Shirts vs. Skins: Clothing as an Indicator of Gender Role Stereotyping in Video Games

Berrin Beasley

Department of Communications and Visual Arts University of North Florida

Tracy Collins Standley

Department of Mass Communication McNeese State University

This research uses content analysis to examine the portrayal of women in 47 randomly selected games from the Nintendo 64 and Sony PlayStation console gaming systems. We suggest that video games, similar to other media forms, are sources of information that children and young adults may use to determine what behaviors and attitudes are considered appropriately masculine and feminine. This analysis revealed a significant sex bias in the number of male versus female characters found in the games and among the way in which the male and female characters were dressed. Of the 597 characters coded, only 82 (13.74%) were women. The Nintendo 64 games had the fewest number of female characters, and the majority of the female characters ters wore clothing that exposed more skin than the male characters.

In the aftermath of the Federal Trade Commission's (FTC's) September 2000 findings that the film, music, and video game industries were inappropriately targeting adult-oriented material to children, it became obvious that parents and scholars alike needed to more closely inspect the content of such material. Although the FTC's focus was on violence, and indeed many scholars have already asserted the connection between violent media content and increased levels of aggression, many times as indicated by aggressive play (Anderson & Dill, 2000; Anderson & Ford,

Requests for reprints should be sent to Berrin Beasley, Department of Communications and Visual Arts, University of North Florida, 4567 St. John's Bluff Road South, Jacksonville, FL 32224-2645.

1986; J. Cooper & Mackie, 1986; Dickinson, 2000; Graybill, Strawniak, Hunter, & O'Leary, 1987; Irwin & Gross, 1995; Kirsh, 1998; Schutte, Malouff, Post-Gorden, & Rodasta, 1988; Silvern & Williamson, 1987), a second area of concern needed to be addressed. Media content cannot only affect attitudes toward violence, but has also been demonstrated to affect attitudes toward acceptable gender role behavior. Decades of research in other media content categories have established a strong correlation between consumption of media content and attitudes toward acceptable gender-related clothing and behavior (Brabant & Mooney, 1986; Cantor, 1987; V. W. Cooper, 1985; Davis, 1984; Durkin, 1985; Kolbe & LoVoie, 1982; Milkie, 1994; Purcell & Stewart, 1990). Although much attention has been focused over the years on the potential effects of film, television, and music, the video game industry is still in its infancy as compared with that of the previous categories. Little research has been directed at this heavily child- and teen-oriented media industry (Anders, 1999; Brody, 2000), particularly in regard to how video game content may indicate appropriate and acceptable gender behavior to users.

Just as television has gained a foothold in the household and become a major socializing factor in a child's life (Berry & Mitchell-Kernan, 1982), video games and game systems are steadily becoming household fixtures. The video game industry has already won 30% of the U.S. toy market (Van Horn, 1999). More than 50 million homes have either a Nintendo or Sega system (Jehlen, 1994). Video gaming is a profitable industry. In 1999, Americans bought more than 215 million computer and video games, which calculates to more than 2 games per household (Jenkin, 2000). The video-gaming industry earned between \$6 billion and \$9 billion (depending on sources) in recent annual sales, more than the \$5.2 billion Hollywood box office gross earned in 1999 (Dickinson, 2000; Jenkin, 2000; Van Horn, 1999). Because video games are designed for repeated play (the more deluxe games are designed for more than 100 hr of play), the games cannot be considered a one-time experience but an ongoing experience that reinforces its social messages (Jenkin, 2000; Signorielli, 1993).

Research indicates that the majority of video game players are young men (Griffiths, 1991; Kaplan, 1983; Wiegman & van Schie, 1998). Reasons given for this range from the idea that video games contain more masculine than feminine players (Dietz, 1998; Gutman, 1982; Morlock, Yando, & Nigolean, 1985) to the idea that men tend to outperform women on tasks involving visual and spatial skills (Eagly, 1987; Kiesler, Sproull, & Eccles, 1983) to the idea that because girls spend more time in personal care, social interaction, and chores than boys, boys then have more time to spend playing video games (Griffiths, 1993; Huston, Wright, Marquis, & Green, 1999). Huston et al. (1999) found that weekday time spent playing video games was very close between the 2- to 4-year-old boys and girls in their study, but from ages 5 to 7, boys spent considerably more minutes playing video games than did girls. In a study of video game usage among 357 seventh- and eighth-graders, Funk (1993)

