

THE FEMALE VIDEO GAME PLAYER-CHARACTER PERSONA AND EMOTIONAL ATTACHMENT

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ABSTRACT

This research, using online qualitative survey questions, explored how players of the PlayStation 4 console game, Horizon Zero Dawn, formed emotional attachments to characters while playing as, and assuming the persona of the female player-character, Aloy. It was found that the respondents (approximately 71% male) formed emotional attachments to the female player-character (PC) and non-player characters. Players found the characters to be realistic and well developed, and they also found engaging with the storyworld via the female PC a profound experience. This research advances knowledge about video games in general and video game character attachment specifically, as well as the emerging but under-researched areas of Persona Studies and Game Studies.

KEY WORDS

Video games; Player-characters; Gender; Emotional attachment

INTRODUCTION

Persona Studies explore how individuals move in social contexts, and negotiate and present themselves in various contexts (Marshall & Barbour 2015; Marshall, Moore & Barbour 2020). Video game contexts have been a rich area of interest for Persona Studies due to the merging of the persona of the video game player and their avatar/player-character (PC) that they control during gameplay (Milik 2017). Video game contexts involve multiple personas interacting at once. However, much of the Persona Studies' research has examined massive multiplayer online video games (MMOs) (Milik 2017; Moore 2011), instead of single-player games in which players control and merge their identity with a PC and where personality and character are designed by the video game developer, rather than the player. The interaction between the persona of the player and their PC, and how this affects the player's emotional attachment to the characters they and their PC encounter during gameplay, is an innovative and intriguing area to explore.

Video games have not been typically thought to be able to deliver emotive and deep experiences and instead have been stereotyped as delivering violent and unrealistic experiences (Haggis 2016). However, narrative video games are games where the story plays a significant role in the game (Egenfeldt-Nielsen, Smith & Tosca 2008), and these games are capable of telling moving stories and include non-player characters (NPCs) with sufficient depth and characterisation for players to interact extensively and meaningfully with them (Burgess & Jones 2020; Jørgensen 2010). Furthermore, players are able to develop deep emotional

attachments to these characters (Burgess & Jones 2020; Bopp et al. 2019). However, research into these attachments that players can form with NPCs is still an emerging area of research (Bopp et al. 2019; Mallon & Lynch 2014). There have been repeated calls to further understand the video game industry due to its financial significance and fast growth (Alpert 2007; Teng 2017): the industry was worth USD \$152.1 billion in 2019 which is a 9.6% rise year-on-year (Newzoo 2019). By exploring the interaction between the player's persona, PC's persona, and the NPCs they meet while playing the PlayStation 4 console game, *Horizon Zero Dawn*, this research advances knowledge of both Game Studies and Persona Studies through offering a better understanding of emotional attachments to video game characters,

LITERATURE REVIEW

Player-Characters (PCs)

PCs have thus far been the central preoccupation of academic research into how players form attachments to video game characters, rather than NPCs (Daviault 2012). Banks and Bowman (2016) investigated the emotional connection between players and their PCs in the context of an MMO, finding that players were developing relationships with their PC, and Huang and Yeh (2016) found when examining a serious game—one designed for purposes beyond entertainment—that the more players became attached to their PCs, the greater the players perceived their mastery of the game. Lewis, Weber, and Bowman (2008) developed a scale for measuring character attachment using five dimensions focusing on PCs and defining video character attachment as the psychological merging of a player's and character's minds. Bowman, Schultheiss, and Schumann (2012, p.2), using a similar definition involving a “melding of mind” as Lewis, Weber and Bowman (2008), found that character attachment can be useful to understand the motivations of video game players. This definition of character attachment, with its focus on mind melding, would appear to be similar or refer to identification which explores how audiences lose awareness of themselves and imagine their sense of self as a character (Cohen 2001; Klimmt, Hefner & Vorderer 2009). Identification has been a prominent focus of media research for decades, with attention turning to video game characters more recently (Van Looney et al. 2012). However, much video game research into PCs has approached them from a more technical point-of-view, focusing on design and mechanics rather than audiences' reactions (Apperley & Clemens 2017), or focused on MMOs (Bessière, Seay & Kiesler 2007; Teng 2017; Van Looney et al. 2012; Wu & Hsu 2018) rather than games where the PC has a distinct character with a set personality and backstory.

