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GENDER AND RACIAL STEREOTYPES IN POPULAR VIDEO GAMES

By

Yi Mou

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ABSTRACT

GENDER AND RACIAL STEREOTYPES IN POPULAR VIDEO GAMES

By

Yi Mou

This study examined the gender and racial stereotypes in video games. Top 10 games from each of the three most popular consoles (PlayStation 2, Xbox, and Gamecube) were content analyzed. Totally 201 stereotypical behaviors were identified. Female characters (n = 40) were under-represented in comparison to male characters (n = 281). No evidence in the study shows that females are stereotypically portrayed as victims, or that males are stereotypically portrayed as heroes or helpers. Similarly, there is no evidence showing that minority groups are stereotypically portrayed as villains. However, females are stereotypically portrayed with sexually revealing appearance. And except for Asian characters, minority groups are under-represented in video games. Implication for these finding are discussed.

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To PaulQ, of course.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: BACKGROUND

Video games are one of the most popular yet least studied of the new media. They provide realistic-looking fantasy worlds in which players from all around the globe interact in a virtual way (Williams, 2006). According to the Entertainment Software Association (2006), sixty-nine percent of American heads of households play computer and video games, and U.S. computer and video game software sales grew four percent in 2005 to $7 billion, more than doubling industry software sales since 1996.

Although the age of the average video game player is in the late twenties, the prevalent usage of video games by adolescents causes growing concern. A recent NPD Group (2006) study reveals that ninety-two percent of children aged 2-17 play video games, and almost half of all "heavy gamers" are 6-to-17-years-old. A body of studies has been conducted upon the impact of video games play on aggressive attitudes and behaviors (Sherry, 2001); the content of violence in video games (Smith, Lachlan, & Tamborini, 2003); etc. Less concern has focused on the possible stereotyping phenomena in video games.

A stereotype is mental "shorthand which helps to convey ideas and images quickly and clearly" (Courtney & Whipple, 1983, p. 205), and is widely employed in traditional mass media messages. Social cognitive theory (Bandura, 2002) provides a framework on how people, especially children and adolescents, can build their attitudes and beliefs from exposure of those stereotypes.

Research on exposure to stereotypes in traditional mass media suggests that these media provide distorted representations of women and minorities (Thompson & Zerbino, 1995; Aubrey & Harrison, 2004; Greenberg & Baptista-Fernandez, 1980; etc.), and that

exposure to these distorted images can have a negative effect on user perceptions of women and minorities (Omi, 1989). If the presence of such images in traditional mass media can have this effect, it is reasonable to predict that the presence of similar images in the portrayal of video game characters might produce comparable stereotypes. This study is intended to explore the gender and racial stereotypes present in the popular video games.

Stereotypes

Stereotype refers to one group's generalized and widely accepted perception about the personal attributes of members of another group (Ashmore & Del Boca, 1981; Dates & Barlow, 1990). It is not just beliefs about groups, but also includes theories about how and why certain attributes go together (Hilton & von Hippel, 1996).

Stereotypes serve multiple purposes in a variety of cognitive and motivational processes, and they emerge "in various contexts to serve particular functions necessitated by those contexts" (Hilton & von Hippel, 1996). They emerge as a way of simplifying the demands on the perceiver (Bodenhausen, Kramer, & Susser, 1994; Bodenhausen, Sheppard, & Kramer, 1994; Macrae, Milne, & Bodenhausen, 1994); or a way in response to environmental factors, such as different social roles (Eagly, 1995), group conflicts (Robinson, Keltner, Ward, & Ross, 1995), and difference in power (Fiske, 1993); or a way of justifying the status quo (Jost & Banaji, 1994; Sidanius, 1993), or in response to a need for social identify (Hogg & Abrams, 1988).

Stereotypes in mass media

Research on media stereotypes has a long history. In particular, study of group representations in media content "reveals a series of unsubstantiated beliefs about what

these groups are, what they are like, and how they behave" (Omi, 1989). Gender and racial stereotypes are two of the most studied stereotypes in the large body of research.

Portrayal of women in mass media

Research suggests that within many cultures women are generally perceived as subordinate and passive-dependent to men, with sexual relationships as a central and all-important role in life (Cantor, 1987). One reason given for this perception is exposure to the prevalent stereotyped portrayal of women in media. Cantor (1987) maintains that through different mass media, women of all different social classes, "receive the same basic message: that men's work and life choices are more important than women's, and that in order to be happy and fulfilled, women must have a love-dependent relationship with some man". This is supported in a body of studies on the portrayal of women in traditional mass media. For instance, in advertising settings, women are depicted as dependent on men, shown primarily in domestic scenarios related to happy families and perfectionism; in contrast, men are shown in the workplace in various locations, situations, and occupations, portrayed as knowledgeable, powerful, and driven (Koernig, S. K. & Granitz, N., 2006). In political campaigns, female candidates are portrayed as more competent in dealing with educational and health care system issues and better able to maintain honesty and integrity in government, while male candidates are portrayed as better at military issues and farm issues (Sapiro, 1981).

Gender representations in television programs have been explored since 1970s. Updated studies in the 1990s include gender roles found in animated cartoon (Thompson & Zerbino, 1995), children's favorite Television programs (Aubrey & Harrison, 2004), etc.. Within these studies, gender-related personality characteristics, communication

characteristics, behaviors, even the total talk time of male and female characters have been coded. Thompson et al. (1995) point out that both male and female characters are portrayed stereotypically. Their results indicated that compared to female characters, male characters appeared more frequently, talked significantly more, and engaged in more of almost all of the noted behaviors, such as achieving and showing leadership.

Since the mid-1990s, stereotyping portrayals in video games have been explored in several studies, mainly focusing on gender stereotypes. In one of the earliest studies, Dietz (1998) revealed that 41% of the games with characters had no female characters. Moreover, evidence of gender stereotyped representations was apparent in games that did contain female characters. In games with female characters, women were portrayed as sex objects 28% of the time, and were portrayed as victims in 21% of time. However, considering the rapid growth of games during the past eight years, we might question whether or not the results of Dietz's research are outdated.

More recent research is revealing in this regard. Beasley and Standley (2002) found a significant sex bias in the number of male versus female characters. Of the 597 characters coded, only 82 (13.74%) were women. This research focused particularly on appearance-related stereotypes, using clothing as an indicator of sexuality, and they found that majority of the female characters wore clothing that exposed more skin than the male characters. A follow-up study by Downs and Smith (2005) indicates a similar result. Compared to male characters, females are more likely to be partially nude, featured with an unrealistic body image and shown wearing sexually revealing clothing and inappropriate attire. Notably, existing content analysis on gender representations in video games has focused only on appearance-related stereotypes. It is reasonable to ask

questions about behavior-related stereotypes as well. When considering the extensive research in traditional media content analysis relating gender to sexual and violent behavior, it is surprising to see so little research examining gender role stereotyped portrayals of sexual and violent behavior in video games. Therefore, these behavior-related stereotypes were considered in the current study.

