Journal of Media and Communication Studies Vol. 3(6), pp. 212-220, June 2011
Available online http://www.academicjournals.org/jmcs
ISSN 2141-2545 ©2011 Academic Journals

Full Length Research Paper

Racism and sexism in the gaming world: Reinforcing or changing stereotypes in computer games?

B. Mitchell Peck[1]*, Paul R. Ketchum[2] and David G. Embrick[3]

[1]Department of Sociology, University of Oklahoma, 780 Van Vleet Oval, Norman, Oklahoma 73019, USA.
[2]College of Liberal Studies, University of Oklahoma, 1610 Asp Avenue, Norman, Oklahoma 73019, USA.
[3]Department of Sociology, Loyola University Chicago, 1032 West Sheridan Road, Chicago, Illinois 60660, USA.

Accepted 6 May, 2011

Advertising images reflect and shape peoples' perceptions about race and gender issues. We examined two issues surrounding how race and gender are represented in computer game print advertising. First, does imagery in computer game advertisements reinforce race and gender stereotypes? Secondly, how has stereotyping in computer game imagery changed over the last two decades? We conducted both quantitative and qualitative analyses of two major computer gaming magazines, *PC Gamer* from 2009 and *Computer Gaming World* from 1992, to test our hypotheses. We found that women and minorities are represented in gaming advertisements at rates similar to their numbers in the general population. The quality of the representation of women and minorities, however, was generally lower than males and whites. We found minorities were generally limited to stereotypical roles or excluded. Women were typically depicted in sexualized roles. Our study suggests no significant gains have been made in the past two decades in terms of how women and minorities are portrayed in gaming advertisements.

Key words: Computer games, gender, race, stereotypes.

INTRODUCTION

In recent years, sales of personal computer (PC) games have exceeded $900 million per year (McCauley, 2008). Though that figure is less than sales of consol games (for example, Wii, Xbox, Playstation), PC games continue to be on the cutting edge in game development, with many of the best selling consol game titles coming from the PC platform. The combined sales of PC and consol games approach that of the U.S. film industry (McCauley, 2008). Given the significance of the market influence of PC games, we examine how race and gender are depicted in PC games, specifically through an analysis of advertisements in PC game magazines.

The framing of minority and female portrayals in advertisements suggests how these groups are viewed by those targeted by marketing, as advertising reflects and often magnifies social inequalities (Schudson, 1989). Given the legal advances in assuring equality for women and minorities in recent decades, a critical examination of how these groups are portrayed, especially in a media that was created and developed after (most) legal barriers were eliminated, promises to shed light on the comparison of “de jure” and “de facto” discrimination faced by these disadvantaged groups.

Research has consistently shown that stereotypes have long-term consequences regarding how others are perceived and impose limits on intergroup interactions (Bonilla-Silva, 2001; Shaheen, 2003). Stereotypes are generalizations about individuals based upon their group membership (Lauzen et al., 2008) and are created and maintained as a barrier to others who are in close proximity to a community (McVeigh, 2004), that reinforce relative group hierarchies (Lauzen et al., 2008). As “others” become more fully embraced, stereotypes may change or even disappear (Bonilla-Silva, 2001; Bonilla-Silva and Lewis, 1999).

We examine the role of race and gender stereotyping in computer games with the expectation that fewer and less

*Corresponding author. E-mail: bmpeck@ou.edu. Tel: (405) 325-1751. Fax: (405) 325-7825.

intense racial and gender stereotypes may signal a greater inclusion of racial minorities and women and that more common or increased intensity of stereotypes suggests the opposite. Although there is a significant amount of research on gender and race imagery in other areas of mass media, such as film, television, print media and console games (Chito-Childs, 2005; Daniels, 2009; Vera and Gordon, 2003), there is little existing research on stereotypes in the computer game area. This research will fill an important void in this large and growing area of entertainment.

We address two research questions: first, do computer game images reinforce race and gender stereotypes or does the computer gaming world embrace equality more so than other media? Secondly, how has stereotyping in computer games changed over the last two decades? To examine the questions, we analyzed the images in advertisements for computer games in industry magazines. The images in the advertisements are ideal to address these questions because: (1) visual imagery is a common vehicle for expressing or suppressing stereotypes, (2) magazines include advertisements for many different genres of computer games, and (3) computer game magazines are more likely to be read by active gamers (Nakamura, 2001), rather than first time users, making it more likely that stereotype rejecting and stereotype reaffirming imagery will be viewed repeatedly, as each new issue is released and read.