Non-Player Characters (NPCs)

Historically, Game Studies literature has critiqued videogame characters: for example, Aarseth (2006, p. 51) has stated NPCs are “wooden”, and a “convenient vehicle.” This view is still held by some modern video game players as evidenced by the emergence of the ‘NPC meme’ in 2018, which viewed some people as having no internality and, like NPCs, only capable of repeating a limited number of canned lines. The meme was then used to attack those who identified as progressive (Alexander 2018). The meme, and the perceived shallowness of the people it critiqued, ignores the depth of characterisation and the intense emotional attachments players can form with video game NPCs. Most game genres utilize NPCs, which may help or hinder the player, to make the game interesting, immersive, and challenging, and to develop relationships with players and prompt emotional reactions (Daviault 2012). These emotional reactions and relationships are important because prompting emotions from players is critical for games to be successful and enjoyable (Lankoski 2012; Bopp et al. 2019). Coulson et al. (2012) investigated the factors that may affect how players become attracted to video game characters and noted

that using NPCs with sufficient depth and characterisation can prompt extensive and meaningful interactions between the NPC and players. Using NPCs from BioWare's *Dragon Age Origins*, they found that players developed real and meaningful emotions, and even love for these characters (Coulson et al. 2012). Investigating players' responses to NPCs in *Half-Life*, Daviault (2012) found that rather than considering them part of the game mechanics, players perceived the NPCs as friends and that they added emotion and enjoyment to their game. Overall, 96 per cent of Daviault's (2012) participants stated that they considered NPCs, despite not being controlled by the player, as still playing a role in the story. Mallon and Lynch (2014) analysed players comments that were diarized about their feelings during play in order to suggest ways that game creators could make players feel involved and engaged with both PCs and NPCs. Their results found two criteria were necessary for players to care for video game characters: (i) responsiveness of the characters; and (ii) stimulating deep and meaningful relations. They also found that players enjoyed developing relationships between their PC and an NPC, and when deep relationships were established, particularly when the relationships were of a romantic nature, players expressed high levels of engagement. Waern (2015) focused on romantic relationships in video games and found that the four romantic options for PCs (two male and two female NPCs) in *Dragon Age Origins* prompted emotional attachment. Burgess and Jones (2020) found that the emotional attachments that video game players formed with NPCs motivated game manipulation behaviour, for example customising their PC's armour to match the NPC's armour they were attached to and attempting to control the composition of cut-scenes to better reflect and understand the persona of their PC as developed by the player. Furthermore, Burgess and Jones (2020) found indications that the attachments male and female players feel might be different. Based on an analysis of forum comments dedicated to beloved characters, they suggested male players might feel something closer to identification and a merging of their persona with that of their PC, while female players retained a distinctive identity that did not merge with their PC. Female players saw their identity and that of their PC as two separate personas and individuals, in contrast to the male players. Furthermore, female players spoke of their PC as a separate character and identity using the PC's name of 'Shepard' to describe them, while male players used first-person pronouns and conflated themselves with the PC.