Prior research examining gender role stereotyped portrayals of sexual and violent behavior in traditional media has demonstrated several gender related patterns. First, male characters are more often portrayed engaging in bravery behavior than female characters, while female characters are more often portrayed as victims than male characters (Busby, 1975). Second, female characters are more often portrayed wearing sexually revealing clothing or showing nudity than male characters (Riffe, Place, & Mayo, 1993). Third, male characters more often portrayed as the initiators of sexual behaviors than female characters (Milkie, 1994). Based on the expectation that patterns of sex-role stereotypes found in traditional mass media will be replicated in video games, the following hypotheses are proposed.

H1. Male characters in video games are more likely to engage bravery behavior than female characters.

H2. Female characters in video games are more likely to be victims than male characters.

H3. Female characters in video games are more likely to be portrayed with sexually revealing clothing and showing nudity than male characters.

H4. Male characters in video games are more likely to be the initiators of sexual behaviors than female characters.

Portrayals of minority ethnic groups in mass media

Passive viewing is often thought to sustain uncritical acceptance of stereotypical portrayals and to unintentionally shape the American public's view of minorities (Bristor, Lee, & Hunt, 1994; Wilkes & Valenica, 1989). Concern over this possibility has focused the attention of scholars on the portrayals of ethnic groups in mass media.

Hispanic American

Baptista-Ferbabdez and Greenberg (1980) examined characters of television drama serially from 1975-1978, and concluded that Hispanic characters were rarely seen, especially in the programs targeting for children. They were absent from Saturday morning TV but heavily concentrated in the early evening time slot. Latinos are portrayed with laziness and immorality (Martinez, 1993). In Greenberg's study, he found that Hispanic characters were either in regulatory or anti-regulatory roles. They were often seen either breaking the law or helping to maintain it. Latino characters were equally likely to be portrayed as bandits, thieves, junkies, or extortionists as they were to be shown in roles as a sheriff, inspector, or patrolman.

African American

The most prevalent stereotype of African Americans, especially males, is that African Americans are believed to be more likely to commit crime (Entman, 1992; Peffley, Shields, & Williams, 1996). Greenberg's study examined the portrayals of African Americans and found that the typical black character was substantially younger; and was less likely to be professional. In total, 71 percent of the black roles were partly or wholly comical characters.

Asian American

There are two main categories of stereotypes of Asian Americans. One is that they are positioned as a "model minority" with economic influence, high education, and a strong work ethic (Cohen, 1992; Delener& Neelankavil, 1990). In general, other Americans view Asian-Americans as hard-working and thrifty (Delener& Neelankavil, 1990), intellectually gifted, mathematically skilled, technically competent, serious, and well assimilated (Yim, 1989). In television advertising, the portrayals of Asian-Americans put so much emphasis on work ethics that other aspects of life seldom appear (Taylor & Stern, 1997). The other, under the few circumstances of portrayal of personal life, Asian men are culturally ignorant, while Asian women are submissive (Park, Gabbadon, & Chernin, 2006).

To the author's knowledge, no research to date has examined racial stereotyping in video games. Nevertheless, previous research sheds some light on the under representation stereotyped portrayal of minority groups. For example, Lachlan, Smith, and Tamborini (2005) indicated that most violent perpetrators were Caucasian (40.5%), with Asian/ Pacific Islander (8%) coming in a distant second with most others being inidentifiable. Generally speaking other ethnic groups, such as African American and Hispanic American, were unlikely to be portrayed at all as characters in games. A similar phenomenon in television was pointed out during the 1970s. Greenberg's (1980) study showed that it was hard to find minority groups among television characters. Therefore, it is reasonable to predict that a similar pattern will be observed in video games.

H5. The percent of minority groups characters represented in video games is lower than the percent of these minority groups represented in the U.S. population.

Consistent with the "criminal" and "immoral people" stereotypes of African and

Hispanic Americans in other mass media, the following hypothesis was proposed:

H6. Non-white characters are more likely to engage in evil behavior more than white characters.

CHAPTER 2: METHOD

Sample

The 6th generation of video game console occupies a major share of video game markets, represented by Sony's PlayStation 2, Microsoft's X-Box, and Nintendo GameCube. To be representative, the top 10 most popular games based on reader's survey on www.gamespot.com from each game system in last twelve months (dating back from September 2006) were selected according to www.gamespot.com (listed in Table 1). Due to the overlapping of titles across the three platforms, a total of 25 games were identified for inclusion in the sample. One game was excluded due to its inaccessibility[1], resulting in 24 games included in the sample observed.

Each video game was played for thirty minutes by one of three players with at least three-years of gaming experience. Game play was captured on VHS tapes via a videocassette recorder.

Unit of Analysis

Three units of analysis were used in this study. These were identified as the game segment, the behavior, and the character. The complete coding scheme could be found in the Appendix I.

Game segment variables. The game segment included the first 20 minutes of the 30-minute pre-recorded game segments. The game segment was coded for two variables: segment type and game type.

Segment type was coded for whether or not there were characters in the game and, if so, whether or not there were female characters in it. Segments were coded into one of the following categories: 1) game without characters; 2) game with characters but no

9

human characters; 3) game with only male human character; 4) game with both male and female human characters; and 5) game with only female human characters.

Game type categories were adapted from the Beasley and Standley (2002) study. They included team sports game, individual sports game, storyline game, combat game, Television or movie-based game, and other. Team sports games were those games in which members play as a team in the sport, such as soccer game or football game. Individual sports games were those in which the person plays as an individual in the sport, such as racing game or boxing game. Storyline game was defined as any game that emphasized a storyline over all other elements, and had a specific objective for the main character to achieve, such as saving the city or rescuing someone. Role-playing games were included in the category. Combat games were any war simulation games. Television or movie-based games were defined as those games based on a television show or a movie. For instance, *Peter Jackson's King Kong: The official game of the movie* belonged to the category; the game was produced because of the popularity of the corresponding movie. Other was included as a category for those games that did not easily fit into any of the other categories.

Behavior variables. According to Webster's Collegiate Dictionary, behavior refers to anything that an organism does involving action and response to stimulation. Here, behavior is defined as an exchange that occurs between one character (or group of characters) engaging in a particular type of action or reaction with other characters. Any time the initiating character(s), behavior type, or target character(s) change, a new behavior is created (Wilson, Kunkel, Linz, Potter, Donnerstein, Smith, Blumemthal, & Gray, 1997). Based on the hypotheses, four types of stereotype behaviors were examined

in the study: bravery behavior, evil behavior, victimization behavior, and sexual behavior.