THEORETICAL FRAMEWORKS

Critical inequality scholars recognize how firmly race and gender are embedded in the structural foundations of American society. Rather than treat race and gender separately, we examine how images of race, gender and sexuality intersect to limit opportunities for both women and racial or ethnic minorities, resulting in limited expectations and options for those who are not white, male, middle to upper-class and heterosexual. We draw primarily from racialized social system theory and critical race feminism theory as the foundation for our understanding of how race and gender both intersect and operate in the U.S.

The racialized social system

The racialized social system theory describes racism as a global phenomenon that affected all societies that came into contact with European whites (Bonilla-Silva, 2001). The racialization of the world system was, and still is, based on social, economic, political, and psychological relations of domination and subordination between social groups defined as "superior races" and groups defined as "inferior races" (Bonilla-Silva, 2001; Feagin, 2006; Omi and Winant, 1994). Further, the theory argues that racialization of the world created racialized social systems where the dominant race has developed various practices and mechanisms to maintain its social standing and subject racial groups have struggled to change their position in the social order (Bonilla-Silva, 2001). Racism has a material or structural foundation; that is, race issues in societies reflect the interests of the parties in conflict. Thus, Bonilla-Silva argues that while prejudice in all its variants can be regarded as an expression of dominant group interests, effective racial control benefits not from a plurality of highly racialized individuals in society, but from the passive and tacit support of the racial order by most members of the dominant race, in the case of the U.S., whites (Bonilla-Silva, 2001, 2006).

Because racialized social systems operate to preserve white privilege, progressive attempts to create a more balanced and egalitarian society are often ideals in theory, yet failures in practice. For example, although there is debate surrounding the notion that schools and educators are necessarily privileged sites or actors for progressive social change, in truth, they usually function, despite contradictions, to reproduce the racialized social system (Kozol, 1991).

Critical race feminism

Critical race feminism has origins in the growing traditions of critical legal studies and critical race theory (Wing, 1997). The critical theories began in the 1970s as a challenge to the so-called objectivity of laws that had oppressed women and people of color for centuries. Similar to critical race and critical legal studies, the tenets of critical race feminism revolve around issues of power and white supremacy. For example, one of the central beliefs held by many scholars from these traditions is that because race is such a normal and fundamental part of the everyday lives of most Americans, formal equal opportunity laws are usually unable to remedy all but the most overt types of racial discrimination in U.S. society. What differentiates critical race feminism from critical race theory and critical legal studies is the recognition that women of color, and women, in general, are often excluded from critical race scholarship. Thus, critical race feminism addresses not only the power issues and objectivity of laws that have oppressed women and people of color, they also acknowledge that the experiences of women of color are different than that of their male counterparts and of white women (Ontiveros, 1997). Further, critical race feminism addresses the intersectionality of race and gender that are often dismissed in contemporary race and gender scholarship (Jordan, 1997).

Hypotheses

Using racialized social system theory and critical race

feminism as the foundation for our understanding of how race and gender both intersect and operate in the U.S., we hypothesize that race and gender images in computer game advertisements will reflect current trends of inequality in American society. Specifically, in terms of representation of minorities and women, we hypothesize that:

(1) Racial minorities and women will appear less often than their proportion in the general population;
(2) Racial minorities will be portrayed negatively, as evil or villains, rather than as good or heroes;
(3) Women will be portrayed in objectified and sexualized roles.

We should note that our central focus is on race, rather than ethnicity. The representation and portrayal of ethnicity are difficult to examine in print advertisements, as ethnicity typically is not expressed by observable physical characteristics. For instance, ethnic Hispanics can be racially white, black, Asian, indigenous or any combination of these (or other) racial groups. Because ethnicity is not always expressed visually, we will examine ethnicity only when it is referenced in the advertisement or otherwise made clear visually through the use of other identifiers, such as specific settings, clothing or language. Nakamura (2001) used similar identifiers to detect the racialization of avatars in online games.

