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# Career Attitudes of Men and Women Working in the Computer Games Industry

JULIE PRESCOTT AND JAN BOGG

Looking at the professional identity of game-workers, Deuze, Martin and Allen (2007) found that game-work tended to favour young and unattached males, due to its long hours culture and the potential need to relocate. The long hours culture within the gaming industry has been acknowledged by the International Game Developers Association (IGDA) Quality of Life White Paper (2004). The report suggests that three out of five developers work 46 hours or more in a normal working week and workers can spend anywhere from 65 to 80 plus hours per week at crunch time. Long hours is an issue that stems throughout the ICT sector (Valenduc, et al. 2004). Research looking at women working in the games industry has also found the long hours culture especially at crunch time to be problematic for women and potentially of putting to women pursuing a career in the industry (Gill 2002; Consalvo 2008; Prescott and Bogg 2010). According to the Oxford economic report (2008) relocation is also an important issue for the industry due to the possible decline of UK games companies and other expensive countries in favour of cheaper countries. For instance, the report suggests that games companies in Canada and Singapore have been targeting individuals from more expensive countries to relocate. The Canadian games industry in particular has been growing rapidly in recent years; however, it is acknowledged that there is still a lack of women in its increasing workforce (Dyer-Witthford and Sharman 2005). Research suggests women are underrepresented in the games industry in countries including the UK (Skillset 2009), Canada (Dyer-Witthford and Sharman 2005), and America (IGDA 2004).

According to Skillset (2009) women represent just 4% of the UK's game industry's workforce, a decrease from 12% in 2006 (Skillset 2006). This figure is inclusive of the non-developmental as well as the developmental roles women occupy within the industry. Developmental roles within the industry are those roles that are involved in the creative and developmental aspect of game development. These roles create everything within the games from the content, the style of play, the reward systems and ultimately influence who the target audience of the game will be. Women within the industry have little voice in the content, interaction styles, character representation and the reward systems involved in games. All of which affects what is created and how games are perceived (Flanagan 2005). With regards to the wider Information and Communication Technology (ICT) and Science, Engineering and Technology (SET) sectors it has been observed that women tend to work in the softer and less technical areas such as design, rather than the more technical areas such as coding (Poggio 2000; Henninger 2001 (in Kelan 2007); Panteli et al. 2001). Recent research looking specifically at women working in the computer games industry, suggests that not only are women under represented within the industry but that segregation also exists (Prescott and Bogg 2011).

In the next section, previous research relating to career progression, career barriers and work life balance issues specifically within the computing gaming industry is discussed. The paper then continues with the research aims and the methodology section. The result section focuses on three career related attitudes; attitudes towards career progression, career barriers and work life balance issues. T test analysis looks at differences within genders with regards to a number of variables deemed relevant to the industry. The discussion section follows the same focus as the results section. The paper concludes with some summarizing remarks and implications.

## Career Progression

Career success can be either subjective or objective (Ng et al. 2005). Objective career success is usually externally measured through things such as: highest level attained, highest salary earned, and professional honours. Subjective career successes on the other hand, are typically attitudes, emotions or perception of how the individual feels about their accomplishments; which previous researchers have measured via job satisfaction, organisational commitment and professional identity (Feldman and Ng 2007). Women and men tend to use different kinds of measures for assessing their own career success. Men tend to use more objective measures such as level and salary, whereas women tend to use more subjective measures including satisfaction with their work and non-work lives; which also includes opportunities for advancement and work life balance (Powell and Butterfield 2003).

Evidence that women are less likely to apply for promotion than men has been found, for example in Australia (Probert 2005), the UK (Doherty and Manfredi 2006) and the USA (Harper et al. 2001). Doherty and Manfredi (2006) explored the career routes and advancement procedures for both academic and support staff in four English Universities (two pre-1992 and two post-1992 Universities) and the extent to which these might constitute barriers to progression. Data collection involved twenty-six interviews with senior people involved in decision-making about promotions. They reported a general view across almost all the interviews that women were reluctant to put themselves forward for promotion and also that they were likely to undervalue their achievements. By comparison, men were seen as more confident about their abilities and they were more likely to sell themselves confidently. Self-promotion violates female gender stereotypical behaviour, yet is necessary for professional success (Moss-Racusin and Rudman 2010). Women who self-promote suffer a backlash (Moss-Racusin and Rudman 2010).

The body of research on the mechanisms that produce inequality at work indicates that inequalities such as gender, sexuality, race and class are deeply entrenched in workplace cultures (Britton and Logan 2008). Looking at the intersections and organisational context is important for making inequalities visible, to help in the identification of strategies for change. Acker (1990) moved gender from the realm of the individual to suggest that the organisational structure, the organisation or an occupation can have a gender. According to Acker, to say an organisation is gendered means:

that advantages and disadvantages, exploitation and control, action and emotion, meaning and identity are patterned through and in terms of a distinction between male and female, masculinity and femininity (See Britton and Logan 2008, p.107).

