

Video Game Characters and the Socialization of Gender Roles: Young People's Perceptions Mirror Sexist Media Depictions

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Abstract Video game characters are icons in youth popular culture, but research on their role in gender socialization is rare. A content analysis of images of video game characters from top-selling American gaming magazines showed male characters (83%) are more likely than female characters (62%) to be portrayed as aggressive. Female characters are more likely than male characters to be portrayed as sexualized (60% versus 1%), scantily clad (39% versus 8%) and as showing a mix of sex and aggression (39 versus 1%). A survey of teens confirmed that stereotypes of male characters as aggressive and female characters as sexually objectified physical specimens are held even by non-gamers. Studies are discussed in terms of the role media plays in socializing sexism.

Keywords Video game · Stereotype · Sex roles · Violence · Magazine · Content analysis

Introduction

Both the content of video games and the role of video games in popular culture have changed profoundly since the first games appeared on the market in the 1970s. In this paper, we investigate sexist portrayals of video game characters and young people's schemas about male and female characters. Video game content is linked to advancements in technology, with more compelling and lifelike portrayals becoming

possible with each passing year, so research must keep pace with these technological advancements.

In the early years, gender representations in video games were limited to graphically unsophisticated characters such as Ms. Pac-Man, the hungry yellow orb whose only indication of gender was her pixilated hair bow. Ms. Pac-Man was a variation of the original Pac-Man game (which accounts for her gender-confused moniker) and was designed to attract female players to what was already a male-dominated market (Ms. Pac-Man 2007). From the beginning, females were underrepresented in video games. Even computerized voices in early video games were almost exclusively male (Braun and Giroux 1989). When female characters were present, they were likely to be damsels in distress (Dietz 1998), such as Princess Toadstool in the Mario Brothers games. By the mid to late 1990s, video games had morphed into a persistent, and in terms of gender stereotypes, blatant element in youth popular culture. *Tomb Raider's* Lara Croft, now an icon among female game characters, arrived on the scene to spark debate about the merits and demerits of a butt-kicking, buxom video game star who was at once agent and object (Mikula 2003).

Current Popularity of Gaming and Gaming Magazines

How popular is gaming and who plays video games? Currently, gaming is the top online activity of kids [Magazine Publishers of America (MPA) 2004]. Price Waterhouse Coopers reports that 63% of Americans 6 years and older play video games and that video games will be the fastest growing entertainment segment in the next 5 years, with global video game spending reaching \$55.6 billion in 2008 (Game Informer 2005). Most kids (84.2%) aged 6 to 11 played a video game in the last month (89.3%

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of males, 78.8% of females) and 20.3% of these kids play a video game everyday (MPA 2004). Among children, 11- to 14-year-old boys play the most video games (Roberts and Foehr 2004). This fact is germane to the current investigation since this group is in the process of developing ideas about gender roles and relationships.

Video games and game characters are a common element in youth popular culture. Heavy and regular users of video games are also known as gamers or gaming enthusiasts. There is a gaming subculture that extends beyond the games themselves. Gaming enthusiasts, for example, participate in online gaming blogs, gaming web sites and gaming conferences. Many of them also subscribe to video game magazines. Among young men, gaming is a common past time, a common topic of conversation (Lewin 2006), and has been associated with poorer academic performance (Anderson and Dill 2000; Lewin 2006). Banking on the popularity of video games among young men, the US Army spends \$4 million each year to market and upgrade their video game *America's Army*, which they use successfully as a recruiting tool (Lugo 2006). And because gaming is so popular, even non-gamers gain knowledge of video games and gaming culture from their peers and from the media. In an investigation that adds new data to the literature, we document knowledge about gender and video game characters in a sample of teenaged non-gamers.

How popular are video game magazines? According to recent data, three of the top ten best-selling teen interest magazines are video game magazines (MPA 2004). These three (*Electronic Gaming Monthly*, *Game Informer*, and *GamePro*), along with three others, are analyzed in the current investigation. Marketers target teens aggressively because they have significant discretionary income (spending an estimated \$190 billion in 2006, according to market-researchworld.net), are a growing demographic, influence household spending, and are heavy media users (Bartholow et al. 2003; MPA 2004). Video games and magazines are on the top ten lists of items teens buy with their own money (MPA 2004). Eight out of ten teens read magazines, and teens report trusting magazine advertising more than advertising in other media (MPA 2004). Furthermore, they report giving magazines their full attention when they read, rather than multitasking (MPA 2004). Video game magazines are a popular medium and provide a unique forum for analyzing character depictions.

Research on Gender and the Media

Hyper-Masculinity and Hyper-Femininity

Past research on gender portrayals in the media reveals both the existence and the negative consequences of gender

stereotyping. For example, Scharrer (2004) defines hyper-masculinity as the exaggeration of “macho” characteristics, specifically hardened sexual attitudes toward romantic partners, a desire for action and danger, and the acceptance of physical violence as a part of male nature. In contrast, hyper-femininity is the amplification of female stereotypes, with an emphasis on dependence, submissiveness, and sexuality as the basis of a woman’s value (Scharrer 2004). Scharrer (2005) exposed 93 male college students (average age 20) to a variety of television content, including *The Sopranos*—a violent, hypermasculine television show. Viewing *The Sopranos* increased young men’s acceptance of hypermasculine beliefs, namely that violence is both thrilling and manly, relative to those who viewed shows without a hypermasculine theme. This research fits in the larger theoretical context of the research documenting a clear link between media violence exposure and aggression (e.g., Anderson et al. 2003; Anderson and Bushman 2001; Anderson and Dill 2000).

Appearance Ideals

Research suggests that exposure to physical appearance ideals in the media are connected with poor body image (Dohnt & Tiggemann 2006; Tiggemann and McGill 2004) and self-destructive behaviors such as pathogenic dieting practices (Thomsen et al. 2002). Media also exert a strong influence on male body image, as stereotypes of hyper-masculinity are connected with the drive for muscularity, motivating boys and young men to engage in unhealthy practices such as compulsive weight training and illegal steroid use (Smolak and Stein 2006).