found that roughly one third of all boys and girls in the study reported playing video games at home for 1 to 2 hr per week. Among the boys, another 29% played between 3 and 6 hr per week. Only 15% of the girls said they played video games at home from 3 to 6 hr a week. More than one third of the girls said they did not play video games at all; that number was 12% for boys. Video games are the most popular form of entertainment for boys and men between 12 and 25 years of age (Kotick, 2001). The core gaming audience is 8- to 14-year-old boys (Brody, 2000). According to a national survey of more than 1,600 households in 1999 regarding video game purchases and uses, nearly half (44%) of console players, such as those who play Sony PlayStation and Nintendo 64, are 17 years of age or younger (Anders, 1999). Sheff (1993) revealed that in "Q" ratings, which are designed to indicate the popularity of public figures such as movie stars and politicians, Nintendo's mascot, Super Mario, was better recognized by American children than Mickey Mouse.

The age of the core gaming audience, when combined with previous research findings that indicate children can and do learn gender roles via the media, gives rise to the question of how male and female characters are depicted in the PlayStation and Nintendo 64 console video games. Applying gender schema theory and social learning theory to the way that children interpret what they see in video games can help parents and researchers better understand the potential teaching abilities of these media products.

According to gender schema theory, the process of applying learned sex concepts to new information may be achieved through the use of schemata (Bem, 1981, 1983, 1993). Children form schemata of what behaviors, attitudes, and clothing are appropriately masculine or feminine through accumulated experiences (Wroblewski & Huston, 1987). Video games are just one source of many for information about what is masculine or feminine. The contribution of video games to the process of acquiring sex-based concepts is unknown at this time. However, one may reason that if a child sees many female characters in typically feminine clothing, such as the thong-bikini-clad characters in the wrestling world, that will become part of his or her developed schema. Although gender schema theory shows how an individual can arrive at a personal definition of gender through internal processes, the question arises as to how the original schemata form. Social learning theory is one way of explaining how children learn about what are acceptable and unacceptable clothing and behaviors within their society through the processes of reinforcement, observation, and imitation (Bandura, 1965; Bandura, Ross, & Ross, 1963; Bandura & Walters, 1963; Durkin, 1985).

Research that focuses specifically on video games and gender role acquisition has been limited. Provenzo (1991) noted that the most popular games of the time typically depicted stereotypic views of gender-appropriate behavior, where men were often depicted as ruthless aggressors and women as victims of violence. His interviews with child players revealed that women are often perceived as holding subordinate and even boring roles in electronic games. Much may have changed in the 10 years following Provenzo's research.

More recent findings are from Dietz (1998), who content-analyzed 33 Nintendo and Sega Genesis video games popular in 1995 regarding the portrayal of women and the use of violence. Dietz found that with 41% of the games, there were no female characters. Of the games that included female characters, 28% depicted the women as sex objects. Nearly 80% of the games included violence or aggression as part of the strategy or object of the game. Of those games, 21% depicted violence directed at women. The weakness of Dietz's work is that 6 years have gone by since her analysis of the games. With Nintendo alone launching between 8 and 12 new games per year (Dorman, 1997), and with the advances in technology, Dietz's work is quickly outdated. Because of the rapid and unrelenting advance of technology, video game research from as recent as 5 years ago is questionable in its application to modern game versions. PlayStation debuted at the end of 1995 for \$299 with games running \$49, and Nintendo 64 debuted in the United States at the end of 1996 for \$199. These game systems have much more advanced graphic capabilities than their predecessors, the Nintendo and Sega console systems. To accurately reflect the gaming industry, content analysis must be frequent and thorough.

Indirectly related research by Funk and Buchman (1996) evaluated 364 fourth- and fifth-grade children's views of gender differences in social approval for electronic game playing. The most telling findings were that the boys tended to be more stereotyped in their attitudes about electronic games, specifically when asked whether the fighting games were mainly for boys. Boys were more likely to agree with the statement than the girls. Although this study was indirectly concerned with gender role stereotyping, it did not attempt to assess what specific gender behaviors users may learn from playing video games.