To be qualified as bravery behavior, the following criterion must be met: the behavior must emphasize a character putting himself or herself in harms or at risk in order to protect others (which would be heroic bravery) or to protect self (non-heroic bravery) from physical harm. It included rescuing self and helping others.

Evil behavior was defined with the following criterion: the behavior must emphasize a character engaging in acts that intentionally inflict harm (physical and verbal) on others, or prevent others from achieving goals for the character's own self benefit (e.g., to feel better, to amuse the self, to release anger, or for personal gain). Sometimes evil behavior acts as an obstacle to the goal of the game. For instance, a character tries to lure the main character away from his responsibilities, and when successful, results in the main character's failure and demotion back to the beginning of the game (Dietz, 1998). It included three categories: inflicting intentional physical harm on others for self benefit; inflicting intentional verbal harm on others for self benefit; and intentionally preventing others from achieving goals without hurting them.

Victimization behavior was this type of behavior which must emphasize a character being the target of a violent attack. Violence is defined as "any overt depiction of a credible threat of physical force or the actual use of such force intended to physically harm an animate being or group of beings. Violence also includes certain depictions of physically harmful consequences against an animate being/s that results from unseen violent means" (Smith, Wilson, Kunkel, Linz, Potter, Colvin, & Donnerstein, 1998, p.30). Examples of victimization behavior include being kidnapped, and being physically or verbally harmed. This category includes 1) being the target of violent verbal attack and 2)

being the target of violent physical attack.

To be qualified as sexual behavior, the following criteria must be met: the behavior must emphasize talk or behavior that involves sexuality, sexual suggestiveness, or sexual activities or relationships. Sexual action and talk about sex are considered fundamentally distinct categories. Sexual action was defined as a character's actions which convey a sense of potential or likely sexual intimacy (Kunkel, Cope, & Biely, 1999). For example, a passionate kiss between two characters with a discernible romantic interest, or a woman licking her lips provocatively while gazing intently at a man in a bar would be coded as sexual behavior. According to Kunkel and his colleagues (1999), talk about sex "involves a wide range of types of conversations that may involve first-hand discussion of sexual interests and topics with potential partners, as well as second-hand exchanges with others that convey information about one's prior, anticipated, or even desired future sexual activities. For purposes of measuring talk about sex, the topics of both reproductive issues (such as contraception or abortion) and sexually-transmitted diseases (including but not limited to AIDS) were considered as sexual" (p. 231).

Character variables. Character was defined as a human, animal, or object within a video game that displayed human-like appearance or qualities such as speaking, using tools, or making conscious decisions (Beasley & Standley, 2002). For each stereotyping behavior, both the initiating character(s) and the target character(s) were coded along seven categories.

The first category is the type of the character. It was coded as human, animal, supernatural creature, robot, anthropomorphizes animal, anthropomorphized supernatural creature, and other. The second category is sex. Sex was coded for human characters and

anthropomorphized or supernatural creatures as well. Physical appearance, behavioral patterns and voice intonation or cues were all used to make this judgment. It was coded as male, female, other, or cannot tell. Thirdly, ethnicity was only coded for human characters. Its categories were derived from the U.S. census, including White, Hispanic, Black, Native American, Asian/Pacific Islander, Middle Eastern, and Mixed.

The fourth category is the role of the character. As Beasley and Standley (2002) pointed out, "in future studies, characters should be coded as to their importance in the video games" (p. 290). Generally speaking, primary characters and secondary characters are those receiving the most attention from video game players (Downs et al., 2005). Therefore, it was important to look at the role of the character. Based on Downs et al. (2005), character roles could be divided into four categories. The first one was always-control primary character, which was actively manipulated and controlled onscreen all the time by the video game player. The second one was sometimes-control primary character. It was actively manipulated and controlled onscreen part of the time; the control switches to other characters at other time. It appeared most often in team sports games, when the player needed to switch control among multiple team members. The third one was secondary character. It was immediately tied to or related to the primary character by either aiding or deterring the primary character from fulfilling their quest, while being controlled by the game itself. All other characters belonged to the last category: background characters. Considering the importance of the characters, only the first three types of characters were coded.

The fifth category, attire, was coded only for human characters. It referred to any garment that is worn in order to enhance, exaggerate, call attention to, or accentuate the

curves or angles of any part of the body (from the neck to above the knee) and which by design, or the amount of exposed skin a character shows, would arouse interest of physical intimacy from others. It was coded as unrevealing, partially revealing, nudity (revealing), not applicable, or other (Downs et al., 2005).

The sixth category, age, was coded only for human characters. It was divided into child (0-12 years), teenage (13-19), adult (20-64), elderly (65+), not applicable, or cannot tell. The seventh category, number of the characters, was counted as the actual number of characters who engaged in the behavior.

Since demographic variables were also analyzed in the study, it was interesting to see if there were any differences for games produced at diverse countries to portray the characters. To be specific, for example, it was reasonable that games from Asian countries, such as Japan or Korea, contained more Asian characters. Albeit the US game market is made up with games from multiple regions, it is still important to tell the nuance of portrayals in the games.

Coding Principles

It is crucial to point out the necessity of the coding principles to avoid confusion in coding. The first one was called *Primary-character-priority principle*; it means in a multiple-character-involving behavior, behavior was coded from the primary character perspective. For instance, if the primary character is hurt by a secondary character, it is coded as being victim. The second was the *Human-priority principle*. This principle held that, behavior involving both human character(s) and non-human character(s) was always coded from human character(s) perspective. The third was the *Initiator-priority principle*. This principle held that in a multiple-secondary-character-involving behavior, the

behavior was coded from the initiator perspective. For instance, A hurts B, A is the initiator, so it is coded from A's perspective as aggression, not as victimization. The fourth principle was from National Television Violence Study (Wilson, et al., 1997), and was called the *Revelation principle*. This principle held that, a character's type, true sex, or true ethnicity may be concealed or may change, and the truth is revealed during the segment. When this was observed, the revealed feature is used for coding. The last principle was the *"Mandated" exemption principle*. According to Tamborini, Skelski, Lachlan, Davis, and Smith (2005), in sports (such as wrestling), the violent acts compelled by rule should be labeled mandated. It is violence performed as a job-related requirement, not as an act motivated by the desire to gain "power, status, popularity or affection." There is no to evil intention. Therefore, those violent behaviors should not be considered as evil or bravery behaviors. All these principles were in a hierarchical order, i.e., the first principle was adopted prior to the second one, the second one prior to the third one, and so on.