Recently, Harrison (2003) demonstrated that the modern media ideal for feminine beauty is what she calls “curvaceously thin.” For example, the ideal bust–waist–hip proportion of 36–24–36 would correspond to women’s clothing sizes 10–2–4, which translates to an abnormally small waist and hips, but a medium-sized (and therefore relatively large) bust. Using a sample of 231 male and female college students (average age 20), Harrison (2003) found that exposure to curvaceously thin images of females predicted the personal acceptance of this figure as an ideal by both men and women. Furthermore, greater exposure to the curvaceously thin ideal predicted approval of women’s use of cosmetic surgery by both men and women.

Research has also shown that exposure to media images of ideal beauty causes college men to find average-looking “real” women less attractive (Kenrick and Gutierrez 1980). Gutierrez et al. (1999) studied the effects of exposure to physically attractive and to dominant individuals on the self-evaluations of 190 college students (91 females and 99 males). For women, exposure to media images of highly physically attractive females caused them to downgrade

their own desirability as a mate. However, interestingly, for men, it was not exposure to physically attractive males, but to *dominant* males that damaged their view of their own desirability as a mate. These findings suggest that failure to live up to the specific media stereotypes for one's sex is a blow to a person's sense of social desirability.

Male–Female Relationships and Interactions

Media research has identified a variety of negative effects of media on heterosexual relationships and other male–female interactions. For example, frequent TV viewers show dysfunctional beliefs about relationships and greater acceptance of sexual harassment (Ward 2002). Likewise, those who hold more stereotypical attitudes about gender have been shown to have sex earlier and to be less effective with their contraceptive use (Brown et al. 2006; Carpenter 1998; Ward 2002). Similarly, exposure to a highly sexual media diet increases the risk of early sexual activity (Brown et al. 2006).

Males exposed to advertisements featuring women portrayed as sex objects subsequently show greater rape-supportive attitudes (Lanis and Covell 1995). (Dill 2007, manuscript in preparation) found a positive correlation between violent video game playing and endorsement of rape myths, including the myths that women secretly want to be raped and that sometimes women “deserve” to be raped. Furthermore, those who played more violent video games also endorsed more traditional views of sex roles, such as the idea that men are more capable as leaders and professionals, while women deserve less freedom than men and are subservient to men (Dill 2007, manuscript in preparation).

Gender in Video Games

The National Institute on Media and the Family (Walsh et al. 2002) characterized recent video games as glorifying violence towards and objectification of women and as perpetuating a crass view of sexuality. In the *Grand Theft Auto* (GTA) series, which has repeatedly broken video game sales records, women are typically depicted as prostitutes and men as violent thugs. A male character can have sex with a prostitute, then kill her and take his money back. One female character in *GTA: Vice City* is a porn star named Candy Sux. Female prostitutes, when hit by a male character, are programmed to respond, “I like it rough.” Real women have been paid to appear as “booth babes”—provocatively dressed, attractive women representing game characters who pose for pictures with male video game conferences attendees (E3 Censorship 2006). Clearly, the world of gender in video games is evolving and research must keep pace with this evolution.

There has been little research on gender portrayals of video game characters, especially male characters. Dietz (1998) analyzed both violence and the portrayal of female characters in the top selling console video games. She found that 79% of the games were aggressive and that about one fifth depicted violence towards women. Although most games did not include female characters at all, over one quarter of games depicted women as sex objects. Other common roles for female characters were damsels in distress, visions of beauty and obstacles.

Dill et al. (2005) analyzed violence, sex, race and age in the top-selling PC games. They found that most games (60%) were aggressive and that women were underrepresented in video games (about 20% of characters were female). Male characters were never portrayed as highly sexualized, but female characters were. Only ten percent of main characters were female.

Beasley and Collins-Standley (2002) analyzed Nintendo and PlayStation games for gender role portrayals, focusing on revealing clothing. Female characters were much more likely to be scantily clad. Furthermore, females were frequently portrayed as large breasted and as sex objects. These authors also found females to be underrepresented.

Signorielli and Bacue (1999) identify recognition and respect as key aspects of appropriate media depictions of women. Recognition is frequent, representative appearance and respect is appearance in varied, not just stereotypical, roles. By those definitions, depictions of women in video games meet neither standard.

Very little published research exists that analyzes the content of video game magazines in general or gender representations in specific. Scharrer (2004) conducted a quantitative content analysis of images and text in the advertisements of three top-selling video game magazines. Rating all characters and text in all the video game advertisements in these magazines, she found that males outnumbered females by over three to one. Most of the ads (about 55%) contained violence. Males were depicted as more muscular than females and females were depicted as more attractive and as sexier than males. Consistent with hypermasculine male ideals, advertising text sometimes depicted danger as thrilling and violence as manly.

Theoretical Basis for the Current Investigations

Among game enthusiasts, it is commonly argued that negative gender stereotypes in the media do not matter because they are just harmless entertainment. Brenick et al. (2007) exposed 41 male and 46 female college students to gender stereotypes and to violence in video games. These authors found that high frequency players, especially males, were more likely to condone negative stereotypes in video

games such as sexually exploited females and violent males. Furthermore, Brenick and colleagues found that their subjects, in general, believed exposure to negative gender stereotypes does not cause changes in attitudes or behaviors. Given that youth, especially males and gamers, do not understand that negative media content can have negative effects, then it follows that they do not understand *why* such content has detrimental effects. Some key media theories, discussed below, explain why negative gender stereotypes in the media are harmful. Taken together, these theories explain both how and what we learn from the stories popular video game characters tell about gender. Gender portrayals of video game characters reinforce a sexist, patriarchal view that men are aggressive and powerful and that women are not healthy, whole persons, but sex objects, eye candy and generally second-class citizens.

