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Contents lists available at ScienceDirect

## Journal of Experimental Social Psychology

journal homepage: [www.elsevier.com/locate/jesp](http://www.elsevier.com/locate/jesp)

## Reports

Effects of exposure to sex-stereotyped video game characters on tolerance of sexual harassment<sup>☆</sup>Karen E. Dill<sup>\*</sup>, Brian P. Brown, Michael A. Collins

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## ARTICLE INFO

## Article history:

Received 24 August 2007

Revised 16 May 2008

Available online 18 June 2008

## Keywords:

Stereotypes

Media

Aggression

Sexism

Power

Sexual harassment

Rape myths

Violence against women

## ABSTRACT

The violent video game literature has previously not extended to the domain of violence against women. The current investigation tested the effects of exposure to sex-typed video game characters versus images of professional men and women on judgments and attitudes supporting aggression against women. Results showed experimental effects of short-term exposure to stereotypical media content on sexual harassment judgments but not on rape myth acceptance. A significant interaction indicated that men exposed to stereotypical content made judgments that were more tolerant of a real-life instance of sexual harassment compared to controls. Long-term exposure to video game violence was correlated with greater tolerance of sexual harassment and greater rape myth acceptance. This data contributes to our understanding of mass media's role in socialization that supports violence against women.

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According to *Price Waterhouse Coopers*, over the next 5 years the video game industry will be the fastest growing of any entertainment category, and will earn a projected \$55 billion internationally by 2008 (Vargas, 2007). Most top-selling games and most of kids' favorite games are violent (Anderson & Bushman, 2001; Dill, Gentile, Richter, & Dill, 2005; Funk, Germann, & Buchman, 2000). A growing body of research demonstrates a causal connection between exposure to video game violence and aggressive behavior, thoughts and feelings (Anderson & Bushman, 2001; Anderson & Dill, 2000; Anderson, Gentile, & Buckley, 2007; Bartholow, Sestir, & Davis, 2005; see Anderson et al., 2003 for a review). To date, effects research on video game violence has not extended to the domain of violence against women. This is a clear gap in the literature, especially given the growing concern about sexist gender portrayals in video games (Brenick, Henning, Killen, O'Connor, & Collins, 2007; Burgess, Stermer, & Burgess, 2007; Dill & Thill, 2007; Scharrer, 2004; Walsh, Gentile, VanOverbeke, & Chasco, 2002). The current investigation is designed to bridge that gap by providing data showing a causal relationship between sexist gender portrayals in video games and two measures linked to violence against women: sexual harassment judgments and rape-supportive attitudes.

Of all the forms of mass media popular with youth, video games perpetuate perhaps the most uniform and subtle sex role ste-

reotypes. According to Dill and Thill (2007) popular gaming magazines portray 83% of male video game characters as violent. Commonly, male video game characters are hyper-masculine ("macho") and many scenes (32%) glamorize violence. These characterizations have important implications for gamers in that research has shown hyper-masculinity and hostile masculinity to foster sexual aggression (Malamuth, Heavy, & Linz, 1993; Murnen, Wright, & Kaluzny, 2007; Scharrer, 2005).

Female video game characters are consistently shown as beautiful, busty, scantily clad sex objects (Burgess et al., 2007; Dill & Thill, 2007; Scharrer, 2004). Women in video games also are under-represented and marginalized; games rarely depict female heroes (Dill et al., 2005; Scharrer, 2004). Even when a game has a female lead, she is still likely to be sexually objectified as exemplified by *Tomb Raider's* Lara Croft (Mikula, 2003).

Dill and Thill (2007) asked teenagers to describe typical male and female video game characters. Teens described female characters as being sexually promiscuous, wearing revealing clothing and as thin with large breasts. In contrast, they viewed typical male characters as physically powerful, dominant, violent, mean and cocky. These conceptions of masculinity and femininity can have real-life implications for how video game players view the roles and abilities of men and women.

## Violence towards women in gaming

There are also current trends in gaming towards glorification of violence towards women and the perpetuation of a crass view of

<sup>☆</sup> The authors wish to thank Bruce Bartholow, Jeanne Funk, Craig Anderson and Melinda Burgess for helpful comments on an earlier draft of this manuscript.

