

The Gender-Role Content of Children's Favorite Television Programs and Its Links to Their Gender-Related Perceptions

Jennifer Stevens Aubrey

Department of Communication Studies
The University of Michigan

Kristen Harrison

Department of Speech Communication
University of Illinois at Urbana-Champaign

Two studies were conducted to (a) examine the gender-role stereotypical, counterstereotypical, and gender-neutral messages contained in a sample of first- and second-grade children's favorite television programs; and (b) to link the results of the content analysis to the children's gender-role values and interpersonal attraction to same- and opposite-gender television characters while the content analysis showed that there was a great deal of gender neutrality in the programs the children preferred. However, as predicted, male characters were still more likely than female characters to answer questions, boss or order others, show ingenuity, achieve a goal, and eat. The results of the survey showed that preference for stereotypical content predicted boys' valuing hard work and humor. In addition, for girls preference for male stereotypical and male counterstereotypical content negatively predicted interpersonal attraction to female characters, whereas preference for female counterstereotypical and gender-neutral content positively predicted interpersonal attraction to female characters. For boys preference for female counterstereotypical content positively predicted interpersonal attraction to male characters.

Researchers have taken an interest in the effects of television on children's gender-role stereotyping since the 1970s. Whereas early studies were primarily con-

Requests for reprints should be sent to Jennifer Stevens Aubrey, Department of Communication Studies, The University of Michigan, 2020 Frieze Bldg., 105 S. State St., Ann Arbor, MI 48109-1285. E-mail: stevensz@umich.edu

tent analyses that counted up the number of gender stereotypes in children-oriented media samples (Levinson, 1975; Sternglanz & Serbin, 1974; Streicher, 1974), later studies examined the effects of viewing television programming with gender stereotypes and counterstereotypes on a variety of outcomes such as gender-role stereotyped beliefs (Eisenstock, 1984), stereotypical attitudes (Davidson, Yasuna, & Tower, 1979), and stereotypical behaviors (McArthur & Eisen, 1976). On the whole, studies of television's effects on children's gender-role learning have suggested that the medium can contribute to *both* traditional and nontraditional gender-role learning. Unfortunately, little attention has been paid to whether these processes complement each other or cancel each other out. At the same time, children's television programs often present dual portrayals of gender; sometimes characters are very stereotypical, and other times they contradict gender norms (Thompson & Zerbino, 1995). Thus it is possible that television can contribute to both gender-role stereotypes and counterstereotypes at the same time.

Previous research has examined the relationship between general television exposure and gender-role values (e.g., Morgan, 1982) and the relationship between the gender of favorite characters and interpersonal attraction to those characters (e.g., Hoffner, 1996). However, to our knowledge, research has not yet examined how gender-role content within programs favored by children is related to these outcomes. Thus one of our goals was to extend this literature by examining how preference for content with gender stereotypes and counterstereotypes, determined first by content analysis, is related to gender-role values and interpersonal attraction to same- and opposite-gender characters.

Moreover, studies examining the effects of gender-role content on television have typically used an experimental paradigm in which children first viewed stimuli containing gender stereotypes or counterstereotypes and then were observed immediately afterward for variations in their gender-role stereotypes, attitudes, and behaviors. Another of our goals was to take a broader approach by examining how nonmanipulated television preferences of children are related to their gender-related perceptions, including gender-role values and interpersonal attraction to same- and opposite-gender characters.

To better understand the relationship between gender stereotypes and counterstereotypes on television and children's gender-related perceptions, we conducted two studies. In the first study, we attempted to answer the question "What are the gender-role messages in the television programs children favor?" To answer this question, we analyzed the content in gender-role messages in a sample of children's favorite television programs. In the second study, we attempted to answer the question "How do these gender-role messages relate to children's own gender-role values and their interpersonal attraction to same- and

opposite-gender characters?" To answer this question, we conducted a correlational analysis, linking the gender-role messages in the children's favorite programs to their own gender-role values and interpersonal attraction to same- and opposite-gender characters.