Key Media Theories

Gerbner's Cultivation Theory (e.g., Gerbner 1999) explains how exposure to mass media creates a worldview more consistent with media's distortion of reality than with reality itself. According to Gerbner, media messages serve three psychological functions: "...to reveal how things work, to describe what things are, and to tell us what to do about them" (Gerbner 1999, p. 9). Bandura's Social Cognitive Theory of mass communication (Bandura 2001) stresses the processing of symbols in making sense of one's social environment. For example, children learn about issues such as aggression and gender identity through exposure to media figures that model these concepts (Bandura and Bussey 2004). Both the Cultivation Theory and the Social Cognitive Theory of mass communication, therefore, articulate how unreal symbols in the media contribute to users' schemas (e.g., about gender roles and relationships) and that these schemas then influence people's real life behaviors, thoughts and feelings.

Theories About Sexism

Ambivalent Sexism Theory (AST; Glick and Fiske 1996, 1999; Glick et al. 2004) begins with the premise that inherent in our social structure is a power hierarchy where men are dominant and women submissive. Members of society simultaneously hold benevolent and hostile attitudes toward both sexes, which "...include three content domains—paternalism (power differences), gender differentiation (roles and stereotypes), and heterosexual relations" (Glick et al. 2004, p. 715). Benevolent attitudes toward men include the stereotypes that men are instrumental, respectable, and powerful, while hostile attitudes include the beliefs that men are arrogant, unscrupulous, and aggressive. In contrast, women are stereotyped as warm and likeable,

but also as weak and submissive. In the domain of heterosexual relations, this means women are the objects of men's desire and exist to satisfy men's needs as opposed to being sexual agents with their own desires. Media stereotypes perpetuate inequality by telling sexist stories about gender and power and about the relationship between men and women. Glick and colleagues (Glick et al. 2004) studied attitudes towards men in sixteen nations and found that where the "bad but bold" stereotype of men was most pronounced, there was also evidence of greater gender inequality (e.g., women had lower purchasing power, less prestigious occupations, and lower literacy rates). Similarly, Agars (2004) found that gender stereotypes in the workplace hinder women's professional advancement.

Connell's (1987) work on hegemonic masculinity and emphasized femininity is a sociological approach that dovetails with the social psychological approach of AST. According to Connell's theory, which we refer to as Hegemonic Masculinity Theory (HMT), masculinity and femininity are always constructed in relation to each other, rather than independently. Socially prescribed masculinity is an understood ideal, and though not attainable for many, includes power, aggressiveness, material success, and heterosexual conquest. Emphasized femininity is only construed in relation to this hegemonic masculinity; women exist for men's sexual titillation and ego stroking, to mother children, and generally to serve men. Under HMT, sexist images in the media exist, not to reflect day-to-day reality, but as a necessary force that sustains the socially held ideals of masculinity, femininity, and, most importantly, of the dominance (e.g., in business, government, and bed) of men over women. Of particular interest to the current investigation, HMT specifies that media images of masculinity and femininity are, by definition, stylized, over-simplified and impoverished because their purpose is not to reflect reality, but to perpetuate myth. But those myths construct the social realities that real people believe in and act on.

Video Game Magazine Images as Iconic Representations of Gender

There are a number of reasons it is important to study visual representations of gender in popular culture. Photographer Eddie Adams wrote the following describing the power of his Pulitzer Prize winning photo *Murder of a Vietcong by Saigon Police Chief*: "Still photographs are the most powerful weapon[s] in the world. People believe them, but photographs do lie, even without manipulation. They are only half-truths" (Adams 2001, p. 1). Adams' observation speaks to the power of the visual image to excite the imagination and to symbolize and distill concepts for the viewer. In one optical gulp, a picture tells a compelling story.

Because of the power of the still image to represent and perpetuate a sexist cultural mythology, which in turn supports real gender inequality, we analyzed still images of video game characters in the current investigation. Visual stimuli are important to study because they are more easily encoded and retrieved from memory than are verbal materials (Cowan 2002). Also, visual images are iconic and thus more powerful than text in both creating and evoking gender stereotypes (Crawford and Unger 2004).

Overview of the Two Investigations

The two investigations reported here represent a novel analysis of both the way gender is portrayed through video game characters and the understanding among a youth sample of these gendered media messages. [Study 1](#) is a visual content analysis of gender-stereotypic portrayals of video game characters in the top-selling video game magazines. We investigate whether and how often male and female video game characters are portrayed in a sexist manner. Specifically, we predicted that female video game characters would be depicted as sexualized and scantily clad more often than male characters. We also predicted that male characters would be depicted as aggressive more often than female characters. We measured the occurrence of a specific masculine and a specific feminine sex role stereotype (hyper-masculinity for males, and Dietz's (1998) "vision of beauty" stereotype for females), predicting that the presence of the gender-specific sex role stereotype would be more prevalent for female than for male characters. Finally, we did a unique analysis of an important combination of characterizations. Specifically, we measured the degree to which male and female characters were depicted as *both* sexual and aggressive. We predicted female characters would be more likely to be depicted as sexual and aggressive. The logic behind this prediction is that if, as past research shows, female video game characters are far more likely to be depicted as sexual, then it follows that they would also be more likely to be depicted with the mix of sexuality and other characteristics. Sexuality is particularly likely to be mixed with aggression in character portrayals given the prevalence of violence in popular video games (e.g., Dill et al. 2005). This mix of sexuality and violence in female character depictions is important to investigate given the link in past research between sexualized violence in the media and violence against women (e.g., Dill 2007, manuscript in preparation; Donnerstein and Berkowitz 1981; Vega and Malamuth 2007).

