created some problems. However, by the end of the hour all the players seemed to have got to grips with the game's interface, as demonstrated by less frequent use of the help system.

The group were asked how much time they spent every week on leisure activities with others such as friends or relatives. This ranged from five to 35 hours. When asked how much time they spent every week on leisure activities by themselves this ranged from two to 40 hours. All of the women in the group identified the home as the primary location where they played games.

The group were asked to list the games they played. One woman's list consisted primarily of computer of computer role playing games (RPGs): "Dragon Age, Dragon Age 2, Overlord, Overlord 2, Dungeon Keeper 2, Portal, Portal 2, the Ultima series, the Kings Quest series, the Space Quest series, Bioshock, Bioshock 2, Skyrim, Dungeons and Dragons (live), Earthdawn (live), sometimes board games (Talisman, QI) and card games (Munchkin, Up The River)." Another's contained mainly board games with some card games: "Monopoly, Boggle, Jenga, Pictionary, Snakes and Ladders, Uno, Rummy, Go Fish." Other games included Angry Birds, Jigsawdoku, Wii Sports, and Hidden Chronicles.

The group were asked how much they spent on games over a year. This ranged from around £10 a year (roughly the price of one smartphone app a month) to £125 a year on video games. However, one woman said that she spent up to £1,040 a year on leisure activities.

The group were asked if they owned certain electronic devices. One owned an eBook reader (such as a Kindle). One owned a tablet computer (such as an iPad). Four owned smart phones (such as the iPhone). Two owned desktop computers. One owned a portable console (such as the Nintendo DS). Four owned home consoles (such as the Nintendo Wii).

The group were asked if they had a home Internet connection and if so what kind. One had a fibre-optic broadband. Four had ADSL broadband. One had a 3G cellular connection.

Chapter 5 contains a discussion and possible interpretation of the findings.

Chapter 5. Discussion

1. Defining Gender

All three of the women interviewed described their perception of gender in relation to other women in society. For Anabel it was women in general, while for Bethany and Caitlin they compared themselves to their mothers. It is interesting to note that they both expressed a strong desire to become mothers themselves while Annabel did not. But more than this, Bethany came across as a self-assured and professional woman, just as she described her mother, while Caitlin expressed regret at not yet having become a homemaker like her mother. In Bethany's childhood her mother was the main adult who she saw using a computer. Whereas in Caitlin's it was her father. Caitlin's brother followed their father into an Information Technology role, while she pursued artistic interests of the kind that also interested her mother. Even Annabel initially followed her mother's interest in languages and herself became a linguist. Whether this behaviour is a due to a genetic disposition or through socialization it would seem to suggest that a mother's technical capability will have an influence on how girls perceive technology as they are growing up.

2. Early Play and Schooling

All three women took part in typical outdoor and indoor play during their childhood both on their own and with family and friends. Annabel identified herself as something of a tom-boy, going cycling with boys and playing with construction sets while Bethany and Caitlin played non-gendered games like board games. However, despite already having formed a view of activities which were for boys and girls, Caitlin played cricket, a traditionally male sport, with her brother and also took part in outdoor activities that may also be considered male gendered.

Annabel's favourite school subjects were the sciences, but as she grew older she drifted away from subjects that were seen as male gendered to those that were seen as female gendered. However she remains comfortable with technology despite giving up science subjects early on. This could indicate that the early years are the most important for introducing technology to girls.

3. Socialization in Relation to Technology

How did the women's contact with games socialize them in relation to computers and technology? Did their experiences with games lead to a reduced fear of technology?

Access to technology may have played a role in determining use of technology later in life. Annabel and Bethany both had access to computers from a comparatively early age while Caitlin did not really begin to use technology seriously until she had her first job. Today both Annabel and Bethany have a wide range of devices and feel comfortable with them while Caitlin appears to be interested in new technology but reluctant to actually purchase it, as if she were waiting for permission.

Playing games at an early age may have given Annabel and Bethany an advantage over Caitlin in being able to quickly get to grips with new technology, for instance Bethany's willingness to switch to learn a new smart phone operating system if she preferred the phone it ran on. Caitlin is now perfectly capable of using office and communication applications but it may be that the exploration that games can promote has effectively limited her willingness to try new technologies.