Coder Training and Reliability

Two coders (the researcher herself included) trained for two-hours prior to coding the sample of content not included in the main study. The main study coded content from the first 20 minutes of game play. In order to avoid contaminating the sample, training and reliability testing was conducted using twelve segments recorded from the last 10 minutes of game play (the 21st minute to 30th minute). Training persisted until coders reached a reliability of at least .80 for every code. Afterward, the researcher herself alone completed all coding.

Cronbach's alpha was used to calculate the intercoder reliability. At the segment

level, the reliabilities for each variable were: segment type (1.000), game type (.943), number of behaviors (.996), number of bravery behaviors (.994), number of victimization behaviors (.997), number of evil behaviors (1.000), and number of sexual behaviors (1.000). At the behavior level, the reliabilities were: character type (.993), number of characters (.996), role of character (.821), sex (1.000), age (1.000), and attire (1.000).

CHAPTER 3: RESULTS

Overview

Among the total 24 games, 201 stereotyped behaviors were recognized. Game type had a great influence on the distribution of those behaviors. The 201 behaviors were concentrated in only 15 games, while no instances of the four types of behavior were found in the other 9 games. Storyline games and combat games (73.3%, 11 out of 15) are most likely to have stereotyped behaviors. As for ESRB rating, games for "M" (46.7%, 7 out of 15) and "T" (46.7%, 7 out of 15) are more likely to have such behaviors.

Hypothesis One

Hypothesis 1 predicted that male characters in video games were more likely to engage in bravery behavior than female characters. There are 141 male characters but only 15 female characters conducting bravery behaviors. It is important to note that there are totally 281 male characters but only 40 female characters in the game census. A one-way Chi-square with adjusted expected value was used. With the consideration of the ratio of total number of male versus total number of female characters in games, Chi-square yielded a non-significant effect for initiators' sex, χ^2 (1, n = 156) = 1.158, p = .282. The data is not consistent with Hypothesis 1. It is concluded that there are more male characters behaving brave, only because there are more male characters in the games; otherwise, there is no difference between these two types of sex.

Hypothesis Two

It was predicted in Hypothesis 2 that female characters in video games were more likely to be victims than male characters. Once again, a one-way Chi-square with adjusted expected value was used. Considering the definition of victimization behavior,

the initiators of such behavior were also included in the assessment. Therefore, the combination of evil behaviors and victimization behaviors was used to test Hypothesis 2. With the consideration of the ratio of total number of male versus total number of female characters in games, Chi-square yielded a non-significant result: χ^2 (1, n = 29) = .608, p = .436. The data is not consistent with Hypothesis 2. The female characters are not more likely to be portrayed as victims. There is no sex difference for victims' sex.

Hypothesis Three

Hypothesis 3 predicted that female characters in video games are more likely to be portrayed with sexually revealing clothing and showing nudity than male characters. A one-way Chi-square with adjusted expected value was used. With the consideration of the ratio of total number of male versus total number of female characters in games, the result is significant, χ^2 (1, n = 39) = 40.587, p < .0001. The data is consistent with Hypothesis 3. Female characters are more likely to wear sexually revealing clothing than male characters, even after adjusting for the low number of female characters in the games.

Hypothesis Four

It was predicted that male characters in video games are more likely to initiate sexual behaviors than female characters. Across the entire sample, only 2 instances of sexual talk and no instances of sexual actions were observed. It is not appropriate to adopt a Chi-square test with such a small number of cases.

Hypothesis Five

Hypothesis 5 predicted the under-presentation of minority group members in video games. Although the Chi-square test yielded a significant result: χ^2 (5, n = 217) = 169.1, p

< .0001, the pattern of data is not completely consistent with Hypothesis 5.

With total 321 human characters, only 217 could be identified with specific race (the other 104 were coded as "cannot tell"). Citing the data from U. S. Census Bureau homepage (2007), the percent of the population identified in categories including: white persons not Hispanic, Persons of Hispanic or Latino origin, Black persons, Native persons, Asian/ Pacific Islander, and Mixed were 66.9%, 14.4%, 12.8%, 1.0%, 4.5%, and 1.5% respectively in 2005. The distribution of race expected and observed in the sample of video game characters is listed in Table 2. The pattern of findings shows that although Hispanic/ Latino persons, Black persons, Native persons, and mixed race persons are under-represented in the sample as expected, in contrast with hypotheses five, Asian persons are over-represented. This unexpected finding might be explained by the origins of some games. Since among the 24 games, 8 (33.3%) are from East Asian (Japanese or Korean) companies, it is reasonable that there were more Asian persons in the sample. [2]

Hypothesis Six

Hypothesis 6 predicted that non-white characters are more likely to engage in evil behavior than white characters. A one-way Chi-square with adjusted the expected value was used. With the consideration of the race distribution in the sample, the result is non-significant, χ^2 (3, n = 39) = .635, p = .888. The data is not consistent with Hypothesis 6. The evidence does not support the claim that minority group members have a greater chance to be portrayed as evil conductors than majority group members.

CHAPTER 4: DISCUSSION

The purpose of this study was to examine the stereotyped representations in video games. In view of concern over the use of stereotypes in traditional media such as television and film, it is interesting to explore the possible presence of similar stereotypes in a popular new media: video games.

The sample, with 40 female characters (12.4%) and 281 male characters (87.0%), shows the tendency of under-representation of females. Within the sampled games, 37.5% (9 out of 24) have no female characters at all. The result is consistent with previous studies. Beasley and Standley (2002) reported the percentage of female as 13.74%. Children Now (2001) study found that 73% of video game characters were male, while 12% were female. Over the past six or seven years, the trend has not changed in the video game industry. It is worth noting that according to the U. S. Census Bureau's report, women made up 50.7% of the U. S. population in 2005.

Although women are under-represented in video games, there is no obvious evidence of stereotypical portrayals of women. The test of hypothesis 1, 2, and 4 are not consistent with claims that female characters are more likely to be shown as victims and sexual objects, and less likely to be shown as brave (A review of these games with stereotypical phenomena can be found in Table 3). At this point, video games appear different from traditional media, such as television or film, in these particular gender-related portrayals.

The tendency can be explained by the so-called "Lara phenomenon", which refers to the appearance of competent female video-game characters in a dominant position (Jansz & Martis, 2007). The Jansz and Martis study did content analysis on the introductory films contained in 12 contemporary video games, and found that female characters in

leading roles appeared as often as male did. Although the representativeness of the sample they chose appears questionable, it suggests a tendency towards the "Lara phenomenon". One possible reason may be that video game producers create these competent female images to attract female players.

