

The Effects of Commercials on Children's Perceptions of Gender Appropriate Toy Use

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Sixty-two first and second grade students (28 boys, 34 girls) were exposed to one of three commercial videotapes in which either all-boys (traditional condition) or all-girls (nontraditional) were playing with a toy. Participants in the control condition were exposed to nontoy commercials. After exposure to one of the conditions participants performed a toy sort where they were asked if six toys, including the two manipulated toys, were "for boys, girls, or both boys and girls." Participants in the nontraditional condition were more likely to report that the manipulated toys were for both boys and girls than were participants in the traditional condition, who were more likely to report that the manipulated toys were for boys. This effect was stronger for boys than for girls.

KEY WORDS: commercials; children; gender roles.

Over the past three decades, children's estimated exposure to television advertising has doubled from an average of about 20,000 commercials per year in the late 1970s (Adler et al., 1977) to more than 40,000 commercials per year in the early 1990s (Kunkel & Gantz, 1992 as cited in Kunkel, 2001). With this pervasive exposure to television advertising, concerns grow about the nature of the advertisements' content and the lessons being taught and shared, particularly for young audiences. Girls and boys are often portrayed in stereotyped roles in commercials for children, and this has not changed dramatically over time (Jennings & Wartella, in preparation). Commercials present gender stereotypes through overt factors, such as activities and language, as well as through more subtle features, such as voiceovers and production features. Although many media messages tend to reinforce gender roles,

very few researchers have explored the portrayal of nontraditional gender roles. Therefore, the purpose of this study was to examine children's exposure to gender-stereotyped toy commercials and the manipulation of gender in children's toy advertisements to measure the effects this manipulation may have on participants' behaviors and toy preferences.

Mass Communication Theory

Attempts to understand the influence of television content have been a major focus of mass communication research over the years. Two theories, cultivation theory and social learning theory, are particularly helpful to understanding how the media act as socializing agents and thus may influence the construction and perpetuation of gender constructs. These two theories work in tandem with each other; cultivation analysis provides descriptions of the recurrent messages that are being vicariously learned via observation (social learning theory), particularly among heavy viewers of television, such as children.

According to cultivation analysis, Gerbner and his colleagues submitted that "those who spend more

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time 'living' in the world of television are more likely to see the 'real world' in terms of the images, values, portrayals, and ideologies that emerge through the lens of television" (Gerbner, Gross, Morgan, Signorelli, & Shanahan, 2002, p. 47). That is, heavy television viewers are more likely to express opinions and hold values similar to those represented on television than light television viewers are. As children tend to be heavy viewers of television with 17% of children in the United States watching more than 5 hr of television a day (Roberts, Foehr, Rideout, & Brodie, 1999), they may be more susceptible than adults to adopting a television world view, particularly as it relates to the social construction of gender and gender roles.

According to social learning theory, learning can be achieved not only through direct experience, but also vicariously through observation of a variety of models. Individuals learn a great deal about the world outside of their immediate setting through what they see and hear, particularly through television exposure (Bandura, 2002). Social learning theory (Bandura, 1986; Bandura, Ross, & Ross, 1963) is based on the assumption that people learn behaviors by observing the punishments and rewards of others. Accordingly, those behaviors that are rewarded are more likely to be learned and invoked than are those behaviors that are punished or unrewarded. Evidence suggests that filmed models can be as effective as real-life models in eliciting and transmitting social behaviors (Bandura et al., 1963). Many of the models that children encounter throughout their childhood are those seen on television. This makes television one of the most important teachers of gendered behaviors.

Depictions of Gender in Children's Television Commercials

Over the past few decades, the nature of the characters depicted in commercials has been of particular interest, especially in terms of gender. Commercials have been analyzed for presence of male and female characters and the demeanor, activities, language, and production features associated with these depictions. Early research indicated that boys outnumbered girls in television commercials directed toward children (Barcus, 1980). However, research in the late 1990s indicated that the distribution of girls and boys was much more equitable; nearly one-

half of the sample characters were boys (49%), and the other one-half were girls (51%; Larson, 2001). The distribution of girls and boys may be increasing over time, but concerns remain regarding how gender is portrayed within commercials directed toward children.