If video game characters are portrayed in gender-stereotypic ways, are game enthusiasts the only ones who have knowledge of these portrayals and thus the only ones affected by them? We believed that, on the contrary, there is general knowledge of the existence of sexist representations of masculinity and femininity in video game characters

among youth. Therefore, in [Study 2](#), we asked teenagers to describe typical male and female video game characters, predicting that their descriptions would reflect the existence of sexist portrayals of gender in video games and game magazines and thus would closely match the results of our content analysis ([Study 1](#)). Using a written questionnaire, we gave teens open-ended questions asking them to describe their schemas of the typical male and the typical female video game character. We predicted their schemas for gender representations in video game characters would mirror the magazine representations reported in [Study 1](#). Specifically, we predicted their schemas for male video game characters would focus on aggression and not sexualization or physical attractiveness. In contrast, we predicted their schemas for female video game characters would include a focus on physical attractiveness and sexual objectification.

The current investigation is one of the only known investigations of imagery in video game magazines. It is unique in its examination of all magazine imagery, as past research has focused on only the game advertisements. Also, it is unique in examining only the most visually salient images—those most likely to capture the reader's attention. This paper also extends the past literature on violence and stereotyping in video games by identifying specific portrayals that are of theoretical interest. For example, without making additional predictions for gender differences, we measured a variety of types of aggressive portrayals, including glamorized portrayals of violence (e.g., images we term as showcasing characters who are "posing with weapons"). We extend Dietz's (1998) work by studying current portrayals of women as "visions of beauty," Harrison's (2003) "curvaceously thin" female media ideal, and Scharrer's (2004, 2005) concept of the hypermasculine male.

Study 1

Method

Magazine Selection

The video game magazines analyzed here were those ranked by Amazon.com as their six top sellers. The magazines were the current (on sale in January 2006) issues of the following magazines, in order of Amazon.com sales from high to low: *Electronic Gaming Monthly*, *PC Gamer*, *Game Informer*, *The Official Xbox Magazine*, *Computer Gaming World* and *GamePro*. Pilot tests revealed that six magazines would supply an adequate number of images for rating, while also representing magazines that have relatively high circulations. These magazines represent a variety of video game platforms that appeal to a more diverse audience than those studied by past research.

We investigated marketing and demographic statistics for all six magazines. Our sources for these investigations included published marketing statistics for each of the six magazines (Computer Gaming World 2005; Electronic Gaming Monthly 2005; Game Informer 2005; GamePro 2005; Official Xbox 2005; PC Gamer 2005). These statistics were corroborated by data from independent resources including the Magazine Publishers Association (MPA 2007) and MediaMark (Business Wire 2005).

GamePro (3 million) and *Game Informer* (2 million) reported the highest monthly readerships, which compare in popularity to well known male-oriented magazines like *Maxim* (2.5 million) and *Rolling Stone* (1.3 million; Game Informer 2005). Business Wire (2006) reported that *GamePro*'s circulation has risen to nearly 3.5 million readers. *Future US*, the company that publishes the *Official Xbox Magazine* and *PC Gamer*, advertises that its magazines "reach a young, active, affluent audience" (PC Gamer 2005, p. 5). For our magazines, the average subscriber is young (mean age 26), and the great majority of subscribers are male (93%). Average annual household income for subscribers was over \$66,000. The average subscriber plays video games about 16.5 h per week. *GamePro* had the lowest median subscriber age at 18 years. Interestingly, 93% of their readers report playing M-rated games, though 48% of them are underage.

Image Selection

To ensure that each image analyzed was large and clear enough to rate, and was also likely to get attention from readers who skimmed the magazine, the following criteria were used to select magazine images: One male and one female image (where present) were selected per page for rating. Each image had to be at least two inches across in any direction. Images chosen were those considered the main male and the main female image on the page. Main images were usually the largest image on a given page. However, if the largest image was obscured, shaded or otherwise visually de-emphasized (i.e., showing the back of a character's head), the next largest image that met the criteria was chosen for rating. Not every page contained a character to be rated. Images to be rated were identified by a female experimenter (not a rater) who also categorized the images as video game characters or non-characters and as part of an advertisement or a magazine article. The bulk of the images (87%) depicted video game characters, whether in articles or in advertisements for video games.

Training of Raters

One male and one female rater, both undergraduate psychology majors, practiced on images from magazines

similar to those used in the current investigation. Raters discussed these practice ratings with each other and with the first author until they showed evidence of properly applying the coding scheme for all variables. Progress was also checked part way through the coding process, as suggested by Cowan (2002). Specifically, the coding scheme was re-taught by the first author, and the two raters privately discussed discrepancies and then independently assessed their judgments about their ratings of the discrepant items. They did not resolve discrepancies, but simply reconsidered their own ratings in light of the coding scheme refresher session. Cowan (2002) reports that this practice of re-evaluating ratings criteria is of particular value when coding large amounts of violent and sexual material because, as with viewers, coders suffer from desensitization effects.

Ratings Criteria

The complete coding scheme for Study 1 is reproduced in the Appendix. The first author gave copies of this coding scheme to the two coders as part of their training.

Sexualized and stereotypical sex role portrayals Females were categorized as *sexualized/curvaceously thin* if the image portrayed was consistent with Harrison's (2003) *curvaceously thin* appearance ideal (e.g., large breasts and small waist) and if the figure's sexuality was stressed such as by showing cleavage, wearing provocative dress, or displaying provocative poses, postures or facial expressions. For example, a female character from *Grand Theft Auto: San Andreas* licks her lips in a sexualized manner, while bending over, revealing tan lines and a tattoo under her bikini top. Similarly, an advertisement for *GamePro* magazine shows a bikini-clad, curvaceously thin female on her knees leaning backwards provocatively. The caption reads, "*GamePro* has what you want." [Interested readers can see this image in the February 2006, issue of *GamePro* on page 73.] Because sexualization and the ideal body type are, in practice, represented together, we coded instances of *sexualized/curvaceously thin* female characters as a unitary construct. Males were simply rated as *sexualized* because the curvaceously thin ideal does not apply to men. We also rated both male and female characters as scantily clad, meaning showing skin. We note that a sexualized character may wear tight clothing that covers most of the body and therefore would not be rated as scantily clad.