In general, we expect to find that computer games are designed and marketed for white, adolescent males, with evidence of both color-blind racism and overt sexism in the advertisements. Since the mid to late-1980s, many social programs in the U.S. have been retracted or eliminated altogether. This trend—often described as the dismantling of the Great Society programs which were implemented to minimize racial and gender inequality—has slowed efforts toward racial and gender equality (Marable, 2000; Sampson and Laub, 1993). Given this trend, we hypothesize:

(4) Current computer game advertisements (from 2009) will be as racially and gender biased (or more) than those from two decades ago.

MATERIALS AND METHODS

Data collection

To test these hypotheses, we collected data from computer gaming magazines. To describe and assess the current degree of racial and gender stereotyping, we collected data from the magazine, *PC gamer*. *PC gamer* is the best selling PC game magazine in the world, with an average monthly circulation of 32,619 in 2008 (Future Publishing, 2009). We collected data from all issues in the first nine months of 2009 (January – September). As a comparison to current trends, we collected data from *computer gaming world* issues in 1992. We selected the year 1992 because it represents a reasonable time frame to assess change and it was the first full year after the expansion of the magazine into the format which lasted for another fifteen years. *Computer gaming world* was a top selling PC game magazine in the late 1980s and early 1990s (Games.net, 2008).

Using a content analysis approach, we developed a coding scheme through an iterative process (Strauss and Corbin, 1990). First, we created general coding categories based on theoretical grounds and an initial examination of a sample of gaming advertisements. Secondly, we developed a coding sheet with operational definitions for the characteristics of interest in the advertisements. We included a section for description and comments on observed racial or gender stereotypes in order to add detail and understanding. Finally, the initial coding sheet was reviewed by the authors and graduate students who worked on the project. After finalizing the coding sheet, we trained four student coders. The student coders trained several weeks by filling out practice sheets. The research staff checked these sheets, noted problems, and provided additional training as necessary. Once the research staff was assured the coders understood the coding categories and operational definitions, the student coders coded the advertisements in the magazines. All data were coded independently, with informal checks occurring periodically to ensure the coders stayed within training guidelines.

We evaluated inter-rater agreement between the coders by randomly selecting 10% of the data for double coding. The coders were not aware of the results of the prior coding. We computed kappa statistics (κ) for variables coded as yes/no or absence/presence of a characteristic or event in an advertisement. The κ-statistic evaluates the extent of agreement between two or more independent evaluations of a categorical variable. The κ-statistic takes into account the extent of agreement that could be expected on the basis of chance (Gwet, 2010). We examined five variables for agreement between the coders.

We examined the extent to which the coders agreed on the gender and race of the primary character depicted in the advertisement. We also examined the extent to which the coders agreed on the presence of a gender or racial stereotype, and whether or not the primary character depicted in the advertisement was sexualized. Agreement between the coders was very good. The κ coefficients ranged from 0.75 to 1.00 (average $\kappa = 0.94$). The lowest agreement among the coders was for the presence of a sexualized main character. The highest agreement was for the race and gender of the characters.

Variables

We focus on two outcomes to examine racial and gender stereotyping in PC game media representations. The first is proportional representation. If representation of women and minorities is proportionate in the advertisements, the percentages should roughly mirror the race and gender composition of the U.S. population. Thus, we would expect approximately 12 to 13% of the people represented in the advertisements to be black, about 4 to 5% to be Asian, about 80% white, and so on (U.S. Census Bureau, 2010). We would also expect roughly half of those portrayed in the advertisements to be female.

The second measurement we examine is the role and quality of representation of minorities and women in the advertisements. Here we focus on whether women and minorities appear as tokens, or if they constitute a substantial presence in video game advertisements. If PC game advertisements are not racialized or stereotyped, we would expect blacks to appear in both hero and villain roles, as main characters as well as supporting cast, at a rate roughly equal to their representation in the larger society. The same is true for all race groups. Likewise, we would expect women to be portrayed equally, as likely as men to be hero or villain, leader or follower, central or peripheral to the plot, and be objectified or sexualized no more than men.

The other variables of interest are those ascribed characteristics

Table 1. Race and gender of characters in 2009 *PC gamer* advertisements.

	N	Percentage (%)
Race of primary character in Ad		
White	64	82.1
Black	7	9.0
Asian	6	7.7
Not applicable	1	1.3
Gender of primary character in Ad		
Male	40	51.3
Female	37	47.4
Other/unclear	1	1.3

most often used in media stereotyping: race and gender. As noted in the earlier, all variables were measured from trained coders examining advertisements in magazines that cater to PC gamers. The descriptions/observations of racial and gender stereotypes were recorded as written descriptions detailing the stereotyping observed. These data were also coded and analyzed for reoccurring themes.

