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Concerning gamer identity: An examination of individual factors associated with accepting the label of gamer

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Abstract

This study examined characteristics of players that self-identified as gamers. Participants (*N*=476) were asked to complete an online survey and provide information about their video game play. Analyses of the survey responses found support for gamers being younger, men, and playing more. We also found that some of the genres of play and technology used diverged from previous research. The two most surprising findings were that gamers preferred to play on consoles more than on computers, and massive-multiplayer online games were not the most played genre. This paper contributed to research in three ways: previous assumptions surrounding gamer identity and demographics were tested, the genre of games and method of play were examined to refine the definition of a gamer, and the implications of gamer identity were discussed.

Introduction

Recently there has been an outcry against Electronic Arts' (EA) *Battlefield V's* new trailer for featuring too many female characters. The hashtag #NotMyBattlefield was trending on Twitter and many gamers were asking for change (Buckley, 2018). This study sought to identify factors that corresponded with an individual's desire to identify as a gamer. The findings and implications of this study may help understand why some individuals felt EA was wrong to release such a trailer as it did not align with traditional gamer identity. Video games provide unique communication situations and relational quandaries that create unique research opportunities. People who play video games are actively engaged in computer-mediated communication (CMC) that can move beyond geographical borders, social strata, and nationality (Hiltz and Turoff, 1978; Kaplan and Haenlein, 2010). Video games also provide a means of communication between players and non-players. Whether facilitated within the game, or discussed outside the game itself, communication about video games is as varied as the types of games played. Because of the impact of video games, understanding who has access to these technological resources and what affordances they provide would be worthwhile. In

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this paper we examine what demographic, genre preferences, and technological devices used are associated with individuals that self-identify as gamers.

From lengthy role-playing adventure games to battling in a first-person shooter, the label 'gamer' is often used. Sometimes this term is used in jest, or with pride, but other times with stigmatizing intent. We seek to understand associations of gameplay and gamer label acceptance. Accepting, or identifying with, the label of a gamer is timely due to recent increases in video game production and consumption. In this paper we provide an overview of literature concerning video game use, gamer identity, and social identity theory. This research contributes to game research in three ways. First, we test previous assumptions surrounding gamer identity and demographics. Second, we examine the genre of games and method of play to further understand gamer identity. Finally, we discuss the implications of the changing, as well as unchanging, aspects of gamer identity.

Contextualizing gaming and gamers

Gamer identity does not exist in a vacuum immune to external influences (Shaw, 2010). Society, leaders, parents, and even academics may influence the perception of video game play and, consequently, of gamer identity. If individuals view gaming negatively they may be less likely to identify as a gamer even though they play video games. In the following paragraphs, we will briefly review video game effects studies to provide more context surrounding gamer identity research.

Video game effects

Video games are often studied regarding the effects they may have upon both users and society. Galantucci's (2005) experiment took participants geographically apart and placed them within a video game that required communication for successful completion of tasks. The participants were not given a means to traditionally communicate such as letters, but created a communication system in a naturalistic setting within a computer simulation, which illustrated how human systems could be created, maintained, and adapted (Galantucci, 2005). Human communication is a combination of individual cognitive processes and the communication becomes a set of shared meanings and artifacts that can be easily reproduced within a group (Galantucci, 2005).

Video games provide a means to connect individuals over geographical boundaries and create a shared meaning; this unique ability of video games (Galantucci, 2005; Howe and Lee, 2018) may contribute to the mixed findings regarding video game effects. For example, an adolescent playing a single player game at home is less likely to develop social ties than online game players participating cooperatively. Some research findings suggest that video games affect players' self-concept and self-esteem in a negative capacity (Jackson, *et al.*, 2009). Other studies also indicate that younger males see the greatest negative effects compared to other demographic groups (Brown, 2017; Jackson, 2008; Jackson, *et al.*, 2009). Popular beliefs of video game effects include violent behavior association, but not all video

games have been found to increase violent behaviors (Lachlan, *et al.*, 2005). Distinct types of video games may increase hostile attitudes, but assumptions of aggression were not supported [20]. One consistent research finding is that violent behavior is more prevalent among younger players (Anderson and Dill, 2000; Bushman and Anderson, 2001; Sherry, 2001).