Alvesson and Due Billing (2009) propose that organisations are shaped in specific ways and contribute to the construction of men and women. Gendered inequalities that are culturally 'built' into organisations could be considered as a possible explanation as to why men succeed despite a 'token' status (Britton and Logan, 2008). Many researchers have found that more formal bureaucratic organisations, with transparent policies can create greater diversity at all organisational levels (Reskin and McBrier 2000; Royster 2003 and Wickham et al. 2008). For example, Wickham, et al (2008) argue that bureaucratic companies that have incorporated equal opportunities are more beneficial to women's career progression, than individualised non-bureaucratic companies where career progression is reliant on individual managers. In their Irish study, the authors found that in a non-bureaucratic software company, despite the flexibility of the culture, there were rigid life choices imposed on employees; either career or motherhood. They concluded that bureaucratic firms can be made more female and/or family friendly, whereas new non-bureaucratic firms can be hostile to women.

## **Career Barriers**

Women face a variety of barriers within the labour market in terms of career progression and advancement. A career barrier is viewed as an obstacle which prevents forward movement; an event or a condition that makes career progress difficult (Brown and Barbosa 2001). Barriers have been defined as: "event's or conditions, as much internal to the person, as those of his/her environment, that make professional progress difficult" (Swanson and Woitke 1997, p.446). Barriers can be overcome dependent on the type of barrier(s) and the individual's personality (Swanson and Woitke 1997). Several barriers emerge repeatedly in the literature and numerous studies (i.e. Arfken, Bellar, and Helms 2004; McCathy 2004; Allen 2005) suggest the following barriers to women's career progression: limited networking opportunities, limited access to mentors and role models, limited flexibility and child care provision, general discrimination, gender segregation of the workforce and higher values placed on masculine attributes. These barriers also appear to be issues for women working in the games industry (Haines 2004). Through a survey and interviews with female game workers, Haines (2004) found that women working in the industry wanted flexible working hours, mentoring, more role models, more women in senior positions and benefits of interest to women such as childcare as well as more games being developed that women like. This unfair treatment impacts career advancement opportunities and also increases stress and reduces wellbeing at work (Perrewe and Nelson 2004).

Other ways in which women are marginalised could be due to organisational structures or cultures. Research has suggested that male characteristics are more desirable than female characteristics (Fondas 1997; Willemson 2002) and women managers who behave in a masculine way are perceived negatively (Fiske and Stevens 1993). However, research has found that gender-neutral attributes are perceived as being most associated with a successful manager (Willemson 2002).

Research has suggested that women are more likely to excel in organisations that emphasise gender equity and value both feminine and masculine characteristics in their workers (Bajo and Dickson 2002). There have also been differences in the pay of women compared to their male counterparts. For example, Wass and McNabb (2006) in a study of UK solicitors found that female solicitors earn 58% of the earnings received by male solicitors. In addition, they also found women had fewer prospects for promotion, especially due to the long hours culture within the profession, more so with non-chargeable work. All of the barriers highlighted make it more difficult for women to progress within the workplace especially women working in male dominated occupations and environments viewed as incongruent to their gender.

Today, women still perceive the 'old boys' network' to be a significant barrier to career progression. Women tend to be excluded from these networks and consequently forgo the benefits and reciprocal behaviours (Vinnicombe, Singh, and Kumra 2004). Developing women's networks can be an effective strategy for overcoming some obstacles to diversity because they challenge the invisible structures women face at work (McCarthy 2004). Mentoring has also been shown to have significant positive influences on the careers of mentees (Ragins and Scandua 1994). A meta-analysis of the career benefits of mentoring point towards positive outcomes for protégés, relating to career outcomes, job satisfaction, promotion and salary level (Allen, Poteet, Lima, Eby and Lentz 2004). However, consequences of the lack of women and ethnic minorities in senior positions may be due to a lack of mentors and role models for women within many organisations and employment sectors. It has been argued that women and ethnic minorities may have a special need for mentoring relationships (Ragins 1989) but are less likely to have access to both external and internal mentors.

Another barrier for many working women is the need for flexibility. Flexible working practices can facilitate the reconciliation between paid work and home life, whilst contributing to equality and diversity (Perrons 1999). Flexible working is important in challenging a masculine culture of long hours and helps women to reconcile work and family commitments. However, flexible working initiatives, which are brought in to enable women to progress, can themselves become a barrier. For example, part-time working women may be marginalised, and those who cannot work long hours can be seen as being less committed (Lane and Piercy 2003). Flexible working has been viewed as gendered (Atkinson and Hall 2009). UK research found that formal flexible working practises are gendered; viewed as being for women, with negative consequences on salary and career advancement. The research found that men use informal flexibility; with no impact on salary and career advancement (Atkinson and Hall 2009). Hamel (2009) perceived organisational sanctioning of career barriers and the organisational commitment to the career advancement of women, influence responses to barriers. Promotion and advancement are the most common obligations employees perceive that their employers have to them (Rousseau 1990 and Robinson 1996). Therefore, organisational barriers to advancement could be viewed as a breach of the psychological contract (Hamel 2009). Having women in senior positions is argued to be associated with long-term company success and a competitive advantage (Cassell 1997). However, the benefits of removing the barriers and promoting women to senior positions are often framed within the context

of advancement for business, rather than for being morally right and fair (Morrison, White, and van Velsor 1992, in Goodman, Fields, and Blum 2003).