Analysis

We use both quantitative statistical tests and qualitative descriptions of the visual images in the gaming magazines. We present basic frequency distributions, percentages and two-way frequency tables. We present Pearson's chi-square tests and associated significance levels to test the hypotheses. We supplement the quantitative analysis with content analysis of the imagery in the advertisements in order to provide more insight into how stereotypes operate in computer gaming advertising, specifically as an examination of the quality and type of minority and female representation in the advertisements.

RESULTS

Characteristics of the sample

A total of 302 advertisements were coded and included in the analyses. There are over 200 advertisements in the 9 issues from 1992; there are 78 advertisements in the 9 issues from 2009. This difference is largely explained by the type and size of the advertisements from the two years. In 1992, there was a higher percentage of small advertisements (half page or smaller). In 2009, there were more full-page and multi-page advertisements.

Most of the characters portrayed in the advertisements were human, though the data show an interesting shift from 1992 to 2009: the number of non-humans in the advertisements declined significantly. In 1992, almost a quarter of all characters in the computer game advertisements were non-human (alien, fantasy, or cartoon). In 2009, only about 5% of the characters were non-human. This is likely the result of improved technology, especially in the quality of screen resolution, and the ability to generate more life-like characters in the games.

There is a similar trend in terms of the race and gender of characters depicted in the advertisements. In 1992, almost a quarter of the characters did not have a clearly identifiable race; while about 10% of the characters in the 1992 advertisements did not have a clearly identifiable gender. In 2009, the number of characters without a clearly identifiable race or gender was nearly zero.

To assess the current depiction of race and gender in computer games, we examine two factors: the proportional representation of minorities and females and the quality of that representation. The former examines whether racial minorities and women are represented in advertisements at roughly the same proportion as their representation in society. The latter examines whether racial minorities and women are depicted in terms of stereotypes or sexualized.

Proportional representation of women and minorities

Table 1 shows the numbers and percentages of the race and gender of the primary characters in the 2009 *PC Gamer* advertisements. The data suggest that racial minorities and women are represented in the advertisements at roughly the same proportion as the general population. In 2008, the general population in the U.S. was 80.1% white, 12% black and 7.9% other races (U.S. Census Bureau, 2010). The PC game advertisements in 2009 showed nearly identical numbers, with 82% of the primary characters being white and about 18% being non-white.

The representation of women in the advertisements shows a similar pattern. In 2008, women accounted for 51% of the U.S. population (U.S. Census Bureau, 2010). Women accounted for 48% of the primary characters in the advertisements. The data clearly suggest racial minorities and women are represented in current PC games approximately proportionate to their numbers in society. We turn now to an assessment of the quality of that representation.

Table 2. Stereotyped and sexualized characterizations of race and gender in 2009 *PC gamer* advertisements. Numbers are percentages.

	Stereotyped character	Sexualized character
Race		
White	53.1	53.1
Black	100.0	0.0
Other	83.3	33.3
N/A	0.0	100.0
p-value	0.033	0.013
Gender		
Male	2.5	67.5
Female	97.3	97.3
p-value	0.000	0.000

Race and gender stereotyping

Table 2 shows the stereotyped and sexualized characterizations for race and gender in the 2009 *PC gamer* advertisements. The data show that racial groups are depicted using stereotypes, minorities are especially so. All the black characters were depicted using a racial stereotype. An example of race stereotyping is depicted in the advertisement for the game “Never Winter Nights”. The illustration in the advertisement for the game shows a group of male elf characters. The elves are trim and physically fit and all have pointed ears. All but one of the elves are racially white. The black elf not only has black skin, but his nose is exaggerated and noticeably broader and more flat than any of the other elves. Another representative example is the depiction of race in the advertisement for “NBA 2K9”. This advertisement includes two images. In the first, ten players are pictured playing basketball. Each team consists of four black players and one white player, with a white referee pictured. The second image is a much closer view of the action. This image shows two white players under the hoop. The black players are absent from the second image, leaving the role of hero to the white characters. When race was identifiable, heroes in many of the games also tended to be white.