In contrast, some research indicates positive effects of video games. Bertolini and Nissim (2002) conducted a psychotherapeutic analysis of video game effects on children and found that children reacted with varying affective imaginative responses to video game use. These findings indicate that the purpose of video game engagement was for enjoyment, entertainment, and fun (Bertolini and Nissim, 2002). Individuals play for other reasons as well but playing for fun is empirically supported to have positive outcomes (Bertolini and Nissim, 2002). Other promising findings include that 40 hours of gameplay of a real-time strategy game is good for the brain activity (Gagné, *et al.*, 2012; Glass, *et al.*, 2013). Neuroplasticity, "the ability of the adult brain to learn new behaviors, create new memories, and alter underlying neural structures responsible for learning" [1] increased among participants who played a real-time strategy game.

Video game effects are constantly under scrutiny and academic inquiry. With increased variety of video game players (Brown, 2017; Howe and Lee, 2018), certain perceptions about video game players that have rigidly persisted in popular media may no longer be reflective of gamer identity. A deeper understanding of game effects may provide more contexts for understanding issues surrounding gamer identity.

Social identity theory

Social identity is a part of an individual's self-concept which derives from one's knowledge of 'membership of a social group (or groups) together with the value and emotional significance attached to that membership" [2]. Identifying as a gamer is therefore demonstrative of the self-concept attached to gamer identification or in-grouping. Social identity theory posits that groups provide a sense of belonging. Furthermore, when individuals identify with a group, a process of in- and out-grouping begins. Individuals who belong to the same group are favored over those who do not belong to the group. These effects can be positive for facilitating in-group interactions and cooperation but potentially negative as the out-group people may be stereotyped and be treated unfairly (Tajfel, 1981; Jessup, *et al.*, 1990; Ross, *et al.*, 1969).

Previous research optimistically proposed that CMC could move beyond boundaries of social strata and stereotypes (Hiltz and Turoff, 1978; Kaplan, and Haenlein, 2010). The visual anonymity of CMC however does not necessarily create a flexible, inclusive group membership, but can operate to maintain social boundaries salient to the group (Postmes, *et al.*, 1998). Social validation facilitates the creation and maintenance of boundaries that define a group (Turner, 1991) but may drive individuals to reinforce boundaries between members and themselves. If an individual does not feel that they belong to a group, they can begin to favor non-

group members over members of the group. Because not all individuals that play video games identify as belonging to the gamer group, a unique situation is revealed. Players of social games, for instance, may not perceive that their game of choice or method of play is an accepted part of gaming culture and may therefore choose not to identify as a gamer. Thus, these players are participating in the activity of gaming but not identifying with the group of gamers because their social identity is influenced by the perceptions about themselves and interactions with those within and outside of the salient gamer group. Recognizing the influence on social identity is essential in understanding choices made regarding video game play and what contributes to perceptions of gamer identity.

Perceptions about gaming and what constitutes a gamer may influence not only how people act within the group (Reicher *et al.*, 1995) but also how they conceive the social boundaries for in- and out-group membership (Postmes, *et al.*, 1998; Reicher *et al.*, 1995; Spears and Lea, 1994). Identifying as a gamer may change how people communicate, behave in games, and associate themselves within the overall gaming culture. Conversely, not identifying as a gamer may influence the way that gamers are perceived.

Constructing a gamer identity

Not everyone that plays video games consider themselves a gamer (Shaw, 2010). As previously discussed, gamer identity is not always open and flexible. Outside influences, personal beliefs about gaming, societal framing of gaming, and institutionalized game marketing are just a few of the factors that could limit the ability of an individual to cognitively reconcile as a gamer (Shaw, 2013, 2011). Rigid boundaries enforce a rigid framework that members must adhere (Postmes, *et al.*, 1998). Playing video games does not indicate complete affiliation with the identity. Just as everyone that exercises does not identify as an athlete, everyone that plays video games does not identify as a gamer. Studying gamer identity can inform researchers why, how, and when individuals formulate a certain identity (Bertolini and Nissim, 2002; Bergstrom, *et al.*, 2016). Researchers have argued that gamer identity is socially constructed and can change as society changes (Bertolini and Nissim, 2002; Consalvo, 2007; Richard and Hoadley, 2013). Because gamer identity is fluid, rather than static, this paper examines multiple possible explanations of what may construct the identity of a gamer; however, previous research on the demographic factors of gamers must not be ignored.

