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LOOKING AT THE VIDEO/ COMPUTER GAMES INDUSTRY WHAT
IMPLICATIONS DOES GENDER SOCIALISATION HAVE FOR WOMEN
IN COUNTER-STEREOTYPICAL CAREERS

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A thesis submitted to the University of Huddersfield in fulfilment of
the requirements for the degree of Doctor of Philosophy

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ABSTRACT

Figures show that the games industry remains a male dominated occupation. Anecdotally a link has been proposed between higher male consumption of platform-based games and career choices, though figures also show a higher female to male ratio in social networking games. This suggests that perhaps the type of gameplay may influence career choice. This study therefore interviews women who have chosen a counter-stereotypical gendered career pathway and who are students in Further Education and Higher Education who are in the process of making career choices, to understand better a potential link between gameplay and career choice.

The key findings relate to the positive emotive language utilised by the participants, a suggested link between gameplay, the concept of a 'gamer' and the choice of the games industry as a career, and serious concerns of abusive online gaming behaviour experienced by females. By adopting a subtle realist approach this study found a strong emotive view of games and the games development courses created a quantifiable link to a career. A high level of identifiable traits, traditionally considered both masculine and feminine, suggested that an outmoded view of gender stereotypes also appeared to negatively affect career choice.

From the findings further research is suggested in relation to experiences of females both within the industry and at secondary school. At a wider level this study suggests both games courses and the industry would benefit from incorporating both traditionally masculine and feminine traits as part of developing more effective and inclusive recruitment strategies. Finally further research is proposed regarding how games and the gaming community relate to females both as characters and as players.

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GLOSSARY:

AI	Artificial Intelligence
BA	Bachelor of Arts
BSc	Bachelor of Science
EA	Electronic Arts
ELSPA	Entertainment and Leisure Software Publishers Association
ESA	Entertainment Software Association
FdA	Foundation Degree in Arts
FdSc	Foundation Degree in Science
FPS	First Person Shooter
QA	Quality Assurance
NES	Nintendo Entertainment System
PC	Personal Computer
RPG	Role Playing Game
SCEE	Sony Computer Entertainment Europe
PSP	PlayStation Portable (Sony)

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CHAPTER 1- INTRODUCTION

Traditionally when choices are made for education and career there are paths which could be considered stereotyped for each gender. These choices as Carter (2014) discussed are based on how males and females are socialised as they grow up. Carter (2014) included both the choosing of clothes such as pink and blue for babies and choice of friends tending to be the same gender as the child. Therefore as children grow they are bombarded with messages of what masculine and what feminine are and how they should be 'doing' (West and Zimmerman, 2009) gender based on these defined patterns.

This results in certain careers being considered the domain of the dominant gender within that role. Therefore physical occupations such as engineering can be seen as a male career (Bagilhole et al, 2009; Faulkner, 2007) and women may need to take on masculine traits to be accepted (Bagilhole et al, 2009; Smith, 2013), thus potentially struggling to maintain their feminine traits within the workplace. Similarly men can feel they must alter in a career which is traditionally female such as nursing and struggle to maintain their masculine traits, for example, through adopting a more acceptably masculine title (Lupton, 2000; Pringle, 1993, Korek et al, 2014). This 'socialisation' of gender therefore leads those who engage in counter-stereotypical careers to be considered outside the 'norm' (Butler, 2006) and means a number of careers remain dominated by one gender or another.

One area which has been seen as a male dominated area is working in the video/computer games industry (McCabe, 2007) and this can be seen by the latest figures by Skillset (2012) which show a low percentage of women work in this industry and of those many do not follow a practical route but are more administrative (Skillset, 2012). Considering the issue of both how careers are gendered and the lack of women joining the games industry - this research therefore looks to find out the implications of this gender socialisation, by looking at its effect on women. This is done in two ways, firstly in relation to those who do choose this career pathway and secondly in terms of those who have chosen an educational path which is aligned to a career in the video/computer games industry.

The research will begin by looking at both the literature and context in Chapter 2 to consider what is already known. This will begin by looking at how gender is defined in this research and then consider how gender is related to work. It will then look at how both males and females react in counter-stereotypical careers. The next section will look at data from both the games industry (Skillset, 2012; Nesta, 2013) and education, with the latter reviewed in terms of existing research on females studying games courses and an analysis of subject choices in Further Education. Gameplay will then be considered in relation to what games females play, how women are portrayed and how females play games. The concept of a

'Gamer' will be discussed and Chapter 2 will finish by looking at gameplay and career choices within the games industry, reviewing factors that influence both and how these may make a difference in terms of the number of women within the games industry.

After the literature and context has been considered, Chapter 3 will look at the methods and methodology utilised within this thesis. It will outline the theoretical perspective and explain how the data was chosen, obtained and how it will be analysed. A discussion of the subject choice - females who are studying games-related courses or who are working in the industry, is also included within this chapter.

Chapter 4 presents the results and analysis from this research study and will link findings back to the literature reviewed in Chapter 2. The analysis will compare and contrast results between Further Education and Higher Education, exploring why participants may choose a counter-stereotypical career pathway, based on what their experiences of gaming, the course and their perception of the industry are.

Chapter 5 will consider the findings from Chapter 4 in a wider context and concludes by summarising the findings in model format and evaluating what they mean both in terms of existing research and in terms of potential future research directions. To finalise with a conclusion in Chapter 6.

CHAPTER 2- ENGAGEMENT (Literature and Context)

INTRODUCTION

The study investigates how gender socialisation affects women joining counter-stereotypical careers. Specifically it looks at women in the computer/video games industry, and considers the reason why there are so few women in the games industry. This study considers this from the perspective of career choice and looks at links such as to gameplay and game avatars. This chapter therefore will look at what gender is, careers and stereotyping, counter-stereotypical careers, gameplay (what games females play, female avatars and how females play computer/video games), education and employment figures within the games industry. It will end with a discussion of the factors which influence choice both in gameplay and the games industry. This chapter will review theorists and supporting data and discuss female placement within each of these sections. It will consider how this creates a reality for those women wanting to join the games industry. Both the literature which is being considered and the context in which this thesis places itself inter-relate and so this chapter will cover both topics. Chapter 2 will provide the background theory to support the following chapters looking at the methodology, methods and original data completed for this research. The results will then be reviewed based on the information presented in this chapter.

2.1 WHAT IS GENDER

The first consideration for a study considering women and their roles in society, is 'what is gender'. This is important as gender itself is utilised frequently throughout society as a term and definition. We consider whether an occupation is gendered or whether media is designed for a specific gender. Therefore to understand how we use gender, the first step is to understand what gender itself is.

'Gender' was coined as a term to describe the social aspects inherent in males and females separate from sexual descriptors (Butler 2006, Risman, 2004, Oakley, 1974). This is significant because the key definition when discussing gender is the social representation of the masculine and feminine distinct from any biological and sexual categorisation. Therefore when describing masculine and feminine within this thesis the term is used in relation to how each gender is considered within society.

Gender socialisation is an important aspect of this research. In this work it is taken in the context of how society creates perceived notions of what is male/masculine and female/feminine and uses these to dictate how careers are appropriate for each gender. As Carter (2014) discussed we are socialised within our family and rules based on gender begin at birth (Carter, 2014). Males 'do gender' (West and Zimmerman, 2009) by being masculine and females 'do gender' by being feminine. Each follows specific guidelines which lead to a difference in what males and females expect in society and what occupations are appropriate within these set boundaries. Recent research (Sherman and Zurbriggen, 2014) considered how the toys given to children can reinforce this gendered socialisation and showed how girls who played with stereotypically female dolls such as Barbie were less likely to choose careers which they considered options for boys. While this study itself was limited, the use of gendered toys and marketing is one prevalent throughout mainstream culture and covered within section 2.65.

This socialisation of gender leads to a differentiation in career pathways; and the lack of career in more traditional households (Chesters, 2011). Chesters (2011) described the 'gender display' which altered based on the

"Individuals who subscribe to the 'housework is women's work' perspective are regarded as holding traditional gender ideologies whereas those who see housework as each individual's responsibility are regarded as holding egalitarian gender ideologies". (Chesters, 2011, p81)

therefore the traditional expectations of the female in the relationship would be seen as completing a disproportionate amount of the non-paid work such as mother and housewife (Fetterolf and Rudman, 2014). Women have what Gershuny et al (1994) called the 'dual burden' where alongside non-paid work there is expectations of paid work within society (Kamp Dush et al, 2015) which as Nadin and Williams (2012) discussed are not always separate 'spheres' of formal and informal work. This shows a shifting of how gender is viewed in relation to career as women take on some of the gendered attributes traditionally identified to males by looking for occupations (West and Zimmerman, 2009). However while women begin careers; those careers can be dictated by what society suggests are appropriate for each gender and limited by how far they are able to progress especially in what are perceived as male-dominated areas (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014). It is therefore both interesting and important to consider how women participate in the working world to a greater extent but at the same time consider career options which primarily are based around the original conception of female (Tower and Alkadry, 2008, Risman, 2004). Therefore roles which are outside these traditional views become counter-stereotypical. Butler (2006) considers gender's similarity to the 'norms' of heterosexuality and how society follows these norms as a set of rules rather than simply a suggestion and this links in with the 'norms' of careers and how these are followed by a large proportion of society in career choices.

The artificial construct of gender discussed by Butler is also considered by West and Zimmerman (2009) where they research the 'doing' rather than 'being' of gender (2009, p113-114). By this they look at how following a certain prescribed course utilising what is seen as gender-typical (male/female) may be creating dictates of gender which are not 'naturally' occurring and therefore being created by society. Joan W. Scott's view on gender in 'Unanswered Questions' (2008), a reply to her earlier well known and utilised 'Gender: A Useful Category of Analysis' (Scott, 1986)) states

"Gender, I would argue, is the study of the relationship (around sexuality) between the normative and the psychic, the attempt at once to collectivize

fantasy and to use it for some political or social end, whether that end is nation-building or family structure." (Scott, 2008, p1428).

Therefore if society 'constructs' (Butler, 2006) careers - the identifiers are not about 'doing' gender but 'being' gender. West and Zimmerman (2009) use as an example that as society believe girls have no aptitude for maths then schools will suggest against girls completing maths as an advanced subject and therefore create a self-fulfilling prophesy. Using the same view as gender as being socially constructed, Barbara Risman (2004) considers the term 'gender' itself was created to cause the difference between men and women in society's expectations. She describes this as "*creation of difference is the very foundation on which inequality rests*" (Risman, 2004, p431). Risman similarly to Butler and West and Zimmerman asks why gender is necessary. She looks to find out what would be left linked to sexual identification if gender was no longer a factor and if gender itself is a socially constructed segregation. The key difference between this and segregation such as race is the implicit rather than explicit usage and so rather than being forced into certain pathways in society men and women themselves choosing these based on their socialisation.

An important factor within this study is the consideration that career roles (see section 2.3 and 2.4) are artificially constructed by society (Butler, 2006; Risman, 2004). This would lead to careers being labelled based on the classification of masculine and feminine. In this study 'gender' is a socially constructed term which is forcing a socially constructed life based around pre-conceived notions of what gender is. Therefore in relation to areas which are atypically seen as male it would suggest not that women are incapable, but that they do not consider these as areas they can identify with and so do not find them relevant. It would suppose that the belief of an idea makes this a fact and so the reality becomes a segregated society based on gender; of what is masculine and what is feminine. This is important to this study as the core idea considers not that women decide not to choose a career such as the video/ computer games industry; but that for many it is never considered as a life choice due to an ingrained value of what gender is within society.

"Gender also becomes effectively salient in contexts that are gender typed in that the stereotypic traits and abilities of one gender or the other are culturally linked to the activities that are central to the context" (Ridgeway and Correll, 2004, p517).

In the next section careers will be considered and how these are affected by gender. The consideration of what a career is will also be looked at.

2.2 GENDER AT WORK

Now gender has been defined it is important to link this into the area this study is looking at. In particular, the focus of this work is how gender socialisation affects females (and by contrast males) through the study of counter-stereotypically gendered careers which will lead to the main research of females in the video/ computer games sector. Prior to this, this section will consider how gender for women relates to careers and stereotyping within the workplace to contextualise the meanings which will then directly link into the next section which will look at counter-stereotypical careers for both men and women.

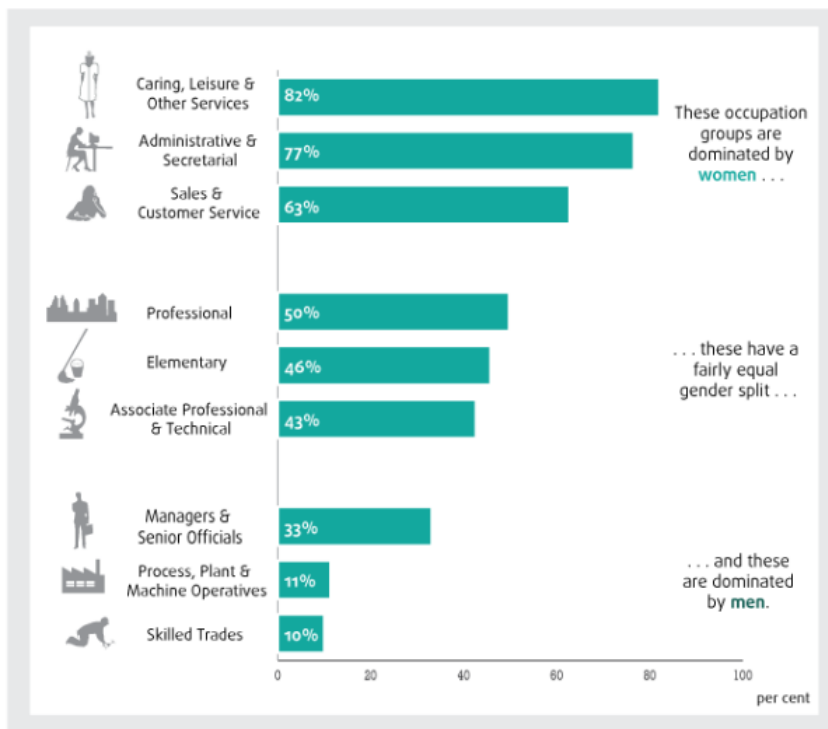
2.21 Careers

A career can be defined as- 'An occupation undertaken for a significant period of a person's life and with opportunities for progress' (Oxford Dictionaries, 2015). Therefore a career is not simply the 'job' you choose but one which is taken with the likelihood for a long-term involvement. By a simple evaluation of online sites which cover a range of occupations it is clear that a certain level of education is needed for most vacancies; especially those which could be constituted as a career e.g. as an 'opportunit[y] to progress'. This is significant because it means learners need to choose their planned pathway early enough to complete the appropriate education for the career path(s) they wish to prepare themselves for. This leads us to two significant junctions for career- the first is 16 when learners can choose an academic course, vocational course or apprenticeship specific to an area they decide on (from September 2015 learners must remain in education or training until the age of 18). The second is at the age of 18 or 19 when the learner then has completed the level course to either enter work or to complete an undergraduate degree. This undergraduate level of degree is important to the area chosen as each course has its' own specific subject(s) tailored to different pathways to a career. Therefore to look at when a career path is chosen- Further Education and Higher Education are the two most significant junctions to gage what choices are being made (see section 2.43 and 2.44 for more details).

When studying the figures gained from the 'Labour Force Survey' (Crown Copyright, 2013) in Figure 1 they showed that a high percentage of women were in the 'Caring, Leisure & Other Services' (82%) and 'Administration and Secretarial' (77%) occupation groups while a low

percentage of women were in 'Skilled Trades' (10%). This showed that in general careers followed what could be seen as a 'traditional' male/ female split (Risman, 2004; Ridgeway and Correll, 2004). There were 43% of women in 'Associate Professional & Technical' which showed that the numbers of women in careers such as I.T. were beginning to equalise with men. However only 33% of women were 'Managers & Senior Officials', with men twice as likely to be in these positions as females. Types of careers which were most and least likely to be chosen by male and female genders can therefore be identified. This is discussed further in section 2.3 which studies those who follow a counter-stereotypical gendered career.

The percentage of workers in each occupation group that are women, April to June 2013, UK



Source: Labour Force Survey - Office for National Statistics

FIGURE 1 THE PERCENTAGE OF WORKERS IN EACH OCCUPATION GROUP THAT ARE WOMEN, APRIL TO JUNE 2013, UK (CROWN COPRIGHT, 2013)

2.22 Gender stereotyping in the workplace

Earlier in this chapter the sections have considered what gender is and both what a career is and the types of career chosen by gender and this directly leads to the consideration of what gender stereotyping for women in the workplace is. This section will therefore consider the impact of gender stereotyping, before counter-stereotypical careers are discussed in the next section.

To begin, what is gender stereotyping in careers? DeFrancisco and Palczewski (2014) consider that the workplace is 'populated with people doing gender' and issues such as pay gaps arise which are seen to be based on gender. Wage figures (The Guardian, 2013) show a large discrepancy between men's and women's wage in the UK (Smith, 2014). According to the Guardian in 2013, the gender gap was 15% (with men being paid on average £26.54 per hour compared to women being paid £18.32). This may be seen as a form of discrimination in the workplace; not based on the individual, but based on gender however is not as simple as the figures shown as the pay discrepancy could be linked to the different careers rather than men and women being paid differently for the same work.

This links in with the premise of this research as it shows that the stereotypes of gendered careers could be an issue as women choose careers which are still those traditionally held by women (Tower and Alkadry, 2008, Risman, 2004) and do not aim for higher positions due to the assumption of masculinity (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014). Barbulescu and Bidwell (2012) evaluate how the socialisation of gender roles means women's career choices are affected by masculinity- in two main ways. Firstly women feel they will not identify with 'masculine- stereotyped' work and secondly that women feel they will be less likely to be offered a male gender- stereotyped career and so do not apply. In Parliament the percentage of women is currently less than 25% (Smith, 2014) and while society can focus on how more women are part of the government than before; the reality is the percentage is not representative of the male/ female split in the UK. If women are not represented in government and women are still aiming for careers traditionally held by men; how can gender stereotyping be seen as a thing of the past. Therefore this is still an issue and will be discussed further in the next section where counter-stereotypically gendered careers will be considered.

2.3 COUNTER- STEREOTYPICAL CAREERS

This section considers males and females in counter-stereotypical roles to those generally held by their gender. While male and female are not the only considerations for gender (eg transgender or non-gender) this study is based around the 'separate spheres' (Beauvoir, 1997; Oakley, 1974; Okin, 1989) and so the focus is on these two specific gender positions. The careers chosen for discussion here are typically known for employing either heterosexual men or women and careers such as fashion where a high percentage of those involved in the creation (in this case men) are known to be homosexual (Entwistle, 2012) are not discussed. The study looks at the role of gender in the 'norms' of society which are manifested through 'rules' as discussed in section 2.1 (Butler, 2006). A basic study of the occupational groups (Figure 1) and which are held predominantly by male and female genders is shown in section 2.2 and this leads to their discussion within this section. As the careers are atypical roles this leads to a smaller sample and therefore naturally studies in this area tend to focus more on patterns within these careers than quantitative data analysis. This section will be separated into the findings from female and male counter-stereotypical roles and then these will be analysed in the context of the aims of this study.

2.31 Females In Counter-Stereotypical Roles

Considering research from a variety of careers which have shown to have primarily men such as engineering (Bagilhole et al, 2009; Faulkner, 2007) and architecture (Sang et al, 2014) and also the police force which has been the subject of a number of research papers (including Chan et al (2010) and Garcia (2003)) these studies showed women trying to progress in the chain of command can be excluded from managerial/ higher roles due to beliefs they did not have the 'masculine' behaviour such as aggression and competitiveness to succeed in these roles (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014). The lack of women in these higher positions such as 'Managerial and Senior' roles is shown in section 2.2 (Crown Copyright, 2013) and so if you consider how women were excluded from higher roles due to a lack of masculine traits (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014) in male-dominated careers such as Engineering and Architecture, a suggestion can be made that women may not be attaining these positions due to a view by society that women do not possess personality traits that men do possess and so are unsuitable for managerial position due to 'lacking' these 'masculine' traits which are believed to be integral to the role (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014; Edvardsson et al, 2015).

Women in a male-dominated career can feel as though they have to take on the attributes of a man to be accepted in the workplace and to be treated equally as a man (Bagilhole et al, 2009; Mallia and Windels, 2015; Smith, 2013); therefore becoming 'anti-woman' (Bagilhole et al, 2009) yet a strong show of masculinity can be just as detrimental (Edvardsson, 2015) and can also cause their male counterparts to target and harass them (Garcia, 2003; Guerrier et al, 2009). Edvardsson (2015) looks at how a 'genderless' approach to management can be detrimental as an expectation of a male or female is expected. Denissen (2010) discusses how women who 'violate interactional expectations' can receive severe 'sanctions' such as loss of jobs, harassment and exclusion from work if they do not retain this duality of femininity and masculinity (Gherardi and Poggio, 2001). This shows how women in male- dominated careers must balance femininity and masculinity and yet gender is always a consideration as a non-gendered approach is not accepted. Women needed to 'feminize' (Smith, 2013b) their role in a male-dominated area while also contributing male characteristics in relation to the work itself to be allowed to be accepted. Female work can be seen as inferior to male work (Torres, 2014; Williams, 2015) and so a certain social stigma is affixed to these careers and so for career (and salary) progression a male-dominated career may be the only option. However Torres (2014) considers the high attrition rate of women

leaving male-dominated careers to return to female-dominated careers at many times a severe detriment and so this suggests the issues are severe enough to force many women into gendered career roles.

Soft skills can be seen as linked to femininity (Faulkner, 2007; Berkery, Morley and Tiernan, 2013); however in many roles they are essential such as within an interactive world (Guerrier et al, 2009; Bailey and Mitchell, 2006). As women are seen as possessing more of these soft skills (Faulkner, 2007, p334), some traditionally male occupations such as engineering and IT are promoting women by integrating both technical and soft skills into careers, 'a technical/social dualism' (Faulkner, 2007, 348). Guerrier (2009) discusses a 'growing reliance' on these soft skills and therefore allowing women to utilise rather than ignore the traditionally feminine traits. While men can find it hard to adapt to this dualism (Faulkner, 2007); for example for male engineers looking to join management 'technical' and 'social' are seen as 'mutually exclusive'. Faulkner (2007) shows how the technical is seen as a masculine area whereas social is seen as feminine and the male engineers distance themselves from gender perceived notions of feminine attributes.

Within studies of females in male-dominated careers women unlike men tended to have a 'back-story' (Faulkner, 2007; Etzkowitz et al, 2000) such as a sibling or father showed them for instance computers as a child. Therefore the stories linked the female in a traditionally male role as having links to a male within the family who began their interest in the subject. However, although women when in these counter-stereotypical occupations talked about reasons why they chose their careers; in general careers were not discussed as linked into hobbies. As Faulkner (2007) discusses if a man becomes an engineer there is nothing seen as unusual and so no reason to discuss any specific reasons; whereas if a woman becomes an engineer there would generally be a reason behind this and similar to Etzkowitz et al (2000) where women discussed back-stories linked to IT, this showed a certain need to justify why they chose that career. This showed a significant difference on how males and females saw themselves within a traditionally male career role as men had an assumption whereas woman needed a reason.

2.32 Males In Counter-Stereotypical Roles

Whereas women could be seen as excluded from male-dominated careers and forced to take on aspects of masculinity while retaining their femininity (Bagilhole et al, 2009; Smith, 2013); when considering research on males in female-dominated careers, some men could gain an advantage (Korek, 2014; Simpson, 2004; Williams, 2015) in occupations due to being able to retain their masculinity- "masculinity is positively related to men's minority status among women" (Korek, 2014, p242) and what Williams (2015) called a 'glass escalator' and use this to affect change in their job roles and the perception of this (Korek, 2014; Simpson, 2004). It needs to be noted the 'glass escalator' described by Williams (2015) was not an advantage which minority and disabled men received based on studies (Cowling et al, 2015) which tended to focus on middle-class men (Williams, 2015).

"While 'token' women can be severely disadvantaged by their minority status, positive career outcomes may well accrue for 'token' men. Men working in non-traditional occupations have been found to benefit from their token status through the assumption of enhanced leadership and other skills" (Simpson, 2004, p352)

However conversely while keeping this masculinity could benefit some men in counter-stereotypical careers; it could also negatively affect others where it would be assumed men had an inbuilt need to progress within the career structure (Simpson, 2004). Simpson (2004) discussed how 'assumptions of careerism' in certain careers such as teachers and nurses were not appropriate to men in these careers and they felt there was an expectation to progress further into management. This showed a gendered difference as women felt they needed to be masculine as well as feminine to succeed (Denissen, 2010; Gherardi and Poggio, 2001) whereas men either utilised their own masculinity or the career itself (Simpson, 2004) assumed men would follow the prescribed gendered path and feminine traits did not factor as an option. This showed how the socialisation of masculinity could be seen as detrimental both to men as to women; as men could be forced into altering their career path into management when they preferred not to such as in teaching and nursing (Simpsons, 2004).

Men could feel the need to demonstrate their masculinity (Korek et al, 2014) and this could include downplaying the female aspects of their roles. Examples of this were renaming job roles to give a 'masculine' perception of a job role (Lupton, 2000; Pringle, 1993) and describing tasks to others generically highlighting those that are seen as more 'acceptable'

to a male in the career. Therefore separating the masculine from the feminine, as Simpson (2004) discussed men were able to alter their jobs to highlight the characteristics seen as 'professionalism' (Simpson, 2004) that were not seen as attributes women possessed such as the ability to cope under stressful situation and be interested in a challenge - all of which were seen as 'masculine qualities.' (Simpson, 2004).

2.33 Analysis Of Counter-Stereotypical Roles

It is difficult to gauge how successful the genders are in their counter-stereotypical careers with only a small sample when the attitude and pressure on women (Garcia, 2003, Guerrier et al, 2009; Denissen, 2010) and the worry by men of becoming feminine (Faulkner, 2007; Korek et al, 2014) leads each gender to rarely break an unconscious taboo when looking at careers which are counter to the 'norm'. Baird (2012) discussed the issue of competence linked to gendered roles; in specific the assumption of competence in gender specific roles could cause negative career choices. The assumption that females have high 'verbal' skills and males high maths skills could lead to a deficit if potential candidates went 'with the flow' (Baird, 2012) in regards to career choice rather than utilising their skills. This could result in a gap in skills linked to the need to conform to gender.