Television and film are frequently thought of as being sources of behaviors to be imitated, and although video games imitate the visual and audio elements of films, they go a step further in allowing the media user to interact with the text (Selnow, 1984; Wiegman & van Schie, 1998). This intense engagement with the media product, in addition to the age of the product users and the knowledge that children can and do learn stereotypical gender attributes from media products, makes analyzing the gender role characteristics of video game characters an important part of understanding what children may be learning during their play time. Clothing can be viewed as a prime indicator of sex roles in our society, even in video games (Duncan, 1990; Riffe, Place, & Mayo, 1993). With this in mind, we are interested in how the female characters are dressed in relation to the male characters, a variable not given deep consideration in previous research conducted on video games.

METHOD

To determine gender role stereotyping based on the presence or absence of female characters and the types of clothing those characters were wearing in video games, a content analysis was conducted. A population of video games was constructed by compiling a list of the Nintendo 64 and PlayStation games available for purchase at the time of the study, except for adult-only titles. The game titles were supplied from a major national toy store. By listing only those games still available for purchase from the manufacturer's supplier, discontinued titles were not included in the population. The population of video games consisted of 227 PlayStation games and 114 Nintendo 64 games. A random sample was taken from this population—every seventh game beginning with the fifth game in the list of games compiled from the store was selected. These numbers were randomly selected from a list of random numbers. A total of 48 games was selected for the sample—32 PlayStation games and 16 Nintendo 64 games.

The games were rented from area video game stores in one large city, one midsize city, and two small towns. Because not all the games that were in the sample were available to rent, some alterations to the sample occurred. For the Nintendo 64 games, one game was not available to rent and was dropped from the sample without replacement. For the PlayStation games, six games were not available to rent. These games were replaced by random selection. The games in the original sample were removed, and replacements were drawn from the remaining games. The originally chosen sample, along with the replacements, is listed in the appendix.

The Entertainment Software Rating Board has determined ratings for each video game. These ratings categories are EC (Early Childhood) for ages 3 and older, E (Everyone) for ages 6 and older, T (Teen) for ages 13 and older, M (Mature) for ages 17 and older, and AO (Adults Only) for content for adults. In addition, some older games in the sample have the rating K–A (Kids Through Adults). These games were included with the games rated E because they were targeted to that group. Also, in some cases, the games had an RP where the rating should have been, indicating that the rating was pending. None of the games included in the sample lacked a rating.

Unit of Analysis and Coding

The unit of analysis for this content analysis was character. *Character* was defined as a human, animal, or object within a video game that displayed human-like qualities such as speaking, using tools, or making conscious decisions. The game was started at the beginning, and each character within the first 20 min of game play was coded. It was determined that playing the complete game would require more

skill than the coders had at video game playing, so 20 min was chosen to give an idea of what types of characters would be present within the game. Characters were coded for the game system they appeared in (Nintendo 64 or PlayStation), the game rating, the game category, gender, species, sleeve length, neckline, lower body clothing, and cleavage.

Characters were also coded for the type of game in which they appeared. The possible categories were team sports, individual sports, storyline, combat, classic video game, board game or game show, television or movie based, and other. Team sports were defined as any sport where members play as a team, such as football, baseball, or hockey. Individual sports were defined as any sport where the person plays as an individual, such as snowboarding, track and field, racing, or fishing. Storyline was defined as any game that emphasized a storyline over all other elements. In other words, a storyline game had an objective other than just playing the game. For example, Crash Team Racing emphasized a storyline by explaining that if the player did not win all his or her races, the world would be conquered by aliens. Role-playing games, such as Body Harvest, were also included in this category. Combat games, such as Battlestations, were defined as any war simulation games. Classic video games were defined as those games that were originally released as an arcade game. Examples of classic video games are Pac-Man, Frogger, Asteroids, and Centipede. Board game and game show games were defined as those games based on a classic board game or a television game show such as Jeopardy, Clue, or Monopoly. Television and movie-based games were defined as those games based on a television show, such as MTV Music Generator, or a movie. Games based on game shows were not included in this definition because they are in a separate category. Other was a category for those games that did not easily fit into any of the other categories. Because there were so few characters that belonged to the classic video game, board game and game show, television and movie-based, and other categories, these categories were combined for analysis purposes.