Whites, too, are often stereotyped in the PC game imagery. For males, those images tended to be more class-based, white images. As an example, one of the primary characters in Fallout 3: Point Lookout depicts a typical, southern "redneck" character—a skinny, white, shirtless man standing in front of a moonshine still and an old cabin, near a swamp. This is consistent with the contention that race and gender do not operate in a vacuum, rather all frames of reference use middle-class or better, white, heterosexual males as the norm, with all other groups being compared to that norm (Bonilla-Silva, 2001). Rather than illustrate an exception to the significance of race, the image shown for “Fallout 3” simply adds yet another layer to the complex interaction of race, gender, and class.

White habitus is defined as: “…a racialized uninterrupted socialization process that conditions and creates whites’ racial taste, perception, feelings, emotions, and view on racial matters” (Bonilla-Silva, 2006: 104). The imagery of computer game advertisements portrays whites in the forefront of the game experience with blacks and other minorities relegated to the role of insignificant background color or “wallpaper” in the white world. This is significant as Bonilla-Silva and Embrick (2007) have suggested that immersion in “white habitus”, especially in childhood, conditions whites, even those who eventually find themselves living and working in multicultural settings, to associate predominantly with other whites as they see whiteness as “normal.” As in the case with the advertisement for “Fallout 3”, images of class can alternatively be used to identify “others.”

The lower panel in Table 2 shows the stereotyped and sexualized characterizations of gender in the 2009 PC Gamer advertisements. The data suggest a very clear and prominent trend. Women are stereotyped and sexualized to a much greater extent than men. Over 97% of all female characters in the advertisements were depicted using gender stereotypes. Similarly, over 97% of the female characters in the advertisements were sexualized. The sexualized nature of the advertisements tended to be in the nature of the women's clothing, their physique, or both. The women tended to be dressed in either tight, form fitting clothing or more often, were scantily clad. The female characters typically resembled the physical characteristics of the popular gaming (and later, movie) character, Lara Croft. The character of Lara Croft exhibits an interesting duality. Physically, she is the embodiment of objectification: she is young, possess an exceedingly large chest, and a very small waist with well-rounded hips. On the other hand, she is strong, smart, independent and, in many ways, the ultimate feminist hero. Toby Gard, designer of Lara Croft, explained in an

interview that he intended to make the character's chest 50% bigger, but a slip of the mouse caused an accidental 150% increase in her chest measurement (Gard, 1997). Lara Croft first appeared in a computer game in 1996, when screen resolution was only a fraction of that available today. It could be that exaggerated physical characteristics for early female game characters were simply a method of easy visual gender identification of early game characters. Gard claims that the exaggerated physique of Croft only became a marketing tool after the fact. The success of the Lara Croft character may explain the trend of current female game characters to have Croft-like measurements. In fact, even a zombie-like character in an advertisement for the game “Prototype” had a beautiful body, but no discernable face.

In addition to sexualized physiques and dress, women were often portrayed in sexualized situations. The very popular game, “Grand Theft Auto 4”, used two such scenes in its advertisements. In one, a sexy, white female is suggestively sucking on a lollypop, while in another advertisement, a white female, wearing only a thong, is standing in front of a fully dressed white male, who is admiring her in what appears to be a run-down motel room. Another example, from “The Sims 3” advertisement, shows a scene in which two sexy, white women are passionately kissing. While it is possible that scene is simply portraying a loving, lesbian couple, it appears staged to titillate heterosexual men.

The only black female to appear in any computer game advertisement is a character in “Left for Dead 2”. While attractive, she is a bit older than most of the female characters appearing in other games (the game website lists her age as 29) and significantly less extreme in looks than most of the white female characters. Within the confines of “Left for Dead 2”, this character could be considered an image of sexual fantasy, which is a rare portrayal of black women in the media (Coltrane and Messineo, 2000). However, when compared to the extreme figures of the white female game characters, she no longer stands out as a sexual fantasy, but instead appears average looking.

In many ways, the advertisements for “Left for Dead 2” are the most racially and gender progressive found in this study. Not only are two of the game's characters black, but the black female character manages to follow in the action hero footsteps of Lara Croft without being hypersexualized. Interestingly, the one game in which half of the featured characters are black also portrayed female beauty within the confines of realistic, attainable possibilities.