The main issue which could be seen from both a female and male perspective was the issue of masculinity ((Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014; Simpson, 2004; Torres, 2014; Williams, 2015). There was a belief that a man should be masculine and that this automatically imbued the male with certain personality traits and abilities (Simpson, 2004)s. This could be seen where women were allowed to utilise some masculine traits (Bagilhole et al, 2009; Smith, 2013) as long as they were limited and also contained feminine traditional traits (Garcia, 2003, Guerrier et al, 2009; Gherardi and Poggio, 2001). Whereas a man in a feminine traditional career felt pressured to follow the masculine career path and the assumption of certain roles meant that men could be pressured into promotion or forced to alter their role to achieve a perceived belief in their own masculinity (Simpson, 2004). This showed how the socialisation of genders, and the resulting careers based on gender, could be detrimental to both males and females within counter-stereotypical careers.

Having identified the issues associated with counter-stereotypical careers generally, the next section will present data from students considering their career choices and females within the games industry highlighting the gendered difference in both.

2.4 INDUSTRY AND ACADEMIC DATA

This section looks at data from industry and academia, with data taken from the Next Gen Talent Survey (Nesta, 2013) connecting the two. While so far the study has shown what gender is, careers and how gender affects careers and issues relating to counter-stereotypical careers; the study is primarily focused on the video/ computer games industry and so the following sections will analyse the official figures and consider what these show for males and females in this career area. As has been discussed in section 2.2 (careers) Further Education (FE) and Higher Education (HE) are the main focus points for career as these are where learners choose courses themselves to lead to their career and no longer follow the prescribed route. Therefore, figures from both Level 3 in general (FE) and computer games degrees (HE) are included so that these areas can also be studied to find any patterns in the choices made by males and females.

2.41 Skillset Census Data

While there has been an increase in the percentage of women in the games industry since 2009 (Figure 2), this must be taken alongside the decline in the overall workforce. In 2009 there were 7050 'computer games total workforce' and in 2012 this stood at 5,500 (Skillset, 2012). Consider that while it is an increase in 2009 the 6% of females accounted for 450 workers while the 14% accounted for 750 (so an actual increase of 300 or 66%). This overall figure still showed that women were a small minority in the game industry. Looking at Figure 4 the main areas women were involved in were still Production and Business Management (which included the majority of roles such as Administration in Business Management and Production roles which could include Directors and Producers) and were much lower in technical careers especially the Technical Development which included careers such as Lead Programmer. Careers linked to Art and Design which was at 12% (see Figure 4) were for example Graphic Designers and Production Designers and so more art or management based and even these had a relatively small amount of females (especially considering that as shown in Figure 3 Art and Design was a third of the work force in computer games). This showed that firstly there is a shortage of women in the games industry; but also and more startling that of those a high percentage are in non-specialist roles.

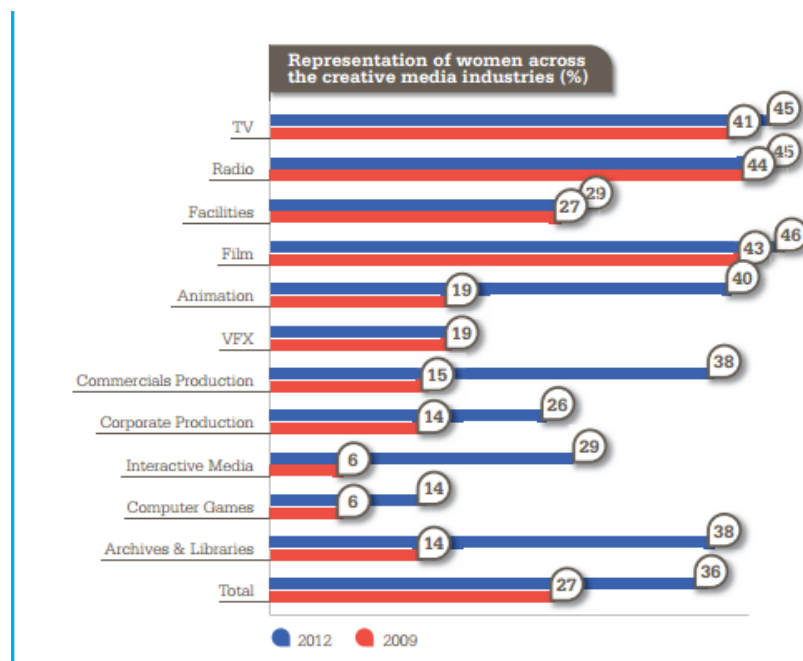


FIGURE 2 REPRESENTATION OF WOMEN ACROSS THE CREATIVE MEDIA INDUSTRIES (%) FROM 2009 AND 2012 (SKILLSET, 2012)

Occupational groups

Figure 65 shows the major occupational groups in computer games. These are art and design (33%), technical development (26%), business management (13%), strategic management (10%) and production (10%).

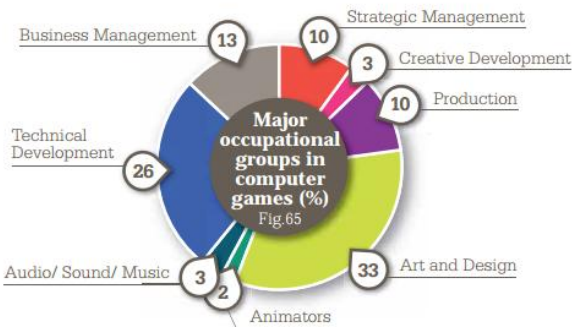


FIGURE 3 THE MAIN OCCUPATIONAL GROUPS IN COMPUTER GAMES (SKILLSET, 2012)

Below average representation	Industry average representation (14%)	Higher than average representation
Technical development (6%)	Strategic management (11%)	Business management (41%)
-	Art and design (12%)	Production (25%)

Women workforce Table 30

Table 30 illustrates the representation of women in each occupational group in computer games.

FIGURE 4 THE REPRESENTATION OF WOMEN IN EACH OCCUPATIONAL GROUP IN COMPUTER GAMES (SKILLSET, 2012)

2.42 Next Gen Talent Survey Data

The following charts were created using raw data provided from Nesta from the 'Next Gen Talent Survey' (Hope, A. and Livingstone, I., 2011) and so is accurate from August 2010 (Nesta, 2013). The results from this survey were used within the Livingstone and Hope report- Next Gen.: Transforming The UK Into The World's Leading Talent Hub For The Video Games And Visual Effects Industries (2011) which looked at those in the games industry and their academic results. The majority of the respondents were aged 18-45 (there was 1 respondent below and 6 respondents above 45 and so these were excluded for all but the last chart).

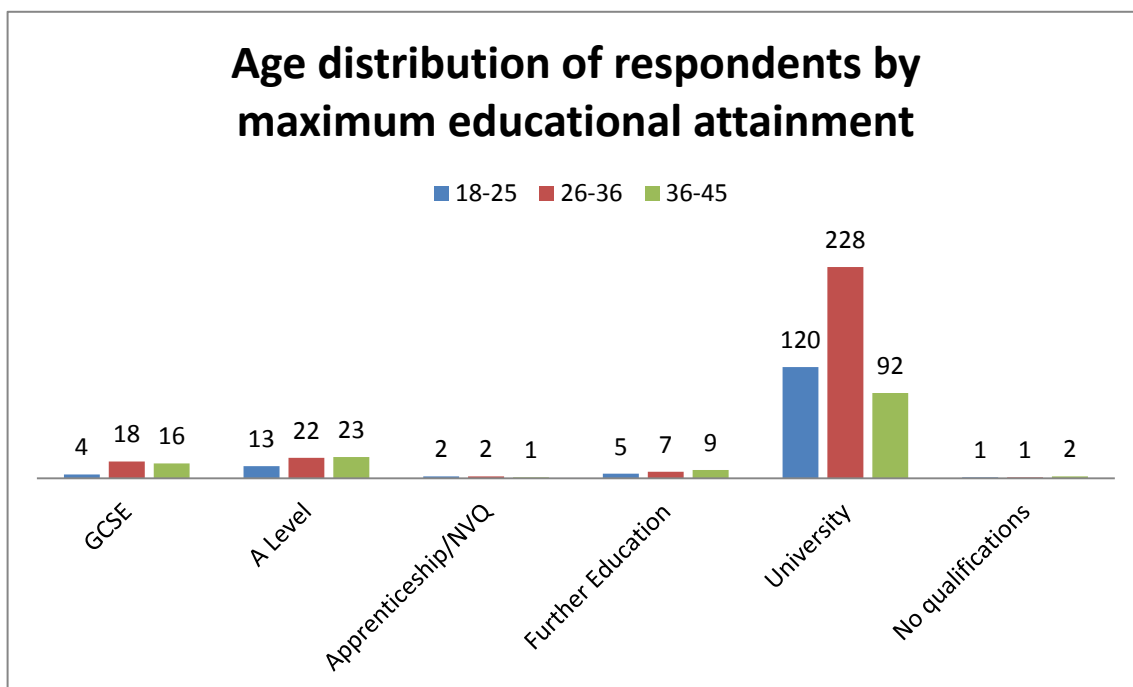


FIGURE 5 AGE DISTRIBUTION OF RESPONDENTS BY MAXIMUM EDUCATIONAL ATTAINMENT – DATA TAKEN FROM NEXT GENERATION TALENT SURVEY (NESTA, 2013)

In Figure 5 it can be seen the majority of those in the games industry had completed some type of University education. This showed that Higher Education or just prior to HE was an appropriate junction to interview learners and helped decide on the target group for the main research.

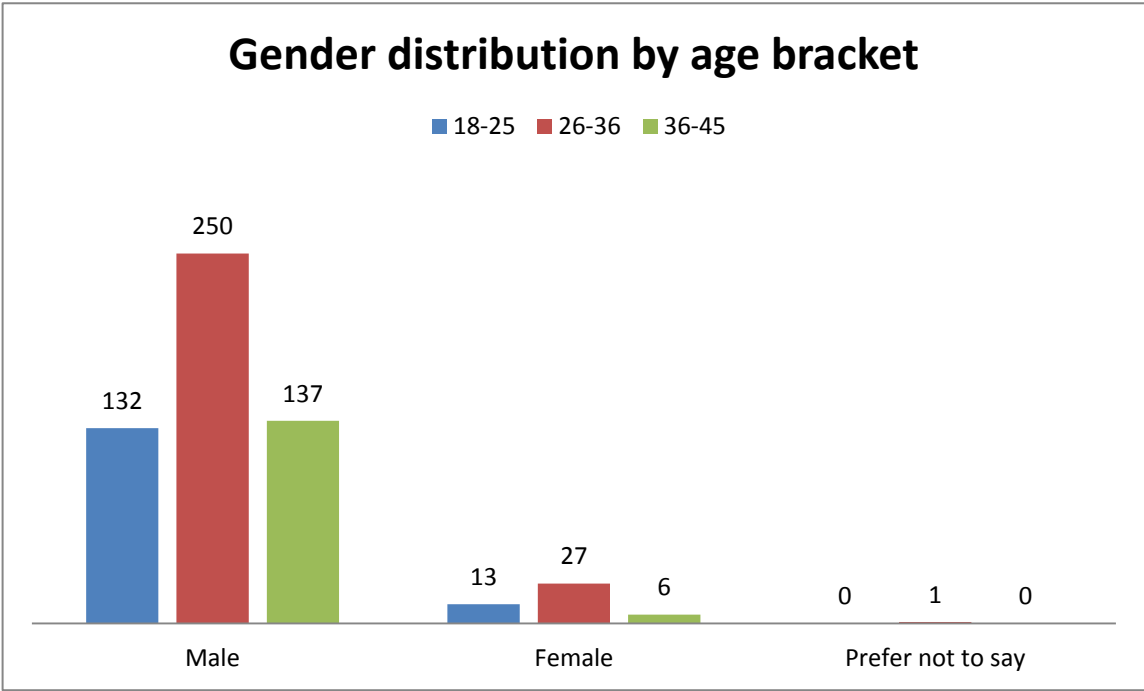


FIGURE 6 GENDER DISTRIBUTION BY AGE BRACKET – DATA TAKEN FROM NEXT GENERATION TALENT SURVEY (NESTA, 2013)

From Figure 6 It is clear how few women there were compared to men and this links with the figures from Skillset (2012). This low figure is the reason for the study looking at why there are so few women in the games industry.

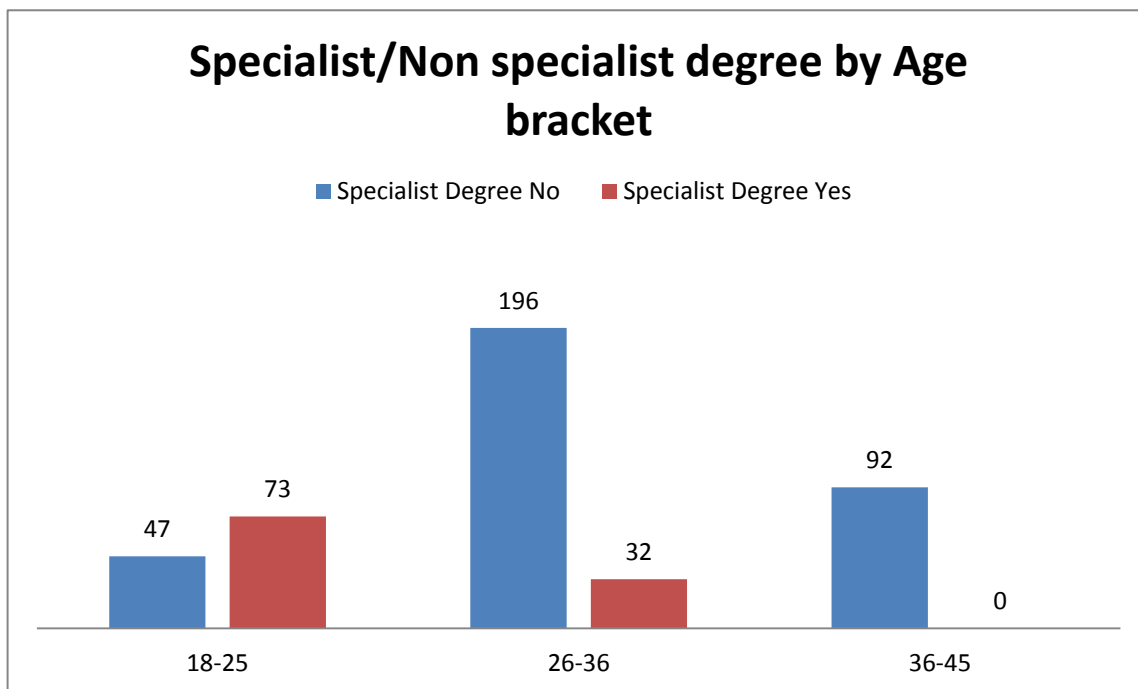


FIGURE 7 SPECIALIST/NON SPECIALIST DEGREE BY AGE BRACKET - DATA TAKEN FROM NEXT GENERATION TALENT SURVEY (NESTA, 2013)

In Figure 7 it can be seen the younger respondents were more likely to have studied a specialist degree (a Games Development specific degree). Whether this is more likely due to more being available is unclear however specialist degrees were readily available for the 26-36 age range and many did not choose one.

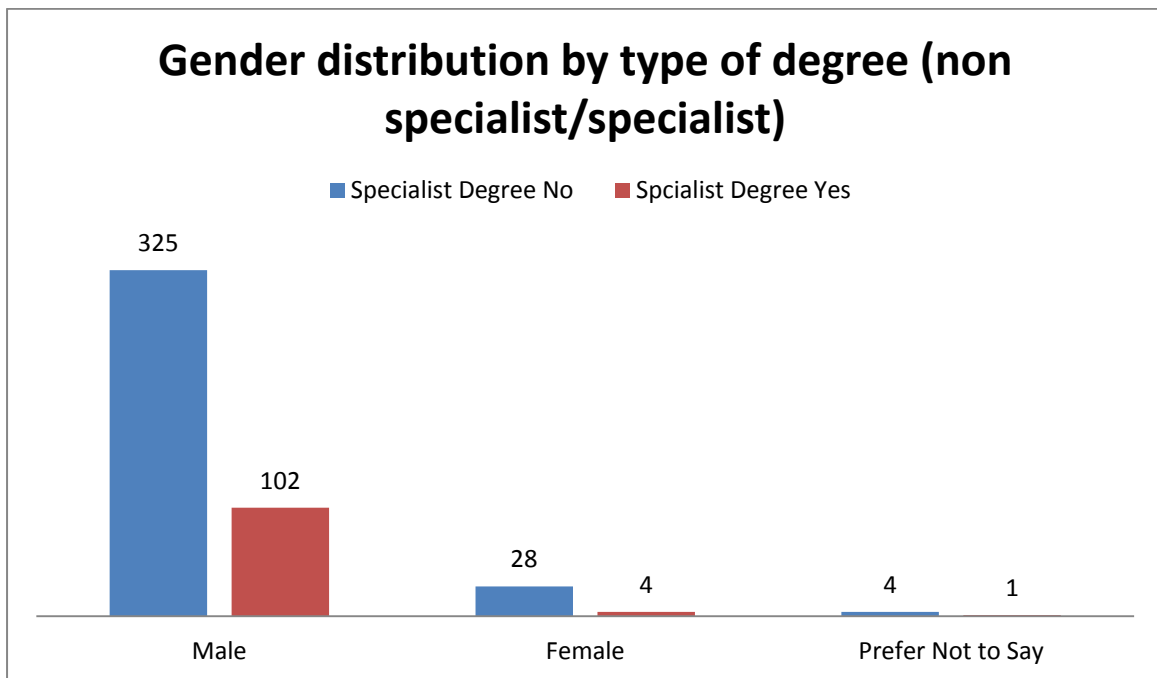


FIGURE 8 GENDER DISTRIBUTION BY TYPE OF DEGREE (NON SPECIALIST/SPECIALIST) (NESTA, 2013)

From Figure 8 it can be seen approximately a third of males chose a specialist games degree unlike the females where only a small percentage did. Therefore while it was still only about 1/3 males who chose a games development degree' for females it was 1/7 and this ties in with this research that looks at not only how few women are in the games industry; but also how few are studying games courses.

2.43 Level 3 Figures

Now having looked at both the games industry and the education of those in the industry; the following sections will look at education from general to specific qualifications. Education prior to 16 years of age is prescribed to specific core subjects with little additional choice (and these extra subjects are also limited) prior to level 3 (A-level or equivalent). Level 3 is therefore an important juncture as this is where learners can choose the pathway which will lead to a degree and career. While the focus of this study is on subject specific level 3 qualifications; A-levels are still an important area to consider as the subjects chosen can be segmented by gender and so give a comparison to learner choice.

“One of the consequences of assumptions about men's and women's job roles is that women tend to study different subjects to men at higher levels. The National Curriculum has narrowed the range of choices at GCSE so girls and boys now study similar subjects at this level. But there is a clear difference between their subject choices at A level. Some subjects attract more than twice the number of entries from girls compared to boys, and vice versa” (WWC, 2006, p11).

By analysing the A-level choice by learner's gender it can be seen the type of subjects taken (The Telegraph, 2013). This gives a good grounding to show that the choice by gender is not simply in vocational qualifications, but also in traditional academic ones. The results (Figure 9) show that choice still follows what can be seen as a traditional gender divide. Males chose ICT, Computing and Mathematics to a higher degree than females; yet females chose Art and Design subjects and English to a much higher degree than males. This is mirrored in the choices in BTEC vocational qualifications (Pearson, 2012) which is shown in Figure 10 which again shows a gendered divide in subjects (males- Engineering and Construction; females- Hair & Beauty and Health & Social Care). The media result for BTEC included the games development pathway which is the only main level 3 games course; however this also contains traditional as well as interactive media pathways.

“Young people still tend to opt for traditionally gender-stereotyped courses and jobs. Whilst girls and boys study similar subjects at GCSE level, there are clearer distinctions in the choice of A Level subjects, with more young women choosing arts subjects and the biological sciences and many young men choosing physical sciences and mathematics”. (CLG, 2007, p19)

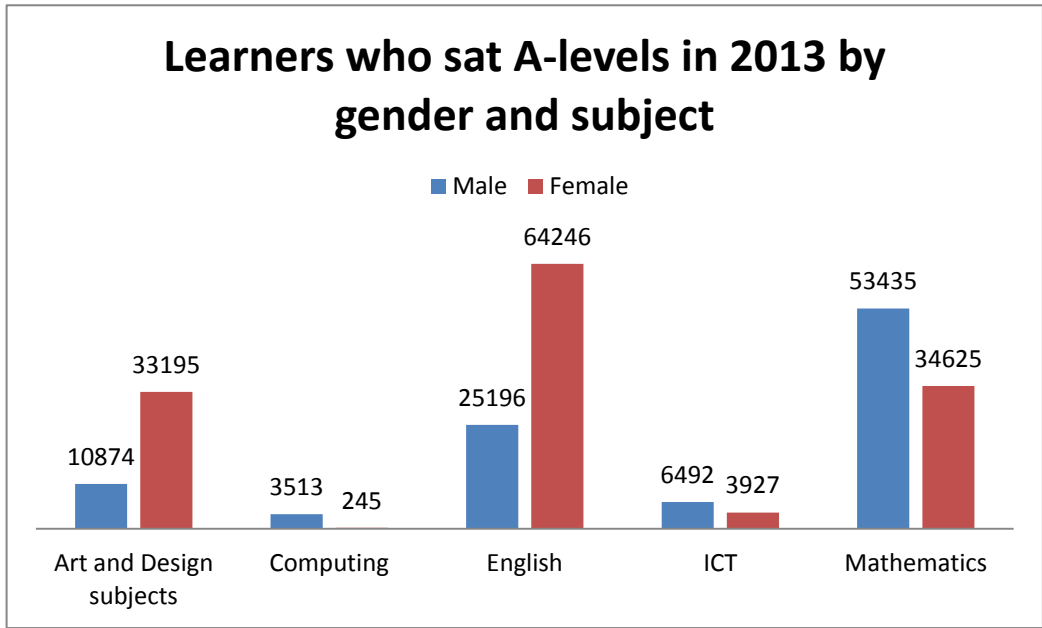
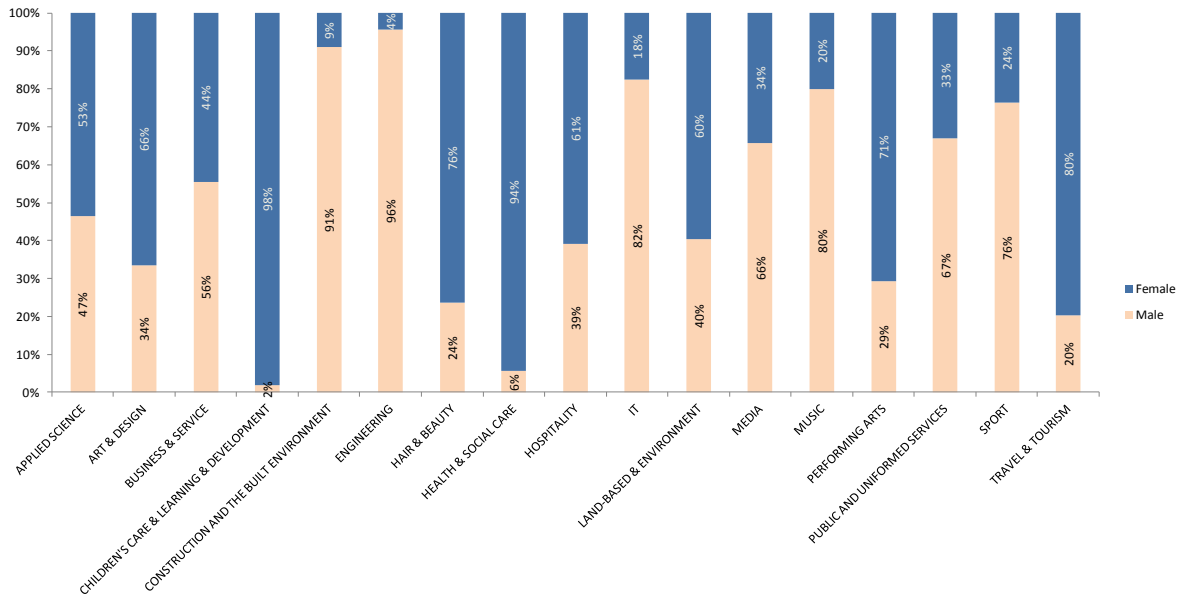


FIGURE 9 THE TELEGRAPH ONLINE- A-LEVEL RESULTS 2013: NATIONAL RESULTS BY SUBJECT AND GENDER (THE TELEGRAPH, 2013)

BTEC Results Day 2012

Learner Certification BTEC Level 3 Overview (Gender & Subject)



BTEC Results Day | 2012

3

FIGURE 10 BTEC RESULTS 2012 - NATIONALS 2011-12: BY GENDER AND SUBJECT (PEARSON, 2012)

What these findings suggest is that the choice of gendered careers may start at this crucial stage where learners choose those subjects which will then place them on a chosen degree (and related career path) and so pre-degree and degree choice are important areas to analyse to understand why men and women do not choose certain subjects and by extension careers. In particular this work is concerned with why women are not choosing the games industry as a career and those that do are not choosing technical subjects (Skillset, 2012).

2.44 Games Specific Qualifications

As discussed in the previous section on level 3; both level 3 and 4-6 (undergraduate- degree) are the precursor to career choice and so show the trends and the career choices prior to the career itself. The Skillset figures (2012) show there are few women in the game industry, the results from the next gen survey (Nesta, 2013) confirm this and also show few women chose specialist degrees and that the level 3 results show that females were already choosing courses which followed what can be seen as pre-prescribed gendered choices. This section looks at how many women were choosing games courses in the UK as this is the specific area this thesis is researching. The figures (Figure 11) were obtained from HESA (2013) searching for course titles that contained the key words computer games and show less than 7.5% females compared to males from 2004-2012 were interested in these courses between the academic years 2004 and 2012. While there was a rise after 2010 to over 5% this still never achieved 7.5%. This shows that not only were women not choosing to work in the games industry; they were also choosing not to take the course prior to the games industry. This is important as this confirms that for whatever reason women were not choosing either the education or the career linked to the games industry.

“Women are under-represented at university in subjects including engineering, computer science, physics and mathematics, and are then under-represented in the occupations for which these subjects are important entry qualifications” (CLG, 2007, p19).

In a previous study (Carr, 2010) it was found that those who considered themselves 'gamers' were more likely to consider a career in the games industry. This is important as this showed a link between those who play games as a pastime and those who want to create those games. Therefore in the next section games and gameplay will be looked at to consider those in relation to gender (primarily female) and whether this has had any impact on the game industry as a choice for females.

