

Examining the intersection of race and gender in video game advertising

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Women and racial/ethnic minorities account for a growing percentage of video game players in the USA. The economic future of the video game industry may, in part, depend on the industry's ability to adapt marketing efforts to appeal to the growing female and racial/ethnic markets. Contrary to these efforts, however, is advertisers' reliance on stereotypes in advertisements to quickly establish a common understanding and wide appeal to a mass audience. This study investigates how race and gender intersect in the stereotypical character depictions used to market video games to consumers. A systematic content analysis was carried out of 383 US magazine advertisements of console, mobile, and PC video games. Stereotyping and intersectionality literatures were used as theoretical guides for this research. Findings reveal that the marketing of video games in the USA upholds some longstanding media stereotypes of minorities and women, including that of the White male hero, submissive sexualized female, Asian ninja, and deviant Black male. The potential social and economic implications of the video game industry's reliance on character stereotypes for the marketing of video games are discussed.

Keywords: videogames; advertising; race; gender; intersectionality; stereotyping

One of the largest grossing sectors of entertainment media is video games. Indeed, with nearly 60% of Americans playing video games (ESA 2014) and the video game industry grossing approximately \$15 billion per year in the USA (The NPD Group 2014), video gaming has become a very profitable segment of the entertainment market. Video games have a wide reach, appealing to children and adults, alike, and consumers of diverse racial/ethnic and sociocultural backgrounds (Entertainment Software Association 2013). According to industry statistics, 45% of game players are now female (Entertainment Software Association 2013). This research examines the diversity of gender and race representations in video game advertising, paying special attention to the ways race intersects with gender in character representations used to market video games in the USA.

As the population of video game players in the USA becomes increasingly diverse, video game companies may benefit by increasing efforts to appeal to new key target markets. We have historically seen similar shifts in advertising focus to ensure the growth of other industries in the USA. For example, in the 1990s, the auto industry turned efforts toward marketing to women and Latinos who accounted for a growing percentage of sales. However, some noted that the auto industry might have been a bit late in the game in making this advertising shift (Meredith 1997). The economic future of the video game industry may indeed, in part, depend on the industry's ability to respond to the growing female and racial/ethnic markets in a timely manner. Offering more female and non-white characters in a wider variety of roles may help grow video game sales and secure a healthy

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future for the industry. Contrary to these efforts, however, is advertisers' reliance on stereotypes in advertisements to quickly establish a common understanding and wide appeal to a mass audience. In particular, advertising often calls upon gender and racial/ ethnic stereotypes to market products to a dominant White male audience. The advertising industry, in particular, is a White male-dominated industry.

This study is a content analysis of video game advertisements appearing in two popular US-based video game magazines. The images in these advertisements are static, making them easy to identify and classify. Further, these magazine images are also often found duplicated in Internet advertising of video games on game-related websites. Thus, though this study is an analysis of video game magazine advertisements, the advertisements analyzed in this study use images that are peppered in video game advertisements across platform. A major contribution of this work is the analysis of the intersection of race and gender in video game advertising. In line with Crenshaw's (1994) notion of intersectionality, analyses were made to investigate intra-group as well as inter-group differences to uncover the interaction of cultural categories (e.g., race and gender) in systematic bias. In other words, differences within groups were examined to determine, for example, if White men were depicted differently than Black men and White women in video game advertisements. Findings are discussed in terms of the consistency of these portrayals with longstanding media stereotypes and the social importance of studying video game content and effects.

Background

Examination of the intersection of race and gender in video game advertising is particularly important given that the examination of representations in advertising has considerable social and theoretical significance. Thus, a content analysis provides a detailed report of the diversity of race and gender images in video game advertisements, and such systematic analysis is important for social reasons. A link between exposure to advertising messages and individuals' cognitions about social groups has been consistently demonstrated (e.g., Lavine, Sweeney, and Wagner 1999; Johar, Moreau, and Schwarz 2003; Monro and Huon 2005; Yoonhyeung, Leshner, and Jounghwa 2008) such that exposure to racial/ethnic and gender stereotypes in advertisements negatively impacts people's race- and gender-based judgments.

Two theories often used as mechanisms to explain these effects are social cognitive theory of mass communication (Bandura 2001) and media priming (see Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier 2002 for an overview). From a social cognitive perspective, Bussey and Bandura (1999) argue that gender stereotypes in advertisements provide consumers with media models from which they may learn about gender-related expectancies and consequences. Media act as 'a pervasive cultural modeling of gender roles' (201). This argument may be extended to learning about other social identities such as race. Relevant to this study, knowledge acquired about gender and race from video game advertisements may be used to guide future judgments and behaviors in the real world. Priming, on the other hand, predicts that advertising triggers cognitive and affective reactions in consumers consistent with the message content (Yi 1990). From this perspective, stereotypes in advertising activate pre-existing stereotypes about gender and race and make this information more readily available in one's mind (Johar, Moreau, and Schwarz 2003). Advertisements can make salient information, which is then used by consumers when making judgments not only about a brand or product but also about social groups they encounter.

Thus, video game advertisers' reliance on stereotypes to appeal to a mass audience has an impact beyond sales. Moreover, Scharrer (2004) argues that video game advertisements highlight prominent game representations and reflect the cultural messages about race/ethnicity, gender, and violence being communicated to video game fans. These advertisements thus provide a window into cultural representations in the video game world.

A first necessary step to understanding the effects of such media imagery on audiences is to systematically analyze content to uncover the cultural messages being communicated. Although the research documenting images of racial/ethnic minorities in US television and magazines is significant, few studies have focused specifically on characterizations of race/ethnicity in video game imagery and those that do fail to explicitly consider the intersection of race and gender. Content analyses of race/ethnicity and gender in video game advertisements (e.g., Scharrer 2004) and video game play (e.g., Williams, Martins, Consalvo, and Ivory 2009) are few and typically merely report on the frequency and not the nature of these representations, nor the intersections of social identities in the depiction of gender and race stereotypes. This study aims to help fill this gap in the research.