Girls and boys are often portrayed in stereotyped roles in commercials. Activities portrayed in commercials often signify traditional gender roles. For example, Smith (1994) observed that girls engaged in shopping, whereas boys did not, and that only boys performed antisocial behaviors, such as stealing or fighting. Aggressive behavior seems to be more visible in commercials that feature boys than in those that feature girls (Larson, 2001; Macklin & Kolbe, 1984; Welch, Huston-Stein, Wright, & Plehal, 1979). Early research indicated that boys' commercials were more likely to contain highly active toys, higher rates of cuts, more rough cuts, less talking, and louder noise and music than girls' commercials, which had more fades and dissolves, smoother transitions, a great deal of talking, and softer background music (Welch et al., 1979). Research in the 1990s suggested that voice-overs were used to match the orientation of the target for the toy such that boy-oriented commercials featured a male voiceover and girl-oriented commercials featured a female voiceover (Johnson & Young, 2002; Smith, 1994). These factors tend to serve as signifiers of appropriate gendered behavior and toy selection.

Effects of Televised Gender Portrayals

Research indicates a relationship between exposure to these gendered images and children's perceptions about gender roles. Research on children's programs and advertising indicates that children perceive gender role stereotypes and apply gendered attributes to characters (Klinger, Hamilton, & Cantrell, 2001; Mayes & Valentine, 1979). Specifically, Klinger et al. (2001) found that boys' toys were rated as more aggressive than girls' toys and that participants would rather play with boys' toys than with girls' toys. Toy play depictions were also found to be gender stereotyped. Furthermore, heavy exposure to television content has been found to foster gender-stereotyped attitudes (Morgan, 1987; Morgan & Rothschild, 1983). Therefore, the research suggests that children are aware of the gendered portrayals in commercials and thus have learned the gender "appropriateness" of toys through modeled

behavior, which may affect their toy preferences and the nature of their play. The repeated exposure to these images contributes to the development of children's conceptions of gender and their expected roles as men and women.

A few researchers have explored the effects of nontraditional gender depictions as a way to challenge these beliefs. Geis, Brown, Jennings, and Porter (1984) exposed adults to gender-stereotyped and reverse gender-stereotyped commercials and then coded the achievement and homemaking themes in essays participants wrote about their expected life 10 years in the future. The researchers found that themes of achievement significantly increased among women who viewed the reverse role depiction. Women who viewed the stereotypical depictions expressed significantly fewer achievement themes in their essays than did men who had been exposed to the same condition. This study showed a societal and mass media priming effect of acceptable gender behaviors through future ambitions. The results of the study suggest that reverse gender-stereotypical depictions may contribute to achievement script development for women and demonstrate an interaction between media portrayals and self-concept, particularly as they pertain to gender roles and gendered behaviors.

Research with children suggests that nontraditional images can change their perceptions of gender roles as well. Pingree (1978) found that children in two experimental conditions had less traditional gender role attitudes after viewing counter stereotypical portrayals. Participants in third to eighth grade were exposed to one of two sets of unaltered television commercials. The nontraditional commercials contained images of female physicians, engineers, designers, and sports professionals. The traditional commercials contained images of women as housewives, mothers, and sex objects, or women performing domestic activities, such as sewing. Overall, both boys and girls held less traditional attitudes toward women after viewing the nontraditional commercials; however, the effects were stronger for girls than for boys.

In the current research we attempted to explore these issues through children's exposure to nontraditional images of girls in children's television commercials. Specifically, children were exposed to television commercials where images of girls digitally replaced those of boys in toy play in order to suggest that girls can play with the same toys as boys. Our hypotheses were that these manipulated images would

have an impact on whether or not children perceived specific toys to be for girls only, for boys only, or for both girls and boys. Specifically, we hypothesized that

H1: Effects will vary by condition.