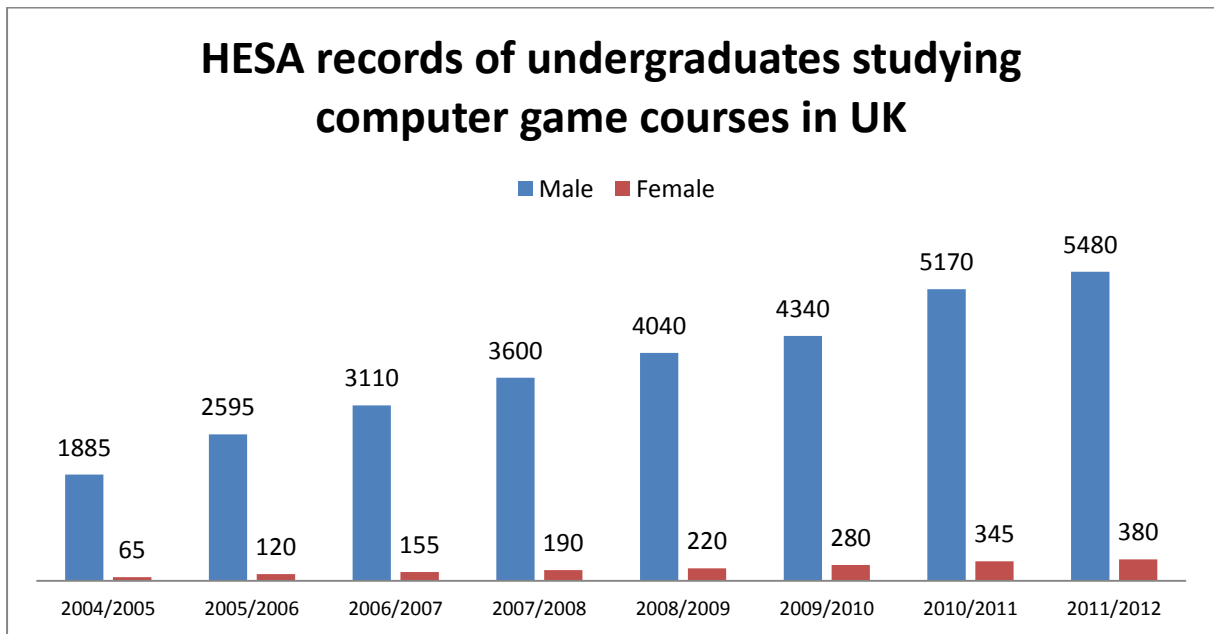


FIGURE 11 HESA RECORDS OF UNDERGRADUATES STUDYING COMPUTER GAME COURSES IN UK (HESA, 2013)

2.5 GAMEPLAY

So far the study has looked at areas such as gender, gender linked to careers, counter-stereotypical careers, figures from the games industry and education and these have been considered. To complete the areas that can affect the choice of the video/ computer games industry; the games themselves are an important consideration. An earlier study (Carr, 2010) found a link between those who play games and want to work in the industry and so the games themselves are an important element to study. The following sections will discuss how many women play games (and the type), the eastern influences on western culture, female protagonists and how females play video/ computer games. These will be partly analysed in context with the masculine view and consider if or how gender is utilised within gameplay.

2.51 The Percentage Of Women Who Play Video/Computer Games

To begin the number of women who play video/ computer games and what games they play will be studied. In the previous section (2.4- Industry and Academic Data) it has been found that few women compared to men are on both the games degrees and in the video/ computer games industry. Therefore this section will begin by answering the question are women playing computer/ video games and if so; what type. The figures which shall be looked at are based on results which include the UK and so are limited. While there are many more results from America; as this is research based around the UK, only results from the UK will be used.

According to the Internet Advertising Bureau UK (IAB, 2012) women play 49% of games compared to men's 51% (see Figures 12 and 13); this tallies with the BBC report in 2005 (Pratchett, 2005) that found a 'fairly' even 'split'. The key thing about these two reports is that they both included games which are not always considered when researching computer games. Both reports found while females played games as much as males; the types of games differed. A Neilson study (Neilson Games, 2008) found 48% of males were active gamers vs. 29% of females.

"Women can no longer be considered to be on the periphery of the industry. Although avid gamers are skewed significantly towards men, women are at least the equal of men when it comes to occasional, social or potential gamers" (Mintel Oxygen, 2008, p2).

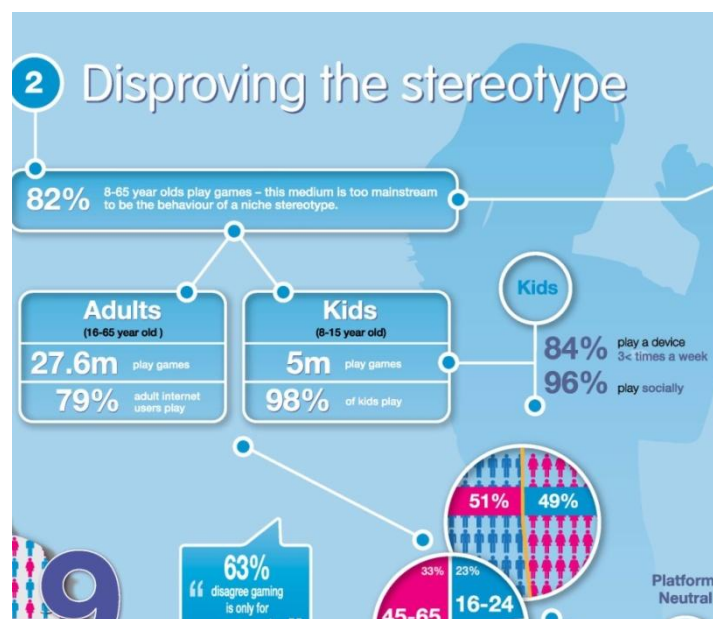


FIGURE 12 SECTION OF DIGITAL BRITAIN: A NATION UNITED BY DIGITAL PLAY (IAB, 2012)

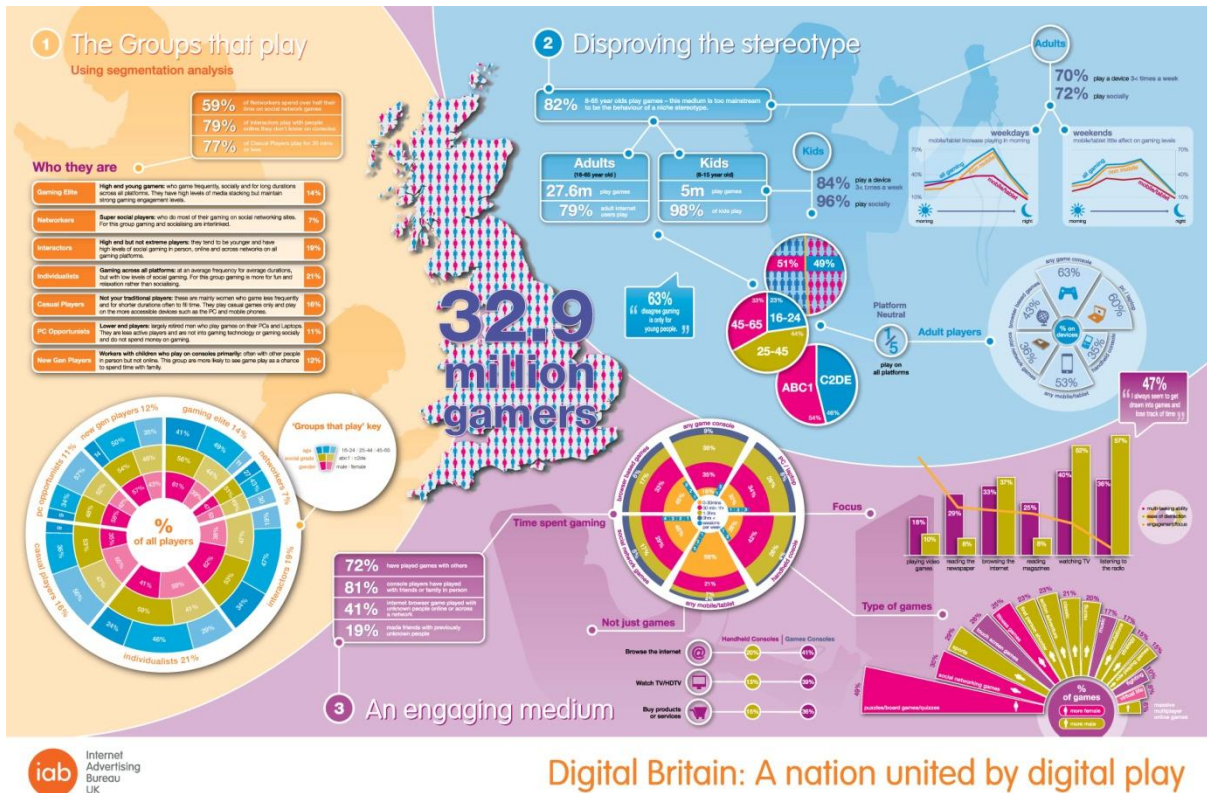


FIGURE 13 DIGITAL BRITAIN: A NATION UNITED BY DIGITAL PLAY (IAB, 2012)

The different genres of games which are chosen by genders could be a link into the choice of the game industry as a career. The game genre, console and method of play could all factor into what is seen as traditionally gameplay. As Pratchett (2005) discussed in the BBC study males and females do have different gaming preferences. Action adventure and FPS (first person shooters), sports and racing tend to be played on consoles; according to the BBC study (Pratchett, 2005) these have a much higher percentage of males than females. In comparison females played puzzles/ board games/ quizzes; which can be considered more for PC. The IAG study in 2012 found these genres also had a higher percentage of each gender. The 2012 study (IAG, 2012) showed social networking games had a greater amount of females and so could also link into PC use such as FaceBook.

This leads on to an important term used within gaming- the 'gamer'. This as a term can be all-encompassing or a term which categorises a small percentage of those that play games as a benchmark. In a previous study (Carr, 2010) those that considered themselves a gamer were more likely to consider the games industry as a career. This is important as self-identifying as a gamer does not itself confirm that others who play games do so differently or to a greater degree. Castell and Jenson (2005) consider how transitory this term can be as "*women who play card games as "female gamers"*" (2005, p3). Therefore the woman becomes something separate and distinct from the gamer. Until this term is specifically categorised it can be utilised indiscriminately as a way to label any subsection.

Now that the number of females who play video/computer games has been considered; in the next section what those games comprise of will be considered. It will also consider the impact of eastern values on western culture which will lead to considering how women are portrayed in these games and the effect this could have and finally how females play video/computer games.

2.52 Eastern Influences On Western Culture

The numbers of women who play games has been analysed; therefore now the media itself is the next important focus. The media has been influenced by Eastern culture and this has shown an effect on how people in the west perceive protagonists within popular culture. The following section will look at this effect and what this means for games. This will be considered in the context of gender and what the resulting feminine and masculine divide means in relation to Western culture.

One of the key Western portrayals of male characters within videogames is the 'Macho' man (Monnens, 2006). An example of such a character is Konami's *Metal Gear Solid series- Solid Snake* (Fig. 14) similar to the 'traditional' central characters in action films especially in the 80s/90s portrayed by Arnold Schwarzenegger and Sylvester Stallone (such as *Commando* and *Rambo*) and including a high proportion of weaponry (large and powerful). These characters are likely to be veterans of war and include scars with the body type being overly muscular. They are heavily heterosexual (at times overly dominant) with 'buxom' female characters (at times submissive) and many times this being a strong element of the plot (such as *Prince of Persia*).

“In machismo, masculine attributes are stressed through physical courage, virility, domination of women, aggression, and an expression of dominance through confrontation, but these attributes are also coupled with a diminishing of “negative” feminine traits such as the expression of emotion, fear, and docility” (Monnens, 2006, pp4-5).



FIGURE 14 COVER OF METAL GEAR SOLID 2: SONS OF LIBERTY VIDEOGAME (KONAMI, 2001)

The view of men in the West has begun to change from that of the traditional 'macho' man (Monnens, 2006) to a more Eastern style on Western TV and films (consider the protagonists in *Mission Impossible* and *The Bourne Identity*). This is similar to the 'bishounen' (aesthetically beautiful boy/man) which is utilised within the Eastern film, TV and game industry (an example is *Tactics* (2004) - Figure 16). The almost feminine characteristics clash with the 'macho' views which were the accepted norm in the 80/90s in Western culture but with the rise in popularity of both Japanese culture in film, comic books and computer games a merging into Western culture utilising the Japanese style of drawing (manga) has brought this new view of the heroic man.



FIGURE 15 COVER OF FINAL FANTASY XII VIDEOGAME (SQUARE ENIX, 2006)

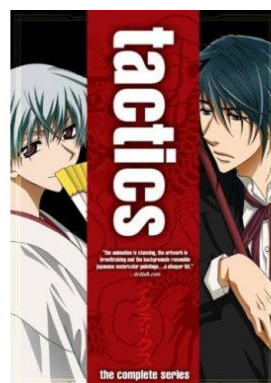


FIGURE 16 COVER OF TACTICS DVD (MANGA ENTERTAINMENT, 2008)

The issue of sexuality is an important consideration in the conflict between Western and Eastern views of masculine portrayal. Whereas the 'bishounen' in Eastern views can be heterosexual without conflict in the Western view the femininity of the male hero can be linked to implications of homosexuality as the physical traits react with the 'macho' view of the male protagonist (Monnens, 2006; Consalvo, 2003) and so within the video game world the male tries to retain his masculinity while taking on a role which may be seen as homoerotic.

“Can the assumed male heterosexual player successfully identify with a feminized male character, without perhaps coming to care for or even desire the character too much?” (Consalvo, 2003, p178)

This leads to adding a female character especially if two male protagonists are involved which is labelled as an “*erotic triangle, comprising two men and one woman*” (Consalvo, 2003, p178) to remove the possibility of homosexuality. However in the game world the protagonists still primarily focus on the traditional 'macho' man; such as John Marston in Rockstar Games' *Red Dead Redemption* (2010) and especially games involving war such as *Call of Duty* and *Battlefield*. Which would seem to suggest that the male game player is still concerned with their perception of themselves within the game. Games such as Square Enix's *Final fantasy series* (Figure 15) while popular are not the normal portrayal of the male character in main stream video games.

This is where there is a difference shown between the genders. The male protagonist can be appreciated for his fighting style and look; 'idealised stereotypes' (Monnens, 2006). Therefore how the man would wish to be perceived. What can be perceived as misogynistic is how many women are also the ideal but for the man rather than the woman; “*young, fertile and always ready for sex*” (Ray, 2004, p104). While the men playing the male character can utilise the 'macho' stereotype and become the main protagonist; the female player many times is forced into either playing a 'hypersexualised' version akin to a sexual fantasy (Ray, 2004) or an almost homoerotic or transgender experience by themselves becoming the overly macho man and working to win the affections of the female. The male protagonist while showing 'youth and virility' does not “*display anything that indicates sexual receptiveness*” (Ray, 2004, p104) and so does not place the male game player in a sexually ambiguous position (Consalvo, 2003; Cogburn and Silcox, 2009). Even Lara Croft (Figure 17) in the Eidos *Tomb Raider* (1996) while being female appears to embody the traits which are seen as traditionally more masculine.

“But is this target audience—the young men who take on the character of Lara in order to play—primarily being invited to take sexual pleasure from looking at her? Or to enjoy the pleasures of being her? We know that there

are certainly masculine pleasures to 'being' Lara, even with her unprecedentedly feminine body. The violence in Tomb Raider is understood to be desirable for men" (Mikula, 2003, p80).

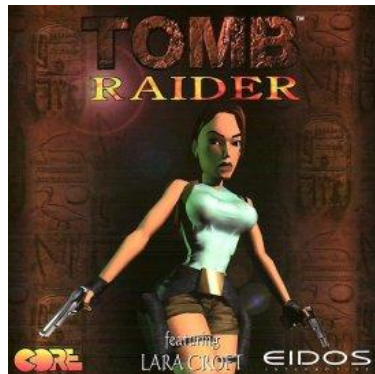


FIGURE 17 TOMB RAIDER (EIDOS, 1996)

One reason may be that while the Japanese portrayal of men allows a shifting of the masculine to embody a more feminised look; the female Eastern portrayals, similar to the Western portrayal of the women are extremely beautiful, cute and sexually attractive such as *Galaxy Angel* (2001), (Figure 18) therefore legitimising this view of the female character as a sexual object and less as a realistic character portrayal.



FIGURE 18 COVER OF GALAXY ANGEL VIDEOGAME (BROCCOLI CO. LTD., 2002)

Why this is so significant is as discussed earlier those who play the games; see themselves as a 'gamer', are more likely to see the games industry as a possibly career (Carr, 2010). Therefore the gender perceptions within the game show a message which is weighted towards the male player on many mainstream games. How females are portrayed in games will be studied in more detail in the next section where female protagonists are considered.

2.53 Female Protagonists

To begin with in this section is a short history of female protagonists to highlight how these characters were able to be integrated into the traditionally masculine arena of games. *Metroid* (Nintendo, 1986) had the distinction of having one of the first female protagonists (Samus Aran); not only a lead but **the** lead and in an action videogame. What made this game especially startling was the knowledge of the gender of the main protagonist was kept hidden behind an asexual armour and there were no references (the manual stated 'he') and so until the game was completed and the armour removed the gender was assumed to be male (admittedly this character was a woman in a bikini in the final scene but pixelation meant subtlety was not available). This meant the player was forced to have been playing a female character whether they had wanted to or not and so created a dichotomy with the usual self-visualisation of the male lead. In 1984 the *King's Quest* series was created by Roberta Williams and her husband. Why it is notable is in the 4th instalment- *The Perils of Rosella* (Sierra Entertainment, 1988) it included the "first female protagonist" (Krotoski, 2004, p6). In contrast to *Metroid* this character was obviously female from the beginnings of the game. Consider the packaging (Figure 19) and it is clear that unlike the asexual character for *Metroid*; *Rosella* is obviously female and the cover is made similar to that of romance books which may have been targeted for a female audience. This allows this game to be specifically targeted and unlike *Metroid* which was a game which would have been targeted for males; this was targeted for the female audience.



FIGURE 19 COVERS OF METROID (NINTENDO, 1986) AND KING'S QUEST IV: THE PERILS OF ROSELLA (SIERRA ENTERTAINMENT, 1988)

In figure 20 are the covers of key female protagonists in video games from 2003 to 2013. Jade from *Beyond Good and Evil* (Ubisoft, 2003) and Faith from *Mirror's Edge* (EA, 2008) wear clothes which are asexual and while obviously female, are not 'hyper-sexualised' (Ray, 2004). Nariko from *Heavenly Sword* (SCEE, 2007) is interesting as while her clothes seem overly provocative and seem similar to the clothes worn by anime characters, the character herself is strong and capable and not overly physically proportioned as many such characters are. Lightning from *Final Fantasy XIII* (Square Enix, 2009) is similar to Nariko in that she is a strong and capable woman however her clothes while including a feminine touch are much more masculine and the sword she uses more reminiscent of a male character such as *God of War* (2005). Finally there is the latest *Tomb Raider*, this is an interesting contrast to the original Lara Croft (shown in the previous section) as while she retains her strength and capability she also has realistic physical proportions similar to Nariko and shows a character which women can attain to physically as well as in personality. These games all reside in the 'action' genre rather than 'passive' (Walkerdine, 2007) and while there have been a number of leads in other genres these are important protagonists in a genre with a predominance of men (Beasley, 2009) and these females are strong and capable. This shows how the female protagonist has been positioned in the game market (whether specifically for female or for both genders can be debatable as this genre has a larger male audience as seen in the previous section) but clearly made to give women an equal position within the game world.

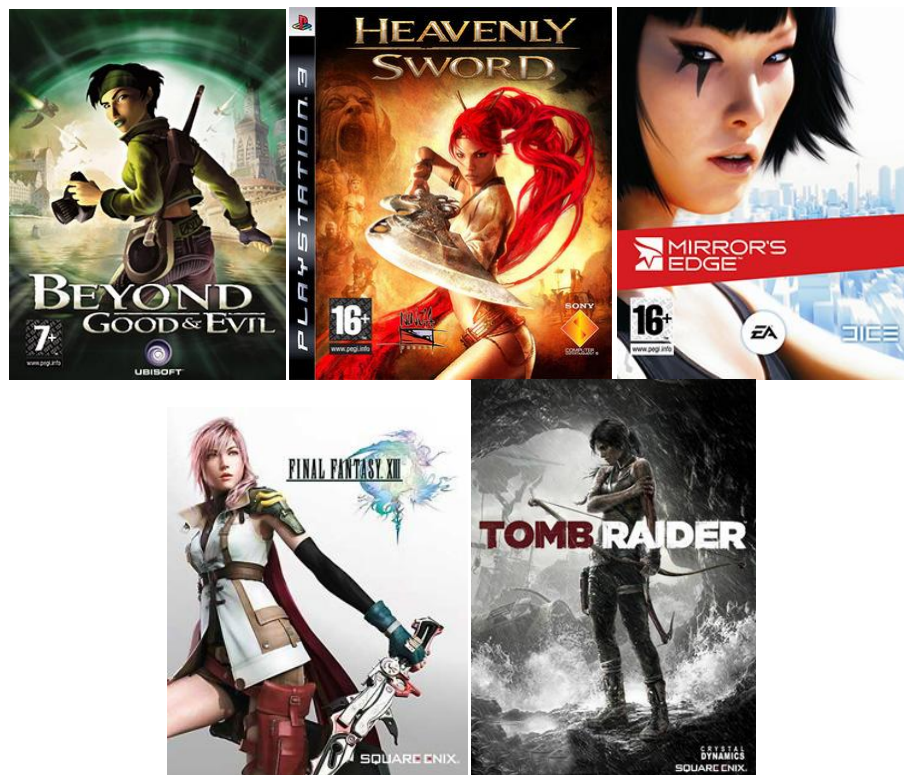


FIGURE 20 FEMALE AVATARS PORTRAYED ON THE COVERS OF BEYOND GOOD AND EVIL (UBISOFT, 2003), HEAVENLY SWORD (SCEE, 2007), MIRROR'S EDGE (EA, 2008), FINAL FANTASY XIII (SQUARE ENIX, 2009) AND TOMB RAIDER (SQUARE ENIX, 2013)

2.54 How Females Play Video/Computer Games

We have now looked at how many females play the games, a look at Eastern portrayals and their influence and how female protagonists are being included within video/computer games. Finally to consider gameplay it is important to look at how games are played by females. In 2.52 the power structure between males and females was discussed and the position of the female as a sexual object. Considering this further, looking at Ray (2004) and her study of gameplay she discussed a male hegemony with a 'pyramid of power' which gave females a weaker position in gaming due to the structure of society and so while men could comfortably consider a female avatar, a female could not consider a male due to their lower social position. The "*majority of dominant, gender- based societal structures in the world today are patriarchal in nature*" (Ray, 2004, p96). This places an interesting perspective on the female protagonists in 2.53 as if men can comfortably game as females; in a genre which is heavily male, are these female protagonists actually for females at all?

When looking at how females play- avatars are an important consideration as they are the link between the player and the game; in fact in many games they are the player themselves. Within Walkerdine's (2007) study of girls playing video/ computer games she found the

"absence of, or ambiguous, masculinity....The girls operate as though they will be more able to cope with the male avatars if these are brought down to size, rendered less macho. This positions them very clearly as mothering and caring, gaining power by looking after an emasculated cuddly male avatar" (Walkerdine, 2007, pp.52-53).

Therefore the avatar was rendered 'safe' and to consider Ray's (2004) analysis of the power structure between genders this would create a character without the female having to transcend a masculine hierarchy yet able to regain some of the power lost within this transaction- a "*cuddly male avatar is rendered powerless and the girl powerful.*" (Walkerdine, 2007, p53). These opposing terms of 'cute' and 'powerful' shows the "*contradiction of femininity and masculinity*" (Walkerdine, 2007, p53). This links back to the first section of this chapter which considered the dual-burden (Gershuny, Godwin and Jones, 1994).

Another facet of how girls play is their preference on team co-operation (Walkerdine, 2007) and is praised as a positive female attribute unlike boys who are taught a much more

independent approach- 'not depending' (Pollock, 2008). Pollack (2008) discussed how boys are taught to be 'stoic', not show emotion and 'not depend on others', this is a startling contrast on how the females were taught to co-operate.

The individual type of play could link to society's expectations as Walkerdine's (2007) study found girls who acted competitively were seen as unfeminine by following what is seen as masculine (trying to win) and so by working with others were able to retain their femininity (Castell and Jenson, 2008). Walkerdine (2007) described this as the 'consistent engagement with both competition and co-operation' which seemed to hint at the girls trying to 'hide the desire to win' and therefore remain feminine while competing. Castell and Jenson (2008) called girls acting competitively while also supporting others 'benevolent competition'. This was in such a way that the girls could remain in society's norm, therefore within the way society decides gender should be performed. This suggested not that girls do not want to win but that girls are taught they should not want to win.

As well as girls preferring to play in groups they also played with a male counterpart so to remain in what is seen as the norm (Castell and Jenson, 2005). In this way they avoided transgressing 'stereotyped feminine identity' (Castell and Jenson, 2005) and so could retain a purposeful ignorance of partaking in a male pastime. Within this gameplay girls became insecure and lacked confidence in their own ability - the "*habitual 'feminine' position of incompetence*" (Walkerdine, 2007, p55) and as described by Castell and Jenson (2005) as a 'magical realism' the girls removed themselves from the game so to avoid the 'gender-inappropriate engagement' (Castell and Jenson, 2005).

Considering these views of gameplay it is clear that females play differently to males and it is clearly hinted that this is due to society's expectations of gender and not their own choice. The consideration of choice is an important one and so in the next section choice will be considered both in relation to joining the games industry and gameplay. This final section of Chapter 2 will consider what has been looked at so far and incorporate any pertinent material linked to choice.

2.6 FACTORS WHICH INFLUENCE CHOICE (IN BOTH THE GAMES INDUSTRY AND IN GAMEPLAY)

There has been a lot of research on the influence of gameplay on games, factors have been identified which influence gameplay and these can then be seen as a factor in career aspirations (Carr, 2010). These factors in relation to gender are therefore discussed as well as social factors linked to both females playing games and those affecting whether females are choosing to play games. Women's place in the games industry is discussed and finally all these factors are considered to hypothesise reasons why there are so few women in the games industry. These results lead to the methodology, methods and results from the original study which looked at female Further Education and Higher Education students and their thoughts in relation to social factors relating to the games industry and their own consideration of the games industry as a viable career option.