Video game players are not merely male or female or Black, White, or Hispanic, they are the intersection of their gender and race (among other) identities. Thus, to understand and to appeal to the video game consumer is to recognize the intersection of these two visible social identities. Moreover, to understand how these social identities are depicted in video game advertising, it is beneficial to explore intersectionality. An intersectionality lens uncovers how gender is raced and race is gendered in the systematic bias of the treatment of groups in society (Browne and Misra 2003; Collins 1999; Crenshaw 1994; Essed 1991). Cultural scholars regularly use this approach to examine the intersection of race and gender in the labor market (Browne and Misra 2003). Social scientific study of the (dis)parity of gender and racial/ethnic groups in advertising is also well suited to using an intersectionality lens. This perspective offers media and advertising researchers the potential to produce research that reflects a more accurate picture of how cultural stereotyping is used in the marketing of products, and more specifically, in this case, the marketing of video games.

Stereotypes in advertising

A substantial body of research documents gender stereotyping in advertising. During the 1950s–1970s, US advertisements predominantly depicted women in subordinate and domestic roles, compared to men who appeared in higher status and career-oriented roles (Belkaoui and Belkaoui 1976; Courtney and Lockeretz 1971; Goffman 1976; Klassen, Jasper, and Schwartz 1993). Research has revealed a shift in gender representations in recent years, such that women appear less often in traditional, domestic roles than in the past; however, women are increasingly relegated to the role of the sexualized and decorative object in advertisements (Ferguson, Kreshel, and Tinkham 1990; Mager and Helgeson 2011).

Similarly, research on the representations of race/ethnicity in US advertising reveals stereotypical portrayals of non-dominant racial/ethnic groups (Coltrane and Messineo 2000; Mastro and Stern 2003). Research suggests that Latinos, Asians, African-Americans, and Native Americans appear in a limited set of roles that often conform to stereotypes. Further, race intersects with gender in advertising portrayals to produce distinct racially gendered stereotypes. For example, it is not uncommon to see African-American women portrayed as exoticized sexual objects (Plous and Neptune 1997),

whereas African-American men are stereotyped as athletic in advertisements (Bristor, Lee, and Hunt 1995).

From a socio-cognitive perspective, stereotypes are broadly defined as 'mental representations of the world' (Stangor and Schallor 1996, 6) that, on an individual level, influence how we attend to, judge, remember, and respond to people we encounter in our lives. Stereotypes consist of information related to the capability, appearance, attitudes, interests, traits, social status, occupation, and behaviors of social groups (Golombok and Fivush 1994). Research confirms that a relationship exists between exposure to media stereotypes and individuals' propensity for making real-world stereotypic judgments about racial/ethnic minorities (e.g., Armstrong, Neuendorf, and Brentar 1992; Ford 1997; Givens and Monahan 2005) and women (e.g., Behm-Morawitz and Mastro 2009; Herrett-Skjellum and Allen 1996; McGhee and Frueh 1980).

When examining advertising, in particular, research has demonstrated that exposure to stereotypes in advertising impacts individuals' attitudes, beliefs, and self-concept. For example, Garst and Bodenhausen (1997) demonstrated that exposure to traditional (i.e., stereotyped) gender representations in advertisements resulted in men, particularly those who initially were less gender traditional, reporting attitudes consistent with longstanding gender stereotypes. This study suggests that, even as adults, our attitudes and beliefs about cultural groups may not be particularly stable and are susceptible to influence from advertising imagery (Garst and Bodenhausen 1997). Cultural representations in advertising may also affect one's identity and aspirations. Davies, Spencer, and Steele (2005) demonstrate that exposure to stereotypes of one's own group (e.g., gender or racial/ ethnic group) in advertisements may result in lowered self-efficacy and aspirations due to the threat posed to one's identity by the stereotypes. When examining the body of literature investigating the effects of advertising on both children and adults, it is clear that advertising imagery plays a significant role in shaping our attitudes and beliefs about others, as well as our perceptions and feelings of the self.

Video game advertising

This study examines the representations of race/ethnicity and gender in video game advertisements as they are tied to character appearance (e.g., provocativeness of attire) and depicted behaviors (e.g., acting violently). Below is a brief overview of existing research examining representations of video game characters in the games themselves and in the marketing of the games.

Representations of race and ethnicity

A handful of studies have documented the frequency of portrayal of racial/ethnic minorities in video games and video game advertisements. For example, Williams et al. (2009) content analyzed game play from the top 150 games of 2005–2006 and reported on the frequency of portrayal of racial/ethnic groups. Whites were overrepresented and occupied the vast majority of primary character roles. Blacks, Latinos, and Native Americans were underrepresented in comparison with the real-world US population.

Most relevant to this study is Scharrer's (2004) and Burgess et al.'s (2011) analysis of race in video game advertisements. Scharrer analyzed advertisements appearing over a 6-month period in three popular US-based video game magazines. Analyses focused primarily on violence and gender. Though race/ethnicity was not a primary variable, Scharrer reported that White characters appeared in 86% of advertisements, Blacks in 30%

of advertisements, Asians in 18% of advertisements, Latinos in 10% of advertisements, and Native Americans in 1% of advertisements. Burgess et al. analyzed advertisements appearing in popular video game magazines published in 2006; however, their race work focuses mostly on the representations of Blacks in video game imagery. They found that White males were the most frequently depicted in advertisements. Black males were more frequently depicted as athletes and as engaging in deviant violent acts, in comparison to White males.