PCs, NPCs, and Fans

Fans are audience members who have an intense love and emotional connection to media, termed a fan objective, to the point where they consider it part of their identity (Jenkins 2012; Proctor 2013). Fans will often form online networks and communities to discuss the fan object and to create and share fan works. Fan works include stories (fanfiction), art (fanart), videos (fanvids), songs, toys, clothing and costumes (cosplay) (Jenkins 2012). Video game fans will also share video game walkthroughs, theories, and speculation, and tabletop role-playing game (TRPG) might share fan-made guides and rules, rulebooks, and mods (Newman 2013). Fans will engage in debates with minute detail to strengthen or refute theories and viewpoints (Newman 2013). The majority of the pleasure fans derive from their fan objects comes not from viewing and consuming them but from discussing them with other fans, and the more fans share their experiences with each other, the more their attachment to the original fan object grows (Schwabach 2011). Fandom is thus highly performative and productive; fans' creation and sharing of fan content are acts of performance and also generates social capital within online fan communities (MacCallum-Stewart & Trammell 2018). Furthermore, the act of developing an online persona requires public, performative actions that allow for the expression of self often assisted by media technologies (Moore, Barbour & Lee 2017). Due to their focus on story, role playing games (RPGs) tend to be the video game series that attract fans. Video game series that have prompted high amounts of fan productivity include the *Mass Effect*, *Dragon Age* and *Final*

Fantasy series (MacCallum-Stewart & Trammell 2018), which are series that have also received praise for their well-constructed PCs and NPCs (Jørgensen 2010). Indeed, the emotional bonds created between characters and the audiences are often what creates emotional attachment to the fan object (Williams 2015). Thus, the lack of research into NPCs could be limiting research into and understanding of video game fans and how they relate and negotiate their personas and those the NPCs they encounter via the PCs they control.

Video Games and Gender

Video game players have been stereotyped in media and society as being male (Vermeulen et al. 2016; Condis 2015), despite research indicating that 47% of Australian video game players are actually female (Brand et al. 2019). It has been demonstrated that male players are more likely to play console games, while female players tend to prefer mobile and casual games (Nichols 2014). However, despite this near gender parity, the characters in video games are far more likely to be male than female (McCullough, Wong & Stevenson 2020). Furthermore, when female characters do appear, they are more likely to be supporting characters, rather than leading characters (Williams et al. 2009), and depicted in a sexualised manner (Lynch et al. 2016). The two most famous and enduring female video game characters are Lara Croft, who was depicted as highly sexualised, and Samus, who had her gender hidden (Ubaldi 2017). Female characters are more common in independent games, although some big-budget game series, known in the industry as AAA (pronounced "Triple-A"), have included female player-characters in sequels and spin-offs such as *Dishonoured*, *Uncharted* or *The Last of Us*. However, a female PC in a new AAA series, as was the case in *Horizon Zero Dawn*, is still rare and Sony, the game's publisher, considered the design decision to be risky (Peterson 2015). Despite the near parity of female to male video game players, female players often feel a lack of belonging in video game contexts (Vermeulen et al. 2016) and report harassment, objectification, and verbal abuse, which has been suggested as being related to the sexualised and/or absent female characters in the medium (Hanus & Dickinson 2018). Thus, it appears that the female persona, whether encapsulated as players, PCs, or NPCs, is not welcome in some elements of the video game community and industry.

The video game industry has long assumed that male players would not enjoy playing as a female PC (Hanus & Dickinson 2018). For example, even though the PC, Commander Shepard, in the *Mass Effect* trilogy of video games released from 2009-2012 was originally envisioned as female by BioWare, they added a male option and made this the default because they believed that male players would not want to play as a female Shepard PC (Jean 2019). BioWare's statistics indicated that 18% of players selected the female Shepard (Makuch 2013). *Assassin's Creed Odyssey*, released in 2018, was another game that allowed for a (binary) choice of the gender of the PC and approximately 33% of players selected the female PC (Totilo 2019). Since the video game market crash in 1983, video game developers have adopted a conservative, safer business approach prompting them to create male characters in the belief that the majority of their audience is assumed to be male (Hanus & Dickinson 2018). Williams et al. found in 2009 that 89% of characters were male in their content analysis of the 150 top-selling video games between March 2005 and February 2006 (for the nine most sold game systems sold in the USA during that time span). This lack of representation of female characters also extends to video game box art, where female characters are more likely to appear as a supporting figure, if at all (Hanus & Dickinson 2018; Near 2013). At the 2016 E3 (Electronic Entertainment Expo), the industry's premier industry conference where the developers and publishers announce and preview their upcoming releases, only 2 of the 59 video games showcased at press conferences had a female lead character (Petit 2016). Four games did not have a lead character. One of these two video games with a female lead character was *Horizon Zero Dawn*, the research site selected

for this study. For this research, the player's persona (whether male or female or other) was interacting with a female PC's persona while both the player and PC explore the world of *Horizon Zero Dawn* and interact with the gameworld's NPCs. The player controls Aloy's persona during gameplay.