## **Work Life Balance**

Work identity for both men and women has been shown as a central part to a person's identity (Simpson, 2004). Work is becoming an increasingly important element in women's lives (Tinklin et al. 2005). However, it has been suggested that career development is structured around men (Tracey and Nicholl 2007). Combining work with other roles especially motherhood, has been viewed as a major disadvantage to women in the workplace.

Family demands may interfere with women's careers, leading them to perhaps, refuse overtime, rearrange their working day, or refuse extra work, all of which can be viewed as being less committed or job involved (Keene and Reynolds 2002, see Cortis and Cassar 2005). Life circumstances often impact and lead to adaption of career goals. Women have been found to have more work-family conflict than men (Innstrand et al. 2009). Women's extra domestic responsibilities can create work overload, effecting women's experience of work and possibly reducing their career promotional opportunities (Keene and Reynolds 2002, see Cortis and Cassar 2005). For instance, research by Straehley and Longo (2006) of ninety female surgeons in the USA, found that, motherhood and family concerns were detrimental to career progression. Recent figures found 61% of medical students in the UK were female, yet only 10% of female house officers as opposed to a third of men plan a surgical career (Morris 2005). In another UK study, Lambert et al. (2003) found that quality of life issues played a significant part in rejecting certain specialties, leading to high numbers rejecting surgical specialties. A higher percentage of women than men gave reasons related to quality of life (54% and 39% respectively).

## **Long Hours Culture**

Associated with work life balance is the issue of long hours, which appear to be especially prominent in male dominated occupations, such as ICT (Valenduc et al. 2004) and computer games (Gill 2002; Consalvo 2008; Prescott and Bogg 2010). It has been suggested that the number of hours a person works and a culture of presenteeism show commitment to your job and your organisation (Simpson 1998; Newell and Dopson 1996). Simpson (1998) found from a mixed methods sample of both male and female managers, that long hours was the top pressure experienced by both men and women; 66.9% and 61.5% respectively. For the female managers long hours were seen to result from a combination of factors: work pressures, the politics and culture of the organisation, and competitive behaviour by men engaging in 'competitive presenteeism'. In addition, presenteeism was seen as a form of 'male resistance' to women in the workplace. Simpson stated that: "men have been found to be culturally active in creating an environment where women do not flourish and in this way staying late in the office can be an effective weapon" (p.45).

According to research by Consalvo (2008) the long hours culture and crunch time are the biggest challenges to women in the games industry. Crunch time within the games industry refers to when a game is due to be released; it is a notorious time for extremely long hours. Crunch time was seen as being ingrained in the work culture, with passion viewed as the main reason as to why employees do the long hours. Consalvo suggests that women, like their male counterparts, also have a passion for playing games. It is this passion which although viewed as a necessity to work in game development, may in turn deter women not interested in playing games from entering the industry. Consalvo viewed passion as problematic in that “the ideal worker is constructed as someone possessing a ‘passion for games’ and that passion is used to help maintain work practices that may ultimately kill the passion” (p.186). Furthermore, part-time work has been found to be a rarity within the industry (Gill 2002; Prescott and Bogg 2010).

Presenteeism is also often cited as a key factor in terms of improved career chances (Newell and Dopson 1996). In a study of organisational restructuring at British Telecom, Newell and Dopson (1996) found that the number of hours worked was seen as an important measure of success; despite a strong feeling that these hours were not really necessary. Being seen at one’s desk for long periods of time was perceived as necessary to advance one’s career by demonstrating a heightened commitment to the organisation. Dreher (2003) in an analysis of sex ratios and work life balance programs in seventy-two USA corporations confirms that more and more hours of work are now required to be successful in a career and this can disadvantage women.

Parental status is another important consideration when discussing women’s careers and career development. According to Simpson (1998) women with children were generally less likely than childless women to occupy senior positions. Burke and McKeen (1996) in a Canadian study of employment gaps on the satisfactions and careers of managerial and professional women, highlight the potential pit falls of taking time out of work. Burke and McKeen found that University educated women in managerial and professional jobs who had gaps or interruptions in their work and career histories, were less satisfied with their career and future career prospects, less involved in their jobs and were earning less income than managerial and professional women who had no career or work interruptions. These differences occurred, despite both groups of women having similar levels of education and credentials, and seniority within their organisations. It has been acknowledged that there is a lack of women with children working in the games industry as in the wider ICT and SET sectors (Deuze et al. 2004; Haines 2004; Krotoski 2004; Gourdin 2005; Consalvo 2008; Prescott and Bogg 2010).

## **Research Aims**

In light of the literature discussed, the current research focussed on gender attitudes in the computer games industry. It was hypothesised that women’s and men’s attitudes will vary within the industry. Specifically, this paper focuses on three attitudinal areas: attitudes towards work life balance issues, attitudes towards women’s career barriers and attitudes towards own career progression and

promotion. Attitude, particularly gender based attitude for these areas, is particularly pertinent to career advancement, in this male domain.

## **Methodology**

### **Sample**

An online survey gained quantitative data from an international sample of 454 female and 93 male game workers. The data in the current paper forms part of a larger study which looked at women's careers in the games industry and hence the disproportionate number of men and women in the sample.

### **Measures**

In order to look at attitudes towards barriers to women's career progression; six questions asked participants to indicate the extent they agree/disagree with statements on barriers to women's career progression, measured on a six point Likert scale, ranging from 1 'very strongly disagree' to 6 'very strongly agree'. Participants were asked the extent they agreed/disagreed that: the glass ceiling exists; equal opportunities legislation means there are no barriers to women in employment; some careers are more female friendly than others; there are no covert barriers to women's achievement; women are well represented in their profession and their organisation.