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sexuality (Walsh et al., 2002). The *Grand Theft Auto* (GTA) series of games, consistently among the top-sellers worldwide (see *Top 25 PS2 Games of All Time*, 2007), provides a pertinent example. In *GTA: Vice City* the violent male hero can hire a prostitute—depicted in scenes where a car rocks back and forth and the characters trade sexual quips. Often these quips are sexually demeaning to both men and women, including jibes from the prostitute such as “You in me yet?” *Vice City* also rewards violence against women: if the male hero kills the prostitute after they have sex, he gets his money back. When a male character punches a female prostitute, she does not respond by screaming or saying “no,”—negative responses likely to happen in real social interactions—but rather is programmed to retort, “I like it rough” and to punch back. Seventy-five percent of American boys under 17 have played a *Grand Theft Auto* game, though they carry a *Mature* rating indicating that sales to anyone under age 17 are prohibited (Walsh et al., 2002).

### A theoretical model of media sexism effects

Anderson and colleagues' General Aggression Model (e.g., Anderson et al., 2007) describes how knowledge structures about aggression are formed and how they are accessed, considered, and acted upon in relevant situations. In terms of the present investigation, exposure to negative gender stereotypes in video games will contribute to schemas and scripts about social relations between men and women. For example, if a boy learns that males are powerful and dominant and women are objects to be subjugated and used, these ideas will take root in his developing social conscience and broadly influence his attitudes and behaviors towards women. The current investigation, then, fits conceptually within the broad framework of the General Aggression Model, exemplifying how stereotypical images in the media cause beliefs that foster violence against women.

Theories of hegemonic masculinity (Connell, 1987; Lull, 2003) assert that modern media project *myths* about male dominance and female submission in order to support a patriarchal social structure. In other words, media stereotypes do not reflect reality—for example, few real men look or act like a prototypical muscle-bound, weapon-toting video game character—but rather construct a stylized view of masculinity and femininity that influences the beliefs, feelings and actions of members of the culture.

According to Ambivalent Sexism Theory (AST; e.g., Glick et al., 2004) many societies view men as aggressive and self-serving, but ultimately as superior to women because the traditionally masculine characteristics of dominance and instrumentality are widely valued. Females, in contrast, are “wonderful but weak,” in other words, women are more likeable, but clearly subordinate. Across a variety of cultures, being male is equated with social status, and this fact leads to real gender inequality. Research based on a broad international sample found that where the stereotype of men as “bad but bold” was most pronounced, women suffered from lower literacy rates, held less prestigious jobs and had lower incomes (Glick et al., 2004).

Recently, Murnen et al. (2007) conducted a meta-analysis investigating the theory that the patriarchal structure of society supports sexual violence against women. They analyzed data from 39 studies related to masculine ideology and sexual aggression. Results showed evidence for a consistent relationship between measures of stereotypical male dominance and sexual aggression. Perpetuating images of men as dominant and aggressive and women as demeaned supports violence against women.

Burt's (1980) classic work on Rape Myth Acceptance (RMA) raised consciousness about how cultural myths support rape. Rape myths are false stereotypes about rape, such as the idea that women secretly enjoy rape. Burt (1980) said that rape is the logical outcome of a patriarchal social structure. In essence, rape myths

are “cognitive justifications for sexual aggression,” that “create a climate that allows rape to occur” (Murnen et al., 2007, p. 362; see also Looby, 2001; Mastronardi, 2003; Stark, 2007).

The theme that emerges from these theories is one of a social hierarchy where masculinity is hegemonic: where men dominate and women are subjugated. The most important theoretical factor here is social power. When the media presents demeaned images of women, they encourage the use of power against women. That can mean physical or sexual aggression or sexual harassment in the workplace or school.

### Media effects studies pertaining to rape and sexual harassment

The primary reason for the current investigation is that it meaningfully extends the video game violence literature to the arena of violence against women; no such study currently exists in the literature. However, there are studies showing a causal connection between sexist representations in other forms of media and variables relevant to violence against women. Milburn, Mather, and Conrad (2000) exposed male and female college students to either a control film or a 22-min compilation of scenes rated in a pre-test to be non-violent but to sexually degrade and objectify women. Results showed that males who viewed the degraded, objectified women were more likely to endorse rape myths.