Even so, however, female characters are usually portrayed with exaggerated female characteristics, such as sexually revealing clothing. The result is consistent with previous studies. Downs et al. (2005) found that in comparison to male characters, females were significantly more likely to be partially nude, featured with an unrealistic body image and shown wearing sexually revealing clothing and inappropriate attire.

Debate over such "eye candy" representations holds that although these images may function for the male players, for women, it is different. Jansz and Martis (2007) pointed out, "women who do play video games may experience contrasting consequences". The female characters with exaggerated female characteristics may teach the ideals of femininity and beauty that build unhealthy body image orientation (Botta, 1999; Labre & Duke, 2004; Smith, 2006). On the other hand, the appearance of competent and powerful female characters such as Lara Croft may have positive influence on the young women players, and help build their self-identity.

Hypothesis 5 and 6 considered race-related stereotype portrayals. For minority groups, there are diverse results. Hispanic, Black, Native, and mixed groups are significantly under-represented, while Asian groups are significantly over-represented. Hispanic and Native persons do not even appear in the sample.

The origin of the games is the possible reason for the unexpected over-representation of Asian characters. About one third of the samples games are produced by East Asian

companies (either Japanese or Korean). It is reasonable to expect more Asian characters in those games; and since people of other races are rare in East Asian areas (ExEAS, 2007), the omission of such characters is not surprising. In fact, across the whole sample, majority of Asian characters come from the game *Ninja Gaiden Black*. It is produced by a Japanese company *Tecmo*. Another reason might be the conscious avoidance of specific race representations by the game producers. The current technology allows producers to create characters with vague or ambiguous ethnic characteristics. In the sample, the ethnicity of about 32.6% characters cannot be distinguished.

No evidence shows that minority group members are more likely to be villains. It is consistent with recent findings in traditional media. In Mastro and Greenberg (2000) study, they found that in prime television, Latino characters were on average the least lazy or most motivated, and African Americans were the least aggressive, particularly by comparison with the Caucasian characters, "both of which constitute counter-stereotypical findings" (p. 697). In fact, in some games, such as *Resident Evil*, the African American character is a good policeman, helping others all the time. It probably can be explained also by the under-representation of minority groups. If there would be more minority characters, they may also likely engage bad actions.

One of the limitations of the present study is that in those games where players had the option to choose among multiple leading characters to play, only one leading character was chosen. Players were instructed that when a dominate character was clearly recognized, such as a policeman other than a waitress, the player was to chose the dominate character to play. If no clear dominate character was not recognized, the researcher gave the players the freedom to choose whichever leading characters they

liked. Eight out the total 24 games have such an option, and the majority of these games were sports games, such as soccer or football games. Player preferences in these situations may have introduced a bias into the sample.[3] For instance, one player in this study was Asian male, and may have been more likely to choose an Asian male character to play. To avoid this problem, in future study, games need to be played with every option.

Another limitation worth noting is that the result is highly dependent on the game playing. Previous study has found that different players with different attributes may play video games differently (Peng, Liu, & Mou, 2007). For example, people with more aggressive personality engage in a more aggressive style of playing. However, in the present study, only three players played the sampled games. Their playing may not be representative of all the game playing styles.

A final limitation deals with the length of playing time used in the present study. The pre-recorded game segments contained only the first 20 minutes playing, excluding the introductory section. The beginning part of video games may not include the same level of stereotyped representations as later parts. Longer game playing should be considered in the future study.

In sum, stereotypical phenomena in video games are not the same as those in other traditional media. No evidence in the study shows that females are stereotypically portrayed as victims, or that males are stereotypically portrayed as heroes or helpers. Similarly, there is no evidence showing that minority groups are stereotypically portrayed as villains. However, females are stereotypically portrayed with sexually revealing appearance. And except for Asian characters, minority groups are under-represented in video games. As one of the most popular forms of new media, video games seem to avoid

some of the extensively used stereotypes in traditional media, while adopting some relatively new stereotypes.

FOOTNOOTS

[1] The missing game is *Guitar Hero*, which is a music video game.

[2] In fact, across the whole sample, majority of Asian characters come from the Japan produced game *Ninja Gaiden Black*.

[3] In those games with multiple options, other options are:

For *NBA 2K6, Madden NFL 07, NCAA Football 07, FIFA 06, MLB 2K6,* and *World Soccer Winning Eleven,* all options are similar. Each team is made up of male players with both majority and minorities.

For *Smack Down vs Raw,* there are several male characters and female characters to choose. The player chose two male and two female characters.

For *Resident Evil Outbreak,* there are two male characters and two female characters to choose. The player chose one male character.

Table 1 List of Video Games Included in Analysis

Rating	PS2	Xbox	Gamecube
E	World Soccer Winning Eleven 9 [1] Burnout Revenge [2] MLB 06: The show [3] FIFA 06 [4]	FIFA 06 [4] World Soccer Winning Eleven 9 [1] Burnout Revenge [2] NCAA Football 07 NBA 2K6 SSX on Tour [7]	SSX on Tour [7] Madden NFL 07 [8] FIFA 06 [4] Harvest Moon: Magical Melody
T	Dragon Quest VIII: Journey of the Cursed King Guitar Hero [5] WWE Smack Down vs Raw 2006		Fire emblem: path of radiance Need for speed: most wanted [9] Battalion Wars Peter Jackson's King Kong: The official game of the movie [10] X-Men Legends 2: Rise of the Apocalypse
M	Resident Evil 4 Metal Gear Solid 3: Subsistence [6] SOCOM 3 US Navy Seals	Ninja Gaiden Black Far Cry Instincts Marc Ecko's Getting up: Content under pressure Brothers in arms: Earned In Blood	Prince of Persia: The two thrones [11]

Notes:

[1.] This game was on the top 10 list for two platforms and was played only on the PS2 platform.

[2.] This game was on the top 10 list for two platforms and was played only on the Xbox platform.

[3.] Due to the inaccessibility of the game on this platform, it was played on the Xbox platform instead.

[4.] This game was on the top 10 list for two platforms and was played only on the PS2 platform.

[5.] Due to the inaccessibility of this game, it was not included in the sample.

[6.] Due to the inaccessibility of the game on this platform, it was played on the Gamecube platform instead.

[7.] Due to the inaccessibility of the game on this platform, it was played on the PS2 platform instead.

[8.] Due to the inaccessibility of the game on this platform, it was played on the Xbox platform instead.

[9.] Due to the inaccessibility of the game on this platform, it was played on the Xbox platform instead.

[10.] Due to the inaccessibility of the game on this platform, it was played on the PS2 platform instead.

[11.] Due to the inaccessibility of the game on this platform, it was played on the Xbox platform instead.