Characters were also coded for gender and species. Categories for gender were female, male, and unknown for those characters whose gender could not be determined. Categories for species were human, animal, object, and other. Because there were relatively few characters that fell into the animal, object, and other categories, and in some cases it was difficult to tell whether a character was an actual animal or some alien shape, for analysis purposes the animal, object, and other categories were combined.

Clothing of characters was also coded. The clothing was split into three parts the sleeve length, the neckline, and the lower body clothing. The categories included in sleeve length were long sleeves or those sleeves stretching from the shoulder to the wrist, 3/4 sleeves or those sleeves stretching from the shoulder to past the elbow but not reaching the wrist, short sleeves or those sleeves stretching from the shoulder to above the elbow, no sleeve or bare arms from the shoulder to wrist, and not applicable or unknown for characters that were not expected to wear clothing or characters where the sleeve length could not be seen. Due to the small number of characters wearing 3/4 sleeve length, these were added to the long sleeve category for analysis.

The categories used for neckline were turtleneck or a collar that covers the neck, high neck or a collar that reaches the base of the neck, midcollar or a collar that is below the base of the neck but not showing any cleavage or pecs, low collar or a collar low enough to show cleavage or pecs, other or any collar that does not fit into any of the previous neckline categories, none for characters not wearing anything on their upper body, and not applicable or unknown for those characters that are not expected to wear clothing or where the clothing is unknown. For analysis purposes, the categories of turtleneck and high collar were combined. The purpose of this category was to ascertain how often the player's eyes were directed to the female character's cleavage by having the character dressed in cleavage-exposing clothing (Duncan, 1990).

The categories used for lower body clothing were pants or clothing below the knee and split into legs, shorts or clothing above the knee and split into legs, long skirt or a skirt below the knees, short skirt or a skirt above the knees, other for any lower body clothing that did not fit into any of these categories, and none, not applicable, or unknown for those characters that were not expected to wear clothing or the lower body clothing was unknown. None of the characters that were expected to wear lower body clothing were shown nude. The purpose of this category was to ascertain whether women were depicted in traditionally female clothing, such as skirts, and even if they were, how often they were shown wearing short skirts to emphasize the character's legs and genital area (Duncan, 1990).

Cleavage was also analyzed. The categories used for cleavage were flat, average, voluptuous, and not applicable. Female characters were coded according to breast size. The coding was done by consensus between a male coder and a female coder.

Intercoder Reliability

Three coders were trained for the study: two female researchers and a male coder. Intercoder reliability was judged as acceptable with more than 80% agreement on all categories. Intercoder reliability was tested on a randomly selected subsample of seven games (14.89% of the sample). This provided 72 characters (12.08% of the sample). Agreement on the game category was 84.71%, with a Scott's Pi of .83. Agreement on the sex category was 90.27%, with a Scott's Pi of .85. Agreement on the species category was 94.44%, with a Scott's Pi of .93. Agreement on the sleeve length category was 91.67%, with a

Scott's Pi of .90. Agreement on the neckline category was 88.89%, with a Scott's Pi of .87. Agreement on the lower body clothing category was 97.22%, with a Scott's Pi of .97. Agreement on the cleavage category was 88.89%, with a Scott's Pi of .85. Agreement was not calculated on the game system and rating categories because there was no judgment call involved. The information was clearly labeled on the game.

RESULTS

A total of 47 games was analyzed for character. From the 47 games, 597 characters were coded. Five of the games in the sample had no characters—two Nintendo 64 games (Top Gear Rally 2 and Top Gear Overdrive) and three PlayStation games (Gran Turismo, Frogger, and MTV Music Generator).

Characters were coded according to the game rating. None of the games were rated EC. Of the 597 characters, 309, or 51.76%, came from games rated E; 144, or 24.12%, came from games that were rated T, 128, or 21.44%, came from games rated M. Sixteen characters (2.68%) came from games that were listed as rating pending.