- (a) Participants in the traditional condition would be more likely than participants in the nontraditional condition to report that target toys are for boys.
- (b) Participants in the nontraditional condition would be more likely than participants in the traditional condition to report that the toys are for both boys and girls.

H2: Girls and boys would respond differently in the nontraditional condition.

- (a) Girls would be more likely than boys to report that the target toys are for both boys and girls.

H3: Previous experience with toys or commercials would have an effect.

- (a) Participants who have had previous experience with target toys or viewed the commercials previously are less likely than participants who have not had previous experience with the target toys to report toys in the nontraditional condition to be appropriate for both boys and girls.

METHOD

Participants

Participants were 62 first and second grade elementary school students from an upper-middle class suburb of a large mid-western city. Participants were randomly assigned to one of two experimental conditions or the control condition. Consent was obtained from the school district, principal, teachers, and parents. Informed consent was obtained from the students as well.

Stimulus Commercials

Forty hours of children's programming were recorded from network and cable stations on weekdays and weekends during the fall of 2002. Six commercials that aired during this time were selected

for use in this study. Two toy commercials that depicted all boys using a gender-neutral toy (Harry Potter Legos and Playmobil Airport Set) were selected. Harry Potter Legos was chosen specifically because of the androgynous nature of building blocks as well as the believed equal gender appeal of the Harry Potter book series. Playmobil Airport Set was chosen because it showed depictions of families and male and female action figures using the airplanes, which increases the gender neutrality of the toy. In addition to the toy commercials, two non-toy commercials for Chuckie Cheese restaurants and Lucky Charms cereal and two public service announcements for the Center for Disease Control's "Verb" campaign and National PTA, all with equal gender representation, were also selected to provide a context of regular television viewing of nonprogram content and to limit suggestion of gender roles through other means. In total, four commercials and two public service announcements were viewed on each tape.

Because children's play was the focus of the study, only commercials that involved toys were manipulated. Nontraditional commercials were created by placing girls' faces (taken from other commercials collected in the total television sample) over the boys' faces in the two toy commercials. Professionals at an advertising agency performed the editing of the commercials to ensure the quality of the final product. The girls' faces chosen had long hair and feminine features. The commercials used employed close frame shots of the children's faces at the beginning and throughout the commercial, which enabled gender discernment. One drawback from this editing was that the girls' faces were static and did not change emotional expression or exactly match the bodies on which they were placed. However, the editing was digitally performed on a frame by frame basis, which allowed for fluid motion, and the girls' faces closely matched the size of the original boys' faces.

In the control condition, two nontoy equal sex ratio depiction commercials for two beverages (Sunny Delight and Capri Sun) were substituted for the two toy commercials.

Procedure

Participants viewed a set of commercials in mixed sex groups of 10 children per group. The study was described as related to television commercials and toys. Each group of participants was assigned to one of three conditions and thus either viewed

the traditional toy commercials, the nontraditional toy commercials, or the no-toy control condition. The children were instructed not to talk during the video; a researcher stood behind the children as they watched the video in order to discourage inappropriate or distracting behavior or discussion of the video. In one instance a child began to talk and was asked to remain quiet; to ensure quiet the researcher remained behind the child for the rest of the viewing. After the 3-min tape was aired, each participant was paired with a female research assistant to answer questions individually. Participants in the traditional and nontraditional conditions were asked if they had ever seen any of the commercials on the tape before and if they had ever played with any of the toys on the tape.