Males were coded as hypermasculine if they had distorted male characteristics such as exaggerated arm and chest muscles, extremely masculine facial features (e.g., chiseled features, stubble) and facial expressions of power and dominance. Females were rated on the degree to which they were depicted as a *vision of beauty*, a common

stereotypical portrayal of female video game characters described by Dietz (1998).

Aggression, power and dominance Images were identified as containing aggression using the classic social psychological definition of behavior intended to harm another living being. Examples of aggression included weapon use and attacking postures with hostile facial expressions. Aggression, by definition, includes power and dominance. When cues in the image permitted, aggressive pictures were also coded as war scenes (demonstrably military engagement) and fighting scenes (non-military combat such as running with a sword). We also coded the presence of any type of armor (including metal, leather and chain mail). Finally, the last aggressive category was *posing with weapons*, which were scenes showing a character holding a weapon in what appeared to be a staged scene designed to glamorize or glorify aggression. These weapon-posing shots did not include scenes in which characters were using the weapon.

Agreement between raters The two raters coded a total of 479 images (360 male images, 119 female images) of video game characters. Percent agreement is a commonly used inter-rater reliability statistic that has the advantage of being easily understood by a variety of audiences (Bell 2002; Cowan 2002). Therefore, percent agreement between the two coders was calculated for each rating.

For the female images, percent agreement ranged from 87.4 to 100% for the aggression ratings, from 99.1 to 100% for the sexualized ratings, and from 96.4 to 100% for the stereotypical portrayals. For the male images, percent agreement ranged from 96.4 to 99.7% for the aggression ratings, from 87.9 to 98.4% for the sexualized ratings, and from 98.4 to 100% for the stereotypical portrayals ratings.

Results

Major Findings

Major findings are summarized in Table 1. Percentages reported below are the average (mean) ratings of the two raters. Using our main character analysis, as described above, the ratio of male (360) to female (119) video game characters was about 3 to 1.

Sexualized portrayals For the category of *sexualized/curvaceously thin female*, 59.9% of the female characters conformed to this classification, while less than 1% (.8%) of male characters were rated as being *sexualized* figures. Similarly, the *scantily clad* rating accounted for 38.7% of female characters, and only 8.1% of males.

Aggression The broad variable of *aggression* showed that 82.6% of male characters and 62.2% of females were depicted as aggressive. A low percentage of characters were rated as depicting realistic war scenes (4.1% of males and 0% of females); however the fighting category was more common, with 33.2% of males and 16.2% of females rated as depicting non-military combat. In terms of glamorized portrayals of aggression, 31.6% of male and 30.6% of female characters were rated as posing with a weapon. Characters were often (41.9% of males and 35.6% of females) depicted wearing armor. Although we hypothesized that male characters would be portrayed as aggressive more often than female characters (see chi-square analysis, reported below), we did not have a priori gender difference predictions for the specific aggressive characterizations (military, fighting, armor and glamorized violence).

Stereotypical sex role portrayals Stereotypical images were common, with 33.1% of male characters rated as *hyper-masculine* and 62.6% of females considered *visions of beauty*.

Chi-square tests To test for gender differences in character portrayals, we conducted chi-square tests for frequency data that is cross-classified according to two categorical variables. Using the frequencies and sample sizes for male and female characters, we determined whether the frequencies differed by sex for each of the following characterizations: aggressive, sexualized, scantily clad, sex role stereotype (hypermasculine for males versus vision of beauty for females) and, finally, the combination of sexualized and aggressive. Sample size was 360 for males and 119 for females for all chi-square tests. As predicted, males were more likely to be portrayed as aggressive than females ($\chi^2=4.14$, $df=1$, $p<.05$). Also as predicted, females were more likely than males to be portrayed as sexualized ($\chi^2=224.61$, $df=1$, $p<.0001$) and as scantily clad ($\chi^2=73.21$, $df=1$, $p<.0001$). Furthermore, as hypothesized, the combined characterization of aggression with sexual objectification was significantly more likely for female video game characters than for male video game characters ($\chi^2=313.81$, $df=1$, $p<.0001$). Finally, for the sex role stereotype variable (hypermasculine males versus female visions of beauty), females were significantly more likely, as hypothesized, to be stereotyped than males ($\chi^2=36.95$, $df=1$, $p<.0001$).

Additional analyses We conducted additional analyses to see how different characterizations combined and overlapped. We analyzed the degree to which the three stereotypical portrayals of women (as sexualized, scantily clad, and visions of beauty) overlapped. Results (rounded) indicated that 18.9% of female characters showed no stereotypical characterization, 27.5% showed one stereo-

Table 1 Main results of video game magazine content analysis (Study 1).

| Characterization | Frequencies | | Chi-square | Significance |
|--|-------------|------------|---------------------|--------------|
| | Male (%) | Female (%) | | |
| Aggressive | 82.6 | 62.2 | 4.14 ^b | .05 |
| Sexualized | .8 | 59.9 | 224.61 ^b | .0001 |
| Scantly clad | 8.1 | 38.7 | 73.21 ^b | .0001 |
| Sex role stereotype ^a | 33.1 | 62.6 | 36.95 ^b | .0001 |
| Sexualized and aggressive | .8 | 39.2 | 313.81 ^b | .0001 |
| Portrayal of aggression ^c | | | | |
| Military | 4.1 | 0 | | |
| Fighting | 33.2 | 16.2 | | |
| Glamorized violence (posing with weapon) | 31.6 | 30.6 | | |
| Wearing armor | 41.9 | 35.6 | | |
| Overlapping portrayals | | | | |
| Female characters | | | | |
| Stereotypical portrayals (sexualized, scantily clad, and vision of beauty) | | | | |
| None | 18.9 | | | |
| One | 27.5 | | | |
| Two | 27 | | | |
| All three | 26.6 | | | |
| Male characters | | | | |
| Hypermasculine and aggressive | | | | |
| Neither portrayal | 16.9 | | | |
| One or the other | 50.6 | | | |
| Both portrayals | 32.5 | | | |

^aSex role stereotype refers here to the vision of beauty stereotype for the female characters and to the hypermasculine stereotype for the male characters.