METHODOLOGY

Research Context

Horizon Zero Dawn is an action-role-playing video game that was released in 2017. The game involves playing as the female PC, Aloy, who has been praised by critics for her strong personality, characterisation, and lack of sexualisation (Williams 2019). As is the case with role-playing games (Newman 2013), *Horizon Zero Dawn's* story that was a key aspect of the game. Players explore a post-apocalyptic Earth to understand what caused society to regress to an agrarian level of technology but also resulted in advanced robots roaming the earth (Farokhmanesh 2015). Upon release, the game became one of the best-selling games on the PlayStation 4, and had sold over 10 million copies by the end of 2019. Tie-in products were made and sold such as journals and action figures, a downloadable content (DLC) expansion, and there have been plans for a sequel (Hood 2019). Despite this success, concerns were raised during the game's development about using a female protagonist PC as it was deemed 'risky' by the game's publisher, PlayStation (Makuch 2013).

Research Approach and Data Analysis

Audiences regularly post comments online revealing their reactions to media and narratives (Mittell 2015). Therefore, a qualitative survey was posted on the *Horizon Zero Dawn* subreddit that asked players of *Horizon Zero Dawn* about their connections with the PC, Aloy, and the attachments they formed for the NPCs they encountered while playing as Aloy. Demographic data about players was also gathered.

The answers to these questions were analysed following the phenomenographic approach as it involved iterative familiarisation, analysis, and interpretations in considering collective meaning (Åkerlind 2012; McCosker, Barnard & Gerber 2004). The coding was done manually and at the semantic level, where only the surface or explicit meanings were considered (Braun & Clarke 2006) and was an iterative and continuous process with responses returned to and re-examined to refine codes and groupings as the analysis progressed (McCosker, Barnard & Gerber 2004). All of the responses were read before analysis began to ensure the researcher was familiar with the data and any recurring themes, phrases, and concepts. Peer debriefings, in the form of meetings, were used to validate the analysis and the codes derived from it (Creswell & Miller 2000), which included definitions of each theme and example quotes.

The human coding was informed by the role of active story interpreter that was undertaken by the researchers (Reid & Duffy 2018). This 'interpretivist' role involves immersion in the data and the context surrounding it in order to understand and decode the context and to form cultural insights into the phenomenon being investigated and ensure a valid analysis (Reid & Duffy 2018). Such an approach allows for more accurate representations of the participants' feelings and the research context under investigation (Mittell 2015). The specific immersion took the form of playing the game to completion several times, lurking on the subreddit, reading news articles, reviews, and tips about the game, and watching gameplay video and commentary online prior to the data analysis.

RESULTS

Participants

120 respondents completed the survey: 32 (26.6%) female, 86 (71.6%) male, and 2 (1.6%) who identified their gender as other. The vast majority of respondents, 83.6%, were aged between 18 and 34 (Table 1). Respondents named 30 different countries of birth with the United States and the United Kingdom being the two most common (Table 2).

AGE	NUMBER OF RESPONDENTS	PERCENTAGE OF ALL RESPONDENTS
18 to 24	61	50.8%
25 to 34	41	34.2%
35 to 44	13	10.8%
45 to 54	4	3.3%
55 to 64	1	0.8%

Table 1. Gender and Age of Respondents

COUNTRY OF BIRTH	NUMBER OF RESPONDENTS
United States	60
United Kingdom	8
The Netherlands	6
Germany and Canada	5 each
The Philippines	3
Malaysia, India, France, Croatia, Norway, Portugal, Romania, Ireland, and Italy	2 each
Mexico, Spain, Sweden, Belgium, New Zealand, Aruba, Colombia, Czech Republic, Greece, Hungary, Jamaica, Luxemburg, South Africa, Bosnia and Herzegovina, and Vietnam.	1 each