Research on gamer identity construction began in the 1980s when a decline in sales spurred marketing targeting a specific demographic: white, heterosexual, adolescent, and male (Infante and Wigley, 1986; Shaw, 2013; Williams, *et al.*, 2009b). The historical perception of gamers persists to this day. Recent research indicates that men are more inclined to consider themselves gamers (Richard and Hoadley, 2013; Shaw, 2011, 2010) even though empirical findings (McGonigal, 2011) as well as PEW research (Brown, 2017) support the idea that video game play by biological sex is not severely disproportionate. Game players are more likely to identify as a gamer based upon a myriad of factors. One consistent finding in gamer identity research is that biological sex predicts likelihood of gamer

identification closely (Repenning, *et al.*, 2015; Shaw, 2013, 2010; Williams, *et al.*, 2008). Researchers have found that some male gamers systemically exclude women from the gamer ranks by either ignoring female players or using derogatory remarks intended to make female gamers feel unwelcome (Ledbetter and Kuznekoff, 2012; Richard and Hoadley, 2013). Other research has found that verbal harassment of female gamers is more prevalent with lower performing male players (Balswick, 1988; Ledbetter and Kuznekoff, 2012), perhaps due to an implicit identity threat. Because gamer identity is strongly marketed toward young, white, male players and previous research has found players who are different from the prototype are often excluded from gaming clans and activities (Ledbetter and Kuznekoff, 2012; Richard and Hoadley, 2013; Shaw, 2011), we propose:

> H1: Participants that self-identify as gamers are more likely to be a) men, b) white, and c) younger than those that do not self-identify as gamers.

Gamer identification may have changed since the 1980s, but it is still closely situated in the notion of gaming capital (Consalvo, 2007; Williams, *et al.*, 2009b). Gaming capital refers to the knowledge and efficacy of players regarding digital games and paratext (Consalvo, 2007; Williams, *et al.*, 2009a; Williams, *et al.*, 2009b). Knowledge about the game creates a social currency that can be leveraged into a hierarchical structure, or a divide between those that play the game and gamers. Part of this divide is likely based on time spent in the game. Researchers have found that players that spend more time playing a game with members of their network are rewarded with higher positions of power within the gaming network (Howe and Lee, 2018). It is likely that numbers of hours played directly and indirectly influence both self- and other-identification of an individual as a gamer. Recent research has indicated that some competitive players spend more hours per day playing games than performing any other activity (Kauweloa and Winter, 2019). Furthermore, frequency of gameplay has previously been found to be associated with gamer identity (Repenning, *et al.*, 2015) and we therefore propose that:

> H2: Gamers will play more hours of video games per week than participants who did not identify as gamers.

Other researchers added the notion of technological capital, or that players are only considered gamers if they play certain games and own specific devices (Shaw, 2011, 2010). Technological capital is a social construct and is shared in discussions about the game. Researchers have found that networks within games provide identity formation to continually occur (De Grove, *et al.*, 2015). It has also been found that that the type of game is closely associated with gamer identification (Repenning, *et al.*, 2015). Core game (*e.g.*, first-person shooters; role playing) players are more likely to take on the identity of a gamer (Chess and Paul, 2019).

Some researchers proposed that game developers should focus on changing the medium that was used in gameplay rather than trying to change the audience (Shaw, 2013, 2010). They advocate if video games were viewed as more

acceptable by the population at large, it would lead to more diversity among gamers (Shaw, 2013, 2011). Society has normalized gameplay around since 2011 through the acceptance of social games and trend toward using gamified apps. Yet this social normalization has not been generally accepted by gamers, game developers, or even game researchers (Chess and Paul, 2019). Thus, we believe that although game variety and accessibility has increased with mobile apps and social networking applications, varied games have not widely been accepted as part of gamer culture; therefore, we propose:

> H3: Gamers will report more likelihood to play a) first-person shooters, b) massive-multiplayer online, c) role-playing, and d) retro games but less likelihood to play e) sports, f) strategy, and g) social games than participants who did not identify as gamers.

Because most core, or console, and personal computer games [8], are the subject of academic inquiry and industry marketing, it is likely that games played using these platforms will be more acceptable to gamers than games played on cellular phones. The types of video games, as previously hypothesized, and platform of the game may influence why individuals identify as gamers. Some video game platforms can embolden gamer identification. We therefore hypothesize that:

> H4: Gamers are likely to report that they play on a) personal computers and b) consoles more often, but c) less on cellular phones than participants who did not identify as gamers.