^bChi-square test significant in the direction predicted.

^cNo *a priori* predictions for differences in aggressive portrayals.

typical characterization, 27% showed two stereotypical characterizations, and 26.6% of female characters showed all three stereotypical characterizations. The relationship between the sexualized females and aggressive females was also investigated, showing that 17.1% of female characters were neither sexualized nor aggressive, 43.7% were either one or the other, and 39.2% were rated as both sexualized and aggressive. Similarly, the relationship between aggression and hyper-masculinity for male characters was analyzed, showing that 16.9% of males were neither hypermasculine nor aggressive, 50.6% were rated as one or the other, and 32.5% were rated as both hypermasculine and aggressive.

Images of non-video game characters A total of 61 images depicted people other than video game characters. Of the male non-video game characters, 54.7% were rated as *video gamers/computer nerds*. For example, Bill Gates was depicted a number of times, as were other computer experts and people playing video games. Only 3.8% of non-video game characters were considered stereotypical/hypermasculine. The female non-video game characters contained

31.3% gamers/computer nerds. Of these, 37.5% were still rated as stereotypical/vision of beauty, and 12.5% were rated as sexualized. An example of this representation is an attractive woman playing video games with a man.

Discussion

We found that women are underrepresented in video game magazine articles and advertisements, with about one quarter of the main images of video game characters in these magazines being female. Consistent with past content analyses of video games that found most popular games to be aggressive (Dietz 1998; Dill et al. 2005), we found that the great majority of video game characters (77%) in game magazines are aggressive.

Men were overwhelmingly (82.6%) portrayed as aggressive, and about a third were portrayed as hypermasculine, while almost none were sexualized and relatively few scantily clad. Less than 17% were neither hypermasculine nor aggressive. Aggressive video game characters rarely took part in military combat, but regularly were shown

fighting with weapons. It was common for male characters to be shown simply *posing* with weapons. A typical image of this type features a muscular male with a hostile facial expression posing with a gun in what is essentially an aggressive glamour shot. The message portrayed is that violence is cool and macho. This type of scene glorifies aggression, twisting weapons into what amounts to impressive accessories. According to the National Television Violence Study (NTVS 1998), glamorizing violence serves to make it more attractive and therefore more likely.

Our analysis shows strongly and repeatedly that both male and female video game characters are portrayed in stereotypical ways. For female video game characters, the norm is for characters to be depicted as sex objects who wear skimpy clothing, conform to an idealized body type, and are visions of beauty. Of the three major stereotypical portrayals of women studied here (sexualized, scantily clad, and vision of beauty), over 80% of female video game characters were depicted in at least one of these ways, and over a quarter were depicted with all three stereotypes. Another common theme for female characters is the combination of sex and violence, also known as eroticized aggression (39.2%), which is potentially quite damaging to real women. About 83% of female video game characters were either sexualized or aggressive, or both.

In sum, extreme stereotyping is typical when it comes to the portrayal of male and female video game characters in video game magazines. Consider one advertisement we found in both *Game Informer* (January 2006 issue, pages 6–7) and the *Official Xbox Magazine* (January 2006 issue, pages 4–5). The advertisement is for *Condemned: Criminal Origins*, a game in which a male FBI agent chases serial killers. In the advertisement, a female mannequin sits at a table wearing a black negligee, her face and arms blown off, perhaps by assault or gunfire. On the opposite page, bloodstained Polaroid photos feature men holding weapons and a murdered woman lying on the floor wearing revealing clothing. A shadowy figure stands over the dead woman with a cell phone engaged to picture-taking mode. The cover art on the game box for *Condemned* shows a woman's face, her mouth bound by chains. This powerful image of the silenced woman, a theme in advertising, is a device used to show females as degraded, dominated and weak (Kilbourne and Jhally 2000). According to Kilbourne, such negative images of women create a cultural climate where women are less than human, which supports violence towards women (Kilbourne and Jhally 2000).

Our analysis in [Study 1](#) revealed how video game characters are portrayed to video game enthusiasts. We were interested in whether these portrayals were consistent with the general understanding young people have about video game characters. This was the subject of [Study 2](#).

Study 2

Method

Participants

Participants were 49 freshmen (20 males, 29 females) from a private, liberal arts college in the Southeast. Median and modal age was 18, with ages ranging between 17 and 19 years. All traditional freshmen are required to take a 1-h freshman seminar class, and professors of the three classes tested allowed class time for this project. Students participated voluntarily. Classes were chosen on the stipulation that the class topic could not be related to gender and that the class time was one that fit the schedules of the students who collected the data.

Survey

Participants indicated how many hours per week they play video games by circling a number on a continuum. The choices ranged from 0 h to “16+” h per week. We were interested in our sample's exposure to video game magazines. We thought it possible that many of them had never looked at a video game magazine. Therefore, we asked them to respond either “yes” or “no” to the question, “Have you ever looked at a video game magazine?” We did not ask them if they had ever *read* a video game magazine because video game magazines are image laden and it is possible to peruse these magazines without reading them. The two main questions of interest were open-ended items asking them to describe a typical male video game character and a typical female video game character. The specific wording was as follows: “Describe what the typical male video game character looks like (race, build, clothing, etc.) and acts like (behavior, personality traits, etc.).” The same question was asked again, replacing the word female for the word male.