Table 2. Country of Birth of Respondents

56.7% of respondents had completed *Horizon Zero Dawn* either once or twice, while 37.5% had completed it three times or more (Table 3). 40% of the respondents had completed the game on 'ultra-hard,' which was a difficulty mode launched after the release of *Horizon Zero Dawn* and intended for experienced players who had prepared and planned for the increase in difficulty by stockpiling items and developing strategies. However, 66% of respondents had 'platinumed' the game, which involves completing extra challenges and activities for virtual trophies. When all of these trophies are collected, the player receives one final platinum trophy, hence the name. 95% of respondents owned the *Frozen Wilds* DLC released for the game, and 85% (of this 95%) had finished it at least once. The responses to the questions indicate that the sample was familiar and engaged with the game, as they had purchased DLC and played through

the game more than once. Approximately 6% of all players who started *Horizon Zero Dawn* (HZD) obtained the platinum trophy, and 34% finished the game's main storyline, according to PlayStation's publicly available trophy percentages.

<i>Number of Times Completed HZD</i>	<i>Number of Respondents</i>	<i>Percentage of All Respondents</i>
0	7	5.8%
1	39	32.5%
2	29	24.2%
3	17	14.2%
4	8	6.6%
5 or more	20	16.7%
<i>Completed ultra-hard</i>	<i>Number of Respondents</i>	<i>Percentage of All Respondents</i>
No	72	60%
Yes	48	40%
<i>Platinumed HZD</i>	<i>Number of Respondents</i>	<i>Percentage of All Respondents</i>
No	53	44%
Yes	67	66%
<i>Own the Frozen Wilds DLC</i>	<i>Number of Respondents</i>	<i>Percentage of All Respondents</i>
No	6	5%
Yes	114	95%
<i>Number of times completed main story in Frozen Wilds DLC</i>	<i>Number of Respondents</i>	<i>Percentage of all Respondents</i>
0	18	15%
1	57	47.5%
2	24	20%
3	12	10%
4	4	3.3%
5 or more	5	4.2%

Table 3. Respondents Amount of Play

Codebook

A codebook was generated displaying the themes, theme counts, brief descriptions of each theme, and example quotes that were present in the survey responses (Table 4).

THEME	COUNTS	DESCRIPTION	EXAMPLE QUOTE
<i>Very Much Attached</i>	34	This theme encompassed short, responses to the question answered in the positive. These tended to be quite short responses.	"Super attached."
<i>Moderately Attached</i>	11	This theme encompassed short, reactions to the question that was answered ambivalently. These tended to be quite shallow and rushed responses.	"Mildly. 3/10. I love Aloy like a sister but can barely remember anyone else's name."
<i>Not Attached</i>	7	This theme encompassed short, reactions to the question in the negative. These tended to be quite shallow and rushed responses.	"Not very much."
<i>Attached to Aloy</i>	24	This theme encompassed answers that identified their attachment as focusing specifically on Aloy and her character, goals, and personality.	"Even though it is just a game, I could not help myself from becoming emotionally attached to Aloy's life story. I cared a lot for her, and wanted her to succeed."
<i>Attached to the Characters</i>	21	This theme encompassed comments that expressed an attachment to the characters of <i>Horizon Zero Dawn</i> and their backstories and personalities. Respondents praised the writing of the characters and developed connections to them.	"I am extremely involved with the narrative and characters of Horizon Zero Dawn. Almost every character seems fleshed out and driven. The DLC of The Frozen Wilds helped to draw me in even further. Aloy and the supporting cast have very compelling stories and characteristics. No character is perfect, which helps the immersion of the game and it's surrounding world immensely. It added a layer of thought to the narrative that explains the drive of specific characters and how their shortcomings tripped them up."