In order to look at attitudes towards their work life balance; seven questions asked participants to indicate the extent to which they agree/disagree with statements regarding work life balance issues; measured on a six point Likert scale, ranging from 1 'very strongly disagree' to 6 'very strongly agree'. Participants were asked the extent: they were happy with their work life balance; the number of hours they worked affect their personal health and their personal relationships; if work life balance was bad for productivity; if awareness of work life policies needs to be improved; if it is part of their workplace culture; if their colleagues approved when they needed to leave work due to outside commitments and if there is a long hours culture within their organisation.

To look at attitudes towards career progression and promotion; five questions asked participants to indicate the extent they agree/disagree with statements on career progression and promotion, measured on a six point Likert scale, ranging from 1 'very strongly disagree' to 6 'very strongly agree'. Participants were asked: if promotion is important to them; if they intend to climb the career ladder and are prepared to make personal sacrifice in order to do so; if they are progressing in their career; if there are not enough opportunities for them to progress in their career and if being recognised in their field is important to them.

### **Distribution**

The study design is quantitative in nature and involved an online survey which was available at [www.survey.bris.ac.uk/breakingbarriers/games](http://www.survey.bris.ac.uk/breakingbarriers/games) (a hard copy of the



questionnaire was also available on request). For all formats of the questionnaire anonymity and confidentiality was assured. The study was advertised and the questionnaire link was available on numerous game websites and social network sites. Electronic and paper mail shots were distributed to games companies throughout the UK, other parts of Europe, Canada and America. The questionnaire was online from 1st September 2008 until 28<sup>th</sup> February 2009 and was only available in English.

The three games related associations which are; the International Game Developers Association (IGDA - an American based association), the Entertainment and Leisure Software Publishers Association (ELPSA), and Tiga, the independent game developers association (both UK associations) were both mailed and emailed. ELPSA put the questionnaire link in their October 2008 newsletter. The study was advertised in the November 2008 newsletter of Girl Geek Dinners, a network for female IT professionals. It was also sent to all 519 members of the London Girl Geek Dinners face book group. The questionnaire link was sent to the IGDA (International Game Developers Association) Women in Games Special Interest Group e-mail list, which has nearly 700 members. Study information was also emailed to all members of the 'women in technology network' that has approximately 9000 female technologists as members and to all members of the 'UK resource centre for women' with approximately 1500 members.

Internet hypertext weblinks to the study were placed on prominent national and international computer games websites such as [www.womengamers.com](http://www.womengamers.com), [www.womeningamesinternational.com](http://www.womeningamesinternational.com), [www.gamesnet.com](http://www.gamesnet.com), and [www.gamejournal.org](http://www.gamejournal.org). Game industry related groups on the social network sites of facebook and LinkedIn were also utilised to advertise the study and online questionnaire. The study was also sent to over 600 people on the games network listserve emailing list.

## Results

In light of the literature discussed in this paper the authors feel it appropriate to look at some of the demographics of the participants of the study. Descriptive data for both female and male participants are presented in figures 1 and 2. This shows how the two genders are in general similar in regards to a number of personal demographics such as; marital status, age and children as well as a number of professional demographics such as; the role participant's work in and the hours they work.