This study seeks to build on this work by examining the intersection of race/ethnicity and gender, as well as how these representations are related to depictions of character violence and sexualization. Violence and sexualization were selected as central themes for analysis because content analytic work has consistently demonstrated that minorities are tied to images of violence in the media and women and girls are routinely sexualized.

Representations of women and girls

An additional prominent theme in video game representations is the sexualization of female characters. Content analyses indicate that women and girls appear infrequently in popular video games as well as game advertisements and are often sexualized in appearance (Beasley and Standley 2002; Dietz 1998; Downs and Smith 2010; Ivory 2006; Miller and Summers 2007). For example, Downs and Smith (2010) found that female video game characters were frequently sexualized, being depicted with voluptuous cleavage and dressed in revealing clothing. Although there is considerable work documenting gendered video game character portrayals, this research does not examine the intersection of race/ethnicity and gender in these representations. This study fills this gap by investigating how character race/ethnicity is related to character gender and sexualization, providing a fuller and more meaningful account of the cultural representations used in video game marketing.

Representations of violence

Lastly, the portrayal of violence is important to examine, given it is a dominant theme in video games (Scharrer 2004; Smith, Lachlan, and Tamborini 2003) and has been traditionally tied to constructions of masculinity, femininity, and race/ethnicity. Historically, Black and Latino men in the media are disproportionately represented as criminals (Greenberg, Mastro, and Brand 2002; Oliver 2003; Ramírez Berg 2002) and members of law enforcement (Greenberg, Mastro, and Brand 2002; Mastro and Behm-Morawitz 2005; Ramírez Berg 2002) — both roles characterized by violence in entertainment media. The portrayal of Blacks and Latinos as criminals focuses on portraying these groups as deviant, untrustworthy, having low intelligence, being unattractive, violent, menacing, and of lower status than Whites. Similarly, Asians have been associated with the stereotype of the villain/criminal, depicting them as untrustworthy, dangerous, violent, and cunning (Kawai 2005; Park, Gabbadon, and Chernin 2006; Shah 2003; Shim 1998).

In terms of gender, television and film content analyses indicate that male characters are traditionally depicted as the aggressors and female characters as the victims. Examinations of gender in video games have revealed that these roles generally hold true in games and game advertisements (e.g., Beasley and Standley 2002; Provenzo 1991; Scharrer 2004). This study takes this research a step further by examining the intersection of race/ethnicity and gender in portrayals of character violence in video game magazine advertisements.

The present study

The following research questions were developed to investigate the frequency as well as intersection of race/ethnicity and gender in video game magazine advertisements. Research question 1 inquires about the frequency of depiction in game advertisements based on race/ethnicity and gender. Research questions 2–4 are related to the relationship between race/ethnicity, gender, and violence in character advertisement representations. Lastly, Research question 5 asks whether character appearance will differ based on race/ethnicity and gender.

Research question 1: What is the racial/ethnic and gender composition of characters

in video game advertisements?

Research question 2: Does the rate of appearance in violent video game advertise-

ments differ based on character race/ethnicity and gender?

Research question 3: Does the rate of depiction of engaging in a violent act in video

game advertisements differ based on character race/ethnicity

and gender?

Research question 4: Does possession of a weapon in a video game advertisement

vary based on character race/ethnicity and gender?

Research question 5: Does character appearance in video game advertisements vary

based on character race/ethnicity and gender?

Method

A content analysis of 6 months, totaling 12 issues, of two popular gaming magazines was conducted. Advertisements for games released by all major video game manufacturers typically appear in these magazines. The popularity of *Game Informer* and *PC Gamer* is akin to many best-selling mainstream entertainment magazines. This is particularly true of *Game Informer*, the top-selling video game magazine; its readership exceeds that of *Time*, *Sports Illustrated*, *Newsweek*, *Maxim*, *O Magazine*, and *Playboy*, with approximately 5 million subscribers, 80% of whom are male (Game Informer 2011). *Game Informer* features news, reviews, and previews of primarily console-based and some PC-based video games. *PC Gamer* (2010) is the top-selling US and UK video game magazine that is dedicated to covering PC games. The magazine had an average monthly US circulation of approximately 33,000 in 2008 (Future Publishing Limited 2009). Although not as widereaching as *Game Informer*, *PC Gamer* is 'the world's biggest PC gaming media brand' (Future Publishing Limited 2009), and its selection ensured that advertisements of PC-based games were represented in the sample.

All gaming advertisements in the magazines were coded; this included repeat video game advertisements. Thus, some games are represented multiple times in the data. To eliminate repeat advertisements would result in a data-set that does not accurately reflect the cultural landscape of advertisements in gaming magazines. Advertisements for products and services other than video games (e.g., computer equipment advertisements) were excluded from analysis. A total of 383 advertisements (*Game Informer*, n = 165; *PC Gamer*, n = 218), 783 characters (*Game Informer*, n = 412; *PC Gamer*, n = 371), and 260 unique video game titles were coded.

Coder training

Four undergraduate and two graduate students served as coders. Four of the coders were identified as White, one coder identified as Black, and one identified as Latina; five of the

coders were females and one was male. Coders were trained by the author for approximately 8 weeks using video game magazine advertisements not a part of the actual sample. At weekly meetings, the coding team discussed discrepancies in the data gathered during training until an agreement was reached on each issue. Once the team reached reliability on the variables, each coder was given a portion of the advertisements in the sample to code. An overlap of 10% of the sample was given to each coder in order to assess inter-coder reliability for the study. Inter-coder reliability was evaluated using Krippendorf's α .

Levels of analysis

For each advertisement, coders made judgments at the game and character levels.