<i>Attached to Past Side Characters</i>	6	This theme encompassed comments that expressed an attachment to the characters of <i>Horizon Zero Dawn</i> but focused on the characters that appeared in the game's past through holograms, recordings, and computer files.	"Interestingly enough I cared more about the characters and their struggles and reactions to the faro plague and creating Zero Dawn, then the contemporary characters. Parts of the contemporary character stories were on a personal level relatable and therefore in these moments there was a stronger emotional attachment."
<i>Attached to the Storyworld</i>	14	This theme encompassed comments that expressed an emotional connection to the story and world of <i>Horizon Zero Dawn</i> . Players felt the world and history created in the game was moving and discovering it was an emotional experience.	"As I did the main story missions all in a row at the end, the events and revelations during them were at the fore in my mind. The worldbuilding invoked empathy, sorrow, loss, and curiosity."
<i>Attached to the Experience of Horizon Zero Dawn</i>	8	This theme encompassed comments that expressed an emotional connection to the experience of playing <i>Horizon Zero Dawn</i> . Respondents felt playing the game was a profound experience that had changed their world view and perspective.	"I can't imagine a world where this game doesn't exist. This game changed my life.. made me more conscious about how I lived my life, what I take for granted... it's a master piece."

Table 4. Codebook of Qualitative Responses

DISCUSSION

Although the survey did not explicitly ask about the overall storyworld of *Horizon Zero Dawn*, players reported feeling attached to the entire gameworld including its history and locations. Exploring the fictional history and geography of the world was a moving and emotional experience, and it was through Aloy that players did this. The sense of wonder that players reported when playing the game does not seem to have been negatively impacted by playing as a female PC. Interestingly, in the game, Aloy lived in a confined area and knew little of the world outside, which the game explores briefly before the main plot takes Aloy to other parts of the gameworld. As such, the wonder that players reported feeling as a result of exploring the gameworld could be influenced or enhanced by the persona of Aloy and might indicate some 'mind-melding' (Lewis, Weber & Bowman 2008), despite Aloy being perceived as having a distinct character and identity. This finding also indicates that players found the story of *Horizon Zero Dawn* compelling and emotional, despite the long-held view that video games are incapable of deep storytelling (Haggis 2016).

Importantly and understandably, the second most common theme was the attachment to the PC of Aloy, notwithstanding the preference for male PCs by the industry or players when video games offer a choice of gender, as was the case with *Assassin's Creed Odyssey* and *Mass Effect*. Controlling the PC of Aloy and thus adopting her persona did not negatively impact on the player's ability to develop attachments and relationships with the characters they encountered through her. In fact, participants of all three gender identities indicated they developed an attachment to her. In contrast to industry concerns that male players would not enjoy playing as a female PC (Hanus & Dickinson 2018), participants found Aloy a compelling and enjoyable character through which to explore the gameworld of *Horizon Zero Dawn*, even though the majority of respondents self-identified as a different gender to her.

Aloy was described as "compelling" and participants reported they knew "how she thinks and what she's been through" indicating they believed they possessed insight and understanding of her character and her personality. Thus, Aloy was perceived as a distinct identity and persona that players controlled during gameplay. Players saw her as a distinct persona they guided and controlled, which is in contrast to prior research that has focused on the merging of the player and player-character personae (Milik 2017). Players did engage in some merger of their persona with Aloy's, but even while viewing her as a distinct personality. This view developed despite the difference in gender of Aloy to most of the participants (73.3% male). Participants wanted her to succeed, and they developed an empathy for her and what she went through. Some were even relating to her, and her experiences indicating their emotional attachment influenced how they saw winning the game. Winning or finishing the game was seen as not entirely about the player's success, but also about Aloy's success. Several explicitly talked about their "love" for the character. Juul (2013) noted that the players' emotions should mirror those of their PC, so when their PC is happy, the player should feel happy, but when their PC experiences an upsetting event, the player should also feel those emotions. Interestingly, this research indicates that this mirroring still occurred, despite the difference in gender and the perception that Aloy was a distinct personality, indicating a merger of personas. Thus, participants viewed Aloy as a distinct persona, due to her well-developed character and personality in the game but were also involved in some merger of their persona and hers during their gameplay.