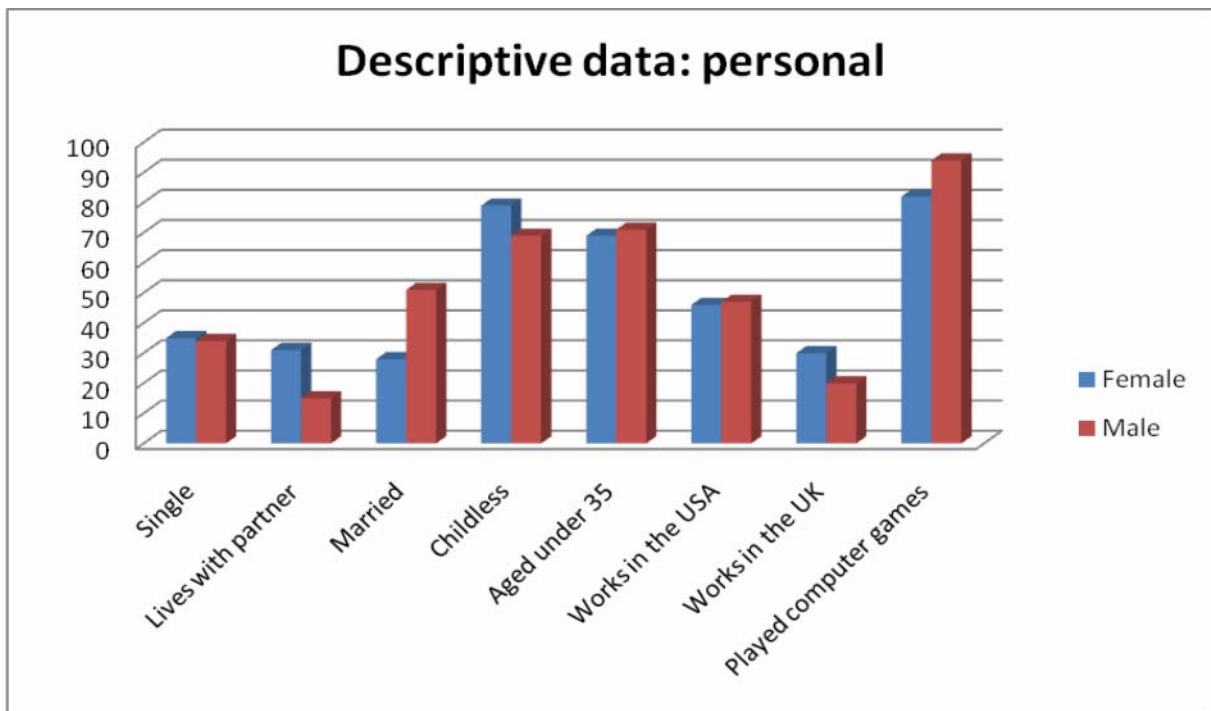


Figure 1: Percentage of female and male personal descriptive data

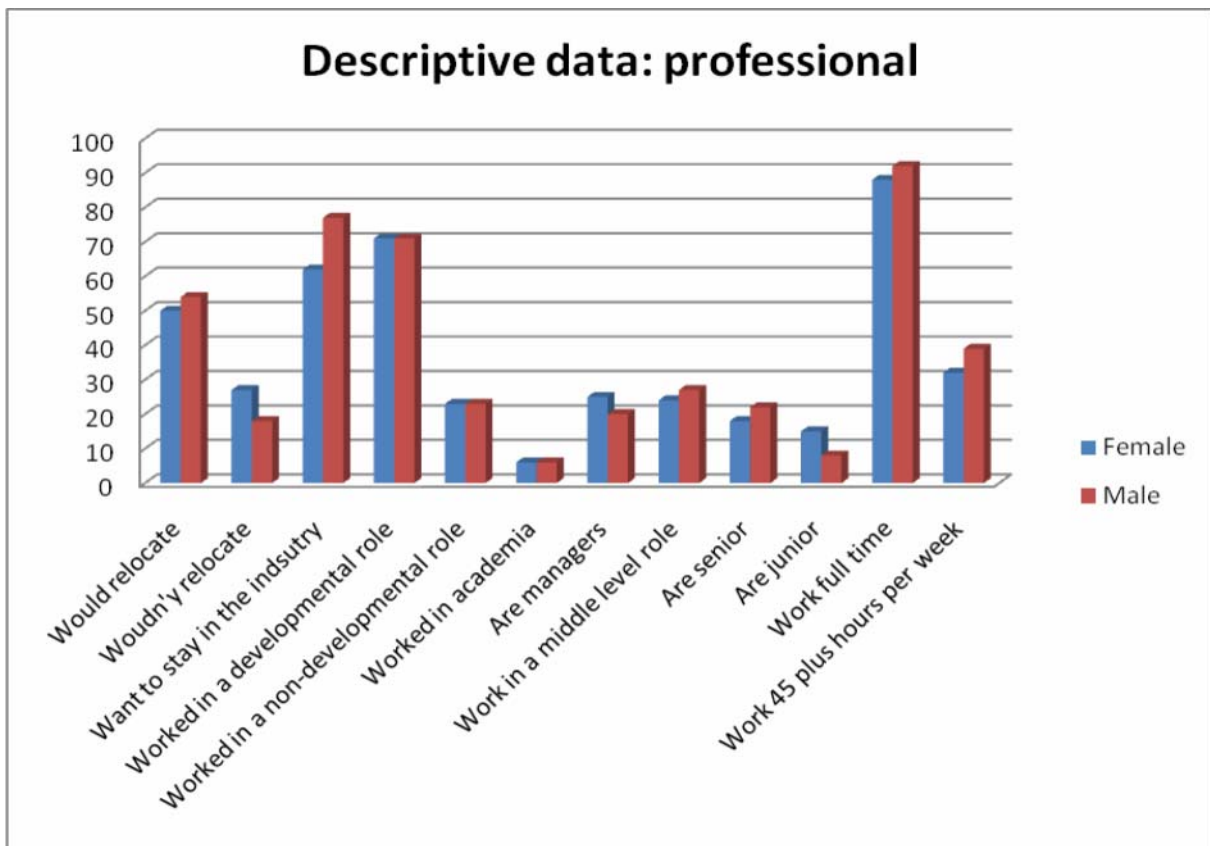


Figure 2: Percentage of female and male professional descriptive data

T test analysis was conducted to identify significant differences on each of the measures. T tests were used to explore differences within gender on a number of variables, the variables were: developmental versus non-developmental role, country of work, whether participants played computer games in their leisure time, the number of hours per week they worked ( $\leq 45$ hrs or  $\geq 46$ hrs), intention to stay or not stay in the games industry, willingness to relocate or not, age ( $\leq 35$  or  $\geq 36$ ), number of year they had worked in the industry ( $\leq 7$  yrs or  $\geq 8$  yrs), and whether they had children or not. Tables 1 and 2 details the significant t test results by gender.