Johnson, Adams, Ashburn, and Reed (1995) studied the effects of exposure to non-violent, but degraded and objectified women in rap videos on male and female adolescents using a treatment group and a no-treatment control. Results showed a significant interaction between film exposure and gender on acceptance of violence against women. While boys' acceptance of violence against women was not altered by the manipulation, girls who watched the non-violent but degrading rap videos showed significantly more acceptance of dating violence than girls who did not see the videos (see also Lanis & Covell, 1995). This study shows that when girls see women demeaned in the media, they are more accepting of dating violence.

### Sexual harassment

Sexual harassment (SH) encompasses a wide variety of behaviors and can range in severity from degrading remarks to unwanted sexual advances and sexual assault. Statistics indicate that SH is widespread in high schools, colleges, and in the workplace. About 40–50% of women and girls in these settings who were surveyed reported experiencing sexual harassment (Crawford & Unger, 2004).

Like rape, SH was once miscast as sexually motivated behavior, but is now understood as aggressive behavior (O'Leary-Kelly, Paetzold, & Griffin, 2000). SH harms victims in a variety of ways including emotionally and physically. In the job or university setting, it can also result in economic sanctions and limits on advancement (Looby, 2001). As with domestic violence against women, men who harass often do so to coerce women and exercise power and control over them (Looby, 2001; Stark, 2007).

To what extent are specific negative media stereotypes applied to other women? Ferguson and colleagues (2005) exposed participants to either promiscuous or non-promiscuous women taken from tapes of the *Jerry Springer Show*. Later, they read a sexual harassment scenario and rated the promiscuity of the female victim. Results showed that those who saw the promiscuous women on *Jerry Springer* rated the sexual harassment victim as less traumatized and more responsible for the harassment than did participants in the control condition. Furthermore, the authors demonstrated that it was the act of stereotype application—of attributing promiscuity to women other than those seen on *Jerry Springer*—that caused them to blame an unrelated victim

of sexual harassment. The conclusion: when people generalize lessons learned from sexist media images, unrelated women may suffer the consequences.

### The current investigation

We investigated the effects of sexist video game content (macho, aggressive males and objectified females) on two outcomes: (1) sexual harassment judgments and (2) rape-supportive attitudes, described below. We also measured chronic exposure to video game violence and related this factor to sexual harassment judgments and rape-supportive attitudes. Ferguson et al. (2005) noted “there has been little empirical research on how the mass media might affect perceptions of sexual harassment” (p. 479). To add to this media effects literature, we designed our own instrument for the present study, which included a real-life account of sexual harassment between a college student and a professor and a series of judgments about this account. Our hypotheses were as follows:

*H1:* Exposure to images of sex-typed video game characters (macho, aggressive males and objectified females) will result in greater tolerance of sexual harassment.

Ferguson et al. (2005, p. 480) reported that there have been studies showing gender effects on sexual harassment judgments, studies showing no gender effects and studies showing mixed results. Citing these studies as precedent, they made no gender predictions for their sexual harassment outcomes. Based on this rationale, we also made no gender predictions. However, we frame this as a research question:

*RQ1:* How will gender influence sexual harassment judgments and how will gender interact with exposure to images of sex-typed video game characters?

*H2:* Exposure to images of sex-typed video game characters (macho, aggressive males and objectified females) will cause increases in rape supportive attitudes.

Johnson et al. (1995) showed that viewing objectified women did not change males' level of support for dating violence. However, Lanis and Covell (1995) found that viewing objectified women increased male's rape and violence-supportive beliefs, but that viewing both objectified and progressive images of women decreased female's judgments on these same outcomes. Clearly, gender effects in this domain are complex. We therefore made no predictions about gender effects for H2. Again, we frame this as a research question:

*RQ2:* How will gender influence rape-supportive attitudes and how will gender interact with exposure to images of sex-typed video game characters?

One known investigation (Dill, 2008) demonstrated a correlation between violent video game exposure and RMA and negative attitudes towards women. Extending this research, we propose:

*H3:* Participants' self-reported exposure to violent video games will correlate negatively with progressive sexual harassment judgments.

*H4:* Participants' self-reported exposure to violent video games will correlate positively with rape-supportive attitudes.

## Methods

### Participants

Participants ( $N = 181$ ; 120 females, 61 males; mean age 18.82 years) were students at a private liberal arts college in North Carolina enrolled in an introductory psychology course. The four available sections of introductory psychology (ranging in size from 17 to 32 students) were randomly assigned to either the experimental or control conditions.