In conducting the two studies, we attempted to fill two gaps in the literature. First, instead of analyzing a randomly selected sample of children's programming, we explored gender-role messages in children's *preferred* television programming. Thus the first study was a content analysis of a sample of first- and second-grade children's *favorite* television programs, which arguably provide the most important, salient, and memorable scripts for young viewers (Greenberg, 1988). We coded the gender-typed attributes of the programs' lead characters and the frequency and type of gender-typed behaviors and communication activities contained in the programs. Second, instead of imposing television content onto participants, we explored how nonmanipulated television preferences related to the children's gender-related perceptions. Thus the second study used the results of the first study to construct predictor variables corresponding to the level of stereotypical, counterstereotypical, or gender-neutral content contained within the children's preferred television programs. With these predictors we were able to determine if preference for stereotypical, counterstereotypical, or gender-neutral content related to children's gender-role values and interpersonal attraction to same- or opposite-gender characters.

THEORY

The existing literature on gender and children's television is framed primarily within two major theoretical paradigms: cultivation theory and social learning theory. Based on cultivation theory (e.g., Gerbner, Gross, Morgan, & Signorielli, 1980), research has shown that there is a positive relationship between television viewing and views of the world that are reflective of gender-stereotyped TV images (e.g., Morgan, 1982; Signorielli, 1989, 1991; Signorielli & Lears, 1992). Cultivation theorists argue that if television repeatedly and consistently portrays female characters as weak, passive, and dependent, heavy television viewers, compared to light viewers (Signorielli, 1989), will be more likely to assume that these characteristics apply to women in general. For heavy viewers television interacts with other potential sources of information, ideas, and consciousness, including, for example, interactions with parents, other adult figures, and peers. Television might be more influential than parents and peers because it offers more commonly and widely shared messages than other sources of information.

Based on social learning theory (e.g., Bandura, 1977, 1994), researchers argue that gender-typed behavior results from observing and imitating television texts of gender stereotypes. According to the social learning process (Bandura, 1994), children will attend to television programming geared toward them. They will observe and extract what is appropriate for each gender through modeled events in the programming. Next, children will actively transform and restructure information from the programming in the form of rules and conceptions. These symbolic conceptions will then be translated into appropriate courses of action and will be reinforced by rewards or punishments of these behaviors.

Both cultivation and social learning theories place the emphasis on viewers' exposure to television texts. Cultivation theory's emphasis is on the amount of exposure, whereas social learning theory's emphasis is on the type of exposure. Even though both approaches have taught us a great deal about the role of television on gender-role stereotyping in children, we propose to extend this line of research first by considering the gender-role content of children's favorite television content, and second by examining the relationships between children's preference for gender-role content on television and their gender-related perceptions.

Consideration of two other theoretical perspectives justifies the utility of paying special attention to children's television preferences. First, the "drench" hypothesis, conceptualized by Greenberg (1998), underscores the importance of examining what types of television children prefer. Indeed, much of experimental research has involved short-term exposure to television programming chosen by researchers. Such content typically features characters with which viewers are not familiar and programs that are not necessarily favored by viewers (Hoffner, 1996). According to the drench hypothesis, children will be more affected by content they choose to watch than by content that they do not favor (Greenberg, 1988). Empirical tests of the drench hypothesis (Oppliger, 1999; Reep & Dambrot, 1989) have found that individual characters and programs make a larger impact on viewers' perceptions than television exposure on the whole. Based on this rationale, we chose to examine favorite television programs, rather than exposure to television in general, as predictors of gender perceptions.

Second, the uses and gratifications paradigm proposes that the audience's preferences and motivations are important in determining what they internalize from media texts (McQuail, 1984; Rubin, 1994). Uses and gratifications researchers argue that media effects are more likely to occur when relevant motives exist in message receivers (McQuail, 1984). Such would be the case when children view their most preferred television programs. Children might be particularly attuned to the gender-stereotyped and counterstereotyped conceptions contained in their favorite television programs, more so than when they view programs they prefer less.

We make two qualifications about our decision to examine favorite television programs. First, we do not assume that the favorite programs are necessarily viewed more often than other programs; after all, children might watch other nonfavorite television programs, such as those chosen by their parents or siblings, more often than their favorite programs. Second, we acknowledge that frequency of exposure in its own right is related to children's gendered and nongendered perceptions, as has been reported elsewhere (e.g., Harrison, 2000). We see the focus on favorite television programs as complementing this line of research.