			Mean	Mean
	T	df	Work in a developmental role	Work in a non-developmental role
Career barriers: women are well represented in my profession	-4.072**	423	2.54	3.15
			<b>Aged ≤35</b>	<b>Aged ≥36</b>
Work life balance: awareness of work life balance policies needs to be improved	-2.217*	451	2.36	2.63
Career progression: to be recognised in my field is important to me	-3.139*	451	4.56	4.87
			<b>Have children</b>	<b>No children</b>
Career progression: I intend to climb the ladder and I am prepared to make personal sacrifices in order to do so	1.973*	451	4.00	3.71
			<b>≤7yrs in the industry</b>	<b>≥8yrs in the industry</b>
Work life balance: there is a long hours culture in my organisation	-2.264*	442	4.46	4.96
			<b>Work in the UK</b>	<b>Work in the USA</b>
Career barriers: I think the glass ceiling exists	-3.449**	316	3.84	4.30
Career barriers: some careers are more female friendly than others	-3.039**	289	4.57	4.93
Career barriers: there are no covert barriers to women's achievement	4.510**	305	3.16	2.55
			<b>Plays games</b>	<b>Does not play games</b>
Career progression: promotion is important to me	-2.017*	450	4.42	4.69
Career progression: I intend to climb the career ladder and I am prepared to make personal sacrifices in order to do so	-3.088**	136	3.69	4.12
Career barriers: there are no covert barriers to women's achievement	-2.026*	450	2.81	3.12
Career barriers: women are well represented in my profession	-2.198**	450	2.62	2.98
			<b>Work ≤45hrs per week</b>	<b>Work ≥46hrs per week</b>
Career progression: promotion is important to me	-3.085**	445	4.35	4.70
			<b>Intends to stay in industry</b>	<b>Does not intend to stay</b>
Work life balance: work life balance is part of my work culture	-1.994*	300	4.65	4.14
Career progression: I intend to climb the career ladder and I am prepared to make personal sacrifices in order to do so	2.085*	300	3.84	3.26
Career progression: I am progressing in my career	2.263*	300	4.43	3.96

\*\* significant at the 0.01 level \* significant at the 0.05 level.

Table 1: Female significant t tests

			Mean	Mean
	t	df	Work in a developmental role	Work in a Non-developmental role
Career barriers: I think the glass ceiling exists	-2.194*	91	3.65	4.30
Career barriers: equal opportunities legislation means there are no barriers to women in employment	2.946**	91	3.42	2.52
Career barriers: there are no covert barriers to women's achievement	2.320*	91	3.06	2.41
Work life balance: my colleagues approve when I need to leave work due to outside commitments	2.12*	91	2.52	2.41
			<b>Aged ≤35</b>	<b>Aged ≥36</b>
Career barriers: equal opportunities legislation means there are no barriers to women in employment	3.518**	91	3.79	3.96
			<b>Have children</b>	<b>No children</b>
Work life balance: the number of hours I work affects my personal relationships	2.157*	91	3.90	3.44
			<b>≤7yrs in the industry</b>	<b>≥8yrs in the industry</b>
Career barriers: there are no covert barriers to women's achievement	-2.812**	86	2.87	3.53
			<b>Work in the UK</b>	<b>Work in the USA</b>
Work life balance: work life balance is part of my workplace culture	-2.405*	61	3.68	4.45
Career progression: promotion is important to me	-2.246*	61	4.11	4.68
Career progression: I am progressing in my career	-2.530*	61	3.68	4.45
Career barriers: equal opportunities legislation means there are no barriers to women in employment	2.070*	61	3.68	2.93
Career barriers: there are no covert barriers to women's achievement	3.107**	61	3.37	2.39

\*\* significant at the 0.01 level \* significant at the 0.05 level.

Table 2: Male significant t tests

## Discussion

The focus of this paper was the variation within genders. In general, both male and female participants in the current sample of game industry workers had similar attitudes in terms of their own career progression, work life balance issues and attitudes towards women's career barriers. The many differences within the genders with regards to the three areas of focus provide interesting and useful discussion when looking at both men and women working in male dominated industries.

With regards to the career progression of women work in the games industry previous research has produced mixed findings with regards to the seniority of women within the industry. According to Krotoski, only 0.4% of female employees in

the UK's industry are in lead, director or management positions, whilst 1.2% of male employees hold these jobs. Dyer-Withford and Sharman (2005) also suggest there is a paucity of women at executive level within the industry. Whereas Haines (2004) found that nearly a quarter (23%) of senior positions within the twenty UK games companies in her study, were filled by women. However, these were more often in managerial and marketing roles rather than direct game development roles. More recent international research suggests women are more equally represented in senior roles within the industry (Prescott and Bogg 2010 and 2011). For both the majority of male and female participants in the current study, promotion was important to them and they felt that they were progressing in their careers. This is despite the fact that a third (33%) of female and male (35%) participants had not been promoted in the past five years. Just over half (59%) of the female and 47% of male participants intended to climb the career ladder and were prepared to make personal sacrifices in order to do so, and nearly half (46%) of the female participants compared to just 35% of male participants felt that there were not enough opportunities for them to progress in their career. Furthermore, to be recognised in their field was important to nearly all the female and male participants in the study (91%).