Of the 597 characters analyzed, 427, or 71.52%, of the characters were men, 82, or 13.74%, were women, and 88, or 14.74%, were of an undeterminable gender. A chi-square goodness-of-fit test showed the difference between the number of male and female characters (leaving out those characters whose gender could not be determined) to be statistically significant, $\chi^2(1) = 233.8$, p < .05.

A chi-square cross-tabulation compared the gender with the game systems (see Table 1). This was statistically significant, $\chi^2(1) = 8.29$, p < .05. Only 8.54% of the female characters in the sample came from Nintendo 64 games, whereas 22.48% of the male characters came from Nintendo 64 games. Although female characters are vastly underrepresented on video games, the games for Nintendo 64 have the fewest number of female characters.

A cross-tabulation that compared the rating with gender (see Table 2) was not statistically significant, $\chi^2(2) = 0.923$, p < .05. This is important because it shows that female characters are equally poorly represented in all ratings of games.

TABLE 1 Game System by Gender					
Game System	Women	%	Men	%	Total
Nintendo 64	7	8.54	96	22.48	103
PlayStation	75	91.46	331	77.52	406
Total	82	100.00	427	100.00	509

Note. Percentages are column percentages.

A cross-tabulation that compared game category with gender (see Table 3) was statistically significant, $\chi^2(4) = 20.34$, p < .05. This significance is largely due to the lack of female characters in team sport games. This goes hand in hand with a lack of games that feature female team sports. The largest percentage of female characters compared with male characters was in the individual sport category. A large portion of the female characters in this category came from a single game—the PlayStation game Sydney 2000, which featured a number of female Olympic events.

Sleeve length was compared with gender in a cross-tabulation (see Table 4). The result of this was statistically significant, $\chi^2(3) = 34.15$, p < .05. Nearly one half of the female characters in this study were shown with no sleeves. Most of these women were wearing clothing such as halter tops, tank tops, and bathing suits. This, along with Table 5, points to the fact that women in video games are shown less clothed than are men in video games.

A cross-tabulation of neckline without the categories of none, other, and not applicable was conducted (see Table 5). The result of this was statistically significant, $\chi^2(2) = 95.35$, p < .05. Of those characters shown with a low neckline, in which cleavage or pecs were visible, 85.71% were women. This again supports the claim that female characters are shown less clothed than men.

Game halling by Gender					
Rating	Women	%	Men	%	Total
Everyone	37	14.23	223	85.77	260
Teen	18	15.38	99	84.62	117
Mature	21	18.1	95	81.9	116
Total	76		417		493

TABLE 2 Game Rating by Gender

Note. Percentages are row percentages.

TABLE 3 Game Type Category by Gender

Game Type	Women	%	Men	%	Total
Team sports	14	8.54	150	91.46	164
Individual sports	29	27.36	77	72.64	106
Storyline	29	19.73	118	80.27	147
Combat	7	10.00	63	90.00	70
Other	3	13.64	19	86.36	22
Total	82		427		509

Note. Percentages are row percentages.

	Character Sleeve Length by Gender					
Sleeve Length	Women	%	Men	%	Total	
Long	32	39.02	149	34.89	181	
Short	6	7.32	137	32.08	143	
None	39	47.56	94	22.01	133	
N/A	5	6.10	47	11.01	52	
Total	82	100.00	427	100.00	509	

TABLE 4 Character Sleeve Length by Gender

Note. Percentages are column percentages.

	Character Neckline by Gender					
	Women	%	Men	%	Total	
High neck	36	11.46	278	88.54	314	
Mid neck	18	21.69	65	78.31	83	
Low neck	24	85.71	4	14.29	28	
Total	78		347		425	

TABLE 5 Character Neckline by Gender

Note. Percentages are row percentages.

A comparison of lower body clothing and gender was statistically significant, $\chi^2(5) = 130.98$, p < .05. However, this comparison included skirts, which are generally expected to be worn by women but not by men. When a comparison was conducted of lower body clothing and gender, leaving, out all categories but pants and shorts, the result was not statistically significant, $\chi^2(1) = 1.71$, p < .05.