Furthermore, television's relationship to gender is an important area of study. Certainly, the development of gender identity in children is constructed through a complex web of processes, including socialization, psychological development, and cognitive development (Powlishta, Sen, Serbin, Poulin-Dubois, & Eichstedt, 2001). We argue that television represents one of the key points of influence in these processes. Indeed, evidence has shown that television can reinforce or cause the development of gender-typed perceptions and that repeated exposure to gender-typed television may reinforce stereotyped achievement aspirations and self-image (Perloff, Brown, & Miller, 1982). Furthermore, it is particularly important to examine television's impact on gender in young samples because conceptions about gender are most likely to affect preoperational children (approximately 2 to 7 years old) who have developed a sense of gender identity but do not yet consider television characters in abstract or psychological terms (Perloff et al., 1982).

STUDY 1: CONTENT ANALYSIS GENDER-ROLE CONTENT OF CHILDREN'S TELEVISION

A clear finding from early content analyses has been that female characters in cartoons were less numerous than male characters (Levinson, 1975; Streicher, 1974). In addition, gender stereotypes have been evident in three other areas. First, female characters exhibited less total behavior (Sternglanz & Serbin, 1974), and they made fewer appearances, played fewer lead roles, were less active, and occupied fewer positions of responsibility (Streicher, 1974). Second, content analyses have found gender differences in behavioral dimensions. Sternglanz and Serbin (1974) found that male characters were more likely than female characters to show aggression (Sternglanz & Serbin, 1974), were generally rewarded for their behavior (Sternglanz & Serbin, 1974), and engaged in problem-solving activities (McArthur & Eisen, 1976). Female characters were more likely to defer to male characters (Sternglanz & Serbin, 1974). Third, female lead characters were likely

to embody one of four well-known stereotypes: nerdy girls without romantic opportunities; dumb blondes; spiteful, catty backstabbers; and sweet, loyal girlfriends of the male protagonists (Levinson, 1975).

In an update of these content analyses, Thompson and Zerbinos (1995) showed, again, that there were more male characters than female characters in children's programming. Male characters were more independent and assertive; female characters were more emotional, warm, romantic, and affectionate. Also, male characters were more likely to do more assertive behaviors, including showing leadership, asking questions, expressing opinions, and expressing interest in task-related activities. However, male characters also were more likely to show incompetence and failing. The only thing female characters were more likely to do was show affection.

The following hypotheses attempted to discern which gender-typed stereotypes and counterstereotypes exist in the favorite television programs of a sample of first and second graders.¹ By *stereotypes* we mean a collection of traditional norms that differentiate typical feminine behaviors and personality traits from typical masculine behaviors and personality traits according to contemporary cultural norms. By *counterstereotypes* we mean the opposite, behaviors and personality traits that buck contemporary cultural norms. For example, a gender stereotype would be a male character portrayed as a natural leader and a female character portrayed as a natural follower; a counterstereotype would be a female character portrayed as a natural leader and a male character portrayed as a natural follower.

- H1: Male characters will outnumber female characters.
- H2: Male characters will exhibit the following personality characteristics significantly more than female characters: independence, assertiveness, insensitivity, and importance to the plot. Female characters will exhibit more attractiveness, frailty, and concern about body/beauty.
- H3: Male characters will exhibit more of the following communication activities than female characters: answering questions, expressing opinions, laughing at others, bragging, ordering or bossing others, insulting others, threatening others, and verbally expressing anger. Female characters will exhibit more of the following: receiving and making comments about body and beauty and expressing verbal affection.
- H4: Compared to female characters, male characters will exhibit more behavior related to ingenuity, aggression, leadership, bravery or rescue, eating, and achievement of goals. Female characters will exhibit more behavior related to maintaining and enhancing body and beauty, showing affection, following, failing at a goal, and crying.

Method

Sample

The reports of favorite television shows from first and second graders ($N = 190$) from two public schools in a small Midwestern township comprised the sample for the content analysis. The decision to examine the preferences of first and second graders was based on two factors. First, previous research has found that elementary-aged children are able to identify gender stereotypes in television (e.g., Klinger, Hamilton, & Cantrell, 2001; Oliver & Green, 2001). Second, as already mentioned, preoperational children are especially vulnerable to televised messages of gender (Perloff et al., 1982).