4. What Is Fun

The games that the women mentioned encompass a wide range of playing styles:

- puzzle (Angry Birds, Bejewelled, Paper Toss, Solitaire)
- driving (Grand Theft Auto, Rally Master Pro)
- action (Grand Theft Auto, Tomb Raider)
- platform (Super Mario)

- simulation (The Sims)

What is striking about this list is that it includes none of the types of games that some online providers appear to think will appeal to women. (gamesgames.com 2012)

5. Violence and Addiction in Games

Annabel and Caitlin both expressed a dislike of violence in video games. However Annabel's film choices included thrillers with a degree of violence in them and Caitlin enjoyed watching very violent films, although she would look away during the strongest violence. By contrast Bethany enjoyed horror films and books and was not bothered about violence at all except in the context of a game where she was called upon to act violently towards others. In this regard all three women agreed that violence could be acceptable in games if it was morally justified. It could be interesting to investigate whether the ability of a player to distance themselves from a character who acts immorally is a gendered behaviour. It can be said that violence alone is not necessarily a deterrent to women playing video games.

Although all three women had very different exposures to games, they all said they thought video games were addictive and perceived this as a negative quality. This suggests that games developers must not only take care over the content of video games if they wish to appeal to women but also the way games are marketed.

6. Getting the Product to Market

All three women read a variety of media aimed at women, but none of them had ever noticed an advert for a video game in women's magazines or on Internet sites aimed at women. However, Annabel and Bethany both said that friends and relatives were the most common way for them to find out about new games. They were both willing to try downloading applications from the online store on their smart phones and they both liked the ability to see pictures of the games and read reviews in the virtual store. Both groups of women were asked about their home Internet connection and most had access to broadband and a smart phone or other portable device. It may be that selling through an online community is the most effective way to target women consumers. Both groups of women were also asked about the amount of money they spent on leisure and while the amounts varied widely it was clear that for these women, across a broad age range, they had a disposable income and were willing to spend it on their leisure time.

7. The Viability of Adventure Games

One of the purposes of this research was to determine if text adventure games, which had traditionally appealed to a female market but died out with the advent of better quality graphics, were still a viable type of commercial game that women might want to play. While the story element did appeal to the group, the interface proved to be cumbersome and the lack of graphics put some people off. Although most of the women began to enjoy the game when they got into playing it, had they not promised to spend an hour with the game they might have given up much sooner. The sample size was smaller than desirable and is not significant enough to say that there is no place for this kind of game, but the prospects do not look good.

8. Conclusion

It should be clear from the responses of the interview participants that even among just three women, backgrounds, tastes and expectations vary considerably. It is clear that there is no one video game that is going to appeal to all women. However there are common themes that offer the potential for further research. Women clearly do want to play video games, and if video game companies can find the right way to market and deliver games that appeal across genders then there is a potentially very large source of revenue waiting to be tapped.

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Appendix A. Consent Form

CONSENT FORM

My name is Andrew Owen. I am conducting a research project entitled "Why don't women play video games?" for submission towards a post-graduate degree in Informatics.

This project is being sponsored by the Department of Computer Science and Information Systems at Birkbeck University of London.

I am the principal investigator of this project and I may be contacted at this email address aowen10@mail.bbk.ac.uk should you have any questions.

Thank you for your willingness to participate in this research project. Your participation is very much appreciated. As a participant in this project you have several very definite rights.

First, your participation is entirely voluntary.

You are free to refuse to answer any of the follow up questions.

The information you provide will be kept strictly confidential and will be available only to myself, my supervisor, and my examiners.

Excerpts from the information you provide may be made part of the final research report but under no circumstances will your name or identifying characteristics be included in this report.

I would be grateful if you would print and sign this form to show that you have read its contents.

_____ (signed)

_____ (printed)

_____ (dated)

Please send me a report on the results of this research project. (circle one)

YES

NO

address for those requesting research report