All participants, regardless of condition, were asked to perform a toy sort. Three 3×5 cards were placed in front of the participant. The first card had a drawn picture of a boy with the word "BOY" written above, the second card had a drawn picture of a girl with the word "GIRL" written above, and the third card had a drawn picture of a boy and a girl with the words "BOTH BOYS AND GIRLS" written above. The researcher then handed the child a card with a picture of a toy on it and asked the child: "Is this toy, *X*, for boys, for girls, or for both boys and girls? Place the card next to the picture you think that it matches." The researcher pointed to each category card, boys, girls, both boys and girls, as she read it to the child. After the child placed the card, the researcher said "okay," took the card back, and gave the child a new toy card. The six toys examined included Harry Potter Legos, Playmobil Airport Set, and two toys similar to the toys shown on the tapes—generic wooden blocks and a generic wooden train set. This was done to examine the possible transference of gender-preferenced play to similar toys. The last two toys examined were two traditionally gender marked toys— a doll and a dump truck. These toys were used to serve as an indication of gender placeholders. After the interview was completed, the participant was told not to discuss the interview with anyone in the school until after everyone had been interviewed, and then the participant was escorted back to the classroom.

The study took a total of two visits, one per each of 2 consecutive weeks. Children were aware that a study was being done; they were excited when chosen to participate but showed no signs of understanding what the study was about or what was expected of them when brought into the viewing room.

RESULTS

Traditional Versus Nontraditional Conditions

A chi-square analysis of the sorting task for the Playmobil Airport Set (PAS) indicated a significant difference by condition, $\chi^2(4, N = 62) = 9.95, p = .041$, but there was no significant difference for Harry Potter Legos (HPL). Of the 25 participants who viewed the traditional commercials, the majority reported that HPL (60%) and PAS (56%) were for boys as opposed to for both boys and girls (HPL, 40%; PAS, 40%) or exclusively for girls (HPL, 0%; PAS, 4%). Of the 25 participants who viewed the nontraditional HPL commercial, 42.3% reported that Harry Potter Legos were for boys, and 57.7% reported that HPL was for both boys and girls. Of the 26 participants who viewed the nontraditional PAS commercial, 15.4% reported that the toy was for boys, 76.9% reported that the toy was for both boys and girls, and 7.7% reported that the toy was for girls. These results support Hypothesis 1; children in the nontraditional condition reported more often than those in the traditional condition that the toys were for both boys and girls. For Harry Potter Legos, 17.7% more of the children reported the toy was for both boys and girls, whereas 36.9% more of the children reported that Playmobil Airport Set was for both boys and girls.

Gender Comparisons

It was hypothesized that girls would be more influenced than boys by the commercials, but this hypothesis was not supported. Results indicated that more boys than girls reported that the toys were for both boys and girls in the nontraditional condition (see Tables I and II). For the girls, no significant differences were found between the traditional and nontraditional conditions for either target toy. However, for the boys, significant differences were found between the traditional and nontraditional condition for the Playmobil Airport Set. Of the 12 boys in the traditional condition, 33% reported that the PAS is for both boys and girls, whereas 91% of the 11 boys in the nontraditional condition reported the same, a 58% difference, which was significant, $\chi^2(4, N = 28) = 10.56, p = .032$. No significant differences were found for the Harry Potter Legos for the boys. Overall, the findings suggest that Hypothesis 2 was not supported. Indeed, boys in the nontradi-

Table I. Sample of Sorting Responses for Harry Potter Legos

Gender and condition	Sorting responses			<i>n</i>
	Girls only (%)	Boys only (%)	Both girls and boys (%)	
Girls				
Traditional	0	38.5	61.5	13
Nontraditional	0	40.0	60.0	15
Control	0	50.0	50.0	6
Boys				
Traditional	0	83.3	16.7	12
Nontraditional	0	45.5	54.5	11
Control	0	40.0	60.0	5

tional condition were more likely to report that one of the target toys, PAS, is for both boys and girls.