It is worth noting that only two more black females were pictured in any of the issues of *PC Gamer*, though not in a game advertisement. Both appeared together once, in a screenshot for PC-based training software for Hilton Garden Inn Hotels. Unlike the game advertisements, the two black females, who are the only characters in the picture, are both average looking. One appears to be in her thirties or forties and the other, with grey hair, appears to be in her fifties or sixties. We highlight this non-gaming advertisement as it exemplifies a modern take on the mammy character, first introduced in the slavery era (Pilgrim, 2000) and later popularized in early Hollywood films (Fuller, 2001). The mammy character was not limited to Hollywood. Advertisers were quick to use the image. Aunt Jemima, first created in 1889, is today both the best known and arguably the longest lived of these, but the mammy image has been used to sell many household products, such as breakfast foods, detergents, planters, sewing accessories, beverages (Pilgrim, 2000). While the Aunt Jemima mammy character has been updated, softening the racialized images somewhat, the PineSol lady, portrayed by Diane Amos since 1993, has clearly taken over as the new mammy face of advertising (Fuller, 2001). Taken by itself, the individual advertisement for the Hilton training software means little, but within the context of nine months of magazines and hundreds of advertisements, the mammy-inspired Hilton advertisement represents fully two-thirds of the black women characters observed. As noted by Ontiveros (1997), the terrain navigated at the intersection of black race and female gender exhibits unique characteristics, as evidenced by both the quantity and quality of black female imagery in the advertisements.

The analysis of the 2009 data suggests that minorities and women are represented in proportions roughly equal to their proportion in the general population. How minorities and women are depicted in those advertisements, however, is a different story. Both racial minorities and women are more likely to be portrayed by stereotypes. Women are more likely to be sexualized. We now examine whether these trends have been fairly steady or if the current trends represent a change in the depiction of racial minorities and women.

Change in stereotypes

To assess changes in the depiction of race and gender in computer games, we examine the same two factors, the proportional representation of minorities and females and the quality of that representation, at two points in time, 1992 and 2009. Table 3 shows the numbers and percentages of the race and gender of the primary characters depicted in the advertisements from 2009 *PC gamer* and 1992 *computer gaming world*. The data indicate a few interesting trends. The role of minorities in PC games increased over time, as did the depiction of white characters. This increased representation of all racial groups is accompanied with a decrease in the number of characters with no racial identification. As noted earlier, this likely is the result of more human characters and fewer aliens, fantasy, and cartoon characters in PC games in 2009 compared to 1992. The representation of women in PC games also increased significantly from 1992 to 2009. Only 14% of characters depicted in the 1992 advertisements were identifiable as women,

Table 3. Race and gender of characters in 1992 *computer gaming world* and 2009 *PC gamer* advertisements.

	2009		1992	
	N	**Percentage (%)**	**N**	**Percentage (%)**
Race of primary character in Ad				
White	64	82.1	165	73.7
Black	7	9.0	5	2.2
Asian	6	7.7	4	1.8
Not Applicable	1	1.3	50	22.3
p-value		0.000		
Gender of primary character in Ad				
Male	40	51.3	169	76.5
Female	37	47.4	31	14.0
Other/Unclear	1	1.3	21	9.5
p-value		0.000		

Table 4. Stereotyped and sexualized characterizations of race and gender in 1992 *computer gaming world* and 2009 *PC gamer* advertisements. Numbers are percentages.

	Stereotype character		Sexualized character	
	PC gamer 2009	**CGW 1992**	**PC gamer 2009**	**CGW 1992**
Race				
White	53.1	73.9	53.1	36.4
Black	100.0	80.0	0.0	0.0
Asian	83.3	100.0	33.3	0.0
N/A	0.0	26.0	100.0	10.0
p-value	0.034		0.033	
Gender				
Male	2.5	76.3	67.5	24.9
Female	97.3	83.9	97.3	74.2
N/A	0.0	0.0	0.0	0.0
p-value	0.000		0.000	

compared to over 48% in 2009. Table 4 shows the stereotyped and sexualized characterizations for the two time periods by race and gender. The number of non-white characters at both times is very small (4 to 7cases). As such it is difficult to draw firm conclusions about the change in stereotypes and sexualized characters. Because the number of white characters is relatively large at both time points, we will limit comparisons across time to white characters. The use of stereotypes to depict white characters decreased over time, 74% of all advertisements in 1992 versus 53% in 2009. The use of sexualized characters, however, increased for whites. In fact, the use of sexualized characters was higher for all racial groups except blacks. None of the black characters in 1992 or 2009 were sexualized.