### Procedure

After signing a consent form, participants received instructions and then viewed one of two PowerPoint presentations, containing either the experimental or the control images. To increase task focus, we told participants that, at the end of the study, we would test their memory for the images they viewed and that those scoring highest on this memory test would be eligible to win a \$25 gift certificate to a popular store. Participants completed the questionnaires, presented in one of two random orders to control for order effects, and were debriefed. During the entire experiment, care was taken to ensure they were neither exchanging information nor discussing the images. Gift certificates were awarded as promised.

### Experimental manipulation

The experimental group viewed a PowerPoint presentation of images of sex-typed video game characters similar to those described by Dill and Thill (2007). The games covered in the presentations included *GTA: Vice City*, *GTA: San Andreas*, *Dead or Alive Xtreme Beach Volleyball 2*, *BMX XXX*, *Saint's Row*, *Resident Evil* and *Gears of War*. See Fig. 1 for an example image.

Control group participants viewed press photos of current US senators and congresspersons—half male and half female (see Fig. 1). Our goal was to present images of both men and women as respected professionals. Both PowerPoint presentations were set to automatically display each image for ten seconds and to continuously loop for a total of ten minutes. The experimental and the control presentations each had a total of 32 images (16 males and 16 females).

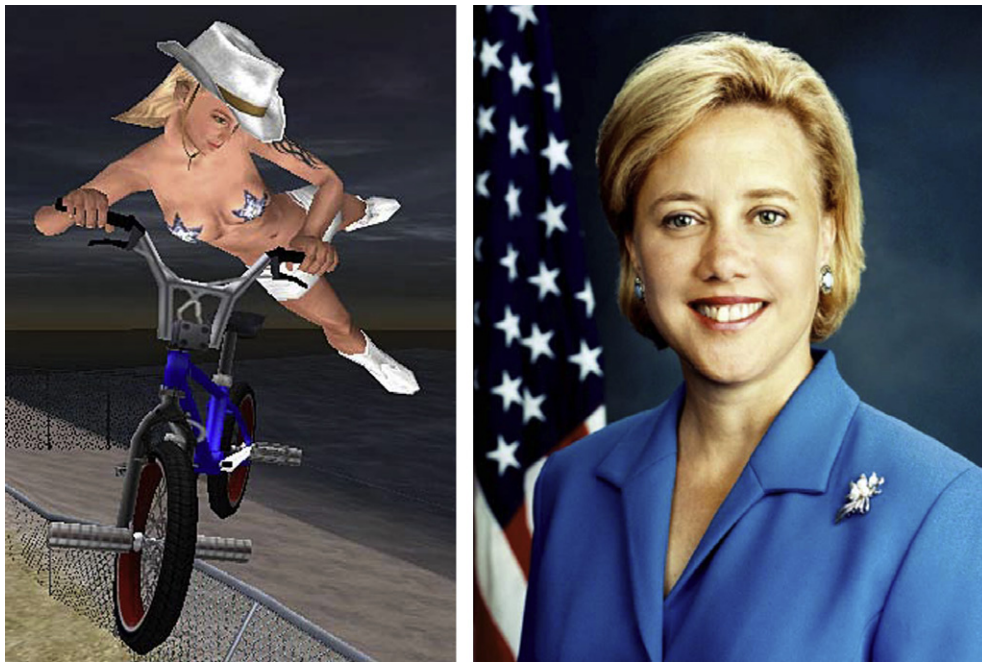
It is important to note that, theoretically, these stimuli served as both a manipulation and as a prime. As previous research shows (Dill & Thill, 2007, Study 2), college students are aware of sexist stereotypes in video games. Seeing only the images presented in this study should affect participants. However, because most American youth have grown up in the video game culture, the images in the experimental condition also serve as a prime for all the other sexist images of video game characters they have seen in their lifetimes, thus making the manipulation more powerful.

### Materials

#### Sexual harassment judgments

The authors created a measure of sexual harassment judgments (SHJ) for the current investigation (see Appendix). Participants read a real-life story of sexual harassment perpetrated by a male college professor against a female student. This was adapted from *The Silent Treatment* by Naomi Wolf (2004). The scenario was chosen in part for its complexity and ambiguity. The nuances of the social situation described create a story that is more open for interpretation and therefore offers what we hope is a more sensitive measure of sexual harassment. Subjects responded to seven questions about their judgments of the event. Participants rated the incident as constituting sexual harassment and as a serious and damaging offense. They also reported their empathy for the victim, and the extent to which they blamed the victim. Two items measured their choice of punishment for the perpetrator. The entire measure is included in the Appendix. We crafted the judgment questions to be open, balanced, and not leading. For example, rather than asking simply “Is this sexual harassment?” we asked, “If the student's story is true, would you personally believe that Prof. Bloom is guilty of sexual harassment?”