Procedure

In each class, two male research assistants distributed consent forms and explained the survey. They asked students not to talk to each other while completing the survey and monitored the class to make sure students' responses were completed independently. Participants took approximately 15 min to complete the surveys, after which time they were thanked for their participation and given a debriefing statement.

Results and Discussion

Participants reported playing video games an average of 1.8 h per week. Eighteen (10 males, 18 females) of 49 or

about 37% reported having looked at video game magazines, whereas 31 (10 males, 21 females) of 49 or about 63% reported never having looked at a video game magazine.

For the character description questions, all responses were listed. Two male coders read all the comments and determined which comments were synonyms. For example, several participants described male video game characters as aggressive, and different wordings were used (violent, deadly); however, all these wordings were judged to fall under the category *aggressive*. The first author read the lists to verify that the synonyms were classified correctly. Next, the researchers counted how many times each characterization was used for male and female characters separately. Table 2 summarizes the most common characterizations by sex, in rank order, and lists the number of times (frequency) each type of comment was reported. Male video game characters were described as powerful (strong, muscular), aggressive, having a hostile attitude (mean, cocky, belligerent), athletic, and as thugs. Female characters were described as being provocatively dressed, thin but with a curvaceous figure (“big boobs”), sexual (hooker, slutty, easy) and aggressive. The single most often stated characteristic for males was *muscular*. The single most often stated characteristic for females was *big boobs*. Other examples are listed in Table 2.

Helpless, victim, subservient, polite, pretty and *bitchy* were mentioned for females but not males. *Warrior, superhero, rage, asshole, and cool* were mentioned for males but not females. Where race was mentioned, *White* was the most common characterization.

Young people’s perceptions of video game characters were quite similar to the portrayals found in our content analysis. Namely, the top characterizations of males were related to power, aggression and a cocky attitude, and the top characterizations of females were sexual and attractiveness-oriented, though aggression was a top element for females as well. Participants’ characterizations were rather explicit, especially concerning female characters. Terms like *hooker* and *slut* were commonly reported. Interestingly, Harrison’s (2003) *curvaceously thin* appearance ideal was found, with *skinny/thin* and *curvaceous figure/big boobs both* among the top five most common characterizations. The characterization of males, as in our content analysis, was fairly unidimensional, focusing on power and aggression, while the characterization of females included more ideas, namely about sexuality, appearance, and aggression (though this was characterized as *bitchy* rather than *strong* and was contradicted by ratings of weakness/subservience).

In conclusion, even youth without a high current personal exposure to video games agree about what the

Table 2 Characterizations of typical male and female video game characters (Study 2).

| Characterization | Examples | Rank | Frequency |
|---|--|------|-----------|
| Male characters | | | |
| Powerful | Muscular Strong Built | 1 | 35 |
| Aggressive | Violent Deadly | 2 | 21 |
| Hostile attitude | Mean Cocky/arrogant Belligerent | 3 | 18 |
| Athletic | Athletic Sports | 4 | 8 |
| Thug | Gangster | 5 | 5 |
| Other examples: warrior, gladiator, brave soldier, superhero, fierce, six pack, rage, evil, asshole, acts like they own everything, cool, plays sports, handsome, pimpish, armed with dangerous life-ending weapons | | | |
| Female characters | | | |
| Provocative dress | Skimpy clothes Naked Tight clothes | 1 | 18 |
| Curvaceous Figure | Big boobs Voluptuous | 2 | 15 |
| Thin | Skinny | 3 | 13 |
| Sexual | Slutty Sexy Hooker | 4 | 11 |
| Aggressive | Violent | 5 | 7 |
| Other examples: pretty, good looking, likes to kill, needs to be saved, scared, polite, Xena, does things like a man | | | |

typical video game character is like. In other words, video game characters and their common, stereotypical portrayals of gender are part of general popular culture for youth and thus are important to understand.

General Discussion

Though older generations are not attuned to video game culture, video game characters are icons in youth popular culture. Character images tell blatantly sexist stories about gender, and research is just beginning to reveal and analyze those stories. The vision of masculinity video game characters project is that men should be powerful, dominant, and aggressive. The story video game characters tell about femininity is that women should be extreme physical specimens, visions of beauty, objects of men's heterosexual fantasies, and less important than men. An emerging trend, though, is that these sexy, curvaceously thin beauties are also now typically violent.

Since video games are popular with youth and since the popularity of video games is growing, it is important to understand them as an agent of socialization. People get information about video games and video game characters from sources other than the games themselves. Video game magazines, television shows, video game commercials, movies, and Internet video game sites are other sources for information about video games. As Martin and Ruble (2004, p. 67) note: "From a vast array of gendered cues in their social worlds, children quickly form an impressive constellation of gendered cognitions" including gendered self-conceptions and gender stereotypes. *Study 2* showed that you do not have to be a video game player to be aware of gender messages present in video games. Video game characters are an agent of gender socialization in youth popular culture, even for those who are not avid gamers. Similar themes about gender emerged in *Study 1* and *Study 2*. Taken together, these studies showed that women are both portrayed and perceived as sex objects who embody an idealized image of beauty. Males, by contrast, are neither portrayed nor perceived as sex objects, but rather, almost exclusively, as powerful aggressors. While one might think aggressive role models uniformly empower men, research shows they do not. For example, the more aggressive a male is, the poorer his intellectual functioning (Huesmann et al. 1987). Furthermore, lower social and intellectual functioning hinder advancement in the workplace and cause strain (Hyde 2007). Even still, both our studies showed that male video game characters are given greater respect (Signorielli and Bacue 1999) than female characters in a way consistent with the theories of sexism discussed here.