Table 2 Distribution of race in expectation and observation

Race	Expected Value	Observed Value
white persons not Hispanic	145	145
Persons of Hispanic or Latino origin	31	0
Black persons	28	4
Native persons	2	0
Asian/ Pacific Islander	8	38
Mixed	3	0

Note: $\chi^2 (5, n = 217) = 169.1, p < .0001$.

Table 3: Coding content in the games with stereotypical behaviors

Game	R	Brave	Evil	Vic	Sex	Role	M	F	White	Non-white	Age
ResiEvil	M	10	0	11	0	Good	40	1	24	0	A
FarCry	M	17	0	1	0	Good	35	0	0	0	A
Ninja	M	15	1	3	0	Good	37	0	0	37	A
X-Men	T	26	0	2	0	Good	39	17	56	0	A
Prince	M	10	2	2	0	Good	11	2	0	15	A
Harvest	E	0	0	1	0	Good	1	1	0	0	T
SOCOM	M	23	0	0	0	Good	38	0	23	15	A
Smack	T	0	12	4	0	Good	16	16	32	0	A
Dragon	T	2	1	0	0	Good	4	0	0	0	T-A
King Kong	T	24	0	3	0	Good	27	1	25	3	A
speed	T	0	0	0	1	Good	1	1	3	0	A
Brother	M	8	0	0	0	Good	16	0	9	0	A
Fire	T	5	1	0	0	Good	9	2	0	0	A
Metal Gear	M	5	0	1	1	Good	13	1	0	0	A
Battalion	T	8	0	1	0	Good	18	0	0	0	T

Notes: 1. This table provides the basic coding content in those games with stereotypical behaviors. The abbreviations of the games are used; to find the complete name, please refer to Table 1.

2. "R" refers to Rating of a game; "Brave" refers to the number of bravery behaviors; "Evil" refers to the number of evil behaviors; "Vic" refers to the number of victimization behaviors; "Sex" refers to the number of sexual behaviors; "Role" refers to the role of the main character (good vs. bad); "M" refers to the number of male characters; "F" refers to the number of female characters; "White" refers to the number of white characters; "non-White" refers to the number of non-White characters; "Age" refers to the general age of the character overall.

APPENDIX

Coding Scheme

1. Segment variable

1-1. Content of games

    a. Games with no characters

    b. Games with characters but no human characters

    c. Games with human characters but no female characters at all

    d. Games with both male and female character

    e. Games with only female character

1-2. Rating of games

1-3. Origin of game (Japan, US, other)

1-4. Game type (Beasley & Standley, 2002)

    a. Team sports

    b. Individual sports

    c. Storyline

    d. Combat

    e. Television and movie-based game

    f. Other

2. Character variables:

Character: defined as a human, animal, or object within a video game that displayed human-like appearance or qualities such as speaking, using tools, or making conscious decisions. (Beasley & Standley, 2002)

2-1. Type of character:

Revelation: A character's true type may be concealed or may change, and the true type is revealed during the segment. Code the true type.

  a. Human: A homosapien with no supernatural features.

  b. Animal: A live action or animated mammal, reptile, bird, fish, amphibian, or shark.

  c. Supernatural creature: A non-human that exceeds biological limits and/or possesses supernatural powers.

  d. Robot: An electro-mechanical or bio-mechanical device or group of devices that can perform autonomous or preprogrammed tasks.

  e. Anthropomorphized animal: An animal with human-like characteristics. Eg. Mermaid and Donald Duck.

  f. Anthropomorphized supernatural creature: A super creature with human-like characteristics.

  g. Other.

2-2. Sex:

Revelation: A character's true sex may be concealed or may change, and the true sex is revealed during the segment. Code the true sex.

In most cases, it is easy to assess sex for human characters. For anthropomorphized characters or supernatural characters, it may be difficult to determine sex. Physical appearance, behavioral patterns and voice intonation or cues should be all used to make the judgment.

  a. Male

  b. Female

  c. Other

d. Can't tell

2-3. Ethnicity:

Revelation: A character's true ethnicity may be concealed or may change, and the true ethnicity is revealed during the segment. Code the true ethnicity.

Only for human characters.

Categories derived from the U.S. census.

    a. White

    b. Hispanic

    c. Black

    d. Native American

    e. Asian/Pacific Islander

    f. Middle Eastern

    g. Mixed

    h. Can't tell

2-4. Role of character (Downs, E., 2004)

a. Always-control primary character: Those that a video game player actively manipulates and controls onscreen all the time.

b. Sometimes-control primary character: Those that a video game player actively manipulates and controls onscreen part of the time; and the other the control switches to other characters.

c. Secondary character: secondary characters are those that are immediately tied to or related to the primary character by either aiding or deterring the primary character from fulfilling their quest, while are controlled by the game itself.

d. Background character: the others rather than primary and secondary characters.

Only primary and secondary characters are coded.

2-5.   Attire variable (Downs, 2004)

Only for human characters.

Any garment that is worn in order to enhance, exaggerate, call attention to, or accentuate the curves or angles of any part of the body (from the neck to above the knee) and which by design, would arouse interest of physical intimacy from others. Or the amount of exposed skin a character shows.

a. Unrevealing

b. Partially revealing

c. Nudity (revealing)

d. Not applicable

e. Other

2-6.   Age

Only for human characters.

    a.   Child (0-12 years)

    b.   Teenage(13-19)

    c.   Adult (20-64)

    d.   Elderly (65+)

    e.   Not applicable

    f.   Can't tell

3. Behavior variables

Behavior refers to anything that an organism does involving action and response to

stimulation. Here, behavior is defined as an exchange that occurs between one character (or characters) engaging in a particular type of action or reaction with other characters. Any time the initiating character(s), behavior type, or target character(s) change, a new behavior is created.

A behavior change occurs when:

1) When the initiating character(s) changes: becomes a new/different character; the shifts from single to multiple characters; or shifts from multiple to single character.

2) When the target character changes: becomes a new/different character; shifts from single to multiple characters; or target shifts from multiple to single character.

3) When the type of behavior changes (see behavior types 3-1 to 3-4).

3-1. Bravery behavior:

To be qualified as bravery behavior, the following criterion must be met:

The behavior must emphasize a character putting him/herself in harms way or at risk in order to protect others (which would be heroic bravery) or self (non-heroic bravery) from physical harm. Protection refers to any action that shields or removes the threat of physical harm.

3-1-1. Rescuing self

3-1-2. Helping others (Heroic behavior)

3-1-3. Other

3-2. Evil behavior:

To be qualified as evil behavior, the following criterion must be met:

The behavior must emphasize a character engaging in acts that intentionally inflict harm (physical and verbal) on others, or prevent others from achieving goals for the character's

own self benefit (e.g., to feel better, to amuse the self, to release anger, or for personal gain). Sometimes evil behavior acts as an obstacle to the goal of the game. (e.g., a character tries to lure the main character away from his responsibilities, and when successful, results in the main character's failure and demotion back to the beginning of the game.)