Research on gaming effects (Lachlan, *et al.*, 2005), gaming capital (Consalvo, 2007), and gamer identity (Peña and Hancock, 2006; Richard and Hoadley, 2013) clearly indicates that the label gamer or gamer identification is more complex than simply playing video games. Although we acknowledge some external factors such as marketing, media reports, parental beliefs, and social discourses may influence gamer identity, the purpose of this study is to examine the relationships among internal factors including demographic attributes, genre preferences, technology platforms used in gameplay, and gamer identification.

Method

Participants

After receiving the institutional review board's (IRB) approval, participants from the undergraduate research pool of a large Southwestern university were invited to participate in an online study about social networks and video games. Participants that completed the survey (N=476) ranged in age from 18 to 37 (M=20.77, SD=1.79). More than half (56.3 percent) of participants identified as women (N=268). When participants were asked if they were a gamer 33.6 percent

said that they were (*n*=160). All total, 98.6 percent of participants selected at least one way they played video games (*N*=467). Participants could select more than one race/ethnicity; they identified as white or Euro-American (394), black or African-American (32), Indigenous American or Alaskan Native (46), Asian (25), Native Hawaiian or Pacific Islander (2), Hispanic or Latinx (26), and other (9).

Measures

Hours of play. Participants were asked how many hours per week they played completely alone, co-present with another individual, and online with another individual. Alone ranged from 0 to 30 hours (*M*=2.93, *SD*=4.71), co-present ranged from 0 to 24 (*M*=1.85, *SD*=3.05), and online ranged from 0 to 32 (*M*=2.33, *SD*=4.52). These items had a Cronbach's alpha of .78 and a single score of hours played was generated (*M*=2.39, *SD*=3.49, *N*=451). This new score was skewed at 2.37 and was therefore transformed using square root transformation, which improved skewness to 0.78 (*M*=1.14, *SD*=1.04, *N*=451); the transformed variable was therefore used in subsequent tests.

Genre of play. The following genres were presented to participants with accompanying examples of games included for those unfamiliar with the terms: First Person Shooter (*Call of Duty, Battlefield*, etc.), Massive Multiplayer Online (*World of Warcraft, Destiny*, etc.), Role-Playing (*Fallout, Oblivion*, etc.), Strategy (*Command and Conquer, Risk*, etc.), Sports (*Madden, Forza*, etc.), and Retro (*Mario, Zelda*, etc.) [43]. Participants were then asked to rate how likely they were to play each genre on a 7-point Likert-type scale (*1=extremely likely; 7=extremely unlikely*); this was reverse coded for an easier interpretation. Four hundred and thirty-six participants completed these questions. Mean ratings were as follows: First Person Shooter (FPS) (*M*=3.03, *SD* = 1.85), Massive Multiplayer Online (MMO) (*M*=4.58, *SD*=1.77), Role Playing Game (RPG) (*M*=4.35, *SD*=1.62), Strategy (*M*=4.16, *SD*=1.55), Social (*M*=3.46, *SD*=2.37), Sports (*M*=3.83, *SD*=2.09), and Retro (*M*=4.31, *SD*=2.12).

Medium of play. Participants were asked what type, if any, of gaming system they used to play video games. Participants were allowed to select multiple gaming systems. One third (33.0 percent) of the participants reported playing on Xbox (*N*=157), 23.5 percent on PlayStation (*N*=112), 11.8 percent on Nintendo (*N*=56), 27.1 percent on a computer (*N*=129), and 59.7 percent on a cellular phone (*N*=284). To better account for the medium of play, Xbox, PlayStation, and Nintendo were all considered as consoles.

Procedures

Participants completed an online survey administered via Qualtrics. Average response time was 22.45 minutes (*SD*=6.23). Participants were first asked to provide demographic data and then asked to complete the questionnaires on game play. Scales were presented in a randomized order and scale items were also randomized to reduce the chance that participant fatigue could influence results.