Players also expressed attachments towards the other NPCs in the game and reported their emotional attachment to these NPCs increased the stakes of succeeding and the motivation players had to finish the game. Players attachment to the NPCs increased their investment in succeeding in quests and gameplay. The characters were described as "fleshed out", which made the characters "easy to get attached to". One player even wrote that they "learned something from them[the NPCs]". These sentiments were developed as a result of players' interaction with the NPCs in the game, interactions that would have taken place via their PC of Aloy. Players described the characters they met throughout the game as meeting "friends" and "enemies", the same classifications Aloy would give to the characters in question, and developed connections to them as well. By controlling and adopting Aloy's persona, they were identifying the characters they met as friends and enemies as it was through her outlook and point-of-view. Thus, players did not appear to encounter difficulties aligning and integrating Aloy's persona as they explored the game. As players interacted with the other characters in the game through Aloy, they appeared to merge their viewpoint and persona with her while also viewing her as a distinct entity and persona.

CONCLUSION

This research explored the personas of the players of *Horizon Zero Dawn* and their PCs, and how these personas might affect their emotional attachment to the characters they and their PCs encountered during gameplay. This research has contributed to the emerging discipline of Persona Studies (Marshall & Barbour 2015) by examining personas in a single-player video game and the emerging but growing body of knowledge examining attachments to NPCs (Bopp et al. 2019; Mallon & Lynch 2014). It was found that despite the difference in gender between the majority of respondents and their female PC of Aloy, players developed emotional attachments to her and could relate and empathise with her. The difference in gender of the persona of the PC and the players was not a barrier to this emotional attachment or game experience for the players of *Horizon Zero Dawn* who participated in the survey despite industry concerns about female PCs being unpopular with male players. Furthermore, although Aloy possessed a distinct personality and identity, rather than being a customisable PC, players also reported mirroring her emotions, indicating that this was no barrier to mind-melding and elements of identification. Players viewed Aloy as possessing a persona distinct from their own, which is underexplored in Persona Studies with a video game context, but also reported aspects of mind-melding and identification. The NPCs in the game were described as fleshed out with personalities that players reported made it easy to get attached to. Thus, video game developers need to ensure the characters they include in video games have distinct and developed personalities to prompt players' emotional attachment, which can make video games successful (Lankoski 2012). Players also reported that the attachments they developed towards the NPCs they encountered as Aloy enhanced their motivation to finish the game and replay it.

Limitations and Future Research

This research explored one PC in a single game, a scope that is admittedly narrow but due in part to the lack of AAA games that have launched with a female PC. The research also used responses from online forum participants, who are likely to be more engaged and pay more attention to the media they are consuming (Mittell 2015). Indeed, the participants platinumed the game at a higher rate when comparing their answers to PlayStation's publicly available data. Participants were also 71% male, higher than the near parity between genders identified by research into video game players, although female players have been noted to be more likely to play casual and mobile games (Nichols 2014) rather than console games. Further research should explore a sample of video game players who do not regularly take part in online discussions, and players who participate in general video game communities rather than ones dedicated to a specific game, to see if these segments have different responses and how they viewed the identity of Aloy and interacted with *Horizon Zero Dawn's* gameworld and characters.

Practical Implications

The findings presented by this research indicates that playing as a female PC can still allow male players to form emotional attachments and enjoy the story and gameworld. This is important given the financial significance of the video game industry (Teng 2017). Female players comprise 47% of the video game players in Australia (Brand et al. 2019), despite the shortage of female characters and female-led games. Including more deep and well-written female PCs and NPCs could help attract more female players to play console games and increase revenue without decreasing the enjoyment of male players. Increased representation of these types of female characters may also help to combat the harassment that female players can be subject to and thus could have multiple benefits for the industry without presenting the risk that video game publishers and developers have believed is associated with using female lead PCs.

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