We created a sexual harassment composite score by summing scores on the seven-item scale. Six of the items used 0–9 scales. Each punishment checklist item was assigned a value from 0 to 7. The final composite score could range from 0 to 61. Higher scores indicated more progressive sexual harassment judgments (SHJ). Scale reliability was .786 based on a sample size of 179 (two participants were excluded due to missing data).



**Fig. 1.** Two stimuli used in the current investigation: A stereotypical (experimental) female (Left) and a professional (control) female (Right). The videogame image is a screen shot from the video game *BMX XXX* published in 2002 by Acclaim Entertainment. The professional image is Senator Mary Landrieu (D-La) – <http://landrieu.senate.gov/>.

**Rape-supportive attitudes.** The 20-item short form of Muehlenhard and Felt's (1998) Sexual Beliefs Scale is designed to measure specific attitudes linked to violence against women. These attitudes, organized into five subscales include the following content areas: Leading On Justifies Force, Token Refusals, Women Like Force, No Means Stop, and Men Should Dominate. This scale is far less commonly used than Burt's (1980) measure of RMA and thus will provide new data to the literature on media violence effects generally, and video game violence and stereotype effects specifically. Reliability statistics (alphas) for these subscales were good, ranging from .714 (Token Refusals) to .944 (No Means Stop).

Composite scores of the twenty-item *Sexual Beliefs Scale* could range from 0 to 60 with higher scores indicating greater rape supportive beliefs. Scale reliability was .834 based on a sample size of 180 (one participant was excluded due to missing data).

**Video game questionnaire-Checklist version (VGQ-C).** We created a simplified version of Anderson and Dill's (2000) measure of violent video game play. We asked "Which type of video games do you play most often?" Participants responded by checking all game types that applied from the following list: action, first-person shooter, sports, fighting, adventure, strategy, role playing game, puzzle, racing, music and dancing. They then rated how often they play video games on a scale ranging from 0 (never) to 5 (often). They also indicated how many hours per weekday and per weekend day they typically play video games. We calculated Violent Video Game Exposure (VVGE) by adding together the number of violent video games (action, first person shooter, and fighting) and multiplying that by how often the subjects played video games.

## Results

### Full factorial models for sexual harassment judgments and rape-supportive attitudes

First, we ran a full factorial ANOVA with the experimental manipulation (Media Content: Sex-Typed Video game Images vs. Professional Images) and sex of subject as independent variables

and the composite score for sexual harassment judgments as the dependent variable. Results indicated a main effect of the Media Content variable ( $F(1, 175) = 4.15, p < .05, \eta^2 = .023$ ) and a main effect of sex ( $F(1, 175) = 13.63, p < .0001, \eta^2 = .072$ ). There was also a significant interaction between Media Content and sex of subject ( $F(1, 175) = 9.33, p < .01, \eta^2 = .051$ ). Tolerance for sexual harassment was greatest for males in the Stereotypical group ( $M = 41.0$ ), followed by males in the control group ( $M = 47.64$ ), and females in the control group ( $M = 48.47$ ). The group with the least tolerant attitudes towards sexual harassment were the females in the Stereotypical group ( $M = 49.8$ ) (Fig. 2).

Based on the observed pattern of means, we ran a 3-to-1 contrast to determine if males in the Stereotypical group scored significantly lower than the other three groups. This 3-to-1 contrast was significant ( $t(175) = 4.667, p < .001$ ). Post-hoc comparisons also revealed a significant difference between males in the Stereotypical and Professional groups (mean difference =  $-6.64, p < .002$ ), but not between females in the Stereotypical and Professional groups (mean difference =  $1.33, p > .05$ ).

Next we ran the same full factorial model, but with Rape-Supportive Attitudes as the dependent measure. The only significant factor in this model was sex of subject ( $F(1, 176) = 16.72, p < .0001, \eta^2 = .087$ ) with males ( $M = 1.08$ ) scoring significantly higher on the Rape-Supportive Attitudes measure than females ( $M = 0.84$ ).