Results

All statistical tests were performed using IBM's SPSS software package. The first hypothesis (*H1*) was: Participants that self-identify as gamers are more likely to be a) men, b) white, and c) younger than those who do not self-identify as gamers. A Chi-square test of independence was performed to examine the relation between self-identifying as a gamer and sex (*H1a*). The relation between gamer identity and sex was significant, [$\chi^2(1, N=476)=204.39$, $p<.001$]. Men were much more likely to identify as gamers than were women (143 men, 17 women), $\Phi=.65$. Thus, H1a was supported. See Table 1 for a summary of results.

Table 1: Differences between gamers and participants that did not identify as gamers regarding sex.

Identified as a gamer					
	Yes	No	χ^2	Φ	*p*
Women	17	251	204.9	.65	.000
Men	143	65			

However, the relationship between gamer identity and white or Euro-American race/ethnicity (*H1b*) was not significant, [$\chi^2(1, N=394)=0.78$, $p>.05$]. H1b was therefore unsupported. Additional analyses were conducted regarding other racial identities that had at least five members per cell, which included Asian, Latinx, and black or African-American. There was no significant relationship between gamers and Asian [$\chi^2(1, N=25)=2.19$, $p>.05$] or Latinx [$\chi^2(1, N=26)=0.10$, $p>.05$]. There was however a significant relationship between gamer identification and black or African-American identity, [$\chi^2(1, N=32)=7.88$, $p<.01$]. Participants who identified as black or African-American identified as a gamer more frequently than not, $\Phi=.13$. To better understand this data, additional Chi-square tests cross-tabulating sex, race/ethnicity, and gamer identification were performed (see Table 2).

Table 2: Differences between gamers and participants that did not identify as gamers regarding race.
Note: *p<.05; **p<.001. Participants could select more than one racewith which they identified.

Identified as a gamer					
	Yes	No	χ^2	Φ	p
Women	15	211	White		
Men	114	54	164.0	.54	.000**
Women	3	10	African American		
Men	15	4	9.79	.48	.002*
Women	1	18	Asian		
Men	4	2	10.75	.46	.001*
Women	0	17	Hispanic/Latinx		
Men	8	1	21.83	.88	.000**
Women	0	1	Pacific Islander		
Men	1	0	2.00	1.00	.157
Women	0	23	Native American		
Men	13	10	18.12	.20	.000**
Women	0	6	Other		
Men	3	0	4.05	.45	.045*

The analyses of additional Chi-square tests revealed that the statistical significance was more dependent on participants' sex than on their race or ethnicity. For this reason, these results should be interpreted with caution as sex differences, combined with small cell counts, could either hide or illuminate any relationships between identifying as a gamer and race or ethnicity.

H1c that gamers would be younger than participants that did not identify as gamers was tested by a one-way analysis of variance (ANOVA) which yielded a statistically

significant result for participant's age, $F(1, 469)=5.08$, $p<.05$. The average age was lower for self-identified gamers ($M=20.51$, $SD=1.29$) than those that did not identify as gamers ($M=20.91$, $SD=1.99$) with a small effect size of $\eta^2=.01$. Therefore, *H1c* was supported.

H2 stated that gamers will play more hours of video games, per week, than participants that did not identify as gamers. Hours per week was measured on a multiple item scale, as previously mentioned, to account for several types of gameplay. ANOVA was conducted to examine any differences in gameplay hours between gamers and participants that did not identify as gamers. A main effect was significant, [$F(1, 450)=419.5$, $p<.001$], with hours played being higher for self-identified gamers ($M=2.16$, $SD=0.88$) than those that did not identify as gamers ($M=0.63$, $SD=0.68$) with a moderate effect size of $\eta^2=.48$. Thus, *H2* was supported.

Table 3: Differences between gamers and participants that did not identify as gamers regarding hours played and age.
Note: *$p<.05$; **$p<.001$.

Identified as a gamer					
	Yes	No	*SE*	*F*	*p*
Hours played	2.16*	0.63	0.05	419.9	.000
Age	20.51*	20.91	0.08	5.08	.025