2.61 Factors

From previous research (Carr, 2010) there was a link found between those who played computer/video games regularly (saw themselves as a 'gamer') and those who wanted a career in the games industry; this was found to be players who were primarily male and so compares with previous research that showed those who play video/computer games are mainly male (Barron, 2004; Cherney and London 2006; Terlecki and Newcombe 2005) and so could lead to a possible reason why not as many women either study games at degree level; no more than 7.5% of males (HESA, 2013; Carr, 2010) or only 14% of the game industry is female (Skillset, 2012). This therefore led to the possibility that to attract more women into the game industry more girls needed to be attracted to gameplay or at least attracted to the same games as boys. The following section will look at firstly cognitive and physiological factors and secondly social factors linked to gameplay to see if any patterns can be found why girls may not play video/ computer games (or the same type of games) to the same extent as boys and therefore why girls do not choose the game industry as a career. In the following study the term 'gameplay' will be in relation to the playing of mainstream games (those usually played on Playstation 3 or Xbox 360) such as *Call of Duty* or *Red Dead Redemption*; this will also relate to the playing of the same games on a PC.

2.62 Cognitive And Physiological Factors

Spatial awareness/ attention span/memory/problem solving

Previous studies show the playing of action games creates greater spatial awareness (Feng 2007; Dye, 2009; Latham et al, 2014; Spence, 2009) and showed a difference in male and female cognitive responses; males gained higher figures (Feng, 2007; Terlecki, 2005) yet repeated gameplay improved both genders and allowed women to show equality with men in this area (Feng, 2007; Spence, 2009). The most pertinent finding of this study was the utilisation of the 'action games' genre as figures (Pratchett, 2005) showed that this was an area that is predominantly played by boys; thereby showing one possible reason for studies showing males generally having a higher spatial awareness in computers (Castelli, 2008). The link between spatial awareness and skills needed for engineering and maths (Feng, 2007) are also linked to subjects predominantly taken by males within STEM- Science, Technology, Engineering and Maths (Watermeyer, 2010; Ceci, 2011; Halpern 2007) and include roles such as programming which also showed females have less experience of than males (Barron, 2004; Beyer, 2003; Madrid et al, 2014). Therefore although women scored lower compared to men in spatial awareness prior to continued use of action games (Feng, 2007; Terlecki, 2005) this could be linked to the games and amount of gameplay they complete as a child and so also placing this within social factors as well as cognitive factors.

The use of computer games has also been shown to expand 'attention, memory and executive control' (Boot, 2008, p387) but more specifically in those who have been playing action games for a long time (Green and Bavelier, 2003). This showed a link between being an action/ First Person Shooter (FPS) 'gamer' (someone who plays games regularly) and developed cognitive skills. The same participants did not show any improvement when playing a non-action game (Tetris) and this was linked to the simultaneous and high pressure tasks required in an FPS/ action game (Green and Bavelier, 2003; Boot, 2008). Oei and Patterson (2013) showed that other games as well as action may develop cognitive skills.

Other cognitive skills such as task-switching (Strobach, 2012; Green and Bavelier, 2012; Cain, 2012), attention skills (Dye, 2009), probabilistic inference (Green, 2010), memory (Colzato, 2012; Ferguson, 2007) and visual acuity (Castel, 2005; Green, 2007; Wallander, 2011) were linked to the playing of action video games. Blacker et al (2014) showed action games developed the Visual Working Memory (VWM). Although there were no specific gender tests completed this links back to a higher percentage of males playing action games discussed in the early section and can be seen in several papers which were unable to obtain female test subjects (Strobach, 2012; Green and Bavelier, 2012; Dye, 2009; Montag, 2012).

2.63 Violence/ Emotions

'Gamers' when shown a variety of images from a First-Person Shooter showed less negative responses when showed negative images than non-gamers; therefore showing a lack of empathy for fictional violence (Montag, 2012). Montag (2012) showed that long term players of violent games process emotions differently to non-gamers. Anderson and Bushman (2001) suggested games made players violent and Weber et al. (2006) studied the players response to violent acts and found the players reacted the same as in a real-world action, however Regenbogen et al. (2010) showed gamers are able to differentiate between real and fictional scenes from games and this suggests that although 'gamers' are desensitised to fictional violence this may not be mirrored in the real-world. Montag et al. (2012), Regenbogen et al. (2010) and Weber et al. (2006) all used 'functional magnetic resonance imaging (fMRI)' for their studies. The studies were once again all male and so this further continues the evidence of 'action games' as being predominantly played by males. Weber et al (2006) noted an important concern is whether the 'gamers' play violent games because they are violent or have become more violent because of the games and so the 'causal' effect. This is significant as discussed in the previous section if FPS/ action games are a means to develop cognitive skills and possibly a way to close the gender gap with certain skills and a way to recruit more women in predominantly male areas. Recent research shows that FPS games are less violent than sports games (Goodson and Pearson, 2009) and so this leads credence to the causal effect being linked to violent players rather than the games making the players violent. This could lead to negating the concerns about aggression linked to FPS/ action games and therefore the positive cognitive responses and possible uses to recruit more females into the games industry as a long term goal.

Conclusion

Action games/ FPS show as a possible means to gain more women in 'male' subjects such as maths (Feng, 2007). This links to the spatial and other cognitive factors of playing such games and the link between these abilities gained (Green and Bavelier, 2003; Boot, 2008) and skills in traditionally male subjects (Watermeyer, 2010; Ceci, 2011; Halpern 2007) which would include areas of the games industry such as programming. The negative connotations of playing FPS/action games linked in to possible violence shows from the latest research that although they affect players this appears to be in relation to fictional violence and has no effect on the player's empathy within the real world (Regenbogen et al., 2010).

2.64 Social Factors Affecting Gameplay

Avatars

A study of games revealed a high percentage of game characters were male (Beasley, 2009) and of the female characters, many wear much less clothing/ are more sexualised than their male counterparts (Ivory, 2009; Beasley, 2009; Miller, 2007; Soukup, 2010). This depiction of the male characters can be seen as 'macho' (Monnens, 2009; Walkerdine, 2007) which has a correlation to the Western version of masculinity and has a link to the hegemonic power structure within culture (Ray, 2004; Soukup, 2010) with the masculine imagery holding power over the feminine discussed previously. Morawitz (2009) discussed how this portrayal of female characters as 'sexualised' can have negative impacts on the perception of women in the real-world. This trend of female characters within gameplay showed a pattern of gameplay being created for a male rather than female audience (Soukup, 2010). Arguments defend the stronger female characters such as 'Lara Croft' as a positive reinforcement to girls but need to also consider the negative impact of an over-sexualised representation of the female avatar (Marriott, 2003). Interestingly when Walkerdine (2007) studied which avatars girls chose they showed a preference for an 'emasculated cuddly male avatar' (Walkerdine, 2007, pp.53) and so giving this power back to the female players (Walkerdine, 2007).

Society

Social issues arise linked to gameplay when considering masculine and feminine types of play. As Walkerdine (2007) discussed of the girls who played games as part of her study; they were 'performing masculinity' while also keeping society's expectations of femininity (Walkerdine, 2007; Castell and Jenson, 2005). They attempted to hide their 'excitement' about killing within gameplay and competitiveness and retain a 'passive' veneer.

"feminine positioning necessitatespassive/covert negotiation of power"
(Walkerdine, 2007, p55).

thereby allowing the girls to remain a societal 'norm'. Meanwhile boys felt the need to add bravado (Pollack, 2008) to retain masculine traits when exhibiting any emotionalism linked to femininity. This resulted in 'overt' action such as competitiveness in boys and 'subversive' action in girls who appeared to attempt '*to hide the desire to win*' (Walkerdine, 2007, p49). When considering video/computer games and in specific action/ First Person Shooters as discussed in the previous work on cognitive traits; the games by their nature generally involve killing, the need to win and this 'masculine' show of violence which is acceptable within boys

(Pollock, 2008; Walkerdine, 2007) but considered unfeminine for girls (Walkerdine, 2007; Margolis and Fisher, 2002; Pollack, 2008; Castell and Jenson, 2008).

Conclusion

An overabundance of both overly macho male games characters (Monnens, 2009; Walkerdine, 2007) and oversexualised female characters (Ivory, 2009; Beasley, 2009; Miller, 2007; Soukup, 2010) show society and the media's views of what is appropriate for boys and girls follow extremely gendered guidelines (Walkerdine, 2007; Margolis and Fisher, 2002; Pollack, 2008; Castell and Jenson, 2008) and this could a) be leading less girls to play games (which as a link has been shown (Carr, 2010) between those who play games and those who are in the game industry could be a reason) b) to choose games only within appropriate feminine guides (Walkerdine 2007), so to link back to the cognitive factors this could be stopping girls from choosing games such as FPS/ action games which could lead to higher skills such as Spatial Awareness and then develop skills in areas such as maths which have a higher percentage of males.

2.65 Social Factors Affecting Whether Girls Choose Video/Computer Games (Both Playing And As A Career)

Parental and Peers

Harris (1998) suggested that parents play little part in children's development and peer pressure is the key factor; this caused many counter-arguments and the ideas which led to a book which was edited by Borkowski et al. (2002) which included a section by Harris and within the different sections suggested that a variety of influences including parental influence as well as peer pressure affected children; showing that the question of influence was an extremely complex one. Therefore both parental and peer pressure needed to be taken into account when considering why a child/ teenager makes their choices. Studies show women unlike men tend to have a 'back-story' from when a male sibling or father showed them for instance computers which led to a computer career and so show the influence of a male to foster a female in a traditionally male career (Faulkner, 2007; Etzkowitz et al, 2000) when women followed a counter-stereotypical role.

Media

When considering advertisements in high street stores or on the Internet for children's toys there is a divide between 'boys' (Figures 22 and 24) and 'girls' (Figures 21 and 23) toys (Lamb, 2006; Fine, 2011). When considering computer/video games the mainstream games are marketed more for males (Beasley, 2009; Lamb, 2006). This can lead to a belief by the girls that certain games are only appropriate for boys (Walkerdine, 2007). This links to the media which promotes society's view where both girls and boys are constantly told what hobbies they should be following (Walkerdine, 2007; Pollack, 2008).



FIGURE 21 ADVERTISEMENT FROM THE TOYS R US WEBSITE FOR 'GIRLS' TOYS (TOYS R US, 2012)






FIGURE 22 ADVERTISEMENT FROM THE TOYS R US WEBSITE FOR 'BOYS' TOYS (TOYS R US, 2012)

Target : Toys : [Girls' Toys](#)

Girls' Toys.

Make playtime perfect for little princesses.

HOT NEW GIRLS' TOYS

 <p>Quick Info</p> <p>sale Liv Girls Fashion Doll - Katie \$15.00</p>	 <p>Quick Info</p> <p>Disney Princess Shimmer Doll Collection \$59.99</p>	 <p>Quick Info</p> <p>Mattel Dora Links Doll</p>
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Shop by Category
[Dolls + Accessories](#)
[Pretend Play](#)
[Arts + Crafts](#)
[Stuffed Animals + Toys](#)
[Learning Toys](#)
[Games](#)
[Tech Toys](#)
[Riding Toys](#)
[Music](#)
[Pink Toys](#)
[Puzzles](#)
[Web Play + Interactive](#)
[Sports + Outdoor Play](#)

Favorite Characters
[Barbie](#)
[Pratz](#)




FIGURE 23 A 'GIRLS' TOYS PAGE- MADE FOR A 'PRINCESS' (TARGET, 2009)

Target : Toys : [Boys' Toys](#)

Boys' Toys.

Shop tons of good times for all the young dudes.

NEW ARRIVALS

 <p>Quick Info</p> <p>Want it by Christmas? Choose 1-Day Shipping Fox Mini Terrain Titan Micro-Vehicle - Blue \$14.99</p>	 <p>Quick Info</p> <p>Want it by Christmas? Choose 1-Day Shipping LEGO Star Wars Tri-Fighter Droid Set \$24.99</p>	 <p>Quick Info</p> <p>Want it by Christmas? Choose 1-Day Shipping Risk Vintage Wood Book Edition \$21.99</p>
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[See All New Arrivals in Boys' Toys](#)

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[Vehicles](#)
[Video Games](#)

Favorite Characters
[Batman](#)
[Disney Cars](#)
[GI Joe: The Rise of Cobra](#)
[Spider-Man](#)

FIGURE 24 A 'BOYS' TOYS PAGE- FOR 'YOUNG DUDES' (TARGET, 2009)

Career choice

Traditionally 'masculine' careers such as science, IT and engineering are linked to 'male', as Etzkowitz et al (2000) discusses it is 'culturally defined' definitions of gender that lead to these careers being labelled as such. The games industry can be seen as a predominantly male career with the latest Skillset (2012) showing only 14% of the 'Computer Games' industry are female. This trend shows on both HE courses and FE games courses (as shown earlier in Chapter 2). With HE recruiting 7.5% or less the number of men (HESA, 2013) on computer games degrees and in FE females avoiding subjects which are stereotypically 'male' such as maths and ICT (as shown in 2.43). This lack of females in the games industry starting from FE courses links to the main research as the question of females not choosing this area academically or as a career is the reason for this study.

Conclusion

The areas here within social factors such as parental and peer pressure and career choice are areas that need further research. There is evidence of social pressures but a more detailed analysis in relation to the games/ IT area is required. This links into career choice, as it is known women do not choose the game industry and this study looks to answer why.

CONCLUSION

Literature and contextualisation linked to this research have been studied and considered within this chapter and will be used when analysing the original data in Chapter 4. The main areas began in this chapter by considering the area of gender, career, counter-stereotypical careers to create a context for this research by considering the literature and utilisation of terminology. The next section looked at data which considered the Games Industry, data considering the education of those in the games industry, what subjects were chosen post-school at Level 3 and finally the number of women on games courses. This showed the issue in relation to both education and career in relation to Games Development and the lack of females. Next 'gameplay' was considered in relation to what games females play, how they play and how women are portrayed in games. This was an important consideration when considering the link between those who play games and those who consider a career (Carr, 2010). Finally the factors in choice of both gameplay and the games industry was considered and how each of these areas could be possible reasons why females do not choose certain games, choose to play a certain way (which can also effect game choice) and many do not choose the games industry as a career.

CHAPTER 3- METHODOLOGY AND METHODS

INTRODUCTION

Aims of the Study

This study aims to look at women transitioning into a career which is counter-stereotypical to their gender socialisation looking at the video/ computer games industry. Therefore the specific aims are:

1. To explore student's experiences as a female games student in a male dominated area.
2. To discover any factors which influenced both the learner's choices and decisions.
3. To establish if any connections existed between gameplay and choosing the games industry as a perspective career.

This study considered women in counter-stereotypical careers and the effect society's view of gender could be having. Due to the researcher's own background as a computer games development lecturer the games industry was chosen as this career. This meant the researcher began with a certain perspective and this was accepted and utilised within the study. The research wanted to find out how women reacted and responded within a career path which was predisposed to be considered as male. This meant an appropriate methodology was researched prior to creating the research itself. In the previous chapter gender, gender linked to career and counter-stereotypical careers were considered. Then the figures pertaining to both the industry and academic figures. Next gameplay was considered in both the games and how females played the games. Finally choice was considered as the different factors in both the industry and gameplay and completed Chapter 2 to lead on to the original research. This chapter looks at both the methodology and methods used for the original study which looked at women choosing the counter-stereotypical gendered career area of video/ computer games by completing a games development course and their experiences.

3.1 METHODOLOGY

The choice of methodology was a difficult one as elements of both objectivity and subjectivity were appropriate to the proposed research. The study would have a narrow focus on gender socialisation. Therefore it would not be denying that any power structures within society might be causing an effect, nor that any issues could be related to specific genders, but in relation to this study would not be the specific area studied. To begin, therefore, both philosophical concepts were considered to find the appropriate perspective for this study by considering the two opposing stances of Realism and Relativism.

3.11 Choice of philosophical perspective- Looking at Objectivity and Subjectivity

Objectivity-Realism

Objectivity looks at a reality which is separate to the researcher. Realism considers absolutes; there are factual results which are taken as generally true. This perspective is especially relevant to quantitative research as it looks at precise data. The researcher is not an important factor when considering objectivity.

Subjectivity-Relativism

Subjectivity includes the researcher's viewpoint and accepts that the knowledge is altered by the researcher's input. Relativism takes the stance there is no actual truth. This position is linked more to qualitative research as it looks at the interpretation of data and therefore the researcher is an integral part of subjectivity.

3.12 A 'middle-ground'

The result of studying both realism and relativism was the realisation that a 'middle-ground' was necessary. This was both a startling revelation and one that led the researcher to consider exactly what was needed for this area to be effectively analysed. After considering various perspectives from both Objective and Subjective perspectives; a solution was found within the social sciences. Hammersley (1992) discussed a methodology which looked at a reality separate from us (objectivity) but which would always be seen from each person's perspective (subjectivity). He called this 'Subtle Realism' (Kirk and Miller, 1986; Hammersley, 1992) and was the ideal solution for this study as the researcher could retain their own perspective which a realism approach would not have allowed (which as a lecturer in

games development needed to be considered) while still objectively being able to look at the findings without becoming too directly involved or over analysing each answer as a relativism view would have required (Dingwall et al, 1998).

"the researcher treading this middle way is continually aware of the constructed nature of research, but avoids the wholesale application of constructivism to his or her own practice, which would result in a descent into nihilism" (Seale, 1999, p26)

3.2 METHODS

3.21 Overall design

Once the methodology was decided; the method to collect data was needed. To begin with what did the research want to know- to refer back to the aims the study wanted to interview female computer games development students studying prior to career and so in Further and Higher Education as discussed in Chapter 2. The research wanted to find out the experiences of these women in a male dominated career area, to consider any influences and look for any links between gameplay and the courses leading to career. This meant that a specific target group would be sampled from; these being females on Computer Games courses in the UK. Therefore a method to interview which would be appropriate for this study needed to be decided on.

To begin were a number of factors- 1) location of participants, 2) availability of participants and 3) ensuring confidentiality of participants were considered. Alongside this was the decision on the appropriate way to contact these participants. As the learners were all on a games course and by necessity would need to have access to computers and the Internet the decision was taken to conduct the interviews online. This led to a number of ways such as a Virtual Learning Environment (which had been used by the researcher previously), FaceBook (which held its own issues linked to confidentiality and more importantly was decided inappropriate due to the researcher's inexperience of this method of communication), Social Media such as Twitter (which was decided would not allow for depth) and E-mailed interviews (which would be completed using a specifically created email address).

The most appropriate way online was decided to be email as this would ensure confidentiality between the participant and the researcher and also would mean a record would be kept of all contact. It would also factor in issues 1 and 2 from the previous paragraph as an online interview made distance unimportant and as Bampton et al. (2013) discussed this method of communication meant neither the researcher or participant had to worry about time constraints when utilising asynchronous communication (Horrocks and King, 2010). An issue which was considered was could the lack of 'spontaneity' (Bampton et al., 2013) detract from the quality of data but this was outweighed by the ability for participants to consider their replies which due to the topic would give more time for reflection. Bampton

et al. (2013) do discussed the issue of lack of response and the reasons due to this being technical rather than the respondents choice and this was an issue that arose in the study and is discussed within this Chapter.

3.22 Sampling and recruitment

As the sample chosen had to cover the required demographic for the research of female learners studying a full time Further or Higher Education Computer Games course in the UK (the research was limited to the UK as the study was considering the career in the games industry within the UK) this would include any course which included Computer Games as a significant part of the study. The reason for this sample was to find by in-depth questioning why these participants had chosen an area which had such a high percentage of males compared to females. It looked to find out by interviewing participants at this important stage prior to joining the games industry to find reasons for so few females both on the educational courses leading to the games industry and then use this as supposition for the same low candidateship in the career. This would include researching the participants choice by finding out any experiences which could highlight why they had chosen this counter-stereotypical career. Also the study would look to find out any links to the playing of games themselves which could account for the low percentage of females as there was roughly an equal amount of males and females who play games (as discussed in Chapter 2) though not in the same genre. This meant a purposive sample was the most appropriate as a specific pre-determined set of variables (gender, subject, education, minimum age) was required to attain the sample.

Given the aims of the study, the sample sought was females on Computer Games courses at either Level 3 (A level equivalent) or Under-Graduate Degree level. As discussed these establishments would be based in the UK. The sample size aimed to be between 20 and 40 participants from a target of about 60 educational establishments which were to be contacted and this number of participants was chosen based on the researcher's experience as a computer games lecturer that there would usually be expected 0-3 learners at any 1 establishment. This number of establishments was chosen linked to various factors- these included the time to recruit as educational establishments could not be contacted until the academic year had begun in 2012-2-13 (October for Higher Education courses) and about 6 months would be needed for research and with courses at Higher Education completing as early as May this meant recruiting had to be mainly completed within a 1

month period. This did not preclude any recruitment as the year progressed but the researcher had to realistically consider the time needed to focus on the interviews themselves while maintaining their own role as a Practitioner. However as Brennan (2013) stated 'there is no magic number' when choosing how many to sample and it is of more importance to ensure you gain the information you need and this alters the amount of participants needed based on each research requirement.

Once the research proposal was approved by the University of Huddersfield School of Human and Health Sciences – School Research Ethics Panel, (<http://www.hud.ac.uk/hhs/research/srep/>) which was a longer process than the researcher had expected and meant interviews did not take place until 2013. The researcher once approved contacted both colleges and universities in person, by email and phone (depending on the most appropriate means). While the researcher contacted over 50 establishments which had full-time computer games courses it was found mainly that only those who had a specific person to contact within the establishment replied. Of those with specific contacts the majority replied; however a number of these also had no learners fitting the required demographic (no females on their course). An important thing to consider is this itself showed how few of the required demographics were studying a Computer Games course which linked to the chart from HESA (2013) in the research in Chapter 2. Whereas a course could have 15-20 male learners studying; there would be (as had been expected by the researcher) only 0-3 female learners in every educational establishment and so 100% participation of all female learners asked would have been unrealistic.

The researcher discussed with the educational establishments the details and requirements of the study and sent the participation information and consent forms to the establishments and this was then given to the learners along with the researcher's email (a copy of this paperwork is included in the appendix). Some educational establishments sent a list of names and email of those who had agreed and they were each sent the information and consent form to sign. A specific requirement of one of the establishments was that there would be nothing specific which would link to these learners location wise except in a general way in the thesis (it was agreed this information could be given to the University of Huddersfield itself) and so anything that could be linked to the area of the UK was removed as well as anonymising each participant as per usual expectations. One establishment asked for the initial contact to be by FaceBook and this was completed by a colleague of the researcher posting the researcher's email address with details of the study on the official FaceBook account of the educational establishment as authorised by the contact within that establishment.

Within the UK there is only one full time Computer Games course available at Further education however Higher education courses could be named specifically linked to the educational establishments and so this information was also removed. Finally 9 educational establishments in the UK had learners who participated in the study and 28 learners agreed to the interviews. Of those individuals that answered some participants had to leave the study due to personal reasons which included time constraints or did not return the consent documentation and so were not able to be included. This led to 17 participants which while this was below the minimum amount of participants of 20 the researcher had aimed for; when considering the depth of answers and the low number of females on games courses (which was lower than the researcher had expected) was decided was a successful recruitment. Later in the research there was a technical issue which meant not all participants were receiving emails and this was only known and able to be rectified to an extent due to one of the participants contacting the researcher querying their questions. Due to this for a limited time for participants who had answered most questions the researcher used FaceBook to confirm to the participants that an email had been sent and to enquire if had been received/ if they still wished to proceed. This proved fruitful in this late stage of the research and as Bampton et al. (2013) discussed highlighted an issue which can be found in 'E-interviewing' of technical issues causing a break in communication with the researcher unaware of the reason.

Included below is a table of participants who were in the final study. Note the participants are listed as numbers for Higher Education and letters for Further Education. Also the educational establishments are also anonymised however it is noted when more than one participant were from the same establishment.

Participant	FE/HE	Educational Establishment
1	HE	A
2	HE	E
3	HE	D
4	HE	B
5	HE	D
7	HE	B
8	HE	A
9	HE	C
10	HE	B
A	FE	F
B	FE	F
C	FE	F
D	FE	F
E	FE	H
G	FE	I
I	FE	G

FIGURE 25 PARTICIPANTS IN THE STUDY

3.23 Online interview procedure

Previous work which influenced this consisted of a larger more generalised research conducted at Further Education level towards Masters by Research (Carr, 2010) and the results from the questions asked then and which were most informative helped in the creation of the questions in this research. Some key findings such as the link between being a 'gamer' and considering the games industry as a career along with how the respondents in that research answered certain questions fed directly into this research.

When the researcher conducted the research for this study there were 2 phases to how the sampling was completed:

Phase one- the initial respondents to the study were sent the questions with the researcher knowing that additional questions could be added or others could be removed for those joining the study after these initial interviews. While the initial participants would be included this would give the opportunity to alter the study as needed while in a 'live' setting.

Phase two- the questions were kept as originally envisioned and the rest of the participants were recruited. One participant had completed their degree recently but was decided was appropriate due to both their recent knowledge of Higher education and also their ability to answer questions in relation to the industry as they were working in the games industry. While this participant was given the general questions- they were aware as were the other participants they could leave any answers not relevant to them/ or which they were uncomfortable answering (or did not want to answer for any reason).

A decision had to be made on how many questions were sent per email (Bampton et al., 2013; Horrocks and King, 2010) as while the ability to ask a number of questions was a positive for the use of email interviews; it also had to be considered what would count as too many and also as questions were aimed to be answered in order if the participant answered out of order if this could affect the results. Therefore the decision was made to split the initial questions into 3 emails and then based on these results further emails would be sent to expand on the answers. There was a slight difference as for example the Further education learners were asked in relation to the possibility of studying a degree in the future and the Higher education learners were asked in relation to their Level 3 course but both FE and HE

had an initial 15 questions which were the same for all respondents. Below are the original questions (Figure 26) which were planned; in the appendix there is an example filled out questionnaire for both FE and HE and this shows how they altered slightly based on Further education and Higher education. The follow up emails consisted of approximately 3-5 extra sets of questions dependant on the individual. These follow up questions were in response to the original answers and were at times a query for clarification which this format of interview allowed for. The participants were made aware that after a certain timeframe they would receive 2 email to 'chase' if they did not respond and then there would be an assumption of having removed themselves from further questions. Unless the participant requested for the answers to be removed these would still be utilised in the study (the specifics of this are included in the participation documentation in the appendix). The study was planned for approximately 6 months and had to be completed at an appropriate time when learners were available due to the large holiday during the summer months. There was a technical issue in the later stages of the research which was discussed in the previous section.