The children were asked to list their favorite television programs. They were permitted to list up to three. We chose to limit their favorite programs to three in order to truly assess what they favored and to eliminate the possibility that they would simply list programs that they watch but did not consider their favorites.

For both boys and girls, *Rugrats* was the overwhelming favorite television program, garnering a total of 114 votes.² *Doug*, *Pokemon*, *Arthur*, *Rocko's Modern Life*, and *CatDog* were the remaining favorites (in order of popularity). After *CatDog*, the votes assigned to programs dropped to single digits; thus six programs were chosen for the sample. *Rugrats*, *Doug*, *Rocko's Modern Life*, and *CatDog* were half-hour animated cartoons that appeared daily on Nickelodeon. *Pokemon* appeared daily on the WB network, and *Arthur* appeared daily on PBS. Each show was shown either during the hours before school (6–8 a.m.) or during the hours after school (3–5 p.m.). The programs were recorded for five consecutive days in May 1999, producing a sample size of 30 episodes, with 5 episodes recorded per program. The six programs were either in syndication or in repeats; thus the sample was not affected by May sweeps.

Units of Analysis

The content analysis examined two units of analyses: lead characters and discrete narratives. Lead characters were defined as regular members of the cast around whom the plot of the episode advanced (Levinson, 1975; Thompson & Zerbinos, 1995). Thus the coders' task was to make an overall evaluation about the personality characteristics of the lead characters in each episode they viewed. For behavior and communication variables, the unit of analysis was the discrete narrative, which occurs in segmented programs that "feature two or more self-contained stories whose unfolding narratives are each presented independently of one another" (University of California at Santa Barbara, Center for Communication

Social Policy, 1998, p. 31). In other words, the discrete narrative is a program-level unit of analysis. In *Pokemon*, the entire episode was the unit of analysis because the narrative spanned the full half hour, even after the midprogram commercial break. For all other programs, however, the discrete narratives were only 10–11.5 min in length contained within the credits and midprogram commercial break. In *Rugrats*, *Doug*, *Arthur*, *Rocko's Modern Life*, and *CatDog*, each episode contained two miniepisodes in which the course of action and the lead characters changed after the commercial break. For the 30 episodes in the sample, there were 56 discrete narratives.³ Thus the task for the coders was to count up the number of times each of the communication activities and behaviors occurred in the mini-episodes and the gender of the character who engaged in each.

Coding Scheme

To document gender-role stereotypes and counterstereotypes in children's favorite programs, we replicated the coding scheme of Thompson and Zerbino (1995), because it was the most comprehensive and most recently published content analysis examining gender-role stereotypes in children's programs. The coding scheme was divided into four sections corresponding to the four hypotheses: the gender of the lead and minor characters, lead characters' personality traits, communication activities throughout the discrete narrative, and behaviors throughout the discrete narrative.

The gender of the lead and minor characters. The gender of all lead and minor characters was coded. A *lead character* was defined as "a regular member of the cast and around whom the plot of the discrete narrative advanced." A *minor character* was defined as "a character who made a notable contribution to the plot but was not characterized as a lead character." Characters appearing in a crowd or in the background were not considered minor characters.

Assessments of personality characteristics. Male and female lead characters were coded for six personality characteristics: independence, assertiveness, importance to the plot, attractiveness, sensitivity, and frailty. The scale for these variables ranged from 1 (*most masculine*, e.g., independent) to 2 (*neutral*) to 3 (*most feminine*, e.g., dependent). Three-point scales were used because they afforded the level of precision that could be reliably coded.

Communication activities. The gender of the characters who exhibited the following activities was coded: answer questions, express opinions, laugh at oth-

ers, brag, boss or order others, insult others, threaten others, verbally express anger, receive comments about body or beauty, make comments about body or beauty, and express verbal affection.

Behaviors. The gender of the characters who exhibited the following behaviors was coded: demonstrate ingenuity, physical aggression, verbal aggression, leadership, bravery or rescue, eat, follow others, achieve a goal, fail at a goal, show physical affection, primp, cry, and obey.

Reliability

Reliability analyses were conducted on 26.7% ($n = 8$) of the episodes. These were double coded by the first author and a trained graduate-student coder to obtain intercoder reliability. The coding was done independently.