Importance of a Broad, Interdisciplinary Theoretical Approach

Past research links exposure to appearance ideals in the media with a host of negative outcomes relevant to self-concept (i.e., anxiety about one's appearance, attitudes favoring a variety of appearance-enhancing strategies, decrements in self-esteem). Past studies also link exposure to media violence to increases in aggressive thoughts, behaviors, and feelings (see Anderson et al. 2003 for a review). Furthermore, exposure to gender stereotypes in the media is related to negative outcomes such as acceptance of violence as manly (Scharrer 2005) and acceptance of rape-supportive attitudes (Dill 2007, manuscript in preparation; Lanis and Covell 1995).

When seen as individual effects, these issues are problematic, but we also place them in the context of a broader theoretical understanding. When viewed within the framework of AST and THM, the way masculinity and femininity appear in the media also support a sexist social hierarchy. This is particularly troubling, given that video game portrayals are targeted to a youthful audience who are actively developing social schemas, especially regarding gender.

One way this research extends the current literature is in the depth, breadth and integrative nature of its theoretical foundations. The interdisciplinary approach (including psychology, sociology and communication) proposed here goes beyond approaches limited to specific learning mechanisms to an integrative psychological, social and cultural understanding of media and gender. We believe people understand media images of gender and power in this broader social context; therefore, analysis at this level is most appropriate.

Changing Representation of Female Characters as Aggressive

While earlier studies (e.g., Deitz 1998) did not find female characters represented as aggressive, the present investigation found the majority (62.2%) of female characters presented as aggressive. Many of these images of aggressive female video game characters glamorize and sexualize aggression. In recent years, more female video game protagonists have emerged, and some have speculated that this indicates new power and liberation in the image of the female video game character. We, however, agree with Provenzo's analysis (Huntemann 2000) that aggressive female figures that are also objectified, sexualized and trivialized (as we found in the current analysis) are not true figures of liberation. The ubiquity of aggressive females, and especially of sexualized aggressive females in video games, is an important development. Traditional theories relating to

the role of gender in society stress the importance of male aggression and dominance, juxtaposed with female submission. Researchers should continue to investigate media depictions of female aggression and its effects.

Strengths, Limitations, and Future Directions

A limitation of this research is that it does not test for effects of stereotyping and aggression in video games. It does, however, suggest the importance of measuring gender in future effects studies. Past studies have conclusively shown that violent content increases aggressive behavior, thoughts, and feelings in children and late adolescents. The same socialization and learning processes that underlie these general violent content effects likely also produce similar effects of sexualized content on a host of sex-role beliefs, interpersonal behaviors, and self-image outcome variables. Future research could improve our understanding of such effects by using designs that allow for a more fine-grained analysis of portrayals of gender and violence. Future research could also combine gender analyses with other relevant factors like race and social class as well as variables such as character respectability and criminality. So, in addition to identifying a smoking gun, it is also important to ask who is holding the gun on whom and in what context.

Study 1 is the first to analyze the images depicted in video game magazine articles and advertisements with respect to gender and power. Therefore, we extend the small literature in this general area, especially the important work of Scharrer (2004) whose research analyzed advertisements in video game magazines. Scharrer (2004) rated characters on the degree to which they possessed dimensions such as muscularity and sexiness and hypothesized that there would be differences between male and female characters on these dimensions. Our analysis differs in a number of ways. In general, we designed our ratings schemes to uncover broad characterizations of theoretical importance. For example, we specifically coded females for the “curvaceously thin” depiction. This analysis was consistent with **Study 2** findings that female characters are depicted both as thin and as buxom, thus underlining the appropriateness of the specific stereotypes we coded for. We also rated males as hypermasculine based on a number of dimensions in addition to muscularity.

While Scharrer (2004) counted the number of weapons present in each advertisement, we coded the specific ways weapons were presented (e.g., using weapons in military engagement). Another important characterization we coded was instances where weapon use was glamorized, which we referred to as images featuring characters “posing with weapons.” Glamorizing and rewarding violence encourages violence (NTVS 1998). We found that about 30% of

aggressive images of both male and female video game characters were strictly aggressive glamour shots. When one considers that 77% of all the characters were represented as aggressive, this represents a pervasive element in video game magazines.

We only studied the visual images of male and female video game characters throughout the magazines. We believed this to be a meaningful approach since video game magazines are image laden. Because images are attention grabbing, readers leafing through the magazine are likely to give primary focus to the images more than the text. Future research should also analyze the text of the magazine articles themselves. One potential focus for this analysis would be describing the pro-gaming stance, which we predict would be consistent with the findings of Brenick and colleagues (2007) that gamers do not believe stereotyping of video game characters and violence in video games has negative effects. This disconnect between what experts and enthusiasts believe about media effects should be studied more in general if we are truly to do science in the public interest.

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Appendix

Operational definitions of terms for magazine content analysis

Aggression—behavior intended to harm another living being

Ex. pictures of aggression may contain weapons, injuries/blood, attacking postures and facial expressions showing intent to harm, cues in the situation (ex. explosions)

War—real, military, historical (ex. fatigues, tanks)

Fighting—any other combat; must show movement/action such as firing weapon, running with sword

Posing with weapon: picture of person holding weapon (ex. gun, knife, sword, ammunition belt. Not using weapon.

Armor—mail, metal armor, leather armor, shields

Sexualized (women)—showing skin, particularly cleavage, midriff and legs; large breasts, extreme proportions, provocative poses, postures or facial expressions

Sexualized (men)—showing skin, belly (six pack), provocative poses, postures or facial expressions

Scantily clad/showing skin—men who are shirtless, women showing cleavage, midriff, wearing short skirt. Tight outfits that cover most of the body do not fit this category.

Hypermasculine—distorted male characteristics. Ex. large muscles (often unrealistically so), very masculine facial features (chiseled face, stubble) signs of power and dominance

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