The cleavage of female characters in the video games was also analyzed. Of the 71 female characters for whom cleavage could be seen on, 2, or 2.82%, were considered flat, 40, or 56.34%, were considered average, and 29, or 40.85%, were considered voluptuous. However, many of the characters that were considered voluptuous were unrealistically large breasted.

A chi-square also compared rating by cleavage (see Table 6). Female characters in unrated or rating pending games were not included. There is a significant difference among the ratings, $\chi^2(4) = 9.90$, p < .05. A greater percentage of women in mature games have large breasts, whereas a greater percentage of women in games rated for everyone have average breasts. However, here it is worth noting that of those female characters with voluptuous breasts, 31% are in games rated for everyone. The E category is subjected to women with unrealistic breast sizes.

Game Rating by Female Character Cleavage							
Rating	Flat	%	Average	%	Voluptuous	%	Total
Everyone	2	6.25	21	65.63	9	28.13	32
Teen	0	0.00	7	53.85	6	46.15	13
Mature	0	0.00	6	30.00	14	70.00	20
Total	2		34		29		65

TABLE 6 Game Rating by Female Character Cleavage

Note. Percentages are row percentages.

CONCLUSION

As can clearly be seen, there is considerable gender role stereotyping in video games. Female characters are vastly underrepresented in video games available for the two major console gaming systems at the time of the analysis. In fact, there were more characters of indeterminate gender (88) than there were female characters (82). The characters of indeterminate gender were predominantly animals or aliens without speaking parts. Most of the female characters appeared in individual sport and storyline games, and there were more female characters in PlayStation games than in Nintendo 64 games. Not only are women underrepresented in video games, but those who are present are less clothed than their male counterparts. Female characters are more likely to be seen in low-cut clothing and with bare arms than male characters, and nearly one half (41%) of all female characters were big busted. More important, nearly one third (31.03%) of the voluptuous women appeared in games rated E, which means that these games are suitable for even young children.

The majority of female characters are dressed in such as way as to bring attention to their bodies, particularly their breasts, which carry strong sexual meaning for the young boys who predominantly play these games. As social learning theory and gender schema theory explain, children exposed to gender role stereotyping in the media, including video games, may develop those attitudes themselves. When applied to the 47 games analyzed for this study, social learning theory and gender schema reveal that the dominant theme of the games is the same—female characters are unimportant based on the fact that only about one in four characters are women, although one half of the world's population is female. Furthermore, those female characters that do appear in the games are big busted and dressed in clothing that emphasizes their sexuality by drawing attention to their breasts. Video games may be a fairly new media industry, but game designers should be reminded that such obvious gender role discrimination in any media industry is unacceptable.

Limitations

This study had several limitations that should be corrected for further study. First, every character was coded, regardless of his, her, or its importance to the video game. This included characters that were seen in the introductory footage video but were not available for game play. In future studies, characters should be coded as to their importance in the video game. Although this study was concerned with the number of female characters in the games and how their clothing defined them as women, future studies looking at behavior are necessary. Further studies should code what the characters are doing, whether they are engaged in dominant or submissive behaviors, whether violence is committed or received, whether the characters are heroes or villains, and whether the characters are active or passive.

Another limitation was the coding of the lower body clothing category. It was not discrete enough to capture some of the nuances of female clothing designed to draw attention to the lower sexual zones of the character's bodies. For example, many of the outfits that wound up in the other category were bathing suits and thongs for female characters and tights for male characters.

In a related concern, for researchers interested in evaluating male gender role stereotyping as indicated by clothing, the sleeve category could be troublesome. Masculinity in men can be demonstrated through large arm muscles, which often are shown off by wearing sleeveless shirts. It would be prudent then to include a category about muscle definition and exposure.

Clearly, there is room for improvement in the area of video games as it relates to gender role stereotyping. Continuing study should be conducted to watch the video game market for improvements. As more girls and women begin to play video games, one hopes more female characters in a variety of clothing styles may be seen in these games.