H3 tested whether gamers would report greater likelihood to play a) first-person shooters, b) massive-multiplayer online, c) role-playing games, and d) retro games, but less likelihood to play e) sports, f) strategy, and g) social games than participants that did not identify as gamers. A multivariate analysis of variance (MANOVA) was used to compare the multiple genre variables with gamer identification. *H3a,b,c* were all supported as predicted. *H3a*: Gamers preferred first person shooter games ($M=4.85$, $SD=1.48$) more than those who did not identify as gamers ($M=3.49$, $SD=1.86$), [$F(1, 435)=61.66$, $p<.001$, $\eta^2=.12$]. *H3b*: Gamers preferred massive-multiplayer games ($M=2.86$, $SD=1.95$) more so than those who did not identify as gamers ($M=2.18$, $SD=1.62$), [$F(1, 435)=15.08$, $p<.001$, $\eta^2=.03$]. *H3c*: Gamers preferred role-playing games ($M=3.37$, $SD=1.55$) than those who did not identify as gamers ($M=2.26$, $SD=1.51$), [$F(1, 435)=52.79$, $p<.001$, $\eta^2=.11$]. *H3d* on retro games was significantly associated with gamer identity, [$F(1, 435)=11.49$, $p<.01$], but in the opposite direction of what was predicted as participants that did not identify as gamers preferred retro games ($M=2.95$, $SD=2.21$), more than gamers ($M=2.24$, $SD=1.88$), with an $\eta^2=.03$. On *H3e*, sports game play was also significantly associated with gamer identification, [$F(1, 435)=19.43$, $p<.001$], but also in the opposite direction of what was predicted as gamers preferred sports ($M=3.75$, $SD=2.09$), more than participants who did not identify as gamers ($M=2.85$, $SD=2.02$), with an

η^2=.04. *H3f*, strategy games were found to have a non-significant relationship, [*F*(1, 435)=1.73, *p*>.05]. H3g was supported as participants that did not identify as gamers preferred social games (*M*=4.66, *SD*=1.90) more than those who identified as gamers (*M*=1.53, *SD*=1.71), [*F*(1, 435)=291.1, *p*<.001], η^2=.40. In summary, *H3* was largely supported as *H3a,b,c,g* were supported in the direction predicted. *H3d,e* showed statistically significant differences, but in the opposite of the predicted direction, and *H3f* was not supported (See Table 4).

Table 4: Differences between gamers and participants that did not identify as gamers in genre preference.
Note: The higher the score, the more likely participants are to play that genre.

Identified as a gamer					
	Yes	No	*F*	*p*	η^2
FPS	4.85	3.49	61.66	.000	.12
MMO	2.86	2.18	15.08	.000	.03
RPG	3.37	2.26	52.79	.000	.11
Strat	2.41	2.61	1.73	.189	.00
Social	1.53	4.66	291.9	.000	.40
Sports	3.75	2.85	19.43	.000	.04
Retro	2.24	3.75	11.49	.001	.03

H4 proposed that gamers would report that they play on a) personal computers and b) consoles more often, but less on c) cellular phones than participants who did not identify as gamers. A Chi-square test of independence was performed to examine the relationship between each technology platform and self-identifying as a gamer. Regarding personal computers (*H4a*), the difference was statistically significant, [χ^2(1, *N*=475)=87.12, *p*<.001], although the direction was opposite of the prediction. Those who identified as gamers often claimed to not play on a personal computer (56 played, 104 did not play), Φ=.13. Concerning console play (*H4b*), there was a significant difference between gamers and game players who do not identify as gamers, [χ^2(1, *N*=475)=154.24, *p*<.001]. There were more gamers who claimed to play on a console (144 played, 16 did not play), Φ=.44, than those who do not identify as gamers (94 reported console play and 222 reported no console play). Findings for playing via cellular phone (H4c) was also significant, χ^2(1, *N*=475)=84.45, *p*<.001. Those who identified as gamers often claimed to not play on a cellular phone (49 played, 111 did not play), Φ=.42, but those who do not identify as gamers often played on cellular phones (235 played, 81 did not

play). See Table 5 for full results. *H4* was largely supported as *H4b,c* were supported. *H4a*, regarding game play via personal computers, showed a statistically significant difference, but in the opposite direction of what was predicted.

Table 5: Differences between gamers and participants who did not identify as gamers in technology used to play games.
Note: Participants could select moree than one type of media that they used.

Identified as a gamer					
	Yes	No	χ^2	Φ	*p*
Plays console	144	94	154.2	.45	.000
Does not play console	16	222			
Plays computer	56	73	7.60	.13	.006
Does not play computer	104	243			
Plays cell phone	49	235	84.50	.42	.000
Does not play cell phone	111	81			

In summary, most hypotheses were at least partially supported despite some findings were statistically significant in an opposite direction of initial predictions. In the following section, these results will be discussed considering their theoretical and practical implications.