For the variables in three of the four hypotheses (gender of lead and minor characters, the communication activities, and behaviors), the variables coded were noncategorical. Instead of placing units into categories, we noted the frequency of male and female characters overall and the frequency of men and boys, and women and girls participating in communication activities and behaviors. Thus for these variables we deemed it appropriate to use Cronbach's alpha, instead of the more commonly used Scott's Pi or Cohen's Kappa, which are appropriate for categorical data. If the coders were successful in measuring the same underlying construct (e.g., the number of times men or boys engage in a leadership activity), the interitem correlations between coders should be high (Carmines & Zeller, 1979). There was a high level of agreement for the number and gender of lead and minor characters. The Cronbach's alphas calculated for the gender of male and female characters (both minor and lead) was greater than .99. For the variables measuring communication acts, reliability coefficients ranged from .80 to 1.0, with a mean of .95. For the behavior variables, the range was between .80 and 1.0, with a mean of .90.

Because the data for the personality characteristics were categorical (placing a character in male stereotypical, neutral, or female stereotypical category), Scott's Pi coefficients were calculated. Agreement ranged from .84 to 1.0 with a mean of .93.

Results

H1

To address H1, we conducted chi-square analyses comparing the number of male and female lead and minor characters. In total 29.6% ($n = 32$) of all lead characters were female, whereas 70.4% ($n = 76$) of all lead characters were male, $\chi^2(1,$

$N = 108$) = 18.77, $p < .001$. Similarly, male minor characters outnumbered female minor characters, with 35.4% ($n = 260$) female and 64.6% ($n = 474$) male, $\chi^2(1, N = 734) = 62.39$, $p < .001$. Thus H1 was supported. Male characters far outnumbered female characters.

H2

To address H2, we analyzed the ratings of the six personality characteristics. The results are presented in Table 1. As expected, female lead characters were more likely to be attractive and frail than male lead characters. However, male and female lead characters showed comparable ratings on independence, assertiveness, importance to the plot, and sensitivity. Thus H2 was only partially supported, with support in the expected direction for the female stereotypical traits regarding appearance but no support for the male stereotypical traits.

H3

To address H3, we first conducted chi-square analyses comparing the frequencies of communication activities performed by male and female characters. For communication activities male characters were more likely than female characters

TABLE 1
Comparisons for Personality Characteristics of Male and Female Lead Characters

Variable	Range	Female ^a		Male ^b		<i>t</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Dependent–Independent	1–3	2.16	.96	1.94	.86	–0.67
Unassertive–Assertive	1–3	2.63	.61	2.37	.73	.00
Unimportant to plot–Important to the plot	1–3	2.53	.84	2.59	.59	0.40
Attractive–Unattractive	1–3	1.47	.61	2.19	.39	2.80**
Sensitive–Insensitive	1–3	1.58	.83	2.01	.80	0.82
Frail–Hearty	1–3	1.89	.37	2.36	.46	3.06**

Note. Unit of analysis is lead characters; 1 = female stereotyped trait; 2 = gender neutral; 3 = male stereotyped trait.

^a $n = 32$. ^b $n = 76$.

** $p < .01$.

to do all of the communication activities, except receive or make comments about body or beauty. Thus when only the raw frequencies were considered, male characters not only did more behaviors and communication activities typically considered male stereotypical but also did more things typically considered female stereotypical. However, because male characters outnumbered female characters, raw frequencies were skewed in male characters' favor. To adequately test H3, we considered communication activities and behaviors as a proportion of the number of seconds male or female characters were shown on screen. To measure this, coders timed on the VCR counter the number of seconds discernible male and female characters appeared on screen. Then the number of times male or female characters performed a communication act or behavior was divided by the number of seconds male or female characters were shown onscreen. The resulting variables can be interpreted as the mean of communication activities or behaviors per the number of seconds male or female characters appeared on screen.