Game level. The title of the game ($\alpha = 1.00$), Entertainment Software Rating Board (ESRB) game rating ($\alpha = 0.92$), and ESRB rating labels ($\alpha = 0.89$) (indicating which games contain violent content) were coded.

Character level. Only characters that were discernible were coded, and up to six characters for each game advertised were analyzed. If there were more than six characters pictured, they coded the six that were the most prominent. The characters whose images were larger and more central to the advertisement were considered more prominent. The following judgments were made about each character.

First, coders determined the *gender* ($\alpha = 0.88$) of the character. Coders judged whether the character was female human, female nonhuman, male human, male nonhuman, or cannot tell. Nonhuman characters had a form exhibiting features that are not human, such as a tail, pointed elf ears, and animalistic characteristics. For analysis, gender categories were collapsed down to two categories – male and female.

Second, the *race/ethnicity* ($\alpha = 0.80$) of the character was coded. The following categories of race/ethnicity were used: White, Latino, Black, Asian, Native American, other, and unknown.

Third, the *violent behavior* ($\alpha = 0.75$) of characters was documented. Coders indicated whether a character was depicted engaging in violent behavior (e.g., fighting/combat); the target of violence need not be pictured to be considered an act of violence.

Fourth, the possession of weapons ($\alpha = 0.81$) was coded for each character. Characters could be coded as possessing the following weapons: bow and arrow, gun, sword, knife, spear, grenade, rocket launcher, magic, other, or none.

Fifth, coders assessed the *attractiveness* ($\alpha = 0.82$) of the characters. Characters were rated as highly attractive, average looking, unattractive, or cannot tell (due to the character's face being obscured).

Sixth, judgments were made to determine whether or not a character's body type was realistic or unrealistic. This was determined by coding for waist size, muscularity, and breast size (for female characters). Waist size ($\alpha=0.81$) was judged as being disproportionately small, average, disproportionately large, or cannot tell. The muscularity ($\alpha=0.79$) of a character was determined by the definition and size of the character's muscles. Ratings were made as very muscular (i.e., hyper-muscular), average, not muscular, or cannot tell (i.e., clothing or positioning of the character precluded judgment). Taken together, waist size and muscularity provide a picture of the body type of the male character. For female characters, breast size ($\alpha=0.79$) was coded in addition to waist size and muscularity. Categories were flat, average, voluptuous, or cannot tell (Beasley and Standley 2002). For women, an unrealistic body type is indicated by a smaller than average or average-sized waist with voluptuous breasts.

Seventh, to help determine the sexualization of characters, coders indicated 'yes' or 'no' to indicate when the following body parts were revealed/partially revealed: shoulders ($\alpha = 0.80$), chest ($\alpha = 0.79$), stomach ($\alpha = 0.82$), thighs ($\alpha = 0.84$), buttocks ($\alpha = 0.81$), and back ($\alpha = 0.75$). In addition, the baring or partial baring of breasts ($\alpha = 0.77$) was coded for female characters. The coders also indicated whether or not a character was provocatively dressed ($\alpha = 0.81$), by coding 'yes' or 'no'. Lastly, coders made a judgment of whether a character's overall appearance was sexualized ($\alpha = 0.84$): 'highly sexualized', 'somewhat sexualized', or 'not sexualized'. Sexualization of male characters was evidenced by a lot of skin showing, provocative dress, and/or an emphasis on their groin area. Sexualization of female characters was evidenced by a lot of skin showing, provocative dress, an emphasis on breasts, and/or being sexually posed. The coders were instructed that to be coded as sexualized, a character must meet at least two of the criteria identified for their gender. Although this is a conservative measure of sexualization, it allowed for increased reliability in judgment. The categories were ultimately collapsed into sexualized and not sexualized for analysis. Taken together, the baring of body parts, provocativeness of a character's attire, and overall judgment of sexualized appearance indicated whether or not a character was sexualized.

Results

Chi-square tests were calculated to assess the significance of differences between groups. Chi-square is a probability distribution statistic that examines the degree to which expected and observed results differ. This test is appropriate for this study, as it allows for examination of the relationships between categorical independent and categorical dependent variables.

Some variable categories were eliminated for analysis when violations of the assumption that each cell contains a minimum of five expected observations occurred. Latino and Native American characters were dropped from all analyses, unless otherwise noted, due to their small sample sizes. For significant Chi-square tests, examination of the adjusted standardized residuals (ASRs) was used to determine which cells significantly contributed to the rejection of the null hypothesis. In addition, the Marascuilo procedure (see Marascuilo 1966) was used in some cases to make pair-wise comparisons to determine significance of differences. The Chi-square degrees of freedom are reported followed by the absolute difference score and p-value for significant pair-wise comparisons using the procedure.

Research question 1

Results indicate that there is disparity in the frequency of depiction by character gender and race/ethnicity (see Figure 1). Minority and female characters appear significantly less frequently than White and male characters. When excluding the characters for whose race could not be identified, Whites comprised 82% of all characters. Latinos (1%), Blacks (8%), Asians (7%), and Native Americans (2%) made up only a small portion of characters represented in the video game advertisements. In terms of gender, 78% (n = 613) of characters were male, 20%(n = 155) were female, and gender could not be determined for 2% (n = 19) of the characters. Approximately 80% of all characters were male. Within all racial/ethnic groups, males outnumbered females.