Discussion

Previous research on what it means to be a gamer guided the proposal of our hypotheses. Several of these hypotheses were supported while others were not. The findings of our study contribute to gamer identity research in three ways. First, we discuss how results of the study may challenge previous assumptions about gamer demographics. We then examine both the genre of games played as well as

the technology used to play games and how relevant results challenge the previous literature and expand the definition of a modern gamer. Finally, we discuss the implications of changing gamer identity and why game genre and technology use may change, but demographic information of gamers may remain the same.

Our first hypothesis predicted that gamers would be men, white, and younger than those who did not identify as a gamer. This hypothesis was mostly supported as men and younger participants did identify significantly more often as a gamer. However, being white was not found to be significantly associated with identifying as a gamer. When we consider these findings in conjunction with social identity theory's premises of group membership, we can begin to understand why gamers may have reacted the way they did to the marketing efforts of *Battlefield V*.

Users that posted on Twitter using the hashtag #NotMyBattlefield often expressed that EA was "ignoring the fanbase," "revising history," and "making the game unrealistic." A more pointed response was tweeted by @FPSKrieger:

> Alright, I really wanted to stay out of this, but when EA shows a clip with a female soldier HIGHLIGHTED in front, followed by two African Americans, & then WAY in back there's a BLURRED OUT White soldier; EA — you just reached Rank 120 SJW. 🦃💩 #NotMyBattlefield #BattlefieldV [3]

This tweet exemplifies how individuals can lash out and exclude game characters that do not align with the individual's perception of the group's identity. Although we cannot claim a causal link between identifying as a gamer and exclusionary messages, such as the one above, social identity theory would posit such a relationship.

Our second hypothesis that gamers will play more hours of games than those who do not identify as gamers, was supported and the effect size of this finding was quite large with an η^2=.48. Despite the significant finding with a considerable effect size, it did not explain all the variance of identifying as a gamer. Thus, we need to examine other variables that may also contribute to gamer identification. Although the demographic and play time variables are consistent with the previous literature and our hypotheses, they raise some questions about how the gamer identity may be open to change in some areas (*e.g.*, game genre) but not in others (*e.g.*, sex).

A substantial portion of research about gamers is conducted under the assumption that gamers play massive multiplayer online (MMO) games such as *World of Warcraft*and *Final Fantasy*. A google scholar search of "gamer play" yielded 47,200 results, searching for "gamer play World of Warcraft" yielded 8,510 and "gamer play Final Fantasy" 9,520 results. This indicates roughly 38.2 percent of the research on gamer play is focused on two MMO games. However, this study found that although gamers did play MMOs significantly more than game players who do not identify as gamers, gamers preferred to play first-person shooters, role-playing games, and even sports over MMO games. This finding is evidence of a shift in

gaming culture. This shift from MMO to other types of games cannot be attributed to any individual factor. We would propose, however, that the rise of eSports might have legitimized other genres of games as acceptable for gamers to play. Individuals that participate in eSports can now receive college scholarships, similar to college athletes, for playing video games for a university (Kauweloa and Winter, 2019) and eSports consumption has increased in both in-person event attendance and online attendance (Bowman, 2018; Neus, *et al.*, 2019). We hypothesized that sports games would not be preferred by gamers, but the results of analysis indicated that sports games were preferred by gamers. These findings raise concern about generalizability of studies examining only one genre, or even one game that is being played. If most gamers are not playing MMO games, then perhaps studies of this genre may not represent the wider diversity in gamer community.

An interesting finding about the genre of gameplay was that game players who did not identify as gamers were much more likely to play social games than gamers. This was predicted, but the extent that it was supported was surprising. Social games had a large effect size (η^2=.41), meaning that the likelihood to play social games explained 41 percent of the variance in gamer identification. If social games can receive the same legitimacy that sports games have, then perhaps the gamer ranks can widen, as some scholars have recently suggested (Chess and Paul, 2019).