3-2-1. Inflicting intentional physical harm on others for self benefit

3-2-2. Inflicting intentional verbal harm on others for self benefit

3-2-3. Intentionally preventing others from achieving goals without hurting them

3-2-4. Other

3-3. Victimization behavior:

To be qualified as victimization behavior, the following criterion must be met:

The behavior must emphasize a character being the target of a violent attack. Violence is defined as any overt depiction of a credible threat of physical force or the actual use of such force intended to physically harm an animate being or group of beings. Violence also includes certain depictions of physically harmful consequences against an animate being/s that results from unseen violent means (Wilson et al., 1997). Examples of victimization behavior include being kidnapped, and being physically or verbally harmed.

3-3-1. Being the target of violent verbal attack

3-3-2. Being the target of violent physical attack

3-3-3. Other

3-4. Sexual behavior:

To be qualified as sexual behavior, the following criteria must be met:

The behavior must emphasize talk or behavior that involves sexuality, sexual

suggestiveness, or sexual activities or relationships. Sexual behavior and talk about sex are considered fundamentally distinct categories

3-4-1. Sexual actions:

A character's actions which convey a sense of potential or likely sexual intimacy (Kunkel, Cope, & Biely, 1999). For example, a passionate kiss between two characters with a discernible romantic interest, or a woman licking her lips provocatively while gazing intently at a man in a bar would be coded as sexual behavior.

3-4-2. Sexual talk:

"Talk about sex that involves a wide range of types of conversations that may involve first-hand discussion of sexual interests and topics with potential partners, as well as second-hand exchanges with others that convey information about one's prior, anticipated, or even desired future sexual activities. For purposes of measuring talk about sex, the topics of both reproductive issues (such as contraception or abortion) and sexually-transmitted diseases (including but not limited to AIDS) were considered as sexual" (Kunkel et al., 1999, p. 231).

3-4-3. Other

Principle (in a hierarchical order):

A. *Primary-character-priority principle*: In a multiple-character-involving behavior, code it from the primary character perspective. For instance, the primary character is hurt by a secondary character, code it as being victim.

B. *Human-priority principle:* In a behavior involves both human character(s) and non-human character(s), always code from human character(s) perspective.

C. *Initiator-priority principle*: In a multiple-secondary-character-involving behavior, code it from the initiator perspective. For instance, A hurts B, A is initiative, so code it from A's perspective as an aggression, not as being-victim.

D. *Revelation principle*: A character's type, true sex, true ethnicity may be concealed or may change, and the truth is revealed during the segment. Code the true one. (NTVS, 1997)

E. *"Mandated" exemption principle*: According to Tamborini et al. (2005), in sports (such as wrestling), the violent acts compelled by rule should be labeled mandated. It is due to the job-related requirement as an act motivated by the desire to gain "power, status, popularity or affection", not to evil intention. Therefore, those violent behaviors should not be considered as evil or bravery behaviors.

BIBLIOGRAPHY

Ashmore, R. D., & Boca, F. K. (1981). Conceptual approaches to stereotypes and stereotyping, in Hamilton, D. L. (Ed) Cognitive Processes in Stereotyping and Intergroup Behavior, Hillsdale, NJ: Erlbaum, 1-35.

Aubrey, J. S. & Harrison, K. (2004). The gender-role content of children's favorite television programs and its links to their gender-related perceptions. Media Psychology, 6, 111-146.

Bandura, A. (2002). Social cognitive theory of mass communication. In J. Bryant & D. Zillmann, Media effects: Advances in theory and research. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Baptista-Fernandez, P. & Greenberg, B. S. (1980).The context, characteristics, and communication behaviors of blacks on television. In B. S. Greenberg (Ed.) Life on television: content analyses of U. S. TV drama. Noorwood, NJ: Albex Publishing Corporation.

Beasley, B. & Standley, T. C. (2002). Shirts vs. skins: clothing as an indicator of gender role stereotyping in video games. Mass Communication & Society, 5(3), 279-293.

Bodenhausen, G. V., Kramer, G. P., & Süsser, K. (1994). Happiness and stereotypic thinking in social judgment. Journal of Personality and Social Psychology, 66, 621–632.

Bodenhausen, G. V., Sheppard, L. A., & Kramer, G. P. (1994). Negative affect and social judgment: the differential impact of anger and sadness. European Journal of Social Psychology, 24, 45– 62.

Botta, R. A. (1999). Television images and adolescent girls' body image disturbance. Journal of Communication, 49, 22-41.

Brand, J. E., Knight, S., & Majewski, J. (2003). The diverse worlds of computer games: a content analysis of spaces, populations, styles and narratives. In Digital Games Research Conference, University of Utrecht, Netherlands (November).

Bristor, J. M., Lee, R. G, & Hunt, M. R. (1995). African American images in television advertising: progress or prejudice? Journal of Public Policy and Marketing, 14, 48-62.

Busby, L. J. (1975). Sex-role research on the mass media. Journal of Communication, 25, 107.

Cantor, M. G (1987). Popular culture and the portrayal of women: content and control. In B. B. Hess, & M. M. Ferree (Eds.) Analyzing gender: A handbook of Social

science research. Newbury Park, CA: Sage.

Children Now (2001). Fair Play? Violence Gender and Race in Video Games. Oakland, CA: Children Now.

Cohen, J. (1992). White consumer response to Asian models in advertising. Journal of Consumer Marketing, 9, 17-27.

Courtney, A. E., & Whipple, T. W. (1983). Sex stereotyping in advertising. Toronto: Lexington Books.

Dates, J. L., & Barlow, W. (1990). Introduction: a war of images, in J. L. Dates & W. Barlow (Eds.) Split Images: African Americans in the Mass Media (pp.1-21). Washington, DC: Howard University Press.

Delener, N. & Neelankavil, J. P. (1990). Informational sources and media usage: A comparison between Asian and Hispanic subcultures. Journal of Advertising Research, 30, 45-52.

Dietz, T. L. (1998). An examination of violence and gender role portrayals in video games: implications for gender socialization and aggressive behavior. Sex Roles, 38(516), 425-442.

Downs, E. & Smith, S. (2005). Keeping abreast of hypersexuality: a video game character content analysis. Paper presented at the meeting of the International Communication Association, New York City (May).

Eagly, A. H. (1995). The science and politics of comparing women and men. American Psychologist, 50, 145– 58.