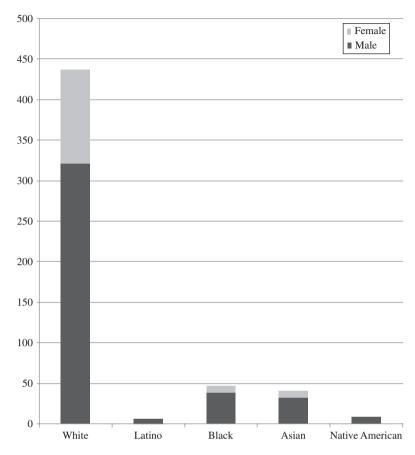


Figure 1. Research question 1: character frequency by race/ethnicity and gender.

Research question 2

Seventy-four percent (n=282) of video games advertised contained at least one ESRB label related to violence. There were no significant differences for race/ethnicity and appearance in a violent video game (as judged by ESRB labeling), $\chi^2(2, N=526)=2.06$, p=0.36. Results revealed that the relationship between gender and portrayal in a violent video game, however, was significant, $\chi^2(1, N=785)=21.59$, p<0.001, Cramer's V=0.17. Specifically, 89% (n=543) of male characters and 74% (n=113) of female characters appeared in an advertisement for an ESRB-labeled violent video game. Male characters were proportionately more likely to appear in violent games than female characters.

When making intra-group comparisons, it was revealed that there were no significant differences in rate of appearance in violent video games for male characters based on race/ethnicity, $\chi^2(2, N=395)=1.18$, p=0.55. There were too few minority female characters to make such intra-group comparisons.

Research question 3

The relationship between character race/ethnicity and violent behavior in video game advertisements was significant (see Table 1). ASRs indicate that Asians were

Race/ethnicity	% Acting violently	ASR ^a
White	36 (n = 158)	-2.1*
Black	37 (n = 17)	-0.1
Asian	60 (n = 24)	3.0*
$\chi^2(2, N = 526) = 9.06, p =$	0.01, Cramer's $V = 0.13$	
Gender		
Male	53 (n = 326)	5.4*
Female	20 (n = 31)	-5.4*
$\chi^2(1, N = 766) = 53.32, p <$	< 0.001, Cramer's $V = 0.26$	
Males		
White	42 (n = 135)	-2.4*
Black	45 (n = 17)	0.0
Asian	72 (n = 23)	3.3*
$\chi^2(2, N = 394) = 10.77, p =$	= 0.005, Cramer's $V = 0.17$	

Table 1. Research question 3: character depiction of acting violent by race/ethnicity and gender.

Note: Percentages reported are within (racial/ethnic and/or gender) group percentages. *Significant ASRs. a Negative ASR scores indicate underrepresentation and positive scores indicate overrepresentation.

proportionately more likely to be depicted acting violently, and Whites were less likely to be shown acting violently. Intra-group analyses revealed that this difference was largely due to the portrayal of *male* characters. When looking at the racial/ethnic differences among male characters, ASRs indicate that Asian male characters were proportionately more likely to be portrayed acting violently than White male characters. Blacks were depicted acting violently at a rate that appears comparable with Whites; however, most likely due to small sample size, significant differences between Black and Asian male characters were not detected.

Gender differences were also examined. Male characters were proportionately more likely to be depicted acting violently than their female counterparts. Examination of the ASRs indicates that female characters were proportionately less likely to be depicted in a violent activity. The reverse was true for male characters.

Research question 4

Research question 4 (see Table 2) explored whether race/ethnicity and gender played a role in the rate of character depiction with a weapon. First, a Chi-square test revealed a marginally significant relationship between race/ethnicity and depiction with a weapon of any type. ASRs indicate that Asian characters were proportionately the most likely to appear with weapons.

When further examining group differences for possession of particular types of weapons, ASRs indicate that significant differences reside with character race/ethnicity and likelihood of possession of swords. First, Asians were proportionately most likely and Blacks were proportionately the least likely to possess swords. Second, Blacks were proportionately more likely and Whites proportionately less likely to possess guns.

In addition, when analyzing only male characters, ASRs indicate that Asian males (43%; n = 12) were proportionately less likely to be depicted weapon-free than their White (62%; n = 185) and Black (60%; n = 22) male counterparts. The ASRs also cautiously suggest that White males may be proportionately less likely overall than their minority counterparts to be depicted possessing a weapon. Although the score (1.5) is not considered significant, the positive number indicates a potential pattern of over-representation of White males in the 'no weapon' category.

Table 2. Research question 4: character depiction with weaponry by race/ethnicity and gender.

Race/ethnicity	% With weapon of any type	ASR ^a				
White	37 (n = 164)	-1.0				
Black	35 (n = 16)	-0.5				
Asian	53 (n = 21)	1.9*				
$\chi^2(4, N = 491) = 11.12, p = 0.03$, Cramer's $V = 0.11$						
Gender	% With weapon of any type	ASR				
Male	44 (n = 175)	5.1*				
Female	20 (n = 26)	-5.1*				
$\chi^2(1, N = 480) = 25.59, p <$	0.001, Cramer's $V = 0.22$					
Race/ethnicity	% With a sword	ASR				
White	11 (n = 38)	0.8				
Black	0 (n = 0)	-2.1*				
Asian	20 (n = 8)	2.1*				
$\chi^{2}(4, N = 491) = 11.12, p =$	0.03, Cramer's $V = 0.11$					
Race/ethnicity for males	% With a gun	ASR				
White	25 (n = 76)	-2.1*				
Black	41 (n = 15)	1.9*				
Asian	35 (n = 10)	0.8				
$\chi^2(4, N = 364) = 11.54, p =$	0.02, Cramer's $V = 0.13$					

Note: Percentages reported are within (racial/ethnic and/or gender) group percentages. *Significant ASRs.

A significant relationship also emerged between gender and the rate of depiction with a weapon. The ASRs indicate that female characters were proportionately less likely and male characters proportionately more likely to be depicted with a weapon.