Therefore to summarise:

- Each learner completed a consent form and were given participation details
- Each learner contacted the researcher directly by email
- Each learner had an initial 15 questions which were sent via 3 emails
- Each learner had follow-up questions based on the answers for the 15 learners

Initial Interview Questions	
1.	Why did you choose games development/ IT to study at Level 3/degree (delete as appropriate)? What appeals to you about this area? Do you feel you have any personality traits that helped you?
2.	Were any careers suggested at school?- if yes, so which careers and by whom? Did this influence you at all?
3.	Did your family suggest any courses to take? Did they help you choose the games development course? What are their opinions on the course? Did they suggest any careers?
4.	Did any of your friends suggest what career path to follow? If so, did this advice influence you at all?
5.	What kind of job are you aiming for? Why? What do you plan to do to get that career?
6.	(FE only) Do you plan to take a degree? If yes- in what subject and what do you hope to use the degree to accomplish?
7.	Did you take the L3 course/degree (delete as appropriate) because you want a career in the games industry? If so- in which area (graphic design/ programming etc). (If not covered in question 6).
8.	If you never considered the games industry before would you now consider it now that it has been mentioned?
9.	What qualities do you think are needed to succeed in the games industry?
10.	What are your hobbies? Do you feel this/ these help or hinder your choice of a course and/ or career?
11.	Have there been and/ or do you think there could be barriers to your choices in course/s and career? If so, what are they? If in the past, how did you overcome them and if in the future do you have plans how to combat them?
12.	Do you think there is any gender bias in the games industry? If yes and you planning to enter the games industry do you think this bias could affect you?
13.	Do you think you were treated differently for wanting to enter a games course because you're female? By school, friends, parents, college etc?
14.	Have you ever found any difficulties because you were interested in computers and/ or games and are female?
15.	What are your impressions about a female wanting to enter a games course, is there anything you would tell them?

FIGURE 26 INITIAL 15 QUESTIONS DESIGNED FOR THE STUDY

Interviewing by email generally was a positive means of data collection. The participants appeared to be from the perspective of the researcher (which the use of Subtle Realism allowed and so highlighted the appropriateness of this stance) open and honest and willing to discuss issues from the results. This was shown by the detailed, self reflective nature of many answers and most startlingly that there were many similar results from a group who were divergent geographically (within the UK) and most had no contact with each other. Although to contradict the idea of divergence they were all linked by the homogenous nature of the study which "*focuses on one particular subgroup in which all the sample members are similar*" (Lewis, P., Saunders, M. and Thornhill, A. (2007), p232). Therefore in the same way popular culture gives a context which for those from another culture would not have meaning; each had a similar context by being within the same demographic- age, gender and educationally wise (both subject and level).

The use of digital communication was popular within the target group and could be utilised more freely than the spoken word by both the researcher and the participants. It also gave an avenue to ask follow up questions whereas one interview would have not given the researcher a reflective period to decide on follow-up questions without having to schedule time consuming additional meetings. The only notable issues were 1) a technological issue that meant for a short period emails were not being received by participants which was only solved due to a participant emailing to check when they would receive more questions and the re-sending of a number of emails (and the use of FaceBook) which was discussed earlier in this chapter. 2) Some participants not responding in a timely manner (not due to issue 1) and the negative side of the ability to give participants their own time of day or week to respond meant that the interview could be taken less seriously time-wise whereas an in-person interview would not have suffered from this as long as the participants attended (Bampton et al., 2013). On reflection, however, the researcher would have chosen the digital method again as the positives made this is a much more productive method for the type and nature of the research.

3.24 Data analysis

A method to analyse the data was needed. Considering that the data were qualitative and the researcher was concerned with the 'content' (Horrocks and King, 2010); the analysis would need to be from as Horrocks and King (2010) described a more 'experience focused' approach. Due to an interest in the patterns of similarity and difference this led to a thematic analysis being the most appropriate method of analysis. The need to begin with certain a priori themes due to wanting to draw on previous literature and alter the required number of themes and subthemes meant as discussed by King in Qualitative Organizational Research (2012) Grounded Theory was too prescriptive and IPA (Interpretative Phenomenological Analysis) would analyse each case too specifically while this research looked to develop the themes utilising the original pre-analysis by the researcher. This meant Template Analysis was the most appropriate approach as it allowed for the flexibility throughout including the ability to code to as many levels as were deemed appropriate by the researcher however also gave the researcher a structure to be followed so these different themes were not missed while considering all the data.

Horrocks and King (2010) discussed how Template Analysis allows for both 'descriptive' and 'interpretative' decisions while coding and this rather than becoming separate identifiers meant the main themes, while a description, would allow that there was an element of interpretation by the researcher. This was in line with the use of Subtle Realism as the study made the assumption that there is a reality "out there" independent of the research process while also accepting the researcher themselves had a perspective when analysing the data (Hammersley, 1992).

"As you seek to reveal patterns within your data and to recognise relationships between categories, you will be able to develop hypotheses in order to test these" (Lewis, P., Saunders, M. and Thornhill, A. (2007), p482)

The researcher began by considering some a priori themes while completing the interviews and discussed this with their Supervisor as a check system. This led to the initial 3 main coded themes of 'Gender Concerns', 'Influence' and 'Emotive Language' (this was later developed to 'Positive Emotive Language' as further data was considered). As further interviews were completed each of these main themes and the resulting subthemes developed as the interviews were completed and the data considered in detail. There was a startling similarity amongst respondents answers and the issues raised and this allowed for the template to be developed and these 3 original themes to be finalised. Patterns began

to emerge within the responses and repetition between participants showed the saturation of data had been reached (Given and Saumure, 2008) as no 'new or relevant information' was found with further participants. Each of the 3 main themes were considered in relation to the playing of games (gameplay), the Games development course (education) and the Games Industry. These were listed as Educational, Gaming (industry) and Gaming (play). Each of these themes was analysed by coding the questions with 'descriptive coding' and these were linked to 'interpretive coding' (Horrocks and King, 2010) -examples from participant A and 1 are included in the appendix, and below the 'overarching themes' which were created into diagrams and a series of matrixes.

The Template Analysis was applied in a number of stages:

- To begin the researcher emailed their initial general findings to their supervisor and integrated feedback prior to completing a template for a whole participant. As an example the researcher had been unintentionally restricting themselves to a 'single dimension' of nested themes and once corrected were able to develop the sub themes to a much higher level.
- The researcher then sent a full analysis of 2 FE and HE participants to their Supervisor who fed back. The Supervisor generally agreed with the analysis with the exception that it was felt implicit knowledge from interviews needed to be clearer as could be confused with explicit knowledge if considered at a later date.
- The researcher then regularly met and gave samples to their Supervisor to show a systematic approach throughout to ensure validity and reliability was obtained.
- Finally after the data was fully analysed and after a period of approximately 6 months the researcher re-analysed all the data and compared this with the earlier results to place an extra check and showed the results to their Supervisor. The results showed comparable and the researcher then began the analysis.

To begin with 'Gender Concerns' was the largest theme and the researcher utilised Hierarchical Coding which included a number of sub-themes which each themselves represented a serious concern. While the participants were female and therefore the concerns would link to their own gender (feminine) or in relation to males (masculine) it is important to consider that the issues were in relation to the socialisation of 'gender' and not

looking at for example simply how men behave towards women although this for example was a consideration within subthemes.

The subthemes which became apparent were: the existence of stereotypes, personal immunity to stereotypes, the legitimacy (or illegitimacy) of challenging stereotypes and issues relates to misogyny/ sexism (see Figure 27 for a diagram representation).

The researcher then utilised a mixture of a Template Analysis and Matrix Analysis (Horrocks and King, 2010) approach to the data. To begin with was the use of the Matrix Approach which allowed the researcher to compare data sets and order each theme. This was used simply to narrow down the data sets for the researcher and these were then used to focus on the main data which was analysed using Template Analysis. As Horrocks and King (2010) state

"In some studies, the optimum analytical strategy can involve a combination of matrix and template approaches" (Horrocks and King, 2010, p173)

Therefore for example in the 'existence of stereotypes' this would be considered in relation to the industry, education and gameplay. So if a participant's (for example Person 1 who is included as an example in the appendix) answers showed they were aware of the existence of stereotypes then both the Participant number (1) and the question number (see Figure 28) would be included. So if participant 1 discussed the existence of stereotypes in education in question 22 they would be listed as 1Q22 (see Figure 28). The researcher then completed this table for their own research and utilised the results in Chapter 4.

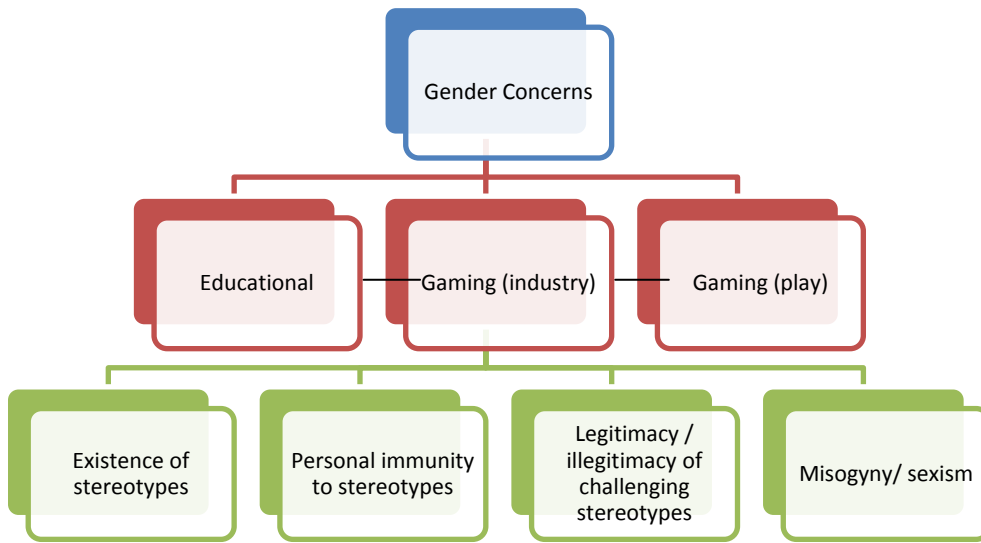


FIGURE 27 GENDER CONCERNS AS A THEME AND THE RESULTING SUBTHEMES

	Nature of concerns			
Focus of gendered concerns	Existence of stereotypes	Personal immunity to stereotypes	Legitimacy / illegitimacy of challenging stereotypes	Misogyny/ sexism
Educational	1 Q22			
Gaming (play)				
Gaming (industry)				

FIGURE 28 GENDER CONCERNS AS A THEME AND SUBTHEMES (THE USE OF A DATA MATRIX)

The next theme which was apparent was 'Influence', that is how others influenced the participant linked to the 3 areas mentioned- educational, gameplay and the games industry. This influence was important due to who the influence was from such as parents or friends and whether this influence was positive or negative. One thing which the researcher noted when completing the analysis was that it was unclear which gender all those who had influenced the participant were and on reflection this was something the researcher could have asked during the interviews and would be an important consideration for future studies. Influence was an important factor because as discussed in Chapter 2 the extent and to the effect others influence has not been fully documented (Borkowski et al.,2002) but it is known to be an important factor in choice. Linked to this was also the consideration of a 'back-story' as discussed by Faulkner (2007) and Etzkowitz et al, (2000) as the discussion of a male influence for females in a male-dominated career showed a possible need to justify their position in a counter-stereotypical role. Figure 29 is a diagram representation of the theme of 'Influence' and Figure 30 again shows how a data matrix was utilised by the researcher.

The last of these 3 main themes was 'Positive Emotive Language' which meant the use of emotive words such as 'Like' and 'Love' which had a positive connotation e.g. the participant was in favour of the discussed area. Again this was looked at in terms of education, gameplay and the games industry. This was an area which was significant as it was not one which the researcher had considered prior to the interviews. While a positive response to hobbies was not surprising and enjoying a course or career may not be notable; what was, was the amount of this language, especially in an area seen as counter-stereotypical due to the male dominance and how many participants included this and how this was seen through all stages. Even, for example, as was found many participants had suffered from serious verbal abuse on online games yet still there was a high level of positive language linked to the 3 areas again of gameplay, games course and games industry. Unlike the other areas which linked back to the study in Chapter 2 there was no specific precedent for this theme and subthemes. Figures 31 and 32 again show the diagram representation and how the data matrix was used.

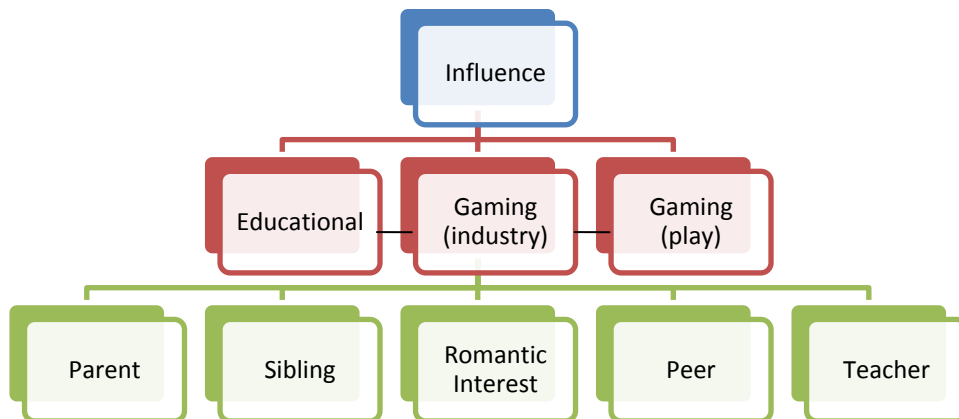


FIGURE 29 INFLUENCE AS A THEME AND THE RESULTING SUBTHEMES

	Party who influenced (if gender included m = male and f = female)				
Focus of influence (green= positive and red= negative)	Parent	Sibling	Romantic Interest	Peer	Teacher
Educational					
Gaming (play)					
Gaming (industry)					

FIGURE 30 INFLUENCE AS A THEME AND SUBTHEMES (THE USE OF A DATA MATRIX)

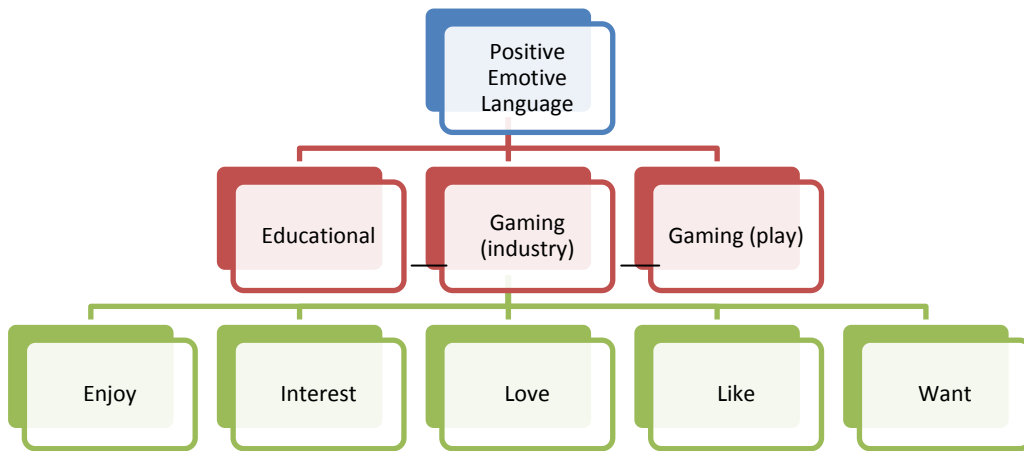


FIGURE 31 POSITIVE EMOTIVE LANGUAGE AS A THEME AND THE RESULTING SUBTHEMES

	Positive emotive language					
Focus of influence	Enjoy	Interest	Love	Like	Want	Passion
Educational						
Gaming (play)						
Gaming (industry)						

FIGURE 32 POSITIVE EMOTIVE LANGUAGE S A THEME AND SUBTHEMES (THE USE OF A DATA MATRIX)

Finally there were 2 other themes which were added as the analysis progressed which were 'Personality Traits' and 'Subject Choice' - both of these were linked to traditionally masculine and feminine and as can be seen in Figures 33 and 34 were listed differently within the matrix than the previous 3 themes. This was due to these answers tending to be linked to similar questions and the analysis looking more for how many traits were discussed for each participant. As an example if a participant - X (there was no such participant) had 3 traits which could be considered traditionally feminine and 3 which were considered masculine within the matrix they would be listed as shown in Figure 33. Similarly if this same participant had 3 subject choices which were traditionally masculine and 3 feminine this is shown in Figure 34. It is important to remember that the matrix was only utilised by the researcher to narrow down the data and was not the main analysis. By using this method the researcher could see how many of each trait for participants were included and the gendered choices in education participants made and so was able to see that due to the high percentage in both this was an area that the researcher included in their further analysis.

Personality Traits	
Stereotypical choices (feminine)	Counter-stereotypical choices (masculine)
X3	X3

FIGURE 33 PERSONALITY TRAITS AS A THEME AND SUBTHEMES (THE USE OF A DATA MATRIX)

Gendered choices in education	
Stereotypical choices (feminine)	Counter-stereotypical choices (masculine)
X3	X3

FIGURE 34 GENDERED CHOICES IN EDUCATION AS A THEME AND SUBTHEMES (THE USE OF A DATA MATRIX)

So to summarise a thematic analysis was decided on with the utilisation of Thematic Analysis to study the interviews from females on Level 3 and Undergraduate Games Courses. Each of the participants answers from the interviews were analysed and the comments added to the answers were linked to themes (see the examples of participants A and 1 in the appendix). These were then coded into matrixes (so Matrix Analysis was used to a lesser degree) so to narrow down which areas should be focused on. Once the matrix for each theme was completed and the researcher then had an idea where to focus their analysis the use of Template Analysis was utilised again as it was the depth of the data which was being analysed and not simply repetition. The resulting information and analysis is included in Chapter 4.

3.25 Ethics

The research had to be approved by University of Huddersfield School of Human and Health Sciences – School Research Ethics Panel, (<http://www.hud.ac.uk/hhs/research/srep/>). This meant that a proposal had to be sent which outlined the expected research. The researcher needed to confirm in relation to the age of the participants as a number of these could be potentially 16-17 and would these participants require parental approval. The University of Huddersfield agreed that with approval from the individual educational establishments, described by Horrocks and King (2012) as the 'Gatekeepers', these learners could choose to take part. An important consideration was that each learner was given the researcher's details but it was their choice to contact the researcher and therefore their choice to agree to participate. Every participant was given a participant form and a consent form (included in the appendix) and were made aware they only needed to answer questions they felt comfortable doing so and were able to remove themselves from the study at any time (until a final date later in the year several months after the completion of the interviews when their data would already have been analysed and so could not be removed). All participants were given the same (with a slight difference between Further Education and Higher Education) 15 questions and the follow-up questions were based on these answers so all participants began with the same interview. The emails would be kept at an email address (phdstudy@live.co.uk) which was separate to the University of Huddersfield and specifically created for this research. Other than the researcher herself, only her supervisors would have access to this.

CONCLUSION

The methodology and methods utilised in this study have been covered within this Chapter. Subtle Realism (Hammersley, 1992) was decided as the theoretical perspective, the use of email as an online qualitative interview method was decided (Bampton et al., 2013) and finally Template Analysis alongside Matrix Analysis (Horrocks and King, 2010) was decided as the method to complete a thematic analysis of the data. The sample, recruitment, procedures and ethics were all discussed and any resulting issues covered. In the next chapter the data from the study will be analysed and suppositions will be made which link into the final concluding chapter- 6.

CHAPTER 4- RESULTS AND ANALYSIS

INTRODUCTION

This chapter will look at the results from the original data collected for this research and then analyse this in relation to gender socialisation. In specific it will consider how the answers relate to counter-stereotypical careers, traits linked to specific genders and educational choices linked to those usually chosen by gender. The results will link back to Chapter 2 and how these answers may relate to other studies and then after making suppositions based on analysis will look forward to the concluding Chapter where discussions of how these results could be used for further research will be completed. This chapter will also consider the aims of the research and utilise the methodology and methods covered in Chapter 3.

The results are from learners from both Further Education (participants noted by letters) and Higher Education (participants noted by numbers). The study did not find any significant difference between FE and HE in relation to the answers taking into account personal experiences. The only places where it did make a difference such as in Subject Choice prior to their degree (Higher education learners) or the area they were interested after Level 3 (Further education learners) are noted within the specific themes. Therefore while the original plan included comparing Further education results to Higher education, this was found to be inappropriate when considering the results and all 17 participants were analysed as Computer Games students.

4.1 GENDERED CONCERNS

When analysing the interviews from participants a number of concerns linked to gender could be seen. These were the existence of stereotypes, personal immunity to stereotypes, the legitimacy (or illegitimacy) of challenging stereotypes and issues relates to misogyny/ sexism. Each of these areas were considered and focused on whether they effect games as play, education or industry. Figure 28 shows each of the areas which were studied in relation to the data from the interviews.

Focus of gendered concerns	Nature of concerns			
	Existence of stereotypes	Personal immunity to stereotypes	Legitimacy / illegitimacy of challenging stereotypes	Misogyny/ sexism
Educational				
Gaming (play)				
Gaming (industry)				

FIGURE 35 GENDER CONCERNS AS A THEME AND SUBTHEMES MATRIX

To begin in relation to gender concerns is included the rather startling comment below by Participant C. Which begins with a level of sexism and yet ends with the request for males and females to be 'treat[ed] the same'. This is an important comment as while many of the participants had suffered gendered abuse be that from gameplay, a games course or linked to the industry one thing was highlighted throughout. These women wanted to remain, wanted to work in the games industry (or a related field) and wanted to continue in a male-dominated area.

'Yes people think i am lying when i tell them i am on a games course. They don't believe me because i am a female. I think male and female should be treat the same.from male friends' (participant C)

4.11 Existence of stereotypes

The participants generally showed an awareness of the stereotypes of females in relation to games in gameplay, courses and within the industry. While many of the responses linked into the other areas such as 'personal immunity' and 'misogyny/sexism'; the answers were of interest here as while gender was not always mentioned by the participants until specifically included in a question; the learners would then be able to discuss the subject in some detail. While this could also link to denial, there at times seemed an automatic reaction to not mention gender until the interviewee discussed the issue and unlike the issue of challenging, this was more an assumption of the existence of stereotypes, however the participants were unaware they held this assumption. An almost 'flippant' view of 'yes of course' in relation to male-dominance in the area was noted by the researcher and more importantly an assumption that 'gender bias' would automatically mean something more serious such as sexism towards women and so while the participants were aware that it was an area dominated by men; there was not always a link between the reality e.g. not many women being a part of games, the course or the industry and how they perceived the issue related to this.

Could this link into Walkerdine's (2007) view of girls during gameplay who purposefully changed their gameplay to remain in society's norm and behaved in a 'passive' way. Therefore the women were concerned with not being seen as too 'active' and in following what society expects from females. As long as they could distance themselves by considering anything which is not seen as 'serious' concerns such as sexism there was nothing to be concerned with. For instance participant B stated how there was no bias but it was simply an area dominated by men. However went on to discuss how 'females' should not be discouraged and how she was treated equally by the 'boys' which is 'great'. This idea of 'being treated equally' showed an awareness that she may not have been treated fairly and the term 'great' suggests almost relief there was no issues. Therefore she may have entered the course with the possibility or even assumption of bias and due to finding none changed her view perhaps.

'I don't feel the game industry is gender bias, However it is a common fact that it is male dominated, but I don't think that should discourage females, I already work in a games class with all boys and am okay with this because I feel treated equally, which is great.' (participant B)

The main area which seemed more of a concern for participants in relation to stereotypes was in gameplay. This stemmed from playing but also how these stereotypes in games linked back to the choice of games as a career. Consider how Participant 1 discusses how female avatars present a negative impression to females in gameplay:

'A cycle exists where big companies give a far smaller budget to games with female protagonists, and then say that there's no point in making them when they don't sell well in a market that's already heavily saturated with video games targeted towards men, in which many women only exist in a sexualised form. They haven't even given a level playing field to compete in the first place, so unless big companies give women the equal representation they deserve, then it's unlikely that this bias will change.' (participant I)

and

'It's not that females aren't allowed, or don't, enjoy these games, but they're just not completely focused towards a neutral gender.' (participant G)

and the causal effect of this being a women would not feel represented and not choose the games industry as a career

'This then causes less women to see the games industry as a viable career choice when as a media form it doesn't have their representation. It's hard to envision yourself creating media that's general sole focus is towards men.' (participant I)

Consider as discussed later in this chapter nearly all participants considered a need to play games to choose a games course. This showed a serious concern if in general women were not playing games due to not feeling represented. As participant 10 states which mirrored nearly all the participants of this study:

'Defiantly a link between playing games and choosing a games based course, you develop a passion and interest in games from playing, and start to aspire to want to create your own.' (participant 10)

Participant 10 also made a further link which was suggested by other participants but explicitly made by this participant that the reason women were not choosing the games industry was that the perception of games did not include those which have a higher percentage of women (IAB, 2012).

'I would say games which are casual facebook kind of games generally don't encourage people as much to want to join the industry as much as games that have taken years to develop. More women than men are said to play casual games, so maybe this is why fewer women are encouraged to join the industry?' (participant 10)

Finally in the area of 'existence of stereotypes' a statement made by Participant E. When asked a question in relation to barriers her answer was in relation to others making comments linked to her gender and with games development as a course and career; she was questioned who would use her gender as a barrier and her response showed how the views were from multiple sources and linked back to the idea that as there were so few women in the industry females would receive negative comments which showed the existence of stereotypes was a far-reaching one. This is an area discussed further under 4.2 Influence.

Basically in general. peers adults even people who are online and gaming with me. i think its because women aren't that common in the games industry.
(participant E)

4.12 Personal immunity to stereotypes

When asked about gender issues relating to the higher percentage of males than females in the games industry a large percentage of participants answered indicating that either there was no issue now or they personally would not find an issue (a personal immunity).