The comparisons of the way in which gender is portrayed over time reveal several interesting trends. The use of sexualized characters increased from 1992 to 2009. The percentage of sexualized characters increased for both males and females. Stereotyped women are the norm at both time periods, though the percentage increased over time, from 84 to 97%. The percentage of male characters sexualized, by contrast, decreased markedly over time.

DISCUSSION

Our analyses of computer game images in print advertisements produced mixed support for our hypotheses. The analyses from the most recent game advertisements (2009 *PC Gamer*) show that, contrary to our hypotheses, minorities and women are represented in numbers approximately proportional to the their numbers in the U.S. population. We did find support, however, for the hypotheses regarding the type and quality of that

representation. That is, we found that minorities and women were depicted using stereotyped imagery more often than whites and men. White male characters are overrepresented in positive and powerful roles and women and minorities are overrepresented in inconsequential, stereotyped or, in the case of women, sexualized roles. Both black men and white women were largely relegated to tightly constricted roles, with black men limited to athletes, street thugs, or military support personnel. Women, though possessing physical strength, and some level of empowerment, are relegated to second class status as sexualized objects.

Though we expected significant support for Bonilla-Silva's (2001) description of color-blind racism, the consistency and strength of the support in our findings was a surprise. With the exception of women of color, both minority group males and women are more visible in advertisements. That fact alone suggests a change in how both race and gender operate in society. However, the quality of the imagery still relegates these groups to outsider status. Our findings suggest that little has changed for women and minorities; they are portrayed differently and unequally. What has changed is how they are relegated to secondary status.

We found that black women are largely ignored in computer gaming imagery with only one black female appearing as a character in any of the advertisements. This presents both favorable and unfavorable consequences for black women. On the one hand, black women are not reduced to sexual object for the entertainment of men. On the other hand, black women are ignored as sexual beings which reinforce the notion of ideal beauty as white. This leaves black women safe from being victimized as sex objects, though victimized by their exclusion from the world of computer games. This is not unique to computer game advertisements. In a study of TV advertisements in 1990, Coltrane and Messineo (2000) found similar results. They concluded that "a lack of such exploitive imagery for African American women could be considered positive, except for the fact that it is part of a larger pattern of excluding African American women from images of fantasy consumption and personal fulfillment" (Coltrane and Messineo, 2000: 383).

Our hypothesis regarding changes in stereotyping over the last two decades is also supported. When advertisements from 2009 are compared to advertisements from 1992, the proportional representation of both minorities and women improve dramatically, though this may be explained, in part, by the greatly improved quality of graphics over that time period. With the greater level of detail available in computer games, distinctions between racial groups and gender become easier to convey, essentially allowing for greater diversity. With the dramatic increase in visibility of women in computer games, comes a related increase in the sexualization of women; however that increase in sexualization is limited to white women.

It is unclear if the differences in rates of sexualization between 1992 and 2009 are due to increased resistance to the gains made by women in the 1960s and 1970s or gains made in graphic quality allowing the greater expression of sexualization. The differences found between the advertisements from 1992 and 2009 appear consistent with our hypothesis. Women are slightly more sexualized than in 1992 yet men are significantly less sexualized. Overall, minorities are limited to the periphery of computer game world existence. They are part of the picture, but limited to stereotyped roles and excluded from the closest relationships. Women, on the other hand, have come to the forefront of the computer game world, though as objects of desire, rather than as equals. Based on our analyses, it appears that no significant gains have been made in the portrayal of either racial minorities or women, as an increase in the rate of appearances has resulted greater rates of stereotyping of minorities and women.

Despite the roughly twenty year difference between the PC Gamer and Computer Gaming World issues used in this study, all of the magazines analyzed in this study were published in the post civil-rights era. We recommend future studies include magazines from the 1940s through the 1970s, marketed to similar demographic groups, as inclusion of analysis from both the Jim Crow era and the civil-rights period would give a clearer picture of any changes in how minorities and women are portrayed in magazine advertisements.

REFERENCES

Bonilla-Silva E (2001). White Supremacy and Racism in the Post-Civil Rights Era. Lynne Rienner Publishers, Boulder, Colorado.