Research question 5

Research question 5 asked whether or not the physical appearance of characters would vary significantly by race/ethnicity and gender. First, the relationship between race/ethnicity and attractiveness (see Table 3) was significant only when comparing White and Black characters, $\chi^2(1, N=407)=4.07, p=0.04$, Cramer's V=0.10. Whites were disproportionately depicted as 'highly attractive' in comparison with Blacks. Overall, Blacks were depicted as the least attractive video game characters. No other significant racial/ethnic differences emerged. However, gender differences in the degree of attractiveness emerged, $\chi^2(1, N=443)=1.08, p<0.001$, Cramer's V=0.49. Female characters were disproportionately depicted as highly attractive in comparison to male characters. Looking at the intersection of race/ethnicity with gender here, it is evident that female White and Asian – and not female Black – characters contribute to this gender difference.

Second, there were significant differences in terms of ratings of *muscularity* (see Table 3) for the racial/ethnic groups, $\chi^2(12, N=574)=36.88$, p<0.001, Cramer's V=0.18. Examination of the ASRs indicates that Blacks were proportionately more likely to be depicted as 'very muscular' in comparison with Whites. In addition, intragroup differences emerged when examining the muscularity of White male and White female characters, $\chi^2(3, N=438)=14.14$, p=0.003, Cramer's V=0.18. Proportionately, White females were less likely and White males more likely to be depicted as highly muscular.

Third, the relationship between provocativeness of attire (see Table 3) and race/ ethnicity was significant, $\chi^2(2, N = 505) = 8.44$, p = 0.02, Cramer's V = 0.13. Using the

^a Negative ASR scores indicate underrepresentation and positive scores indicate overrepresentation.

Research question 5: attractiveness, muscularity, provocativeness of attire, and sexualization by race/ethnicity and gender. Table 3.

Race/ethnicity	% Highly attractive	$\mathrm{ASR}^{\mathrm{a}}$	% Very muscular	ASR	% Provocatively dressed	ASR^a	% Sexualized	ASR
White	$\frac{18}{5} (n = 67)$	1.5	13 $(n = 45)$	-1.6	16 $(n = 66)$	2.9*	$21 \ (n = 91)$	3.6*
Black Asian	5 (n = 2) 17 $(n = 6)$	- 2.0° 0.0	28 (n = 8) 15 $(n = 4)$	2.0°° 0.1	$\begin{array}{c} 2 & (n \equiv 1) \\ 5 & (n = 2) \end{array}$	-2.3° -1.6	9 (n = 4) 0 $(n = 0)$	-1./ -3.1*
Gender								
Male	6 (n = 18)	-10.4*	18 (n = 51)	3.0*	ш	-11.3*	13 $(n = 36)$	-7.9*
White	6 (n = 17)	1.4	17 (n = 40)	-1.7	- 11	1.5	Ш	2.0
Black	(0 = 0)	-1.4	30 (n = 7)	2.1*	(0 = 0)	-1.0	5 (n = 2)	-0.9
Asian	4 (n = 1)	-0.5	19 $(n = 4)$	0.2	- 11	-1.0	Ш	-1.9
Female	47 (n = 57)	10.4*	(9 = u) 9	-3.0*	- 11	11.3*	Ш	*6.7
White	47 (n = 50)	0.1	5 (n = 5)	-0.5	ш	2.3	Ш	2.8
Black	29 $(n=2)$	-1.0	Ш	1.2	Ш	-2.1	Ш	-1.2
Asian	63 (n = 5)	6.0	(0 = 0)	-0.6	= u	-1.2	Ш	-2.7

Note: Percentages reported are within (racial/ethnic and/or gender) group percentages. *Significant ASR scores.

^a Negative ASR scores indicate underrepresentation and positive scores indicate overrepresentation.

Marascuilo procedure, significant pair-wise comparisons emerged when comparing Whites and Blacks, $\chi^2(2) = 0.14$, p < 0.05, and Whites and Asians, $\chi^2(2) = 0.11$, p < 0.05. These results indicate that White characters were significantly more likely to be portrayed in provocative attire in comparison with Black and Asian characters. The relationship between provocativeness of attire and gender was also significant, $\chi^2(1, N = 505) = 1.53$, p < 0.001, Cramer's V = 0.55. Female characters were disproportionately depicted as provocatively dressed.

Fourth, a significant relationship emerged for race/ethnicity and *sexualized* appearance (see Table 3), $\chi^2(2, N=523)=13.73$, p=0.001, Cramer's V=0.16. Pair-wise comparisons using the Marascuilo procedure were significant when comparing Whites and Blacks, $\chi^2(2)=0.12$, p<0.05, and Whites and Asians, $\chi^2(2)=0.21$, p<0.05. White characters were significantly more likely to be portrayed with a sexualized appearance than Black or Asian characters.

In addition, there was a significant relationship between gender and sexualized appearance (see Table 3), $\chi^2(1, N=503)=84.30$, p<0.001, Cramer's V=0.41. The ASRs indicate that female characters were significantly more likely than male characters to have a sexualized appearance. Cell sizes were too small to use Chi-square to examine the intersection of race/ethnicity and gender, but some patterns are discernible when looking at the percentages and ASRs for female characters. White females appear to be proportionately more likely and Black and Asian females to be proportionately less likely to be depicted with a sexualized appearance. Sample sizes here are small, so we should be cautious about drawing conclusions based on these data. Overall, the data suggest, however, that White female characters are the most likely of all gender and racial/ethnic groups to be presented as sexualized in appearance.