**Video game violence exposure (VVGE).** Males reported playing video games an average of 7.26 h per week, while females played an average of 2.71 h per week. Composite scores of the VVGE variable indicated that males ( $M = 4.0$ ) reported playing significantly more violent video games than did females ( $M = .6833$ ), ( $F(1, 177) = 60.45, p < .0001, \eta^2 = .255$ ).

First we ran correlations and found, as hypothesized, that some significant relationships did exist between VVGE and our outcome measures. Specifically, VVGE was negatively correlated with sexual harassment judgments ( $r = -.232, p < .001$ ) such that those with more reported long-term exposure to violent video games increased tolerance towards sexual harassment. Also, VVGE was significantly correlated with Rape Supportive Attitudes,  $r = .239$ ,

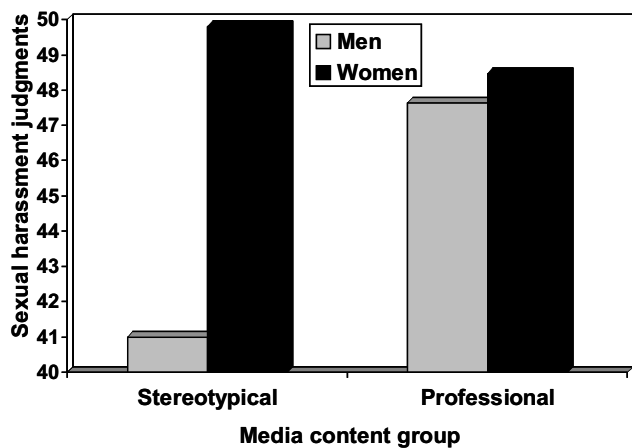


Fig. 2. Sexual harassment judgments as a function of media content exposure (Stereotypical or Professional) and participant sex. The scale for sexual harassment judgments ranged from 0 (least progressive) to 61 (most progressive).

$p < .001$ . Subjects with higher violent video game exposure showed greater Rape Supportive Attitudes. We then ran these same correlations using exposure only to first person shooter games. Results indicated slightly larger correlations between exposure to first person shooter games and sexual harassment judgments ( $r = -.327$ ,  $p < .001$ ) and Rape Supportive Attitudes ( $r = -.256$ ,  $p < .0001$ ).

Next we added VVGE (both the general composite and the shooter games variable) as an independent variable to the full factorial ANOVAs reported above to determine if more complex relationships could be demonstrated. Results indicated no significant effects of VVGE either on sexual harassment judgments or on Rape-Supportive Attitudes ( $p > .05$ ). However, the other results reported above remained essentially unchanged.

## Discussion

Results indicate support for H1—that a short-term experimental manipulation of exposure to media content (sex-typed images versus professional images) altered judgments about sexual harassment. Detailed analysis revealed that males who saw the sex-typed images were most tolerant of sexual harassment when judging a real-life case of sexual harassment between a female college student and her male professor. There was no experimental support for H2 in that sex of subject was the only significant variable in the full factorial analysis.

### Media exposure interaction with sex on sexual harassment judgments

An intriguing finding that resulted from this investigation was the significant interaction that occurred with the sexual harassment judgments. Analyses revealed that men showed a greater tolerance for sexual harassment of a young woman by an older man (her professor). Most interestingly, the males who were exposed to the objectified female video game characters were the most tolerant of any of the groups towards sexual harassment. Furthermore, the trend was for the females who were exposed to these same demeaning and objectified images of women to react by decreasing their tolerance for sexual harassment—even compared to women who had just seen empowered female political figures. This may be because when women see that they are being stereotyped as lesser than men—as objectified and demeaned compared to powerful men—they are energized to advocate for the just treatment of women. Taken together then, media images of demeaned women cause men to advocate keeping women “in their place,” while they cause women to advocate for social justice. Future re-

search should examine the possibilities surrounding the notion that exposure to common stereotypes of men and women in video games might fuel adversarial relations between men and women.