Previous Experience

Findings support Hypothesis 3 that previous experience with HPL or PAS would mitigate the effects of the conditions, whether this experience was previous viewing of the commercials or previous play with the toy. Participants who reported previous viewing of the Harry Potter commercial (*n* = 19) were less affected by the nontraditional condition. Of the eight previous viewers in the nontraditional condition, 50% reported that HPL is for boys and girls, whereas 61% of the no-experience viewers in the nontraditional condition reported that the toy was for boys and girls, an 11% difference. The same effect was found for Playmobil, but only nine participants reported previous experience with this toy, far fewer than those who had previous experience with HPL (*n* = 19). Of the three previous viewers in the nontraditional condition, 67% reported that the toy is for both boys and girls compared to 78% of the 23 no-experience viewers in the nontraditional condition,

Table II. Sample of Sorting Responses for Playmobil Airport Set

Gender and condition	Sorting responses			<i>n</i>
	Girls only (%)	Boys only (%)	Both girls and boys (%)	
Girls				
Traditional	0	53.8	46.2	13
Nontraditional	6.7	26.7	66.7	15
Control	0	33.3	66.7	6
Boys				
Traditional	8.3	58.3	33.3	12
Nontraditional	9.1	0	90.9	11
Control	0	60.0	40.0	5

an 11% difference. The difference for those participants who had no previous exposure to the Playmobil commercial was significant, $\chi^2(2, N = 42) = 6.09, p = .048$, whereas the difference for those who had previous viewing experience was not, which suggests that previous viewing mitigated the effect of the nontraditional condition.

Previous play with HPL and PAS was also examined. No significant differences were found for previous experience with HPL in the nontraditional condition. However, of the two girls who reported previous play with PAS in the nontraditional condition, 100% reported that the toy is for both boys and girls, whereas 75% of the 18 children with no previous play experience in the nontraditional condition reported that the toy is for both boys and girls, which is a significant difference, $\chi^2(2, N = 49) = 816, p = .02$. Therefore, previous toy use did impact perceptions of gender appropriateness for one target toy, Playmobil Airport Set.

DISCUSSION

Overall, the findings suggest that the gender of the model in commercials can have an impact on whom children perceive should play with particular toys. Children who saw nontraditional commercials were more likely to indicate that the toys are for both girls and boys rather than for just one sex. This seems particularly true for boys, which suggests that boys may pay more attention to the models presented. These findings are particularly important given the limited exposure children have to nontraditional images and the effect of such exposure that has been found by previous researchers (Geis et al., 1984; Pingree, 1978).

Children are exposed to a stream of stereotyped images through the media, and various features of commercials further accentuate these messages. As Signorielli (2001) stated, "This storytelling function of television is extremely important because these stories teach viewers about the intricacies of the world and its peoples" (p. 342). Moreover, the programming on television often overgeneralizes realities and depicts stereotypes especially due to the limited time for character development (Signorielli, 2001). In the present study, children were exposed to images that challenge the television view of gender. What is particularly relevant is that after even a brief exposure to nontraditional images both boys and girls were more likely to report that the toy adver-

tised is for both boys and girls as opposed to only for boys (see Fig. 1). These findings are similar to those of other studies (Geis et al., 1984; Pingree, 1978), which showed that exposing participants, adults and children, to counter-stereotypical portrayals led to less traditional gender role attitudes. If brief exposure to nontraditional images creates change in children's beliefs, imagine what prolonged exposure could do for children's beliefs and their behaviors.

Furthermore, children in the nontraditional condition were somewhat more likely to report that the train set and building blocks are for both boys and girls. Although the results were not statistically significant, this is an interesting finding that may indicate that social learning from commercials about a specific toy can transfer to similar toys. It may also demonstrate that children were using the information presented to them in the commercials to add to their construction of gender schemas (Bem, 1981; Martin & Halverson, 1981). Thus, in this instance, the nontraditional depictions of girls playing with stereotypical boys' toys may have encouraged some children to broaden their gender schema of what is gender appropriate toy use.