Fifth, the relationship between waist size (see Table 4) and gender was explored. A significant relationship between gender and waist size emerged, $\chi^2(3, N = 501) = 54.66$, p < 0.001, Cramer's V = 0.33. Female characters were disproportionately represented in the unrealistically small waist category and were less likely to appear with an average-sized or unrealistically large waist. The reverse was true for males. Cell sizes were inadequate to make racial/ethnic comparisons; however, the data (see Table 4) suggest that White female characters account for the overall gender differences in character depiction with a small waist.

Sixth, breast size was looked at for female characters; 9% (n = 12) of female characters were coded as having a 'flat' chest, 37% (n = 49) were coded as having

Gender	% Disproportionately small	ASR ^a	% Average	ASR	% Disproportionately large	ASR
Male	2 (n = 6)	-7.0*	88 (n = 232)	3.3*	10 (n = 26)	2.7*
White	2(n=4)	-1.3	88 (n = 200)	0.7	10 (n = 22)	-0.2
Black	5 (n = 1)	0.9	85 (n = 17)	-0.4	10 (n = 2)	0.0
Asian	6 (n = 1)	1.0	83 (n = 15)	-0.6	11 (n = 2)	0.2
Female	26 (n = 23)	7.0*	73 (n = 65)	-3.3*	1 (n = 1)	-2.7*
White	29 (n = 23)	1.9	70 (n = 56)	-1.9	1 (n = 1)	0.2
Black	0 (n = 0)	-1.4	100 (n = 5)	1.4	0 (n = 0)	-0.2
Asian	0 (n = 0)	-1.2	100 (n = 4)	1.2	0 (n = 0)	-0.2

Table 4. Research question 5: waist size by race/ethnicity and gender.

Note: Percentages reported are within (racial/ethnic and/or gender) group percentages. *Significant ASR scores.

a Negative ASR scores indicate underrepresentation and positive scores indicate overrepresentation.

'average-sized' breasts (i.e., full but relatively proportionate to their body frame), and 23% (n = 31) were coded as having 'voluptuous' breasts.

Last, the relationships between character race/ethnicity, gender, and the *baring of body parts* were analyzed. No significant racial/ethnic differences emerged for the baring of shoulders, $\chi^2(2, N=510)=0.47, p=0.79$; chest, $\chi^2(2, N=510)=1.81, p=0.41$; and stomach, $\chi^2(2, N=508)=0.15, p=0.93$. Cell sizes were too small to analyze statistical differences for thighs, buttocks, and back. However, a significant relationship emerged for gender on all six categories of body parts: shoulders, $\chi^2(1, N=522)=77.21, p<0.001$, Cramer's V=0.39; chest, $\chi^2(1, N=522)=54.77, p<0.001$, Cramer's V=0.32; stomach, $\chi^2(1, N=520)=49.47, p<0.001$, Cramer's V=0.31; thighs, $\chi^2(1, N=520)=40.04, p<0.001$, Cramer's V=0.28; buttocks, $\chi^2(1, N=405)=56.78, p<0.001$, Cramer's V=0.37; and back, $\chi^2(1, N=403)=56.40, p<0.001$, Cramer's V=0.37. ASRs indicate that females were disproportionately likely to be portrayed in various states of undress, with a greater degree of skin showing than their male counterparts.

Discussion

The video game industry has a wide reach, appealing to children and adults, alike, and consumers of diverse racial/ethnic and sociocultural backgrounds (Entertainment Software Association 2013). A primary goal of this study was to investigate how racial/ ethnic groups are represented in video game advertising, as well as how these representations intersect with gender. Thus, a systematic examination of raced gender and gendered race character depictions in magazine video game advertisements was undertaken. This examination was guided by stereotyping and intersectionality literature. Research has long argued that is it critical to understand how advertising represents cultural groups, as advertisements both reflect and shape sociocultural values. In addition, history suggests that an industry's capability to quickly respond to growing female and non-white markets is important to the future success of the industry. Findings reveal that race intersects with gender in video game advertisement portrayals, and video game advertisements uphold some longstanding media stereotypes of racial/ethnic minorities and women. Most notably, support is found for the reliance on stereotypic portrayals of the White male hero, submissive sexualized female, Asian ninja, and deviant Black male.

Consistent with prior content analytic research, results indicate Latinos, Blacks, Asians, Native Americans, and women and girls are underrepresented in video game advertisements. Whites accounted for 82% of all characters whose race/ethnicity could be identified, and White male characters alone made up 60% of the total sample. Latinas and female Native American characters were absent altogether, and, overall, Latinos and Native Americans appeared in such small numbers that they were necessarily eliminated from further analysis. A critical approach is necessary to understand how gender and race intersect in these rare representations.

The intersection of race and gender in video game advertisements was evidenced when examining character appearance and depiction of violence. First, consistent with prior research, findings confirm that the role of female characters as objects of sexual fantasy is indeed present in video game advertisements. However, this practice is not uniform for all female characters; this study sheds light on racial/ethnic differences in the sexualization of female characters. White female characters were the most sexualized and highly attractive characters in the video game advertisements. The near absence of female Black, Native

American, and Latina characters and their propensity to be less sexualized and less attractive than their White counterparts suggest a particular *type* of beauty standard is being communicated in video game advertisements. The idealized White female body is the object of desire, to the exclusion of women of other races and ethnicities. It should also be noted that Asian female characters were highly sexualized and attractive, but not statistically significantly so in comparison to other female characters. Small sample sizes may have limited power to reveal such differences.

Intra-group differences based on race/ethnicity were likewise found for male video game characters. White male video game characters were depicted as more physically attractive than Black male characters. Although Black male characters were less attractive, they were the most hyper-muscular of all characters. This intimidating physical body frame (low attractiveness and high muscularity) could be seen as falling in line with prior content analytic research and reflective of the media stereotype of the African-American male criminal (Greenberg, Mastro, and Brand 2002).