Further analysis revealed a number of significant differences between female and male game workers and their attitudes towards women's career barriers and career progression. With regards to differences amongst the female game workers with regards to the career progression statements, climbing the career ladder was significantly more important to female participants who intended to stay in the games industry in five years time compared to those that didn't. Suggesting a commitment to the industry and therefore perhaps more of a desire or need for progression. Females that didn't play computer games in their leisure time also intended to climb the career ladder, significantly more than females who did play computer games in their leisure time. This possibly indicates that for these females, it is not necessarily a passion for games as put forward by Consalvo (2008) but a passion for their careers and career progression which drives them. Also, women with children intended to climb the career ladder and make personal sacrifices more so than women without children. This is interesting and could reflect the personal sacrifices women with children in the industry feel they need to make in comparison to women without children highlighted by the paucity of women with children within the industry (Gourdin 2005; Prescott and Bogg 2010). Women who intended to stay in the industry in five years time felt they were progressing in their careers significantly more than women who didn't intend to stay. This feeling of progression could be an explanation as to why the participants intended to stay in the industry and why some didn't especially when findings suggest progression is important. To be recognised in their field was impacted by age, with older females (36 plus) viewing it more important than younger females. There are a number of plausible explanations for this finding. For instance, it is possible that wanting to be recognised within your career area develops with age, or it could be a generational difference. Perhaps women want to get more out of their jobs and careers; in terms of recognition as they become more experienced which is related to some extent with getting older. Perhaps women aged 35 or under are not expected to be recognised within their field yet and as such it is not such a pressing issue to them.

For the male game workers, a cultural difference appears to exist with regards to career progression. Promotion was significantly more important to males in the USA than the UK, with males in the USA also feeling they were progressing in their careers significantly more than males in the UK. This cultural difference is interesting and warrants further investigation in order to understand why this difference occurs and what it means to both men and women working in male dominated industries.

With regards to career barriers, findings were contradictory. The majority, 72% of female and 66% of male participants agreed that the glass ceiling exists, supporting previous research which suggests there is a lack of women in senior/executive positions (Krotoski 2004; Dyer-Witthford and Sharman 2005). Yet 72% of female and 74% of male participants felt that there were no covert barriers to women's achievement. Nearly all participants (94% of females and 89% of males) agreed that some careers are more female friendly than others. Just over half (53% of females and 51% of males) disagreed that women were well represented in their organisation; still the majority (76% of females and 78% of males) felt that women were not well represented within their profession. Therefore, it is recognised that there are women within the organisation but less in the professions, reflecting that the majority of participants were in a developmental role within the industry where there are fewer women. Supporting research which suggests women are segregated into certain roles within the industry (IGDA 2004; Haines 2004; Prescott and Bogg 2011). In general, women and men had a negative view of the career progression of women and recognised that barriers exist, despite the female participants feeling they themselves are progressing within their careers. ICT organisations have been found to have a flat structure with little hierarchy. Flat organisations lead to an informal working environment, but career ladders can be short or nonexistent (Valenduc et al. 2004). A lack of formal structures and progression processes can make it particularly difficult for women to gain advancement. Women tend to achieve better in organisations where career paths are clear (Wickham et al. 2008). More understanding of the organisational structures especially with regards to progression and advancement would reveal more of the barriers and supports women and men have within the industry and perhaps lead to changes being made were appropriate.

Differences within the genders were found with regards to a number of the career barrier statements. For instance, females working in the USA felt more strongly that the glass ceiling exists compared to females in the UK and males in a developmental role felt it existed more than males in a non-developmental role. It is particularly interesting that males in the gender incongruent, non-developmental roles viewed the glass ceiling as existing less so than males in the gender congruent, more technical, developmental roles. This could perhaps be an indication that men in the more female dominated, non-developmental roles view their minority status as an advantage, perhaps supporting the theory of a glass escalator existing for minority males as previous research suggests (Williams 1992).

For males the career barriers statement 'equal opportunities legislation means there are no barriers to women in employment', resulted in a number of significant differences. Males in the UK compared to the USA, those working in a developmental role compared to a non-developmental role and those aged 36 and above, compared to younger ( $\leq 35$ ) males, felt significantly more strongly that this statement was true. With regards to the male's working in a developmental role, this appears

contradictory towards their views of the glass ceiling. Interestingly, men in the more female dominated and gender incongruent, non-developmental roles appear to be more aware of barriers towards women due to being in a more female working environment and roles.

The statement that 'there are no covert barriers to women's achievement' also resulted in a number of differences. For instance, both males and females in the UK agreed significantly more than their counterparts in the USA to the statement; suggesting participants in the UK have a more positive view towards women's achievement. Indeed, female game workers in the USA also viewed some careers as being more female friendly than others. Male participants who had worked in the industry eight or more years and those in a developmental role, agreed more to the statement that 'there are no covert barriers to women's achievement'. This perhaps indicates that male participants who have been in the industry longer and those in the more traditionally male roles have a more positive attitude towards women's achievement. For female participants, those who did not play computer games in their leisure time, agreed significantly more than females who did play computer games to the statement. This is interesting, as it suggests that female game workers who play computer games have a more positive view towards women's achievement which may be a result of their passion for games, since they themselves are gamers.