Entertainment Software Association. (2006). Top Ten Industry Facts. Retrieved on November 29, 2006 from http://www.theesa.com/facts/top_10_facts.php.

Entman, R. (1992). Blacks in the news: television, modern racism, and cultural change. Journalism Quarterly, 69, 341-161.

ExEAS. (2007). Nationalisms in East Asia. Retrieved on April 19, 2007 from http://www.exeas.org/resources/nationalisms.html.

Fiske, S. T. (1993). Controlling other people: the impact of power on stereotyping. American Psychologist, 48, 621– 628.

Greenberg, B. S. & Baptista-Fernandez, P. (1980). Hispanic-Americans: the new minority on television. In B. S. Greenberg (Ed.) Life on television: content analyses of U. S. TV drama. Noorwood, NJ: Albex Publishing Corporation.

Hilton, J., & von Hippel, W. (1996). Stereotypes. Annual Review of Psychology, 47, 237-

271.

Hogg, M. A., & Abrams, D. (1988). Social Identifications: A Social Psychology of Intergroup Relations and Group Processes. London: Routledge.

Jansz, J., & Martis, R. G. (2007). The Lara phenomenon: powerful female characters in video games. Sex Role, 56, 141-148.

Jost, J. T. & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. British Journal of Social Psychology, 33, 1– 27.

Koernig, S. K. & Granitz, N. (2006). Progressive yet traditional: the portrayal of women compared to that of men in E-commerce magazine advertisements, Journal of Advertising, 35(2), 81-98.

Kunkel, D., Cole, K. M., & Biely, E. (1999). Sexual messages on television: comparing findings from three studies. The Journal of sex research, 36 (3), 230-236.

Labre, M. P. & Duke, L. (2004). Nothing like a brisk walk and a spot of demon slaughter to make a girl's night: The construction of the female hero in the Buffy video game. Journal of Communication Inquiry, 28, 138-156.

Lachlan, K. A., Smith, S. L., Tamborini, R. (2005). Models for aggressive behavior: the attributes of violent characters in popular video games. Communication Studies, 56 (4), 313-329.

Macrae, C. N., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: a peek inside the cognitive toolbox. Journal of Personality and Social Psychology, 66, 37– 47.

Martinez, E. (1993). Beyond black/while: the racisms of our time. Social Justice, 20(1-2), 22-34.

Mastro, D. E. & Greenberg, B. S. (2000). The portrayal of racial minorities on prime time television. Journal of Broadcasting & Electronic Media, 44, 690-703.

Milkie, M. A. (1994). Social world approach to cultural studies: Mass media and gender in the adolescent peer group. Journal of Contemporary Ethnography, 23, 354-380.

NPD Group (2006). Reports from the NPD Group shows 45 percent of heavy video gamers are in the six-to-17-year-old age group. Retrieved on November 30, 2006 from http://www.npd.com/press/releases/press_060919a.html.

Omi, M. (1989). In living color: Race and American culture. In I. Angus & S. Jhally (Eds.), Cultural politics in contemporary America. London: Routledge.

Park, J. H., Gabbadon, N. G., & Chernin, A. R. (2006). Naturalizing racial differences

through comedy: Asian, Black, and White views on racial stereotypes in *Rush Hour 2*. Journal of Communication, 56, 157-177.

Peffley, M., Shields, T., & Williams, B. (1996). The inersection of race and crime in television news stories: an experimental study. Political Communication, 13 (3), 309-327.

Peng, W., Liu, M., & Mou, Y. (2007). Do aggressive people play computer game in a more aggressive way? Individual difference and the distinctive experience of violent game playing. Manuscript submitted to the meeting of National Communication Association, Chicago (November).

Riffe, D., Place, P. C., & Mayo, C. M. (1993). Game time, soap time and prime time TV ads: Treatment of women in Sunday football and rest-of-week advertising. Journalism Quarterly, 70, 437-446.

Robinson, R. J., Keltner, D., Ward, A., & Ross, L. (1995). Actual versus assumed differences in construal: realism in intergroup perception and conflict. Journal of Personality and Social Psychology, 68, 404– 17.

Sapiro, V. (1981). If senator baker were a woman: an experimental study of candidate images. Political Psychology, 2 (1), 61-83.

Sherry, J. (2001). The effects of violent video games on aggression: A meta-analysis. Human Communication Research, 27, 409-431.

Sidanius, J. (1993). The psychology of group conflict and the dynamics of oppression: a social dominance perspective. In S. Iyengar & W. J. McGuire (Eds.) Explorations in Political Psychology (pp. 183– 219). Durham, NC: Duke University Press.

Smith, S. L. (2006). Perps, pimps, and provocative clothing: Examining negative content patterns in video games. In P. Vorderer & J. Bryant (Eds.) Playing video games (pp. 57-75). Mahwah, NJ: Erlbaum.

Smith, S. L., Lachlan, K., & Tamborini, R. (2003). Popular video games: quantifying the presentation of violence and its context. Journal of broadcasting and electronic media, 76, 58-76.

Smith, S. L., Wilson, B. J., Kunkel, D., Linz, D., Potter, W. J., Colvin, C. M., & Donnerstein, E. (1998). Violence in television programming overall: University of California, Santa Barbara study. National television violence study (Vol. 3, pp. 5-220). Newbury Park, CA: Sage.

Tamborini, R., Skalski, P., Lachlan, K., Westerman, D., Davis, J., & Smith, S. L. (2005). The raw nature of televised professional wrestling: is the violence a cause for concern? Journal of Broadcasting & Electronic Media, 49 (2), 202-220.

Taylor, C. R. & Stern, B. B. (1997). Asian-Americans: television advertising and the "model minority" stereotypes. Journal of Advertising, 26 (2), 47-61.

Thompson, T. L. & Zerbinos, E. (1995). Gender roles in animated cartoons: Has the picture changed in 20 years? Sex Roles, 32, 651-673.

U.S. Census Bureau. (2007). People quick facts. Retrieved on April 14, 2007 on http://quickfacts.census.gov/qfd/states/00000.html.

Wilkes, R. E. & Valencia, H. (1989). Hispanics and blacks in television commercials, Journal of Advertising, 18 (1), 19-25.

Williams, D. (2006). Virtual cultivation: online worlds, offline perceptions. Journal of communication, 56, 69-87.

Wilson, B. J., Kunkel, D., Linz, D., Potter, J., Donnerstein, E., Smith, S. L., Blumental, E., & Gray, T. (1997). Violence in television programming overall: University of California, Santa Barbara Study. National Television Violence Study (Vol. 1, pp. 3-268). Newbury Park, CA: Sage.

Yim, Y. S. (1989). American perception of Korean Americans, Korea and World Affairs, 13 (3), 519-542.