'There is a lot of gender bias out there being a girl, entering the games industry yes there could be bias opinions but I don't think it'll affect me'. (participant E)

This was interesting as this hinted at an almost self-denial of the implications of being in a counter-stereotypical area. There could be a number of reasons for this, as an example all the participants were in the minority

'In fact I am the only girl in this year to have taken it in my college.' (participant E)

On the course and many participants suggested that generally they had no issues with males; therefore to allow themselves to remain in a male-dominated area they could have been justifying this by showing it was no longer just a career for men and so that there would be no friction caused by crossing into what is deemed as a gender inappropriate occupation (consider as a counter-balance how men felt the need to justify their masculinity in a female-dominated occupation (Korek et al, 2014).

While a number of participants saw the games industry as a male-dominated career which could have issues but not affect themselves; this also showed a thought of their own position in relation to the career (e.g. a female in the career) unlike a man who would not need to consider their own position. By denying there were any/ or no significant gender-related issues that could affect them; could they be considering themselves as 'the other' vs. the industry in the sense that the women needed to prove their worth due to 'doing' their gender (Risman, 2004; West and Zimmerman, 2009) not due to themselves as an individual.

'Some, I think, but not enough to worry about. As long as I can prove I'm as capable as anyone else, I should be fine in the industry.' (participant 2)

As an example above 'someone else' would suggest in the context male colleagues and therefore participant 2 was suggesting bias is only due to women actually being inferior in the career; rather than being what could be considered a negative misogynistic view arising from the workplace itself where a female employee must be seen to be as capable as all men. Linked to this several other participants discussed issues in relation to their gender and being in the industry and the general response as participant 2 was in relation to their own work and having to prove themselves as capable enough compared to males and therefore

having to successfully 'do' gender in a context which was counter-stereotypical to the 'norm' (Butler, 2006) in relation to careers and did not consider this itself was a bias where the women had to prove themselves against 'men' as a generalisation and not as an individual. As shown below:

'Sometimes I think being female can lessen my chance in the gaming industry of having my ideas listened to! To combat them I've just got to work hard and show people!' (participant D)

and consider from Participant 7:

'Although I will never try and downplay my skills and oversell my gender, I feel that it is something that will at least at current times whilst the number of females in the industry is small give me an extra foot in the door to get noticed. After that, it is up to me whether the skills are there underpinning that. That is something I will have to make especially sure of as it could in fact be negative to stand out if the quality of work was average.'

and also from Participant 7:

'Once into a role, I think that again it could mean that as a female it may be more pertinent to appear competent at all times and show your worth for people to give the respect deserved and avoid stereotyping.'

The main thing to consider is the last sentence here. Participant 7 had discussed how being female could mean she gets noticed and so could get her 'foot in the door'. However consider her last words about any 'average' work being negative. Therefore a pressure for work to always be better than average. Would a male counterpart in the career expect to always be above average as the term itself shows a general standard; it does not say below average.

4.13 Legitimacy / illegitimacy of challenging stereotypes

'Sometimes it's difficult, particularly being a women in the industry. Video games, and video game courses tend to be predominately male, and while the gender of others has never been an issue for me, you can sometimes feel a little isolated.'
(participant 8)

This comment from participant 8 mirrored the way other participants discussed not having any or not many friends and the way they discussed their placement within their courses and as participant 8 stated 'gender of others' therefore the suggestion she was able to succeed as she could work as equally with men as women. There was a suggestion by some participants of having to either forget about your gender (female) or accept a certain isolation and expect a certain ridicule if they behaved in a traditionally feminine way.

'The fact I'm not a girly-girl I think would help too, since wherever I go to work would class me more as 'just another of the guys' than 'something oggle when they walk past'.'
(participant 2)

and consider the comment below from Participant 1 in relation to her course. Could the issue be what is accepted by the females in question. For example the comment below does not say these comments are directed at her specifically and so could it be an issue of what behaviour females expect from male peers. (That is not to suggest the comments below were acceptable or in any other circumstances would be; but to suggest others may not highlight these incidences as they consider them the 'norm' within a male dominated environment).

'I myself have encountered this within college where I'm the only woman in the classroom and had to deal with sexist and rape "jokes" and such like that are generally considered banter that are actually highly unacceptable and disgusting to have to hear on an almost daily basis.'

Therefore the above comments mirrored the need of some female engineers who felt they had to take on attributes of men (Bagilhole et al, 2009; Smith, 2013) become almost 'anti-woman' (Bagilhole et al). Consider how the females on the course felt isolated and not being a 'girly-girl' meant Participant 2 felt would help her in a male-dominated area. Similarly a number of participants discussed any show of femininity were met with pejorative comments.

Another suggestion made by some participants for the bias towards men was a lack of interest by women:

'I'm sure there is a small amount of bias, but possibly it's more lack of interest in games from women' (participant 9)

and this linked back into the idea suggested by several participants that the reason women had not been interested in a career was because games had not been created with female consumers in mind and as discussed in section 4.1. However here it is included as it is a suggestion that some participants considered that games were the issue; however could this lack of interest be due to games not being made with women in mind (Ray, 2004) and therefore it is the stereotypes within games at fault perhaps not the players. This could also link into the suggestion that without playing the games females would not be interested in the career as nearly all participants felt there was a link.

Many participants understood the issues the effect of these stereotypes had on women's perceptions of females joining a games course. As Participant C discusses in relation to other women joining games courses:

'I would tell them to go for it and prove the males wrong! Women should be equal and shouldn't get treated different.' (participant C)

which showed an awareness of male negativity and as Participant C says 'should' be equal which suggests she is aware they are not always. A common response such as from Participant 5 suggested more females should be on the games courses. She then discussed how other's perceptions could make less females join the courses. This is interesting as most participants similarly suggested more women apply but then explained how this could be a factor against the negativity and so within these statements showed the knowledge of stereotypes and suggested ways to counter this without possibly explicitly realising this and so the answers were more in line with

'I would tell them to do it. If they get put off by someone telling them they can't or shouldn't then it will just make the gender bias worse' (participant 5)

Therefore challenging the stereotype but almost in an implicit way by suggesting if there were enough women the stereotype would not exist.

'there are always people saying things like you're a girl and such why do games development but I enjoy games and creating things.' (participant E)

Similarly the statement by participant E showed how she would persistently be told not to do games development yet still carried on thereby challenging this stereotyped view.

In relation to gameplay Participant C interestingly had an issue with women refusing to show their 'like' of games and showed how she challenged how women themselves behaved.

'I think it's mostly males because males prefer to play and design games rather than females. But I don't agree with that some girls even pretend they don't like playing games just because they're scared to get labelled as being a Tom boy.'
(participant C)

Finally several participants suggested the stereotypes may be due to games being made solely by men and so as Participant B suggests:

'the writing side of it, I feel games have always been designed by males for males. If you could have more stories to a wider audience that would be great, this is why we need more females in the industry.'
(participant B)

4.14 Misogyny/ sexism

Linked into misogyny several participants also had concerns as at times they could be seen as more of a romantic interest rather than a peer or seen as an oddity due to their uniqueness as the only or one of the only females on their course. This highlighted their status as the female on the course.

'When I first started university I had a few people from the course come up to me talk to me a lot, found out I had a boyfriend and stopped talking to me. I didn't realise why until some other friend had informed me. This was more annoying than difficult' (participant 5)

and this linked to the issue Participant G experienced within gaming; consider the second comment by this participant and how others in her experience considered a link between a woman playing online and links to their personal life and being accused of 'being a flirt'. Consider how in both instances the female became a sexual object (Ray, 2004). However unlike the direct abuse of participant G; participant 5 and others considered their status within a male dominated area as simply 'annoying' whereas consider they were being ostracised and only being included due to their gender and position as a sexual object.

'Online, however, I found the opposite of real life. There has always been a difference stigma towards female gamers. I've experienced sexist comments from males just for being *interested* in something that is regarded as 'masculine'. A female gamer online, gaming or just on the internet, is deemed as an 'attention-seeker' and you can be expected to receive a string of derogative/misogynistic terms and expletives following, which again I found to be ridiculous claims about sexuality because of an *interest* I had.' (participant G)

and expanded on...

'Typically, yes, homosexuality is the first thing girls in my school assumed when you said you liked to play video games. If not, then online, female gamers are deemed as promiscuous and flirty, 'attention-seekers' and the like. Even though there's nothing wrong with being homosexual, or even being a flirtatious person, the two come up a lot when thinking of female gamers online and in real life. On the flipside, no one assumes the sexuality/promiscuity of males just because they play video games – there is certainly bias both online and in real life towards female gamers.' (participant G)

To develop the issue whereas conversely linked to the industry many participants denied issues could affect them; in gameplay there seemed a high percentage of misogynistic abuse which at times could be taken as verbal assault. The participants discussed in detail how it was almost expected as a female to be verbally abused if you chose certain games and some participants discussed either limiting who they played with or including a male to protect them. This was startling as it showed a distinct difference between those who played

and those who made the games in the views of participants in the study. While they showed an almost defensive reaction at times to suggestions of bias in the industry the participants saw the abuse suffered in gameplay as a separate issue. This was a significant finding and one that could have a large impact on any future aims to hire more women into the games industry. The participants discussed their abuse in terms which seemed almost dismissive at times while describing incidents which were distressing (such as strangers asking for unclothed pictures) and abusive and included incidents from previous years. Included below are several to show how these incidents were discussed.

'I think my earliest memory of being treated differently in a game because of my gender was when I discovered online games such as runescape; there were a few instances where other players would find out I was a girl and instead of wanting to play with me, I would be harassed for nude photos or my contact details or to roleplay having sex with them. These things did ultimately put me off playing online games or multiplayer games with strangers, even now I only really play online with people I don't know if I am playing with friends or my boyfriend.'
(participant 1)

'Hmm, whilst playing online it's usually a case of shock that female are playing and playing well. If anything the issue would be harassment because we tend to get sent messages and friend requests from random gamers in our matches. Some can be quite persistent in gaining some kind of response.'
(participant 4)

'When I've been playing games online I have often had people say stuff to me about me being female. This has been difficult.'
(participant 5)

Participant 9 for instance described as the 'only difficulties':

'The only difficulties I have being a female gamer is on multiplayer online games. For instance 'call of duty'. If it is discovered I am female I get either 2 responses. Verbal abuse to the point where I have to leave the lobby. Sometimes it is impossible to actually play with physical in game bullying. Or I get message after message of a sexual nature. Some days are quite unpleasant.'
(participant 9)

Participant 9 later discussed how she liked to play Call of Duty online with her friends. Which suggested she had to hide her gender to be able to play without harassment. The general response was that while they had suffered abuse they still played games (though at times these were limited). Similarly nearly all participants also discussed a link between gameplay and choosing a games course and discussed games in positive terms. The suggestion that a female would expect to be attacked for playing a game online due to their gender highlighted perhaps reasons why certain genres are not played by females as much as men and also why as the participants saw a link between gameplay and choosing the course/ being a games designer, why many females would never consider

this area. It is not the counter-stereotypical views of the career itself but an extreme negative reaction in the hobby which has a direct link.

'You only have to look at things like the Xbox conference at E3, where there were no games with female protagonists, or this twitter post [<http://femfreq.tumblr.com/post/52673540142/twitter-vs-female-protagonists-in-video-games>] and the backlash it got from males to see that there is a horrible bias present wherein women are too often pushed aside or not considered a big enough demographic to appeal to despite the obvious large amounts of the female population that do enjoy video games' (Participant 1)

Interestingly and worryingly this trend could be seen in the context of the recent 'Gamergate' scandal (Hathaway, 2014). A number of high profile females including Zoe Quinn and Anita Sarkeesian (who was the person discussed in the comment from Participant 1 above but prior to 'Gamergate') were subject to a high level of abuse for either being or discussing the games industry by players of games. This abuse was from men (or at least appeared to be men) and included threats of personal attacks including rape. Note the interviews conducted by the researcher were prior to this scandal however the comment from participant 8 (who works in the industry after recently completing her degree) was particularly appropriate.

'Even if you write a blog about games, if someone finds out you are a female you can sometimes suffer abuse about your looks, how long you've been a fan of games, maybe even get called a 'fake.'" (participant 8)

Many in the industry itself (including many men) supported the victims of 'Gamergate' and were seen as a supportive force against the abuse which was from those who played games. What makes this startling is based on earlier research those who saw themselves as gamers considered the games industry as a career (Carr, 2010) and the link between gameplay and choosing a course with a link to the career was shown in this study. There has always been a stereotypical view of the 'gamer' as a white male and while this could be seen as a little outdated and more as seen as linked to the main demographic of those playing games; recently vocal online voices seem to suggest this core demographic of 'gamers' is aiming to exclude women. Therefore due to the level of abuse to other female players and to females in the industry both what image is this portraying to females and how is this effecting the intake to the industry. Consider the comment from Participant 8:

'The gaming community is often unkind to female players, and as such I can whole-heartedly understand why females rarely see the game industry as a viable career.' (participant 8)

and from Participant 1:

'but I get the sense that women are subjected to not getting the credit they deserve a lot of the time or are treated differently, perhaps not so much by co-workers, but by the gaming community as a whole. If this wasn't a thing then so many women in games wouldn't currently be trying to make a change' (participant 1)

Is this extreme negativity towards female in certain online games causing an effect directly to the industry? Consider the below comment by participant 1 who suggests that in the industry itself males may act in a sexist manner, however unknowingly' as she suggests and shows a link to the games made themselves.

'I imagine that within the games industry as a woman it's also hard to have to deal with working in an environment that is almost solely composed of men who may think or act, however unknowingly, in sexist ways with regards to their conduct at work as well as the actual products they are creating.' (participant 1)

However to consider the argument fully it needs to be clear that as online posters tend to be anonymous; those verbalising threats may be a minority. This is important as could this minority itself be in reaction to the counter-stereotypical socialisation of what society believed was appropriate- e.g. both what career genders should follow but also how each gender should act; consider how engineers acted towards females who were too masculine (Garcia, 2003, Guerrier et al, 2009, Denissen, 2010). Is this scandal all a reaction to females encroaching on what is traditionally a male domain and so a reaction to the counter-stereotypical career and area they are following. It may be important to note the participants in this research were interviewed prior to the scandal. The researcher could only speculate if this would have changed the view of any of the participants who saw the games industry as a positive career where either bias was no longer an issue or not to them personally (although as discussed this itself could be a denial which allows females to follow a traditionally masculine route).

4.2 INFLUENCE

This section shall consider how generally the participants had a strong support structure, of those who had negative influence the overwhelming theme was one of not accepting and combating this view and one notable thing was that similar to the 'back-stories' from engineer and those from I.T. (Faulkner, 2007; Etzkowitz et al, 2000) a number of the participants had positive 'back-stories' involving male family members. Figure 36 shows the matrix utilised by the researcher as discussed in Chapter 3.

	Party who influenced (if gender included m = male and f = female)				
Focus of influence (green= positive and red= negative)	Parent	Sibling	Romantic Interest	Peer	Teacher
Educational					
Gaming (play)					
Gaming (industry)					

FIGURE 36 INFLUENCE AS A THEME AND SUBTHEMES MATRIX

A high level of participants had support (while not always specific to the area of games, there was a general level of support for the participant themselves) from those who were considered an influence- such as parents, romantic interests, teachers and friends and this support structure seemed to be an important factor. There was no one specific influence and while there were a high number of male influences; a number of participants discussed a strong influence from their mothers.

'I've always been on a good straight path in education and my mum knew that whatever I did I would do my best at. I grew up with games with my two older brothers so of course they supported my decision and really enthuse me about my projects.' (participant 4)

and

'My friends suggested I do something I like,they didn't give me a particular suggestion.' (participant B)

and

'My family have always been hugely supportive in what I've wanted to do. My parents know a little about video games and my Dad works in an industry which is heavily reliant on technology and so they understood my career path well. They sat down with me and looked through the disadvantages and advantages of each course and we talked about it a lot beforehand' (participant 8)

and

'My mum helped me pick a course out she thought of this one because it seemed fun and would be a challenge to me because I had never done 3D modelling or half of the stuff I am doing. My mum is really happy i'm on this course because she knows that I enjoy it. She has been really supportive with everything. My mum wouldn't suggest any careers to me because its up to me she would of supported me in whatever I had chosen' (participant C)

Could this be a way to counter the belief in gendered careers- as this support would mean a male or female could follow a career which is counter-stereotypical to their gender without fear of derision from those closest. While not everyone thought they were following the correct path, there were in the main no extreme results in the negative and influence can be a strong factor in choice (Borkowski et al., 2002).

For those participants who did suffer negative influences such as derision their responses tended to be ones of reacting against those comments/ combating. I have included a number below to highlight how this negative influence had an opposite effect. Could this link into the personality traits discussed later in this chapter which seemed to follow a mixture of stereotypically masculine and feminine traits.

'School, I got picked on a lot by other girls and sometimes men for having an interest in games, because in their eyes they were simply 'not for girls.' But to be honest, my love for games just got stronger because of that. :)'(participant 8)

and

'I think one of the reasons I chose this course was because whenever someone told me I shouldn't/ couldn't do it for reasons that didn't make sense. It made me want to do it just a little bit more. It wasn't the main reason though. I mainly wanted to do it because I enjoy games and are interested in the games industry. '(participant 5)

and

'I would tell them to keep going and to aim to prove wrong every person that ever told them that they weren't good enough just because they are female.' (participant 1) and

'There are certain barriers by which I am considered not good enough merely because I'm a woman. I aim to prove them wrong by succeeding within the industry and perhaps then inspiring others to do the same.' (participant 1)

A high level of participants had a positive male influence such as brother, father or boyfriend. There were a number of participants who discussed playing games with these influences and their back-stories mirrored those in engineering and IT (Faulkner, 2007; Etzkowitz et al, 2000) and showed a reason behind choosing the subject which taking the studies previously as well as the new research suggests the women feeling the need to justify their choice. Not simply my brother suggested but explaining how and showing why they would choose a male-dominated area. These stories are included to show how these participants were heavily influenced by male family members but also how these 'back-stories' seen in other women in counter-stereotypical male careers showed a link between women in different occupations but all male-dominated.

'it will probably be down to me growing up with 2 older brothers and male family members. In our house and when visiting family we would always be crowded around a TV playing games, this is from a very young age.' (participant 4)

and

' I'd been interested in the art side of Game Development ever since playing Heroes Might and Magic III with my brother when I was in primary school' (participant 10)

and

'I began playing video games aged 10,with my older brother,he was the one with the consoles. I never felt I was much of a gamer,However,I was a fan of video game arcades and owned a replica of a game boy,with a black and white screen.' (participant B)

and

'I guess compared to some other girls I've had quite a lot of influence from my brother because we got on really well when we were younger. Since I was the younger sibling I wanted to be like him, and he happened to be into games whether it be on the computer, board or imaginative. I discovered my love for games too so we both encouraged each other' (participant 10)

4.3 POSITIVE EMOTIVE LANGUAGE

Within this section the use of 'Positive Emotive Language' will be discussed. The use of these words was throughout the participants and when considering that those on the study were following a counter-stereotypical role and many had suffered some kind of abuse due to their gender (especially online) this continual use of Positive adjectives showed both an emotional connection to the area of games and with this the course and career; but also the ability by the participants to be positive even against at times extreme negativity. Figure 37 was the matrix utilised by the researcher as discussed in Chapter 3 and show the main word use.

	Positive emotive language					
Focus of influence	Enjoy	Interest	Love	Like	Want	Passion
Educational						
Gaming (play)						
Gaming (industry)						

FIGURE 37 POSITIVE EMOTIVE LANGUAGE AS A THEME AND SUBTHEMES MATRIX

When discussing their reasons for playing games, joining a course and wanting to be in the games industry a high percentage of what could be considered 'positive emotive language' was included. The reason the researcher has included this as an area of study is while an interest and possibly the liking of an area would seem appropriate for a career. The abundance of terms such as 'Love', 'Want' and 'Passion' suggested that the area of games was almost a necessity for the participants and not simply a means to making money. The participants discussed a love/ passion for gameplay (even when a high percentage had been abused online due to being female). When asked the participants saw a link between gameplay and choosing the course linked to making the games as a career rather than a hobby and had an assumption that those joining a course must play (and by association like) games. This was especially of interest as this link between hobby directly into career is not one which is relevant for many careers and so suggests an area which could potentially entice more women but solely in relation to this career in particular and not due to it being a counter-stereotypical career. Specific quotes are not included as the word use was common throughout the interviews but as discussed Figure 37 shows the main words.

'I don't think that anyone who had never played games would choose a games course' (participant 3)

'Yes, if you didn't have an interest in games it would be difficult to create fun and interesting games.' (participant 9)

'there is a link in my opinion- for example with me playing games made me choose a course as it got me interested in how they are made' (participant A)

'There is a link because you would have to be interested in something to want to do well in it' (participant 5)

'My hobbies are mainly writing, drawing and playing video games, and I think the knowledge of games that comes from playing them is definitely something that helps in the choice of a course because usually since you're interested in that that then leads you to wanting to know how they're made and then thinking also that maybe you could also make them' (participant I)

Above were indicative of the responses by participants when asked if there was any link between games and games course. This seemed an avenue of further research as could this be a reason for the participants to be choosing this particular counter-stereotypical career; that the emotional response was more significant than any social barrier?

4.4 PERSONALITY TRAITS

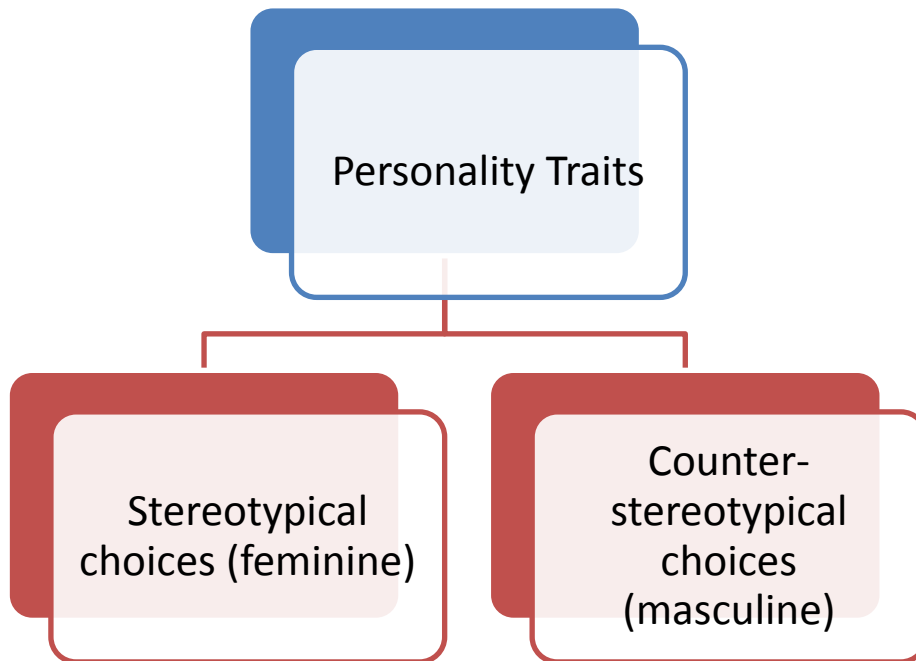


FIGURE 38 DIAGRAM OF PERSONALITY TRAITS AS A THEME AND SUBTHEMES

Personality Traits	
Stereotypical choices (feminine)	Counter-stereotypical choices (masculine)

FIGURE 39 PERSONALITY TRAITS AS A THEME AND SUBTHEMES MATRIX

When considering gender socialisation and counter-stereotypical careers it is important to consider those traits that are considered linked to a specific gender. As an example ambition is seen as masculine and team-work is seen as feminine. Within personality traits the researcher listed ambition as a masculine trait linking it into 'competitiveness' (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014) ambition?- wanting to win// (Walkerdine). This is important as this then links to what are seen as gender appropriate

careers. As Garcia (2003) and Guerrier et al (2009) discussed this means those who transcend those barriers are then penalised and treated negatively in response to not following a predefined gendered pathway. Traits which are considered masculine are both ambition and the ability to cope with stress- both which were listed by a number of participants. In opposition they also noted both team-work and communication which are seen traditionally as feminine traits. Therefore an amalgamation of what are seen as both masculine and feminine. When queried many participants did not see any of the traits as male (or in fact female) and perhaps this itself is an unconscious denial to remove themselves from considering they may be transgressing society's gender divide.

As an example participant 5 listed as her personality traits (which included traditionally masculine as well as feminine traits):

'Ambitious, introverted, indecisive, analytical.'

and asked if she considered any of these male or female traits answered:

'I don't think they are connected to either. As far as I know.'

This showed throughout both the Further Education and Higher Education that learners had a mixture of what could be seen as masculine and feminine in the same way women in engineering needed to balance the two and how in IT 'a technical/social dualism' (Faulkner, 2007) was promoted in the changing technology society.

A number of participants discussed needing to be 'thick-skinned' (participant I) and this phrase also showed links to the high level of ambition the participants had to succeed in the industry. There seemed to be a focus on career and as Simpson (2004) discussed 'masculine' qualities which were shown as ability to 'cope under stress' which a number of participants included within their traits and also suggested an amount of competitiveness which was shown as one of the qualities women were lacking in and therefore could be excluded from managerial roles (Bobbitt- Zeher, 2011; Chan et al, 2010; Faulkner, 2007; Garcia, 2003; Sang et al, 2014). As participant G stated:

'As a female, I think that at certain points in my career, I feel I may not be taken seriously simply because of my gender, or perhaps I may not be trusted to take the role of a lead say, over a male team. There may be irrational thoughts, however, as I have never experienced these within a games design learning environment .' (participant G)

4.5 GENDERED CHOICES IN EDUCATION

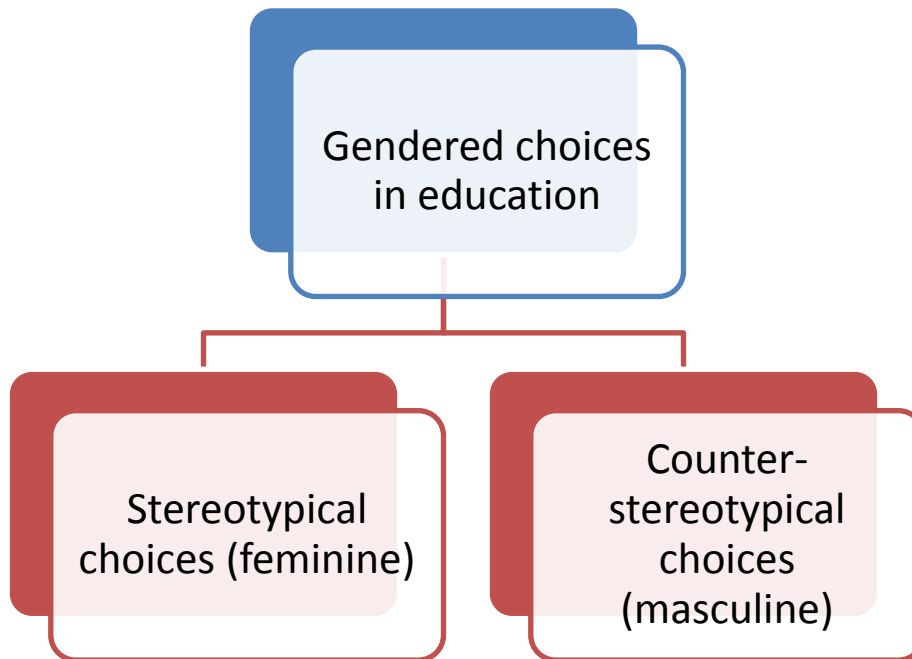


FIGURE 40 DIAGRAM OF GENDERED CHOICES IN EDUCATION AS A THEME AND SUBTHEMES

Gendered choices in education	
Stereotypical choices (feminine)	Counter-stereotypical choices (masculine)

FIGURE 41 GENDERED CHOICES IN EDUCATION AS A THEME AND SUBTHEMES MATRIX

A high percentage of the Higher Education results showed a link to art as a subject; this references back to Chapter 2 that showed subjects such as art were seen as a subject chosen far more by females (Telegraph 2013; Pearson, 2012). Interestingly the choice of art developed into 'modelling' (3D modelling) and other more technical subjects in a number of cases and could lead to the supposition that the learners were limiting their subjects previously (whether consciously or by design linked to gender choice). When considering

the subjects previously studied by Higher education learners there was similarly a mixture of what could be seen as traditionally subjects studied by both males and females. This area was only relevant to Higher education learners as the Further education participants had chosen the Games course at Level 3.