With regards to representation of females within the profession and the organisation, there were no differences for either males or females with regards to representation, within the organisation, however there were differences amongst the females with regards to representation of females in the profession. Females in a non-developmental role and those that did not play computer games in their leisure time felt significantly more strongly that females are well represented in their profession compared to those in a developmental role and those that did play games in their leisure time. This is understandable since women in the developmental and generally more technical roles are underrepresented within the industry, more so than women in traditionally feminine, non-developmental roles. For the women who played computer games for leisure, they perhaps recognised their minority status within the industry as a reflection of women's minority status as both female gamers and game workers.

With regards to attitudes towards work life balance issues, a long hours culture appears to exist in the games industry with three quarters of female (77%) and 71% of male participants reporting a long hours culture in their organisation supporting previous research (i.e. Deuze et al. 2004; Haines 2004; Consalvo 2008; Prescott and Bogg 2010). Yet only 32% of female and 39% of male participants reported they worked 46 plus hours in an average week. However, despite this long hours culture, only 33% of female and 39% of male participants were unhappy with their current work life balance (perhaps these were the participants who worked 46 plus hours per week, since the percentages are similar). More women working in non-developmental roles were unhappy with their work life balance (39%) than women in developmental roles (32%) and men in developmental and non-developmental roles (36% and 38% respectively). However, it is not clear how many hours per week participants would do in the final game development phase known as 'crunch time'. This is perhaps an oversight of the study and would have provided valuable information when discussing long hours within the industry, as Consalvo (2008), as



well as the long hours culture, found crunch time to be a major barrier to women in the industry. Although, both male and female participants reported a long hours culture, in general, participants had a positive attitude towards their work life balance. This provides another finding from the current study which tends to indicate support for Consalvo's 'passion for game' premise highlighted previously.

With regards to the male participants with children, they felt significantly more strongly that the number of hours they work affects their personal relationships than those without children. Interestingly, this was the only significant differences between the male participants with and without children. Indeed, surprisingly there were no significant differences between the female participants with and without children.

Work life balance was viewed as part of the workplace culture significantly more for males working in the USA compared to the UK. This is perhaps a surprising finding since males in the USA tended to have more negative attitude towards women's career barriers than males in the UK, especially in terms of covert barriers towards women's achievement. Females who intended to stay in the industry in five years time compared to those who didn't intend to stay also felt that a work life balance was part of the workplace culture. Viewing a work life balance as part of your workplace culture is possibly an explanation as to why participants intended to stay (or not) in the industry.

Age and length of time in the industry had a significant impact on the female participant's attitudes towards work life balance issues. For instance, females who had worked in the industry eight plus years felt significantly more strongly than females who had worked in the industry less that a long hours culture exists in their organisation. Indeed, promotion was viewed more important to female participants who worked 46 plus hours per week, suggesting promotion is associated with long hours within the industry. Whilst older female participants (36+) felt that work life balance policies needed improving more than their younger counterparts. This attitude to work life policies could be a reflection of life stage, as perhaps older women in the study had, or were thinking of starting a family and so work life balance policies were more of an immediate issue to them. Role within the industry had only on significance towards work life balance issues and that was for male participants. Male participants in a developmental role agreed significantly more than males working in a non-developmental role that their colleagues approve when they needed to leave work due to outside commitments. This suggests that men working in the more traditionally male roles compared to those working in more female dominated roles, felt they were more supported in terms of outside commitments.

## **Conclusion and Implications**

The demographics of the male and female game workers in the present study were very similar both personally and professionally. Both men and women tended to be young and the majority played computer games in their leisure time. However, what is evident is that, in contrast to the women in the study, who tended to be single and childless, the majority of the men were married and had children. This difference between the genders suggests that this male dominated industry does not appeal to

women with families in the same way as it appeals to men and women without families.

In general, both male and female participants had a positive attitude towards their work life balance, despite the recognition of a long hours culture existing. It appears that the games industry has many of the same barriers found for women in the wider ICT industry (i.e. a long hours culture and a lack of women with families). Such barriers imply the new industry of computer games is not, in many ways, so different from the wider, more established sector of which it is a part of; ICT/SET.

A positive attitude towards their own career progression was also generally noted for male and female participants. The majority viewed promotion important to them and felt they were progressing in their careers. Being recognised in their field was also viewed as important to a large majority of participants, especially those aged 36 and older, also indicating the importance of career progression and advancement. Despite the positive attitudes towards their own career progression and work life balance issues, both genders recognised that barriers towards women's career progression exist. However, the variations with regards to the attitudes around the three areas provided interesting and often surprising differences within the genders. In particular, country of work for both men and women yielded a number of significant between those working in the UK and the USA. It would seem that both males and females in the USA had a more negative attitude towards women's career barriers than both male and female participants in the UK.

What is particularly interesting and what this current study adds to the area of career attitudes and research on women (and men) working in male dominated industries, is that the study was able to look at both male and female attitudes towards the three areas. This is useful as the majority of research investigating women's experiences of working in male dominated industries, tends to focus solely on women. Despite this it must be acknowledged that a major limitation of the study is that the questionnaire was only available in English. This as well as the distribution strategy employed will have limited the number of participants who had access to the survey more globally. This is evident by the fact the large majority of participants worked in the USA or the UK. Future research would benefit from a more inclusive research design and sampling strategy in order to consider the issues relevant to the careers of both men and women in the games industry on a more cross-national level in order to consider more cultural variations.

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