Another assumption about gamers is that they play on personal computers. This assumption is logical as most games that are MMO require PCs, not consoles. Since most game studies examine MMO games, they would also be examining PC play as well. This study found results that contradict that most gamers play on PCs. We found that gamers, in this study, preferred to play with consoles more than with any other technology. Additionally, we found that game players who do not identify as gamers preferred to play on computers more than gamers. One explanation for this finding is that consoles have become cheaper and more available than gaming computers. Currently an Xbox One S can be purchased for US$279 and a PlayStation 4 for US$299. Gaming desktops start at US$799 for an Alienware Aurora and laptops at US$1,399 for the Alienware 15. This difference in price coupled with advances in console technology may be reasons why gamers gravitate towards consoles away from computers. External forces, such as marketing efforts to legitimize consoles, could also have had an impact on the normalization of console play by a gamer. The ability to attain cheaper consoles may have a ripple effect as peers influence each other to buy similar consoles so that they can play together.

When the finding related to game genres played is combined with the finding of technology use, it further supports that gamer identity is changing and should no longer be viewed as playing an MMO on a computer. A better definition of gamer identity would be more inclusive and allow for diverse types of genre play on various technological devices. An additional finding in this category was that gamers claimed to not play games on their cellular phones whereas those who did not identify as gamers did. If the price, availability, and features of cellular phones become similar with those of consoles, it is reasonable to predict that gamers could

increase their use of cellular phones for gaming purposes as some scholars have advocated (Chess and Paul, 2019; Williams, *et al.*, 2008).

The finding of male players identifying more often as gamers aligns with previous research and our hypothesis, but it does not align with how many individuals are playing games. Our sample had more women (56.3 percent) than men and most participants (98.6 percent) claimed they played video games. We therefore believe that many women are playing video games, yet they still feel excluded from gamer identity (17 women did identify as gamers). This exclusion of women from the gamer ranks indicates that the current gamer identity is rooted not in gameplay or technology use, but in traditional gender roles. As previously mentioned in our literature review, external influences can have a substantial impact on whether an individual considers him/herself to be a gamer (Richard and Hoadley, 2013; Shaw, 2011). This research provides evidence that genre and technology use have changed for gamers. More gamers, in this study, reported using consoles than PCs. More gamers also reported preferring first-person shooters (FPS), role-playing games (RPG), and surprisingly even sports games than MMO games. However, it also provides evidence that there has been little, if any, change regarding sex differences. The findings of this study thus illuminate why gamers may have responded in such a negative manner to Electronic Arts promoting a woman as the main character in *Battlefield V*: it was threatening their fundamental gamer identification.

Because the identity of a gamer is socially constructed, we can see how it has changed over time. In this piece, we demonstrate that some basic elements of gamer identification remain the same (*i.e.*, sex, age, and hours played). However, we also found that both genre of play and technology used to play is changing. Gamers are playing more RPG, FPS, and sports than MMO games. Gamers are also playing more on consoles than on PCs. The findings regarding changes in genre of play and technology use indicate that gamer identity has also changed. This research reinforces previous research claims (Howe and Lee, 2018; Richard and Hoadley, 2013; Williams, *et al.*, 2008) and provides evidence that some media are becoming more normalized in gamer culture. This shift is allowing for a more diverse group of players to identify as gamers. However, there still is an unwillingness of women to identify as a gamer, which suggests that although some factors of gamer identity may be malleable and subject to rapid change, others are not. Unfortunately, the phenomenon related to #NotMyBattlefield may also be rooted in traditional gamer identification.

Limitations and future directions

This study is not without limitations. One limitation relates to the nature of sample. Although college aged participants may be able to reflect on how they play video games and how they identify as a gamer well, they may differ from gamers who are older and have a different definition of the label, gamer. We also face a challenge in interpreting findings related to race/ethnicity. Most participants who identified as

white also identified as women and those who identified as Black/African American mostly identified as men; therefore, sex rather than race/ethnicity could have influenced the significant difference in gamer identification of Black/African American group. We did not have enough participants in each subgroup of race to further explore this potential explanation.

Knowing that a) gamer identity can change and b) there are people playing games but not feeling welcome in the gamer community, future research might examine why these individuals feel they cannot identify as a gamer. We also propose that future research does not limit studies of gamers to MMO games; but include all genres of gameplay as well as technologies used. First-person shooters, role-playing, sports, and casual games are vastly understudied when compared to their MMO counterpart. Similarly, console and mobile phone games have received much less attention than games played on personal computers.

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Notes

1. Glass, *et al.*, 2013, p. 727.

2. Tajfel, 1981, p. 255.

3. @FPSKrieger, Twitter post, 23 August 2018.

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