However when considering careers a number of participants in both FE and HE considered art linked to the games industry however interestingly a number had moved from this to technical subjects such as 'modelling' and level design which are themselves careers which are traditionally held by men and utilise technical skills which are seen as masculine attributes. Here comes an interesting pattern- wherever a career linked to a masculine pattern such as 'level design' or 'modelling' was discussed, another which could be seen as feminine was also included.

' I'm not entirely sure what I'm aiming for at such an early stage, but I do very much like the idea of level and environment design, I would be happy working in a small team because I think I would like the chance to work on several parts of the artistic process, including concept, and the creation of my own and others concepts' (participant 3)

'something art based that involves concept art and/or modelling and texturing' (participant 1)

Could this be an unconscious need by the participants to conform to the 'appropriate' career based on the gender lines created by society's expectations. As males (Simpson, 2004) altered their own careers to incorporate the masculine and redefine their masculinity; are the female participants aiming to incorporate discussion of feminine appropriate careers to counter-balance the areas which they are in fact following to give a newly created career that allows a female to remain in what society would see as an appropriate feminine career and therefore not have to remove themselves into a struggle against those same pre-defined constraints.

CONCLUSION (AND A LOOK AT GAMER)

The discussion of 'Gamer' did not fit into any theme specifically but was important as a consideration in this study. The participants generally saw someone who was a 'gamer' as someone who played any genre of game a lot. However several noted that while they thought this, society had a different definition.

'It depends who was describing the gamer. In most social circles a gamer would be someone who plays games all the time and is usually playing AAA titles on Xbox, PS or PC. When I think of the term gamer I think of someone who just plays games, I feel it's like calling someone a reader.' (participant 5)

This was especially interesting when you considered previous research such as Carr (2010) which showed those who considered themselves a 'Gamer' were more likely to consider a career in the games industry; therefore the researcher felt this was an important final consideration within this 'Results and Analysis' chapter.

To conclude the main findings from this research were the use of positive emotive language by the participants and a possible link to utilise between gameplay and choosing the games courses/industry; serious concerns about the abuse many participants experienced online and possible links to the low number of females studying games courses and in the industry. The consideration of traits and educational areas which covered both stereotypically (feminine) and counter-stereotypical (masculine) areas suggested a negative effect the socialised view could be having on the games industry and finally the positive effects of a strong support structure such as family and friends who supported participants in a male-dominated area.

'I was too young to really understand gender discrimination properly, and when I got to an age when I could have possibly been turned away from gaming, I was already in far too into it all. Game development was already a huge part of my life.' (Participant 8)

CHAPTER 5- ORIGINAL CONTRIBUTION TO KNOWLEDGE

To follow on from the results and analysis in Chapter 4; this chapter will look at how these findings can be utilised and how they show an original contribution to knowledge. To begin while there is research on counter-stereotypical careers and the effect of those who choose such careers (Bagilhole et al, 2009; Bailey and Mitchell, 2006; Baird, 2012; Berkery, Morley and Tiernan, 2013; Bobbitt- Zeher, 2011; Chan et al, 2010; Cowling et all, 2015; Denissen, 2010; Edvardsson et al, 2015; Etzkowitz et al, 2000; Faulkner, 2007; Garcia, 2003; Gherardi and Poggio, 2001; Guerrier et al, 2009; Korek, 2014; Lupton, 2000; Mallia and Windels, 2015; Pringle, 1993; Sang et al, 2014; Simpson, 2004; Smith, 2013; Smith, 2013b; Torres, 2014; Williams, 2015) for both males and females; it is still a developing area and therefore the research available was limited. These studies have shown commonalities which are discussed in Chapter 2 and are mirrored within this research and are included in the models below. The available research showed the need for both further and more far reaching studies on the effect of stereotyping within these careers as many studies were limited. Further in relation to video/ computer games, which itself is still a developing area of research; while studied in relation to more feminist based research; research considered in the context of gender stereotyping as a symptom of society's socialisation is still severely under-represented and shows the importance of this study. Serious studies related to the issues within the video/ computer games industry would seem to be a necessity; especially to combat the near-hysteria which the reporting in popular media can cause. Recent high profile exposure linked to 'Gamergate' show a need for re-education and a suggested defect within society's stereotyping of both careers and hobbies. A consideration of what is serious abuse and inappropriate tolerance appears key to one specific issue and could link to further studies at ages 11-16 and recognised as a consideration for the curriculum.

The model below both summarises the specific work linked to gender in relation to the video/ computer games industry and shows how this is then transferable to be utilised within other counter-stereotypical gendered careers. It is important to note that while there are other studies related to video games; the most relevant studies for this research are linked to the socialisation of gender and how this affects those in a non-typical career pathway. Some of the issues facing women in gaming may apply to men in careers such as nursing or childcare, though as noted in chapter 2 there are different dynamics for each gender. Equally, there will always be specific features of specific careers that shape the way gender stereotyping has an impact. Video/ computer games do have the unique position of being a

pastime as well as a course/ career which is not the case for many careers; for example males entering nursing and females entering engineering. However the model below takes this factor into account and these issues linked into games can still be mirrored over within the context of gender stereotyping.

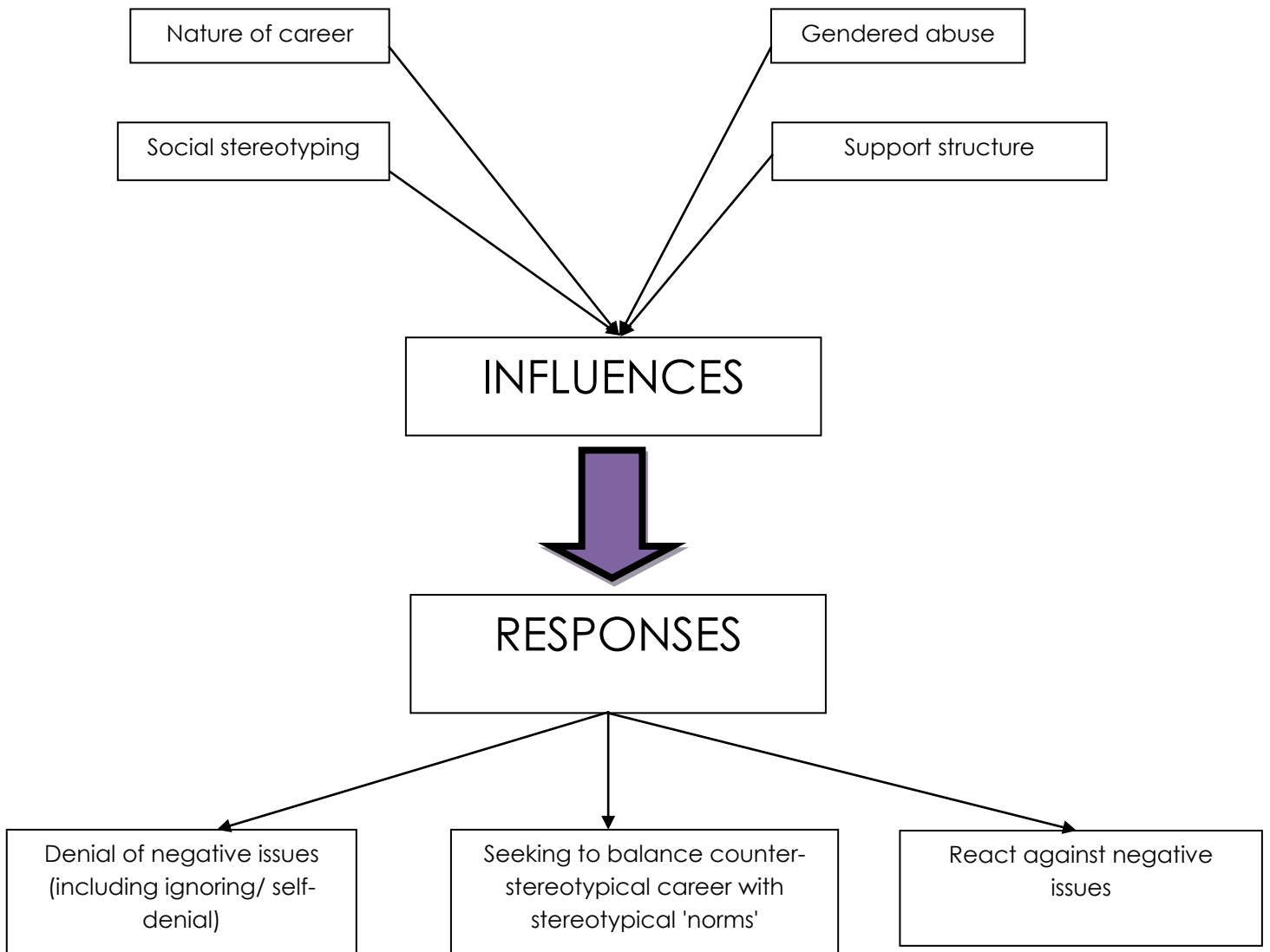


FIGURE 42 CKW MODEL- INFLUENCES ON JOINING A COUNTER-STEREOTYPICAL CAREER AND THE RESPONSES (CARR ET AL, 2015)

5.1 DEVELOPING A MODEL OF EXPERIENCES OF GENDER COUNTER-STEREOTYPICAL CAREERS

The CKW (Carr, King and Ward) model (figure 42) can be utilised linked to other areas where males or females follow counter-stereotypical career paths such as females in engineering and males in nursing. To begin the model will be utilised in relation to the study of females in the games industry and then discussion will be included on how this can be mapped over using examples from studies of others counter-stereotypical careers as covered previously. The purpose of the model is to serve as a conceptual framework to further explore gender counter-stereotypical careers.

5.2 ANALYSIS OF GAMES INDUSTRY USING CKW MODEL:

Influences:

Nature of career - in the games industry this included competitiveness, long hours and the inherent Western Macho in games themselves.

Social stereotyping- such as traits and educational areas being stereotypically gendered ('male' and 'female'). In the games industry the main results showed a need for games courses to incorporate a mixture of traits and subject areas seen as traditionally 'male' and 'female'

Gendered abuse- in the games industry the main issue concerned online abuse linked to game play

Support structure -such as family and friends; in the games industry this was a mainly positive influence based on the research from strong familial support. This could suggest that those without this support are less likely to continue in the area

Responses:

Denial of negative issues (including ignoring/ self-denial) such as in the games industry

1) seeing issues as not relevant personally eg in the games industry being aware of issues of sexism/ misogyny or being a male dominated area but not their personal impact

Seeking to balance counter-stereotypical career with stereotypical 'norms' such as in the games industry

1) incorporating traditional traits of own gender eg in games industry - females traits to a perceived male area

2) seeing the need to outperform traditional gender as acceptable eg in the games industry females considering outperforming males the 'norm'

React against negative issues such as in the games industry

1) in part continuing in a counter-stereotypical area due to negative response such as overcoming barriers eg being told females should not be on a games course/ in the industry and so working harder to succeed in the games industry

2) positive emotive language (passion) in relation to career eg in the games industry a 'love' of the area while acknowledging issues

5.3 EXAMPLE ANALYSIS OF COUNTER-STEREOTYPICAL CAREERS USING CKW MODEL:

Studies considered:

Bagilhole et al, 2009; Bailey and Mitchell, 2006; Baird, 2012; Berkery, Morley and Tiernan, 2013; Bobbitt- Zeher, 2011; Chan et al, 2010; Cowling et all, 2015; Denissen, 2010; Edvardsson et al, 2015; Etzkowitz et al, 2000; Faulkner, 2007; Garcia, 2003; Gherardi and Poggio, 2001; Guerrier et al, 2009; Korek, 2014; Lupton, 2000; Mallia and Windels, 2015; Pringle, 1993; Sang et al, 2014; Simpson, 2004; Smith, 2013; Smith, 2013b; Torres, 2014; Williams, 2015 (analysis covered within Chapter 2).

Influences:

Nature of career - in the engineering industry this could include work which can be seen as 'physical' and in nursing 'emotionally taxing'

Social stereotyping- such as traits and educational areas being stereotypically gendered ('male' and 'female'). In engineering women seen as less physically capable and in nursing men seen as less nurturing

Gendered abuse- in the studies of counter-stereotypical careers women suffered abuse if they were seen to follow a traditionally male pathway to too high an extent. Men could be seen to being forced into a different career path linked to the expectations of gender

Support structure -there were some back stories of male family members for instance showing females how to use computers in I.T. or in engineering. This would be an area which needed studying further, especially in males in counter-stereotypical careers

Responses:

Denial of negative issues (including ignoring/ self-denial)

Seeking to balance counter-stereotypical career with stereotypical 'norms'

React against negative issues

Each of the responses could be seen within studies and would be an area to develop. The CKW model (figure 42) gives a targeted focus for future studies in counter-stereotypical careers and an opening for comparison between the various careers in a tangible and measurable way.

CONCLUSION

The main results of the CKW model (figure 42) which was based on the study within this thesis are:

- 1) measurable results linked to females in the video/computer games which can be utilised for future research and studies
- 2) a model which can be utilised by gendered careers

These show the original contribution to knowledge achieved by this research and its future implications for use and consideration of how counter-stereotypical careers are studied.

The value of this model can be seen in both terms for the study conducted and in relation to the counter-stereotypical gendered careers covered. The next chapter will conclude the thesis and consider future research possibilities.

CHAPTER 6- CONCLUSION

INTRODUCTION

This study began with the aims to find out the affects gender socialisation could be having on women entering the male-dominated career of the video/computer games industry. It looked to find out why so few women are in the games industry (Skillset, 2012) and consider reasons behind this. The literature and context surrounding gender, career stereotyping, counter-stereotypically gendered careers, gameplay (in relation to female players, games with females and how many females played games) and finally considered the factors which influenced choice. This led to the consideration of the methodology and methods required for this study and finally to the analysis of the data itself and the findings from this data.

The literature and context (Chapter 2) defined how 'gender' would be considered within this work and looked at how both the definition of career and how careers were stereotyped based on gender. This led to an analysis of both males and females in counter-stereotypical gendered careers and the effects on both gender such as the need to balance masculinity in a male-dominated career by women (Bagillhole et al, 2009; Smith, 2013) as long as these traits were limited and also contained feminine traditional traits (Garcia, 2003, Guerrier et al, 2009; Gherardi and Poggio, 2001). This was followed by an analysis of data of industry and academic data. Figures were studies from Skillset (2012) which was in relation to the lack of women in the games industry, data from Nesta (2013) was analysed to consider women in the industry related to education, results from A-levels and BTECS were considered to analyse the subjects more frequently completed by each gender and finally in this section figures obtained from HESA (2013) showed how few women were following Computer Games courses. Next within Chapter 2 gameplay was analysed in relation to how many women played games and the genre of these, both the Eastern influence on characters and the consideration of female protagonists/ avatars and how females played games differently to males (Castell and Jenson, 2005; Castell and Jenson, 2008; Walkerdine 2007). This chapter was completed with a consideration of all the factors which could affect choice considering Cognitive And Physiological Factors, Violence and Emotions, Social Factors affecting Gameplay and Social Factors Affecting Whether Girls Choose Video/Computer Games (Both Playing And As A Career). These were then analysed to consider reasons why females may not be considering either certain games or the games industry itself.

In Chapter 3 the methodology was discussed and Subtle Realism was chosen as the appropriate stance as a 'middle-ground between Relativism and Realism (Hammersley, 1992). The method was then discussed in relation to the studies aim which was ' to look at women transitioning into a career which is counter-stereotypical to their gender socialisation looking at the video/ computer games industry' which looked to interview female learners on Games Courses at Further education and Higher education to explore their experiences in a male-dominated area, to look at any factors influencing their choices and finally consider any link between gameplay and the choice of games courses. The chosen method of interviewing was by E-interviews using email and these were to be completed and the data analysed by the use of thematic analysis in specific the use of Template Analysis and to a lesser degree Matrix Analysis (Horrocks and King, 2010).

In Chapter 4 'Gender concerns' were considered and along with issues relating to stereotyping serious concerns arose from the online abuse many had been subjected to linked to their gender. 'Influence' was considered and it could be hypothesised the lack of censure from many of those who directly influenced participants led to more of a willingness to follow a counter-stereotypical gendered area. Positive emotive language suggested a high level of commitment and emotional connection to the area of gaming and games as a link to the course and industry. The mixture of traditionally masculine and feminine traits among participants highlighted an issue that gender socialisation may be having implications for career choice. This linked into the gendered choices in education which similarly showed a mixture of traditionally masculine and feminine choices. This followed on to Chapter 5 where the CKW model (figure 42) was created which utilised the results from previous chapter to create a model which had implications for use in a variety of subject areas. This concludes this study and links to the final section which looks at the possibilities for future studies.

FURTHER STUDIES

Considering the results and possible avenues of study there are 4 main areas of research for the video/ computer games industry to be taken to possible further studies:

- 1) Discussions with a wide range of female students at school level to discern their experiences and their choices of career.
- 2) In-depth interviews with women from the games industry in relation to their experiences.
- 3) The development of recruitment strategies for both games courses and the industry which incorporate both feminine and masculine traits to promote a more effective and inclusive strategy.
- 4) Research into how the games and the gaming community relate to female players and female characters within games.

Finally there is the possibility for the results of this study to be utilised by other practitioners such as those studying nursing and engineering.

APPENDIX

CONSENT FORM



CONSENT FORM

Title of Research Project: How do young women in FE and HE who have chosen computer games courses perceive practical games jobs within the computer/video game industry as a career?

It is important that you read, understand and sign the consent form. Your contribution to this research is entirely voluntary and you are not obliged in any way to participate, if you require any further details please contact your researcher.

I have been fully informed of the nature and aims of this research

I consent to taking part in it

I understand that I have the right to withdraw from the research at any time

without giving any reason (however after April 2014 I cannot withdraw my data).

I give permission for my words to be quoted (by use of pseudonym)

I understand that the information collected will be kept in secure conditions

for a period of five years beyond the end of the project at the University of Huddersfield

I understand that no person other than the researcher/s and supervisor/s will

have access to the information provided.

I understand that my identity will be protected by the use of pseudonym in the

report and that no written information that could lead to my being identified will

be included in any report.

If you are satisfied that you understand the information and are happy to take part in this project please put a tick in the box aligned to each sentence and print and sign below.

Signature of Participant: _____	Signature of Researcher: _____
Print: _____	Print: _____
Date: _____	Date: _____

(one copy to be retained by Participant / one copy to be retained by Researcher)

How do young women in FE and HE who have chosen computer games courses perceive practical games jobs within the computer/video game industry as a career?

INFORMATION SHEET

You are being invited to take part in this study as you are a female studying a computer games course. Before you decide to take part it is important that you understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with me if you wish. Please do not hesitate to ask if there is anything that is not clear or if you would like more information.

What is the study about?

The purpose of this study is to examine why females choose computer games courses and their perceptions of the games industry.

Why I have been approached?

You have been asked to participate because you are a female on a computer games course.

Do I have to take part?

It is your decision whether or not you take part. If you decide to take part you will be asked to sign a consent form, and you will be free to withdraw at any time and without giving a reason. Further to this you only have to answer questions you are happy to answer. A decision to withdraw at any time, or a decision not to take part, will not affect you.

What will I need to do?

If you agree to take part in the research you will be asked a series of questions by email. These will be sent over a 6 month period. You will be asked to respond within a set time (approximately 1 week) and will receive a reminder email after 2 weeks. After 2 reminder emails it will be taken you do not wish to continue however are happy for your material still to be used. Your consent form will be kept confidentially for 5 years after the research is complete.

Will my identity be disclosed?

All information disclosed within the interview will be kept confidential, except where legal obligations would necessitate disclosure by the researcher to appropriate personnel. Your personal details (other than approximate age, gender and generalised location eg Yorkshire) will not be included in the final thesis.

What will happen to the information?

All information collected from you during this research will be kept secure and any identifying material, such as names will be removed in order to ensure anonymity. It is anticipated that the research may, at some point, be published in a journal or report. However, should this happen, your anonymity will be ensured, although it may be necessary to use your anonymised words in the presentation of the findings and your permission for this is included in the consent form. If you decide that you wish your interview to be removed you will need to contact the researcher prior to April 2014 specifically requesting this.

Who can I contact for further information?

If you require any further information about the research, please contact me on:

Name: Marian Carr

E-mail: phdstudy@live.co.uk

If you have any further queries or complaints:

Name: Dr Rupert Ward

E-mail: R.R.Ward@hud.ac.uk

Tel no: 01484 472060

EXAMPLE INTERVIEWS:

Included as separate documents (Person 1- from Higher Education and Person A- from Further Education)

BIBLIOGRAPHY

Adam, A.E., Griffiths, M., Keogh, C., Moore, K., Richardson, H.J. & Tattersall, A.L. (2006) Being an 'it' in IT: gendered identities in IT work. *European Journal of Information Systems*. 15 (4), pp. 368-378. [online]. Available at: <<http://www.palgrave.com>> [Accessed 12 August 2012].

Alexander, L. (2009) Opinion: The Emancipation Of Lara, Or Why 'Female-Friendly' Fails [online]. Available at: Gamasutra <<http://www.gamasutra.com>> [Accessed 20 November 2009]

Alkadry, M. G. and Tower, L. E. (2008) The Social Costs of Career Success for Women. *Review of Public Personnel Administration*. 28 (2), 144-165.

Anderson, C.A. & Bushman, B.J. (2001). Effects of Violent Video Games on Aggressive Behaviour, Aggressive Cognition, Aggressive Effect, Physiological Arousal, and Prosocial Behaviour. *Psychological Science*. 12, 772-790.

Bagillhole, B., Dainty, A. and Powell, P. (2009) How Women Engineers Do and Undo Gender: Consequences for Gender Equality. *Gender, Work and Organization*. July, 16 (4), 411-428 [online]. Available at: IngentaConnect <<http://www.ingentaconnect.com>> [Accessed 18 June 2009]

Bailey, J., & Mitchell, R. B. (2006-2007) Industry Perceptions of the Competencies Needed by Computer Programmers: Technical, Business, and Soft Skills. *Journal of Computer Information Systems*. 47 (2), 28-33.

Baird, C.L. (2012) Going Against the Flow: A Longitudinal Study of the Effects of Cognitive Skills and Gender Beliefs on Occupational Aspirations and Outcomes. *Sociological Forum*. 27, 986-1009.

Bampton, R., Cowton, C.J. and Downs, J. (2013) The E-Interview In Qualitative Research. In Sappleton, N. (ed) *Advancing Social And Business Research Methods With New Media Technology*. USA: IGI Global, Hershey, PA

Barrett, J. and Whitehead, S. eds (2001) *The Masculinities Reader*. Cambridge, UK: Polity

Barron, B. (2004). Learning ecologies for the technological fluency: Gender and experience differences. *Journal of Educational Computing Research*, 31, 1-36.

BBC (2004) *Salary secrecy 'penalises women'* [online]. Available at: BBC News online <<http://news.bbc.co.uk>> [Accessed 30 December 2009]

Beasley, B & Standley, T.C. (2009). Shirts vs. Skins: Clothing as an Indicator of Gender Role Stereotyping in Video Games. *Mass Communication and Society*, 5(3), 279-293.

Beauvoir, S. (1997) *Second Sex*. London: Vintage

BECTA (2008) *How do boys and girls differ in their use of ICT?* [Online]. Available at: Becta <<http://www.becta.org.uk>> (Accessed 14 August 2009]

Berkery, E., Morley, M. and Tiernan, S. (2013) Beyond gender role stereotypes and requisite managerial characteristics. *Gender in Management: An International Journal* 28 (5), 278 - 298.

Beyer, S., Rynes, K., Perrault, J., Hay, K & Haller, S. (2003) Gender Differences in Computer Science Students. *SIGCSE'03*, February 19-23, 2003, 49-53.

Blacker, K.J., Chein, J.M., Curby, K.M. and Klobusicky, E. (2014) Effects of Action Video Game Training on Visual Working Memory. *Journal of Experimental Psychology*, 40 (5), 1992–2004.

Bobbitt-Zeher, D. (2011) 'Gender Discrimination at Work: Connecting Gender Stereotypes, Institutional Policies, and Gender Composition of Workplace.' *Gender & Society*. 25 (6) pp. 764-786.

Boot, W. R., Kramer, A. F., Simons, D. J., Fabiani, M., & Gratton, G. (2008). The effects of video game playing on attention, memory, and executive control. *Acta Psychologica*, 129, 387–398.