Further, analyses of racial/ethnic differences in the depiction of characters acting violently suggest that the stereotype of the Asian ninja or villain is present in video game advertisements. Asian characters were proportionally the most likely to be portrayed engaging in violence in a video game advertisement. In addition, while guns were the most commonly associated weapon with other racial/ethnic groups in this study, stereotypically, swords were most frequently associated with Asian characters. This portrayal of Asian males as highly violent and the 'othering' of Asian characters through ethnic dress and appearance should be further explored in future content analytic work. Due to the relatively small numbers of Asian characters appearing in popular US video games, a more purposeful sampling technique and/or a critical approach may be necessary to uncover more details of the stereotyping of Asian characters in video game advertising.

Interestingly, White male characters were proportionately less likely to be depicted acting violently and possessing a weapon in video game advertisements. This coupled with the finding that White characters were more attractive than minority characters suggests that they disproportionately occupy the role of the video game hero.

In sum, the findings from this study suggest that video games uphold some longstanding racial/ethnic and gender media stereotypes, namely those of the sexualized (White) female, the White male hero, the Asian ninja, and the Black male criminal. Further, the intersection of race and gender is at the core of the understanding of these portrayals. The data indicate that disparate representations of racial/ethnic groups are present in video game advertising, both in terms of frequency and nature of portrayal, and that gender is impactful on these portrayal dimensions.

Social implications

The findings from this study underscore the need for future research examining the shortand long-term effects of exposure to racial/ethnic as well as the intersection of gender and race in the depiction of stereotypes in video game advertising and video game play. Mapping the findings of this study onto priming theory suggests that video game advertisements contain stereotype primes that reinforce the privileging of Whites (particularly White males) over women and less dominant racial/ethnic groups. These stereotype primes found in US-based video game advertisements may influence social perceptions and act as a sanction of prejudicial treatment of non-dominant social groups in the USA. Representations in video game advertisements may also contribute to identity development by providing consumers with gender- and race-linked evaluations. From a social cognitive perspective (Bandura 2001; Bussey and Bandura 1999), entertainment media models, such as the video game characters featured in video game advertising, are mediated peers that can act as socializing agents. Accordingly, advertising is one subsystem that contributes to the social beliefs systems within a culture. Counterstereotypic advertising portrayals may reduce stereotyping, expand individuals' aspirations, and shift beliefs about the types of roles available to societal groups (Bussey and Bandura 1999).

Although video game companies are under no legal obligation to improve racial/ethnic and gender representations in video games and related marketing materials, in light of media effects and inter-group research, it may be deemed socially irresponsible to ignore the issue. Media are certainly only one factor contributing to racial/ethnic stereotyping, but research demonstrates that the effects of exposure to media stereotypes are significant and of social importance.

Practitioner recommendations

It may be economically beneficial to the video game industry to improve the equity of character representations in its games and marketing efforts. As scholars and consumer advocates continue to highlight the inequities present in video game character representations, consumers may become more critical of the industry. Increased attention to the problem may result in increased demands for the video game industry to make a concerted effort to reduce racial/ethnic and gender stereotyping in both advertising and game content. Moreover, the failure to create more games and marketing strategies to reach women and non-white video game players may result in problems for the economic security of the game industry. To tap the economic potential of women and non-white video game players, video game advertising needs to diversify the representations used to market games to the increasingly diverse video game audience. Failure to see this early on may eventually result in the stagnation of the growth of the industry.

Thus, a key recommendation to advertising practitioners is to apply an intersectionality lens to evaluate the strategies and designs used to market video games, and other entertainment products. Advertisements may be more impactful by considering how the intersections of gender and race work to both reflect and appeal to consumer identities, as opposed to simply looking at gender and race as separate demographic categories implicated in an advertising campaign's design. Traditionally, advertising practitioners rely on such categories to understand the market and to make creative decisions. A marked decision to use an intersectionality approach would help practitioners to adapt to the increasingly diverse video game market and maintain relevance with video game players. Such an approach would also extend current demographic and psychographic segmentation market research techniques to consider the roles of intersectionality in consumer decision-making.

Future research

Taken together, the findings from this study suggest that there is much work to be done in terms of both increasing minority and female character representation and decreasing reliance on racial/ethnic and gender stereotypes. Future research should continue to examine such portrayals in video game advertisements as well as shed more light on the short- and long-term effects of exposure to stereotypic video game characters both in terms of buying behaviors and social attitudes.

A next step in research is assessing consumer responses to the representations in video game advertisements. The differential effects of video game advertisements containing stereotypic character portrayals compared to counter-stereotypic characters should be examined. A controlled test of the short-term effects of gendered and raced representations in video game advertisements on individuals' liking of the characters, desire to play the game, and intention to buy the game should be undertaken. Impacts of video game advertising stereotypes on social perceptions should also be measured.

The findings of this research suggest social scientific and marketing researchers should consider the intersection of gender and race both at the video game character and the consumer levels. At the character level, gender and race identity intersections may be manipulated to test the appeal of advertisements. At the consumer level, how the gender and race identities of the consumer intersect to affect responses to video game advertisements should be studied. Using a quantitative approach, moderation models may be tested to examine possible interactions of consumer race/ethnicity with consumer gender in predicting responses to stereotypical and counter-stereotypical character depictions in advertisements. Coupling this approach with qualitative research using focus group interviews would provide rich detail as to the personal reactions individuals have to portrayals in video game advertising. A qualitative approach may be particularly helpful in identifying and exploring responses to counter-stereotypic representations of gender and race in video game advertisements. Such research would provide social scientists as well as practitioners with evidence for how video game advertising content may be manipulated to appeal to an increasingly diverse market and contribute to an egalitarian social belief system.

Notes on contributor

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