REFERENCES

- Anders, K. (1999). Marketing policy considerations for violent video games. *Journal of Public Policy & Marketing*, 18, 270–273.
- Anderson, C. A., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and life. *Journal of Personality and Social Psychology*, 78, 772–790.
- Anderson, C. A., & Ford, C. M. (1986). Affect of the game player: Short-term effects of highly and mildly aggressive video games. *Personality and Social Psychology Bulletin*, 12, 390–402.
- Bandura, A. (1965). Influence of model's reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology*, 1, 589–595.
- Bandura, A. (Ed.). (1971). Psychological modeling: Conflicting theories. Chicago: Aldine Atherton.
- Bandura, A., Ross, D., & Ross, S. A. (1963). Imitation of film-mediated aggressive models. *Journal of Abnormal Psychology*, 66, 3–11.
- Bandura, A., & Walters, R. H. (1963). Social learning and personality development. New York: Holt, Rinehart, & Winston.

- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review*, 88, 354–364.
- Bem, S. L. (1983). Gender schema theory and its implications for child development: Raising genderaschematic children in a gender-schematic society. *Signs: Journal of Women in Culture and Society, 8,* 598–616.
- Bem, S. L. (1993). The lenses of gender: Transforming the debate on sexual inequality. New Haven, CT: Yale University.
- Berry, G., & Mitchell-Kernan, C. (Eds.). (1982). Television and the socialization of the minority child. New York: Academic.
- Brabant, S., & Mooney, L. (1986). Sex-role stereotyping in the Sunday comics: Ten years later. Sex Roles, 14, 141–148.
- Brody, M. (2000). Playing with death. *The Brown University Child and Adolescent Behavior Letter*, *16*(11), 8.
- Cantor, M. G. (1987). Popular culture and the portrayal of women: Content & control. In B. B. Hess
 & M. M. Ferree (Eds.), *Analyzing gender: A handbook of social science research* (pp. 190–214).
 Newbury Park, CA: Sage.
- Cooper, J., & Mackie, D. (1986). Video games and aggression in children. *Journal of Applied Social Psychology*, *16*, 726–744.
- Cooper, V. W. (1985). Women in popular music: A quantitative analysis of feminine images. *Sex Roles*, *13*, 499–506.
- Davis, A. J. (1984). Sex-differentiated behaviors in non-sexist picture books. Sex Roles, 11, 1-15.
- Dickinson, A. (2000). Video playground. Time, 155(19), 98.
- 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, 425–441.
- Dorman, S. M. (1997). Video and computer games: Effects on children and implications for health education. *Journal of School Health*, 67(4), 133–138.
- Duncan, M. C. (1990). Sports photographs and sexual differences: Images of women and men in the 1984 and 1988 Olympic Games. *Sociology of Sport Journal*, 7, 22–43.
- Durkin, L. (1985). Television and sex role acquisition I. British Journal of Social Psychology, 24, 101-113.
- Eagly, A. H. (1987). Sex differences in social behavior: A social role interpretation. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Funk, J. B. (1993). Reevaluating the impact of video games. Clinical Pediatrics, 32, 86-90.
- Funk, J. B., & Buchman, D. D. (1996). Children's perceptions of gender differences in social approval for playing electronic games. Sex Roles, 35, 219–231.
- Graybill, D., Strawniak, M., Hunter, T., & O'Leary, M. (1987). Effects of playing versus observing violent versus nonviolent video games on children's aggression. *Psychology*, 24, 1–8.
- Griffiths, M. D. (1991). The observational analysis of adolescent gambling in U.K. amusement arcades. Journal of Community and Applied Social Psychology, 1, 309–320.
- Griffiths, M. D. (1993). Are computer games bad for children? The Psychologist: Bulletin of the British Psychological Society, 6, 401–407.
- Gutman, D. (1982, Fall). Video game wars. Video Game Player.
- Huston, A. C., Wright, J. C., Marquis, J., & Green, S. B. (1999). How young children spend their time: Television and other activities. *Developmental Psychology*, 35, 912–925.
- Irwin, A. R., & Gross, A. M. (1995). Cognitive tempo, violent video games, and aggressive behavior in young boys. *Journal of Family Violence*, 10, 337–350.
- Jehlen, A. (1994). A patron for video games. Technology Review, 97(6), 74-75.
- Jenkin, H. (2000). Art form for the digital age. Technology Review, 103(5), 117-120.
- Kaplan, S. J. (1983). The image of amusement arcades and differences in male and female video game playing. *Journal of Popular Culture*, 16, 93–98.
- Kiesler, S., Sproull, L., & Eccles, J. S. (1983). Second class citizens. Psychology Today, 17, 41-48.