Borkowski, J. G., Ramey, S. L. & Bristol-Power, M. (Eds.), (2002). *Parenting and the child's world*. Mahwah, NJ: Lawrence Erlbaum Associates

Brennan, B. S. (2013) *Qualitative Research Methods for Media Studies*. UK: Routledge

Brown, L. and Lamb, S. (2006) *Packaging Childhood: Rescuing Our Daughters from Marketers' Schemes*. New York: St. Martins Griffin

Buckingham, D., Burn, A., Carr, D. and Schott, G. (2006) *Computer Games: Text, Narrative and Play*. Cambridge, UK: Polity

Burr, V. (2003) *Social Constructionism*. 2nd ed. London: Routledge

Butler, J. (2006) *Gender Trouble*. New York: Routledge Classics

Cain, M.S. , Laudau, A.N & Shimamura, A.P. (2012) Action video game experience reduces the cost of switching tasks. *Atten Percept Psychophys*, 74, 641–647.

Carr, M. (2010) Is Gender Stereotyping Having an Adverse Effect on Career Choices in the Video/ Computer Games Industry? UK: University of Huddersfield.

Carr, M., King, N and Ward, R. (2015) *CKW MODEL- influences on joining a counter-stereotypical career and the responses*. Not published

Carter, M. J. (2014) Gender Socialization and Identity Theory. *Social Sciences*. 3:242-263.

Cassell, J. and Jenkins, H., eds (2000) *From Barbie to Mortal Kombat: Gender and Computer Games*. Cambridge, USA: The MIT Press

Castel, A. D., Pratt, J., & Drummond, E. (2005). The effects of action video game experience on the time course of inhibition of return and the efficiency of visual search. *Acta Psychologica*, 119, 217–230.

Castell, S. and Jenson, J. (2005) Her Own Boss: Gender and the Pursuit of Incompetent Play. In *DiGRA 2005 Conference: Changing Views – Worlds in Play* [online]. Available at: [Digra](http://www.digra.org) <<http://www.digra.org>> [Accessed: 14 August 2008]

Castell, S. and Jenson, J. (2008) Theorizing Gender and Digital Gameplay: Oversights, Accidents and Surprises. *Eludamos: Journal for Computer Game Culture*. 2 (1) pp.15-25 [online]. Available at: [Eludamos: Journal for Computer Game Culture](http://www.eludamos.org) <<http://www.eludamos.org>> [Accessed 14 August 2009]

Castelli, L., Corazzini, L.L. & Geminiani, G.C. (2008) Spatial navigation in large-scale virtual environments: Gender differences in survey tasks. *Computers in Human Behavior*, 24, 1643–1667.

Ceci, S.J & Williams, W.M. (2011). Understanding current causes of women's underrepresentation in science. *Psychological and Cognitive Sciences*, 108, 8, 3157–3162.

Chan, J., Doran, S. & Marel, C. (2010) 'Doing and Undoing Gender in Policing.' *Theoretical Criminology*, 14(4) pp. 425-446.

Cherney, I. D., & London, K. L. (2006). Gender-linked differences in the toys, television shows, computer games, and outdoor activities of 5-to 13-year-old children. *Sex Roles*, 54, 717–726.

Chesters, J. (2011) Gender Convergence In Core Housework Hours: Assessing The Relevance Of Earlier Approaches For Explaining Current Trends. *Journal of Sociology*. 49(1), 78–96 [online]. Available at: Sage Online <www.sagepub.com>

CLG (2007) *Towards a Fairer Future: Implementing the Women and Work Commission Recommendations*. London: HMSO

Cogburn, J. and Silcox, M. (2009) *Philosophy Through Video Games*. Oxon, UK: Taylor & Francis

Colzato, L.S., Wlidenberg, W.P.M., Zmigrod, S & Hommel, B. (2012). Action video gaming and cognitive control: playing first person shooter games is associated with improvement in working memory but not action inhibition. *Psychological Research* [online]. Available at: Springer www.springer.com [Accessed: 13 August 2012]

Commando (1985) Directed by Mark L. Lester. USA, 20th Century Fox. [Film]

Crown Copyright (2013) Labour Force Survey [online]. Available at: ONS (Office for National Statistics) <<http://www.ons.gov.uk/ons/about-ons/get-involved/taking-part-in-a-survey/information-for-households/a-to-z-of-household-and-individual-surveys/labour-force-survey/index.html>>

Consalvo, M. (2003) Hot Dates and Fairy-Tale Romances: Studying Sexuality in Video Games. In Wolf, J.M.P. and Perron, B. (eds.), *The Video Game Theory Reader*. New York: Routledge

Cowling, M., Lupton, B. and Woodhams, C. (2015). The Presence of Ethnic Minority and Disabled men in Feminised Work: Intersectionality, Vertical Segregation and the Glass Escalator. *Sex Roles*, 72, 277–293.

DeFrancisco, V. P. and Palczewski, C. H. (2014) *Gender in Communication*. 2nd ed. London: Sage

Denissen, A.M. (2010) 'The right tools for the job: Constructing gender meanings and identities in the male-dominated building trades.' *Human Relations*, 63 (7) pp.1051-1069.

Denner, J., Heeter, C., Kafai, Y. and Sun, J. eds (2008) *Beyond Barbie and Mortal Kombat*. Cambridge, USA: The MIT Press

Dingwall, R., Greatbach, D., Murphy, E., Parker, S. and Watson, P. (1998) Qualitative Research Methods In Health Technology Assessment: A Review Of The Literature. *Health Technology Assessment*. 2, 1–274.

Dye, M. W. G., Green, S. C., & Bavelier, D. (2009). Increasing speed of processing with action video games. *Current Directions in Psychological Science*, 18, 321–326.

Edvardsson, I. R., Snaebjornsson, I. M., Vaiman, V. and Zydziunaite, V. (2015). Cross-Cultural Leadership: Expectations on Gendered Leaders' Behavior. Sage OPEN . [online]. Available at: Sage OPEN <sgo.sagepub.com> [Accessed 5 August 2015]

EHRC (2007) *Gender Equality Duty: Guidance for Public Authorities in England March 2007*. London: HMSO

ELSPA (2006) *Unlimited Learning: Computer and Video Games in the Learning Landscape*. [online]. Available at: ELSPA <<http://www.elspa.com>> [Accessed 14 August 2009]

Entwistle, J. and Mears, A. (2012) Gender on Display: Performativity in Fashion Modelling. *Cultural Sociology*. 7(3), 320–335.

EOC (1998) *Gender and Differential Achievement in Education and Training: A Research Review*. [online]. Available at: EOC <<http://www.eoc.org.uk>> [Accessed 18 December 2006]

ESA (2009) *Video Games and Families*. [online]. Available at: Entertainment Software Association <<http://www.theesa.com>> [Accessed 8 May 2010]

Etzkowitz, H., C. Kemelgor and B. Uzi (2000) *Athena Unbound: The advancement of women in science and technology*. Cambridge: Cambridge University Press

Faulkner, W. (2007) "'Nuts and bolts and people': Gender-troubled engineering identities." *Social Studies of Science*, 37(3) pp.331-356.

Feng, J., Spence, I., & Pratt, J. (2007). Playing an action videogame reduces gender differences in spatial cognition. *Psychological Science*, 18(10), 850–855.

Ferguson, C.J., Cruz, A.M., & Rueda, S.M. (2007). Gender, Video Game Playing Habits and Visual Memory Tasks. *Sex Roles*, 58, 279–286.

Fetterolf, J.C. and Rudman, L.a. (2014). Gender Inequality in the Home: The Role of Relative Income, Support for Traditional Gender Roles, and Perceived Entitlement. *Gend. Issues.*, 31, 219-237.

Fine, C. (2010). *Delusions of Gender*. London: Icon Books

Foucault, M. (1998) *The Will to Knowledge: The History of Sexuality 1*. London: Penguin Books

Friedan, B. (1963) *The Feminine Mystique*. Middlesex: Penguin Books

Fusari, A (2014) *Methodological Misconceptions In The Social Sciences*. London: Springer

Garcia, V (2003) "'Difference" in the Police Department: Women, Policing, and "Doing Gender". *Journal of Contemporary Criminal Justice*, 19 , 330- 344.

Gee, J.P. and Hayes, E.R. (2010) *Women and Gaming: The Sims and 21st Century Learning*. New York, USA: Palgrave Macmillan

Gershuny, J., Godwin, M. & Jones, S. (1994) The Domestic Labour Revolution: A Process of Lagged Adaptation? In Andersen, M., Bechhofer, F. & Gershuny, J. (eds.) *The Social and Political Economy of the Household*. Oxford: Oxford University Press

Gherardi, S and Poggio, B. (2001) Creating and Recreating Gender Order in Organizations. *Journal of World Business*. 36 (3), 245-259.

Gill, R. (2007) *Gender and the Media*. Cambridge: Polity

Given, L.M and Saumure, K (2008) *The SAGE Encyclopedia of Qualitative Research Methods*. Thousand Oaks, CA: SAGE Publications, Inc

Goodson S. & Pearson, S. (2009). There is more to video games and aggression than violent content, Proceeding of the Annual British Psychological Society Conference.

Gray, D. (2005) *Doing Research in the Real World*. London: Sage

Green, C. S., & Bavelier, D. (2003). Action video games modify visual selective attention. *Nature*. 423, 534–537.

Green, C. S., & Bavelier, D. (2007). Action video game experience alters the spatial resolution of vision. *Psychological Science*, 18(1), 88–94.

Green, C. S., Pouget, A., & Bavelier, D. (2010). Improved probabilistic inference as a general learning mechanism with action video games. *Current Biology*, 20, 1–7.

Green, C. S., Sugarman, M.A, Medford, K., Klobusicky, E. & Bavelier, D (2012). The Effect Of Action Video Game Experience On Task-Switching. *Computers in Human Behavior*, 28, 984–994.

Greer, G. (1970) *The Female Eunuch*. London: Paladin

Guerrier, Y., Glover, J., Evans, C., Wilson, C. (2009) ‘“Technical, but not very....”Constructing gendered identities in IT-related employment.’ *Work, Employment and Society*, 23 (3) pp. 494-511.

Haines, L (2004) *Why are there so few women in games?* [online]. Available at: IGDA <www.igda.org> [Accessed 15 May 2009]

Halpern, D., Benbow, C.P, Geary, D.C, Gur, R.C., Hyde, J.S & Gemsbacher, M.A. (2007). The Science of Sex Differences in Science and Mathematics. *Psychological Science in the Public Interest*, 8 (1), 1-51.

Hammersley, M. (1992) *What's Wrong With Ethnography?* New York: Routledge

Harris, J.R. (1998). *The NURTURE ASSUMPTION: Why Children Turn Out the Way They Do*. New York: The Free Press

Hayes, J. (2007) Gendered Identities at Play: Case Studies of Two Women Playing *Morrowind*. *Games and Culture*, January, 2 (1), pp. 23-48.

Hathaway, J (2014) *What Is Gamergate, and Why? An Explainer for Non-Geeks* [online]. Available at: Gawker < <http://gawker.com/what-is-gamergate-and-why-an-explainer-for-non-geeks-1642909080>> [Accessed 10 January 2015]

HESA (2013) *2004/05 - 2011/12 HESA Student Record, the number of undergraduate students studying course titles containing the words 'computer' and 'game' by gender*. Not published

Hope, A. and Livingstone, I. (2011) Next Gen.: Transforming The UK Into The World's Leading Talent Hub For The Video Games And Visual Effects Industries. Available At: Nesta <http://www.nesta.org.uk/sites/default/files/next_gen_wv.pdf>

Horrocks, C. and King, N. (2010) *Interviews in Qualitative Research*. London: Sage

Hubert-Wallander, B., Green, C.S., Sugarman, M. & Baveliwe, D. (2011). Changes in search rate but not in the dynamics of exogenous attention in action videogame players. *Atten Percept Psychophys* , 73, 2399–2412.

IAB (2012) *Gaming Britain* [online]. Available at: Internet Advertising Bureau UK <http://www.iabuk.net/research/library/gaming-britain-pull-out-guide-and-infographic>> [Accessed 9 January 2014]

Ivory, J.D. (2009). Still a Man's Game: Gender Representation in Online Reviews of Video Games. *Mass Communication & Society*, 9(1), 103–114.

JCQ (2009) *A, AS and AEA Results Summer 2009*. [online]. Available at: JCQ <<http://www.jcq.org.uk>> [Accessed 19 December 2009]

Kamp Dush, C.M., Schoppe-Sullivan, S.J. and Yavorsky, J.E. (2015). The Production of Inequality: The Gender Division of Labor Across the Transition to Parenthood. *Journal of Marriage and Family*, 77, 662-679.

Kendall, L. (2000) "OH NO! I'M A NERD!": Hegemonic Masculinity on an Online Forum. *Gender & Society*. April, 14 (2), pp. 256-27.

Kerber, L.K. (1997) *Separate Spheres, Female Worlds, Woman's Place: The Rhetoric of Women's History* (1988. In *Toward an Intellectual History of Women: Essays by Linda L. Kerber*. USA: The University of North Carolina Press

KFF (2005) *Generation M: Media in the Lives of 8-18 Year-olds* [online]. Available at: Kaiser Family Foundation <<http://www.kff.org/>> [Accessed 14 August 2009]

King, N. (2012) Doing Template Analysis. In Symon, G. and Cassell, C (eds.) *Qualitative Organizational Research: Core Methods and Current Challenges*. London: Sage

Kirk, J. & Miller, M. L. (1986) *Reliability And Validity In Qualitative Research*. Beverly Hills: Sage Publications

Korek, S., Mohr, G., Rigotti, T., Sobiraj, S and Weseler, D. (2014) The Gender Role Self-Concept Of Men In Female-Dominated Occupations: Does It Depend On How They See Their Jobs? *Journal of Applied Social Psychology*. 44, 241–254

Krotoski, A. (2004) *Chicks and Joysticks: An Exploration of Women and Gaming* [online]. Available at: Entertainment and Leisure Software Publishers Association <www.elspa.com> [Accessed 20 March 2009]

Lamb, S & Brown, L.M. (2006) *Packaging Childhood: Rescuing Our Daughters from Marketers' Schemes*. New York: St Martin's Griffin

Latham, A.J., Patston, L.L.M. and Tippett, L.J. (2014) The precision of experienced action video-game players: Line bisection reveals reduced leftward response bias. *Atten Percept Psychophys*, 76, 2193–2198

Lewis, P., Saunders, M., and Thornhill, A. (2007) *Research Methods for Business Students*. 4th ed. Edinburgh, UK: Pearson Education Limited

Lukas, S. (2002) *The Gender Ads Project* [online]. Available at: Genderads <<http://www.genderads.com>> [Accessed 15 May 2009]

Lupton, B. (2000), Maintaining Masculinity: Men who do 'Women's Work'. *British Journal of Management*. 11, 33–48.

Madill, A, Jordan, A & Shirley, C (2000) Objectivity and Reliability in Qualitative Analysis: Realist, Contextualist and Radical Constructionist Epistemologies. *British Journal Of Psychology*. 91, 1-20

Madrid, A. P. de, Manoso, C., Romero-Zaliz, R and Rubio, M.A. (2014) Closing the Gender Gap in an Introductory Programming Course. *Computers & Education*, 82, 409-420.

Mallia, K. L. and Windels, K. (2015) How Being Female Impacts Learning And Career Growth In Advertising Creative Departments. *Employee Relations*. 37 (1), 122-140

Margolis, J. and Fisher, A. (2002) *Unlocking the Clubhouse: Women in Computing*. Cambridge, MA: MIT Press

Marriott, M. (2003) Fighting women enter the arena: no holds barred [online]. Available at: LexisNexis Academic. <<http://web.lexis-nexis.com>> [Accessed 17 2003]

McCabe, J. (2007) From *inside the games industry: game+girl=advance* [online]. Available at: The F Word <<http://www.thefword.org.uk>> [Accessed 10 December 2009]

McNamee, S. (1998) Youth, Gender and Video Games: Power and Control in the Home. In Skelton, T. and Valentine, G. (eds.) *Cool Places: geographies of youth cultures*. London: Routledge

MCV (2009) 'Large female presence' in Sims 3 dev team [online]. Available at: MCV online <www.mcvuk.com> [Accessed 31 December 2009]

Mean, L. (2001) 'Identity and Discursive Practice: Doing Gender on the Football Pitch.' *Discourse & Society*, 12 (6) pp.789-815.

Men to Men (no date) *Men versus Men* [online]. Available at: Men to Men <<http://www.mentomen.org>> [Accessed 10 December 2009]

Mikula, M.H. (2003) Gender and Videogames: The Political Valency of Lara Croft. *Continuum: Journal of Media & Cultural Studies*. Vol. 17 (1), pp. 79-87.]

Miller, M.K. & Summers, A. (2007). Gender Differences in Video Game Characters' Roles, Appearances, and Attire as Portrayed in Video Game Magazines. *Sex Roles*, 57, 733-742.

Mintel Oxygen (2008) *Video and Computer Games - UK - August 2008: Type of Adult Gamer* [online]. Available at: Mintel Oxygen <<http://oxygen.mintel.com>> [Accessed 2 June 2010]

Mission Impossible (1996) Directed by Brian De Palma. USA, Paramount Pictures [Film]

Monnens, D. (2006) *Men and Videogames*. In: Southwest Texas ACA/PCA Conference, 09 February 2006, Southwest Texas [online]. Available at: Desert Hat <<http://www.deserthat.com>> [Accessed 15 May 2009]

Montag, C., Weber, B., Trautner, P., Newport, B., Markett, S., Walter, N.T., Felten, A & Reuter, M. (2012). Does excessive play of violent first-person-shooter-video-games dampen brain activity in response to emotional stimuli? *Biological Psychology*, 89, 107- 111.

Nadin, S and Williams, C. C. (2012) Work Beyond Employment: Representations Of Informal Economic Activities. *Work Employment and Society*. E-Special Issue, 1-10 [online]. Available at: Sage Online <www.sagepub.com>

- Nesta (2013) *Data from the Next Gen Talent Survey*. Not published
- Nielson Games (2008) *Video Gamers in Europe* [online]. Available at: ISFE <<http://www.isfe-eu.org>> [Accessed 14 August 2009]
- Oakley, A. (1974) *Housewife*. USA: Penguin Books
- Okin, S.M., (1989) *Justice, Gender and the Family*. USA: Basic Books, Inc.
- Oxford Dictionaries (2015) *career* [online]. Available at: Oxford Dictionaries <<http://www.oxforddictionaries.com/definition/english/career>> [Accessed 10 January 2015]
- Pearson (2012) *BTEC Results Day 2012* [online]. Available at: Pearson <<http://qualifications.pearson.com/en/about-us/qualification-brands/btec/progress-with-btec/btec-results-day.html>> [Accessed 10 January 2013]
- Pollack, W. (2008) Preventing School Dropout: The Crisis of Boys and Young Males. In *Reconciling Economics and Health: The Challenge of Prevention* [online]. Available at: Conference de Montreal <<http://www.conferencedemontreal.com>> [Accessed 20 November 2009]
- Pratchett, R. (2005) *Gamer in the UK: Digital Play, Digital Lifestyles* [online]. Available at BBC <<http://open.bbc.co.uk>> [Accessed 18 May 2009]
- Pringle, R. (1993). Male secretaries. In C. Williams (Ed.), *Doing "women's work." Men in nontraditional occupations* (pp.128–151). Thousand Oaks, CA: Sage Publications, Inc.
- Rambo: First Blood (1982) Directed by Ted Kotcheff. USA, Orion Pictures. [Film]
- Ray, S. G. (2004) *Gender Inclusive Design: Expanding the Market*. Hingham, Mass.: Charles River Media, 2004
- Regenbogen, C., Herrmann, M., Fehr, T., 2010. The Neural Processing Of Voluntary Completed, Real And Virtual Violent And Nonviolent Computer Game Scenarios Displaying Predefined Actions In Gamers And Nongamers. *Social Neuroscience*. 5, 221–240.
- Ridgeway, C. and Correll, S. (2004) Unpacking the Gender System: A Theoretical Perspective on Gender Beliefs and Social Relations, *Gender & Society*. August, 18 (4), pp. 510-531.
- Risman, B. (2004) Gender as a Social Structure: Theory Wrestling with Activism, *Gender & Society*. August, 18 (4), pp. 429-450.
- Risman, B. (2009) From Doing to Undoing: Gender as We Know It, *Gender & Society*. February, 23 (1), pp. 81-84.

- Robson, C. (1993) *Real World Research*. Oxford, UK: Blackwell
- Sang, K.J.C, Dainty, A.R.J, & Ison, S.G. (2014) 'Gender in the UK architectural profession: (re)producing and challenging hegemonic masculinity.' *Work, Employment and Society*. 28 (2) pp. 247-264.
- Seale, C. (1999) *The Quality of Qualitative Research*. London: Sage
- Sherman, A M. & Zurbriggen, E. L. (2014). "Boys Can Be Anything": Effect of Barbie Play on Girls' Career Cognitions. *Sex Roles*, 70, 195–208.
- Shriver, M (2009) *The Shriver Report* [online]. Available at: <<http://www.awomansnation.com>> [Accessed 10 December 2009]
- Silverman, D. (2005) *Doing Qualitative Research*. 2nd ed. London: Sage
- Simon, B. (2006) Beyond Cyberspatial Flaneurie: On the Analytic Potential of Living With Digital Games. *Games and Culture*. January, 1 (1) 62-67.
- Simpson, R. (2004). 'Masculinity at work: The experiences of men in female dominated occupations.' *Work, Employment and Society*. 28 (2) 247-264.
- Skillset (2012) *Employment Census 2012* [online]. Available at: Skillset <<http://www.skillset.com>> [Accessed 24 April 2013]
- Smith, L. (2013) Working hard with gender: Gendered labour for women in male dominated occupations of manual trades and information technology (IT). *Equality, Diversity and Inclusion: An International Journal*. 32 (6), 592 - 603.
- Smith, L. (2013b) "Trading in gender for women in trades: Embodying Hegemonic Masculinity, Femininity and Being A Gender Hotrod". *Construction Management and Economics*, 31 (8), 861-873.
- Smith, S. (2014). Limitations to equality: Gender stereotypes and social change. *Juncture*. 21, 144–150.
- Soukup, C. (2003). Mastering the Game: Gender and the Entelechial Motivational System of Video Games. *Women's Studies in Communication*. 30 (2), 157-178.
- Spence, I., Yu, J.J., Fenj, J. & Marshman, J. (2009). Women Match Men When Learning a Spatial Skill. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. 35 (4), 1097–1103.

Strobach, T., Frensch, P.A. & Schubert, T. (2012). Video game practice optimizes executive control skills in dual-task and task switching situations. *Acta Psychologica*. 140, 13–24.

Tactics (2008) Directed by Hiroshi Watanabe. USA, Manga Entertainment. [DVD]

Takemura, T. (2008) *CSR Report* [online]. Available at: Nintendo <<http://www.nintendo.co.jp>> [Accessed 24 December 2009]

Target (2009) *Boys' Toys* [online]. Available at: Target < <http://www.target.com>> [Accessed 22 December 2009]

Target (2009) *Girls' Toys* [online]. Available at: Target < <http://www.target.com>> [Accessed 22 December 2009]

Terlecki, M.S., & Newcombe, N.S. (2005). How important is the digital divide? The relation of computer and videogame usage to gender differences in mental rotation ability. *Sex Roles*, 53, 433–441.

Torre, M. (2014). The Scarring Effect of “Women’s Work”: The Determinants of Women’s Attrition from Male-Dominated Occupations. *Social Forces*, 93 (1), 1–29.

Terminator 2 (1991) Directed by James Cameron. USA, TriStar Pictures. [Film]

The Bourne Identity (2002) Directed by Doug Liman. USA, Universal Pictures [Film]

The Guardian (2013) *Gender pay gap stands at 15%* [online]. Available at: The Guardian <<http://www.theguardian.com/money/2013/nov/07/gender-pay-gap-official-figures-disparity>> [Accessed 20 October 2014]

The Telegraph (2013) *A-Level Results 2013: National Results By Subject And Gender* [online]. Available at: The Telegraph <<http://www.telegraph.co.uk/education/leaguetables/10247947/A-level-results-2013-national-results-by-subject-and-gender.html>>

Walkerdine V. (2007) *Children, Gender, Video Games: Towards a Relational Approach to Multi-media*. London: Palgrave Macmillan

Watermeyer, R & Stevenson, V. (2010). Discover!ng Women in STEM: Girls into Science, Technology, Engineering and Maths [online]. Available at: International Journal of Gender, Science and Technology <<http://genderandset.open.ac.uk>> [Accessed 12 August 2012]

Weber, R., Ritterfeld, U & Mathiak, K. (2006). Does Playing Violent Video Games Induce Aggression? Empirical Evidence of a Functional Magnetic Resonance Imaging Study. *Media Psychology*, 8, 39–60.

West, C. and Zimmerman, D. (2009) Accounting for Doing Gender. *Gender & Society*. February, 23 (1), pp. 112-122.

Wetherell, M. & Maybin, J. (1996) The Distributed Self. In Stevens, R (Ed.) *Understanding the Self*. London: Sage/OUP

Williams, C. L. (2015). Crossing Over: Interdisciplinary Research on "Men who do Women's Work". *Sex Roles*, 72, 390–395.

Wisker, G (2008) *The Postgraduate Research Handbook*. 2nd ed. Hampshire, UK: Palgrave Macmillan

WWC (2006) *Shaping a Fairer Future [online]*. Available at: Government Equalities Office <<http://www.equalities.gov.uk>> [Accessed 15 May 2009]

LUDOGRAPHY

Activision	(2003)	<i>Call Of Duty</i>
Atari	(1980)	<i>Centipede</i>
Atari, Inc.	(1972)	<i>Pong</i>
Blizzard	(2004)	<i>World of Warcraft</i>
Broccoli Co. Ltd.	(2002)	<i>Galaxy Angel Videogame</i>
Capcom	(2001)	<i>Devil May Cry</i>
EA	(2000)	<i>Sims</i>
EA	(2008)	<i>Mirror's Edge</i>
EA Play	(2009)	<i>Sims 3</i>
Eidos	(1996)	<i>Tomb Raider</i>
Fox Interactive	(2000)	<i>No One Lives Forever</i>
Konami	(2001)	<i>Metal Gear Solid 2: Sons of Liberty</i>
Microsoft Game Studios	(2001)	<i>Halo</i>
Nintendo	(1986)	<i>Metroid</i>
Nutting Associates	(1971)	<i>Computer Space</i>
Rockstar Games	(2010)	<i>Red Dead Redemption</i>
SCEE	(2007)	<i>Heavenly Sword</i>
Sega	(2009)	<i>Bayonetta</i>
Sierra Entertainment	(1988)	<i>King's Quest IV: The Perils of Rosella</i>
Square Enix	(2006)	<i>Final Fantasy XII</i>
Ubisoft	(2003)	<i>Beyond Good and Evil</i>
Ubisoft	(2008)	<i>Prince of Persia</i>