### Long-term versus short-term exposure

Although more complex models did not indicate significant effects of long-term exposure to video game violence, simpler correlational analyses did reveal significant relationships between long-term violent video game exposure and less progressive sexual harassment judgments and greater rape supportive attitudes. These correlations are similar to those reported in earlier research (Dill, 2008). It may be that the checklist measure of long-term video game violence exposure used here is a weaker measure than the game-listing version used in a variety of other investigations. Furthermore, there is a difference between the still images used in the experimental manipulation and the live action game content that the long-term measure represents. While these results add to the very small literature correlating long-term exposure to video game violence with attitudes supporting violence against women, more research is needed to elucidate these relationships.

### The experimental and control groups

In this experiment, we designed the experimental versus control conditions in a unique way. A textbook experimental versus control condition would have been more convincingly achieved by comparing video game characters that were sex-typed with those who were not. That design has clear strengths. In the present study, our two conditions were designed to differ from each other on the dimension of the social status of women: namely whether the females were presented as demeaned and objectified (disrespected) versus as positive and professional (respected). Also the males were strong in both conditions, but they were stereotypically manly (most notably, aggressive) in the sex-typed condition, but, like the women, were respectable professionals in the comparison condition. These categories were inspired by the work of Lanis and Covell (1995) on magazine images of demeaned versus esteemed women and also by the theories described above. A critical theoretical variable in the representation of women is social status. A common thread in research on media and women is that women suffer from representations that demean them as compared to men. These themes are present in Hegemonic Masculinity Theory and in Ambivalent Sexism Theory. They are also relevant to research on representations of women in pornography and its relationship to violence against women. We believe our conditions spoke to what was theoretically most important.

There is also a practical aspect to media research that was important in guiding our design of the experimental and control conditions. As past research in our lab has shown (Dill & Thill, 2007, Study 2) the vast majority of male video game characters are aggressive and manly in the sense of hegemonic masculinity (including social power and dominance). Most female video game characters are objectified and demeaned. These are sex-role stereotypes that youth are exposed to in real life. Therefore they represent their real experiences with socialization better than would the creation of artificial avatars. As an example of this point, in earlier research in our lab we attempted to measure positive behavior enacted by video game characters. Unfortunately, we found few positive behaviors to code. When research assistants started asking whether an armed male video game character assisting another character to break out of prison could be coded as a positive behavior, it was clear that true positive behaviors were scarce. On the other hand, it is encouraging to note that people really are exposed to examples of respected male and female professionals such as the

actual congresspersons we showed our subjects. In that sense, our study had greater validity than would artificially created avatars.

In the end, we believe we demonstrated a difference between how men and women reacted when exposed to negative, sex-typed images versus professional images—both of which were realistic in their own ways. We know they behaved differently from each other but not how they would have behaved compared to a no treatment control group or a control group that was designed differently. It does remain a weakness of the design that the congresspersons were real people and the video game characters were not. Could we have designed or located avatars that would have evoked the kind of success and respect one attributes to senators? Especially because there is so little published research in this area, future research will add to our body of knowledge in this regard. One important outcome this research demonstrates is that exposure to different kinds of media images of women changes the level of tolerance some people have for judgments and attitudes relevant to violence against women. For example, exposure to demeaning images of women may cause males to be more tolerant of sexual harassment towards women in their workplace or school.

A strength of this investigation is that it is the first experimental investigation of short-term exposure to negative sex role stereotypes of video game characters. It extends the video game violence effects literature into the domain of aggression against women. These experimental results on sexual harassment judgments also have real world consequences since males are more likely than females to play violent video games, and since men are often in positions of power. Our results suggest that men may disregard women's reports of sexual harassment, blame the victim and assign weaker punishments to perpetrators, thus condoning sexual harassment and punishing victims. Sexual harassment is both a form of aggression against women and a form of gender discrimination and is a serious and widespread social problem. Given the popularity of video games, especially among young men, and the typicality of sex role stereotypes in games and game magazines, the effects reported here are important.

Past research has shown that when sexual harassment involved a man touching a woman, ratings of the harassment tended to be uniformly high, whereas verbal harassment scores were affected by exposure to negative female stereotypes in the media (Ferguson et al., 2005). The scenario employed in our study (see Appendix) involved a male professor putting his hand on a female student's thigh. The victim was a high-achieving, independent-minded female student. Past research (Berndahl, 2007; Maass, Cadinu, Guarniari, & Grasselli, 2003) indicates that men are more likely to sexually harass so-called "uppity" (independent, androgynous) women and feminist women. Our research therefore adds to this literature. Future research should address what characteristics of harassment scenarios are sensitive to manipulations of sex-stereotyped content.