Previous research suggests that nontraditional images can lead to less stereotyped attitudes toward women more so for girls than for boys (Geis et al., 1984; Pingree, 1978). In the present study, only boys reported significant differences in the gender appropriateness of the Playmobil Airport Set (see Fig. 2). In the nontraditional condition, far more boys than girls indicated that the target toys are for both girls and boys. These findings are the opposite of Pingree's (1978) in which boys held more traditional attitudes after viewing nontraditional portrayals of women. The findings of the present study may be related to the importance among boys of appropriate gendered play. Pingree (1978) asked boys about their attitudes toward women, not about their personal play beliefs or choices, which would be of more relevance to their everyday life. Boys are often punished for participation in cross-gender play, whereas girls are rarely punished and may even be rewarded for cross-gender play (Fagot, 1977, Raag & Rackliff, 1998). Furthermore, research suggests that fathers give less positive responses to sons who engaged in stereotypical girls' play than do mothers, whereas both parents are tolerant and supportive of girls who play with stereotypical boys' toys (Fagot & Hagan, 1991). Boys are socialized, particularly by fathers, to be more sensitive to the gender appropriateness of the toys that they select. Therefore, this may cause

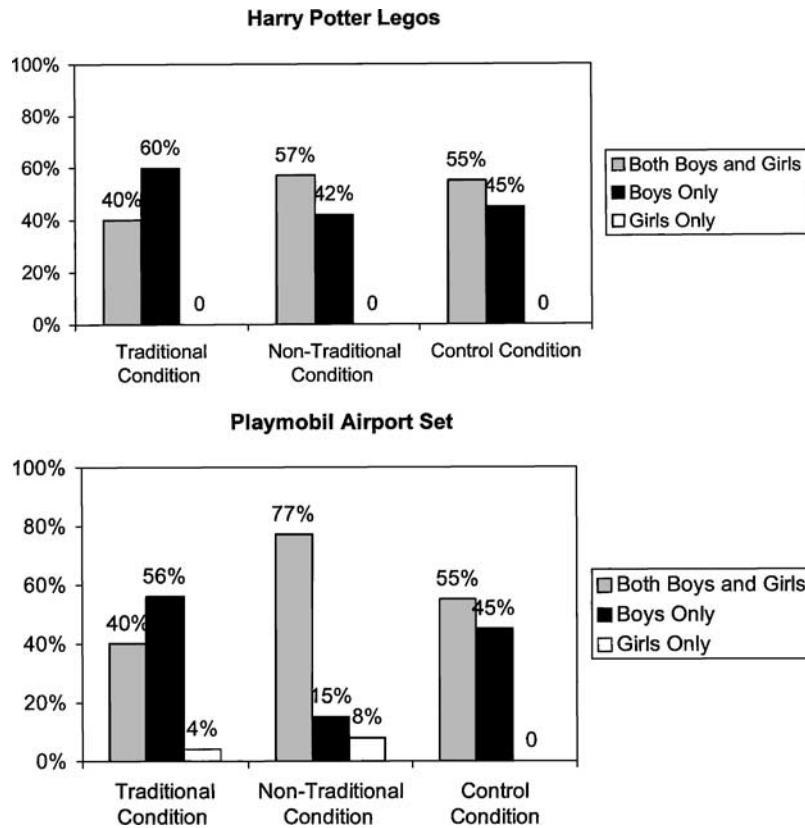


Fig. 1. Percentage of all participants who sorted toys by condition.

boys to pay increased attention to the gender of characters in commercials for clues about gender appropriate behavior so as to avoid inappropriate gendered play. Girls' sensitivity to gender cues does not need to be as highly attuned because they have not been socialized to regard cross-gender play as necessarily punishable or inappropriate. Thus, boys in the nontraditional condition who observed girls playing with the toys reported that the toys are for both boys and girls, whereas girls' reports did not reach such high frequencies.