Bonilla-Silva E (2006). Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in the USA. Rowman and Littlefield Publishers, Lanham, Maryland.

Bonilla-Silva E, Embrick DG (2007). Every place has a ghetto: The significance of whites' social and residential segregation. Sym. Interact., 30(3): 323-345.

Bonilla-Silva E, and Lewis AE (1999). Race, nation, and citizenship, in Wong (ed), The New Racism: Toward an Analysis of the U.S. Racial Structure, 1960s – 1990. Westview Press, Boulder, Colorado, pp. 55-100.

Chito-Childs E (2005). Navigating Interracial Borders: Black-White Couples and their Social Worlds. Rutgers University Press, Piscataway, New Jersey.

Coltrane S, Messineo M (2000). The perpetuation of subtle prejudice: Race and gender imagery in 1990s television advertising. Sex Roles, 42(5-6): 363-389.

Daniels J (2009). Cyber Racism: White Supremacy Online and the New Attack on Civil Rights. Rowman and Littlefield Publishers, Lanham, Maryland.

Feagin JR (2006). Systemic Racism: A Theory of Oppression. Routledge Press, New York.

Fuller L (2001). Are we seeing things? The *Pinesol* lady and the ghost of Aunt Jemima. J. Black Stud., 32(1): 120-131.

Games.net (2008). Game Magazines: Then and Now. Retrieved 1/4/2011, from http://www.games.net/article/feature/117221/game-magazines-then-and-now/.

Gard T (1997). Interview with Toby Gard. Retrieved 3/14/2010, from http://www.laracroft.name/archive/97-01.php.

Gwet KL (2010). Handbook of Inter-Rater Reliability. Advanced Analytics, Gaithersburg, Maryland.

Jordan EC (1997). Race, gender, and social class in the Thomas Sexual Harassment Hearings: The hidden fault lines in political

discourse, in Wing (ed), Critical Race Feminism: A Reader. New York University Press, New York, pp. 165-168.
Kozol J (1991). Savage Ineqaulities: Children in America's Schools. Harper Collins, New York.
Lauzen MM, Dozier DM, Horan N (2008). Constructing gender stereotypes through social roles in prime-time television. J. Broadcast Electron., 52(2): 200-214.
Marable M (2000). How Capitalism Underdeveloped Black America. South End Press, Cambridge, Massachusetts.
McCauley D (2008). Power up: Do PCs stand a chance against consoles? Phila Inq.
McVeigh R (2004). Structured ignorance and organized racism in the United States. Soc. Forces, 82(2): 895-936.
Nakamura L (2001). Head hunting in cyberspace: Identity tourism, Asian avatars and racial passing on the web. Wom Rev. Books, 18(5): 10-11.
Omi M, Winant H (1994). Racial Formation in the United States: From the 1960s to the 1990s. Routledge Press, New York.
Ontiveros ML (1997). Three perspectives on workplace harassment of women of color, in Wing (ed), Critical Race Feminism: A Reader. New York University Press, New York, pp. 188-191.
Pilgrim D (2000). Jim Crow Museum of Racist Memorabilia: The Mammy Caricature. Retrieved 2/5/2011, from http://www.ferris.edu/JIMCROW/mammies/.
Sampson RJ, Laub JH (1993). Crime in the Making: Pathways and Turning Points Through Life. Harvard University Press, Cambridge, Massachusetts.
Schudson M (1989). Advertising as capitalist realism, in Hovland and Wilcox (eds), Advertising in Society: Classic and Contemporary Readings on Advertising's Role in Society. NTC Business Books, Lincolnwood, Illinois, pp. 73-98.
Shaheen JG (2003). Reel bad Arabs: How Hollywood vilifies a people. Ann. Am. Acad. Polit. SS. 588(1): 171-193.
Strauss A, Corbin JM (1990). Basics of Qualitative Research: Grounded Theory, Procedures and Techniques. Sage Publications, Thousand Oaks, California.
U.S. Census Bureau (2010). Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States. Government Printing Office, Washington, D.C.
Vera H, Gordon A (2003). Screen Saviors: Hollywood Fictions of Whiteness. Rowman and Littlefield Publishers, Lanham, Maryland.
Wing AK (1997). Critical Race Feminism: A Reader. New York University Press, New York.