292 BEASLEY AND COLLINS STANDLEY

- Kirsh, S. J. (1998). Seeing the world through "Mortal Kombat" colored glasses: Violent video games and the development of a short-term hostile attribution bias. *Childhood*, 5, 177–184.
- Kolbe, R., & LaVoie, J. C. (1982). Sex-role stereotyping in preschool children's picture books. Social Psychology Quarterly, 44, 369–374.
- Kotick, R. (2001). High stakes and a huge market mean video games aren't child's play anymore. *Upside*, *13*(2), 34.
- 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.
- Morlock, H., Yando, T., & Nigolean, K. (1985). Motivation of video game players. *Psychological Reports*, 57(1), 247–250.
- Provenzo, E. F. (1991). Video kids: Making sense of Nintendo. Cambridge, MA: Harvard University Press.
- Purcell, P., & Stewart, L. (1990). Dick and Jane in 1989. Sex Roles, 22, 177-185.
- 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.
- Schutte, N. S., Malouff, J. M., Post-Gorden, J. C., & Rodasta, A. L. (1988). Effects of playing video games on children's aggressive and other behaviors. *Journal of Applied Social Psychology*, 18, 454–460.
- Selnow, G. W. (1984). Playing video games: The electronic friend. *Journal of Communication, 34,* 148–156.
- Sheff, D. (1993). *Game over: How Nintendo zapped an American industry, captured your dollars, and enslaved your child.* New York: Random House.
- Signorielli, N. (1993). Television, the portrayal of women, and children's attitudes. In G. L. Berry & J. K. Asamen (Eds.), *Children and television: Images in a changing sociocultural world* (pp. 229–242). Newbury Park, CA: Sage.
- Silvern, S. B., & Williamson, P. A. (1987). The effects of video game play on young children's aggression, fantasy, and prosocial behavior. *Journal of Applied Developmental Psychology*, *8*, 453–462.
- Van Horn, R. (1999). Violence and video games. Phi Delta Kappan, 81, 173-174.
- Wiegman, O., & van Schie, E. G. M. (1998). Video game playing and its relations with aggressive and prosocial behavior. *British Journal of Social Psychology*, 37, 367–378.
- Wroblewski, R., & Huston, A. C. (1987). Televised occupational stereotypes and their effects on early adolescents: Are they changing? *Journal of Early Adolescence*, 7, 283–297.

APPENDIX

PlayStation	Nintendo 64
Video Game	es in Sample
Ape Escape	Banjo Kazooie
Battlestations	Donkey Kong 64
Command and Conquer Retaliation	Body Harvest
Contender	Gex, Enter the Gecko
Crash Team Racing	Madden NFL 2000
Dino Crisis	Extreme G XG2
Frogger	NBA Courtside 2 featuring Kobe Bryant
Jet Moto 2	Perfect Dark
Legend of Mana	Tom Clancy's Rainbow Six
MTV Music Generator	NFL Quarterback Club 2000
Mortal Kombat Special Forces	Rush 2049
NBA Live 2000	Shadowman
Tomb Raider II	Turok 3 Shadow of Oblivion
Psybadek	Top Gear Rally 2
Ready 2 Rumble Boxing	Top Gear Overdrive
Road Rash	
Sydney 2000	
Spyro 2: Ripto's Rage	
Syphon Filter 2	
Thousand Arms	
NCAA Football 2000	
ECW Anarchy Rulz	
WCW Mayhem	
Vagrant Story	
Saga Frontier 2	
NHL Rock the Rink	
Games Unav	ailable to Rent
MTV Andy MacDonal	Saban's Power Rangers Lightspeed Rescue
Echo Night	
Gallop Racer	
Mobil 1 Rally Champ	
Trick N Snowboarder	
Star Wars Dark Forces	
Replacem	ent Games
Gran Turismo	None
Tigger's Honey Hunt	
Speed Punks	
Barbie Race & Ride	
Tony Hawk's Pro Skater II	
Sammy Sosa's High Heat Baseball 2001	