Within the context of the General Aggression Model (Anderson et al., 2007), the stimuli used in this study presumably primed associated thoughts. In the experimental group, this included knowledge structures relevant to a male-dominated socio-cultural structure. Though we did not measure affect, priming may also have activated associated affect. Future research could test whether these types of stimuli evoke affective responses and whether they mediate or moderate attitudinal and/or behavioral outcomes.

Video game images and stories are a dynamic part of our social worlds, providing information about what we should or could do, think and feel. Even young people who are not avid gamers are familiar with gender stereotypes in video games (Dill & Thill, 2007) but, at the same time, do not believe their attitudes and behaviors are negatively influenced by exposure

to these stereotypes (Brenick, Henning, Killen, O'Connor, & Collins, 2007). The current investigation calls those attitudes into question and suggests an important line of inquiry for future research.

### Appendix Social attitudes questionnaire

From "The Silent Treatment" by Naomi Wolf—from [newyorkmetro.com](http://newyorkmetro.com)

*Instructions:* The following story is about a student's experiences with one of her college professors. Please read the story and answer the questions that follow it.

"...What actually happened in late fall, 1983? I was a senior, majoring in English. Harold Bloom was one of Yale's most illustrious professors. ...

I, personally, was at once drawn to him intellectually and slightly scared of him. I had audited a famous course he taught, and he had reached out to me then and invited me to talk with him. Since he was so intellectually selective, I was "sick with excitement" at the prospect. . .

Bloom agreed to meet with me weekly. At my adviser's suggestion, he wrote me a letter of reference for my Rhodes Scholarship application. Then I could not get a meeting with him. The semester was slipping away. . . Finally, Bloom suggested that he come to the house I shared with one of his editorial assistants and her boyfriend. At dinnertime. I agreed.

The four of us ate a meal. He had, as promised, brought a bottle of Amontillado, which he drank continually. I also drank. We had set out candles—a grown-up occasion. The others eventually left and—finally!—I thought we could discuss my poetry manuscript. I set it between us. He did not open it. He did not look at it. He leaned toward me and put his face inches from mine. "You have the aura of election upon you," he breathed.

I hoped he was talking about my poetry. I moved back and took the manuscript and turned it around so he could read.

The next thing I knew, his heavy, boneless hand was hot on my thigh.

I lurched away. "This is not what I meant," I stammered. The whole thing had suddenly taken on the quality of a bad horror film. The floor spun. By now my back was against the sink, which was as far away as I could get. He moved toward me. I turned away from him toward the sink and found myself vomiting. Bloom disappeared.

When he reemerged—from the bedroom with his coat—a moment later, I was still frozen, my back against the sink. He said: "You are a deeply troubled girl." Then he went to the table, took the rest of his sherry, corked the bottle, and left."

Circle your answer on the scales below:

1) If the student's story is true, would you personally believe that Prof. Bloom is guilty of sexual harassment?

0 1 2 3 4 5 6 7 8 9  
Not at all guilty Definitely guilty

2) If Prof. Bloom admitted doing what the student accused him of doing, how harshly do you think he should be punished?

0 1 2 3 4 5 6 7 8 9  
No punishment Severe punishment

3) If the story about Prof. Bloom is true, which of the following punishments do you think he would deserve? Assume they are in order from least to greatest punishment. (Check one).

- \_ No punishment
- \_ being asked to apologize to the student
- \_ being given a verbal reprimand from his supervisor
- \_ being given a written reprimand from his supervisor
- \_ being warned that repeating this type of behavior may result in his getting fired in the future
- \_ being forced to take time off his job without pay
- \_ being fired from his job

4) To what extent do you think the student is to blame for the professor touching her thigh? In other words, did the student do something to cause the professor's behavior?									
0	1	2	3	4	5	6	7	8	9
Not at all responsible for Professor's behavior					Clearly responsible for Professor's behavior				

5) Should the student's complaint be taken seriously?									
0	1	2	3	4	5	6	7	8	9
No her complaint is trivial					Yes, her complaint is serious				

6) Do you feel sorry for the student in the story?									
0	1	2	3	4	5	6	7	8	9
No, not at all sorry					Yes, very sorry				

7) How damaging do you think professor's behavior was to the student?									
0	1	2	3	4	5	6	7	8	9
Not at all damaging					Very damaging				

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