Differences in reports may be attributed to participants' experiences with the different target toys. As expected, previous experience with the toys affected the outcome of reports by participants. Participants were less affected by the condition if they had seen the commercial previously or if they had played with the toy before. Of the 51 participants in the traditional and nontraditional conditions, 45% reported that they had either seen the Harry Potter Legos commercial previously or had previous experience with the toy itself, whereas 22% of the participants reported that they had either previously seen

the Playmobil Airport Set commercial or had played with the toy itself. These findings are similar to those of Raag and Rackliff (1998), where children were asked their familiarity with a toy dish and tool set during a study about gender-typed toy play. Of the 61 participants in the Raag and Rackliff study, 43% reported that they were familiar with the tool set, and 51% reported that they were familiar with the toy dish set.

As with any research, the present study has its limitations. One of the limitations is the quality of the editing. The format of the Playmobil commercial involved close-ups of the characters' faces and cuts to action with the toys without child characters present. The format of the Harry Potter commercial used fast paced action with the toy itself, and the characters were only present in the background. This allowed for close-ups on girls' faces in the PAS commercial, whereas the edited faces placed on the HPL characters were often choppy because the pace of the commercial was so quick. Future researchers may want to create commercials for nonexistent products to allow for better production

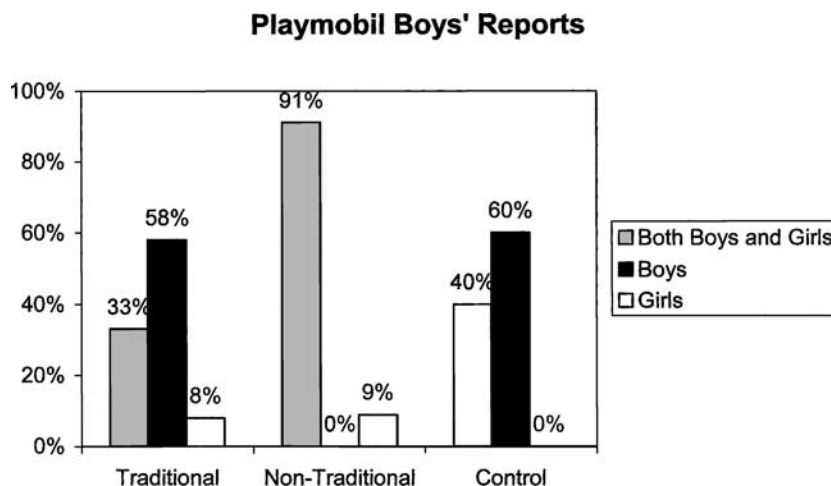


Fig. 2. Percentage of boys who sorted Playmobil by condition.

quality as well as to limit the interaction effect of previous experience and gender-typed reports. A second limitation was the amount of time allowed with each group of participants. Only 10 min were allowed for viewing of the commercial tape and the subsequent questions and toy sort. If time had not been an issue, perceived parental, sibling, teacher, and friend approval/disapproval of cross-gender play could have been examined, as Raag and Rackliff (1998) did, to gain greater insight to the weight that interpersonal sources have on gender beliefs. Future researchers may also want to examine participants' degree of gender-typing prior to exposure to advertising content (Boldizar, 1991) and are encouraged to use open-ended questions to better understand why children are making their toy selections.

In conclusion, advertising directed toward children has the potential to demonstrate gender roles through gender-typed play. We explored the implications of commercials that depict nontraditional play and suggested that these images may have an impact on children's designation of gender-appropriateness for toys in the short term, particularly for boys. Although few commercials currently directed toward children feature nontraditional play, the results of the present study suggest that these types of depictions may lead to a greater acceptance of nontraditional play among future generations and foster a more androgynous gender orientation, which Bem (1981) suggested may be more psychologically advantageous for children. Thus, advertising has the potential to teach children about gender roles, and advertisers should take into consideration the pro-

found effect they may have on the development of children's conceptions about gender.

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