Paired *t* tests were performed to test the difference in means between male and female characters for the communication activities considered as a proportion of on-screen time. Table 2 shows the results of the means of each communication variable in the discrete narratives. As a proportion of seconds on screen, male characters were more likely to answer questions and boss or order others. These differences were as predicted. Although it was hypothesized that female characters would be more likely to express verbal affection (Thompson & Zerbinos, 1995), male characters were actually more likely to express verbal affection. Although this was counter to prediction, one example of this that occurred repeatedly throughout the sample involved the fathers on *Rugrats*. They were surprisingly verbally supportive and affectionate toward their children, which might have accounted for most of the difference in favor of male characters. The mean differences for the remaining eight variables—expressing opinions, laughing at others, bragging, insulting others, threatening others, expressing anger, and receiving and making comments about beauty or body—were not statistically significant.

H4

To test H4, we again considered behaviors as a proportion of male or female characters' time shown on screen. The results are shown in Table 2. As expected, male characters were more likely to demonstrate ingenuity, achieve a goal, and eat than female characters. Contrary to expectation, male characters were more likely to follow others, obey others, and cry than female characters. The finding that male characters were more likely to cry was especially surprising. In general, male characters were more likely to cry out of frustration, as would be the case when they

TABLE 2
Gender Differences in Communication Activities and Behaviors in Children's Favorite Television Programs

	Female		Male		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Communication activities					
Answer questions	.47	.70	.84	.49	3.34**
Express opinions	.68	1.55	.79	.49	.48
Laugh at others	.93	3.86	.45	.53	−.94
Brag	.15	.31	.23	.30	1.39
Boss/order others	.88	1.00	1.25	.77	2.07*
Insult others	.27	.50	.19	.25	−1.09
Threaten others	.12	.30	.08	.14	−.88
Express anger	.12	.26	.16	.23	.83
Receive comment about body/beauty	.11	.47	.03	.08	−1.22
Make comment about body/beauty	.06	.16	.03	.08	−1.34
Express verbal affection	.03	.08	.28	.32	5.51***
Behaviors					
Show ingenuity	.28	.47	.55	.37	3.80**
Demonstrate physical aggression	.15	.42	.27	.51	1.60
Demonstrate verbal aggression	.25	.59	.17	.26	−1.04
Show leadership	.15	.43	.19	.19	.61
Bravery/rescue	.09	.37	.11	.17	.35
Follow others	.11	.27	.24	.31	2.61*
Achieve a goal	.12	.23	.24	.26	3.52***
Fail at a goal	.43	1.92	.28	.27	−.58
Show physical affection	1.71	.90	.18	.21	−1.14
Primp	.04	.11	.10	.36	1.14
Eat	.05	.16	.23	.39	4.30***
Cry	.07	.20	.13	.21	2.00
Obey	.23	.47	.48	.35	3.55***

Note. Unit of analysis is discrete narrative ($N = 56$).

* $p < .05$. ** $p < .01$. *** $p < .001$.

were shown losing at a competition. For example, in *Pokemon*, the main male character, Ashe, would periodically burst into tears if he failed at a *Pokemon* match.

Seven of the 15 behavior variables did not exhibit statistically significant differences, but for all except verbal aggression, they were in the hypothesized direction. These variables included exhibiting physical aggression, showing leadership, demonstrating bravery or rescue, failing at a goal, showing physical affection, and primping.

Discussion

Supporting previous research (Levinson, 1975; Streicher, 1974; Thompson & Zerbinos, 1995), the results of the content analysis showed that male characters outnumbered female characters at a ratio of 2:1. Children might perceive this trend as an indication that women and girls are less important than men and boys (Signorielli, 1989). Consequently, girls may be more likely to pick male characters as role models than boys are to pick female characters (Albert, 1957; Hoffner, 1996; Miller & Reeves, 1976). This might be a circular pattern. Girls might like male characters more because there are more male characters from which to choose, they are rewarded for their behavior, and they are more interesting and exciting (Miller & Reeves, 1976). Meanwhile, television executives might choose to feature male characters because they think boys will not watch programs that have girls as lead characters, but girls will watch programs with male leads (Thompson & Zerbinos, 1997).

The results for the other hypotheses indicated that the sample of children's television programs was rather gender neutral in its portrayal of characters' personality traits, communication activities, and behaviors. Unlike our analysis, Thompson and Zerbinos's (1995) analysis found that male characters were more likely than female characters to show physical and verbal aggression, leadership, and bravery or rescue. Both studies found that male characters were more likely to demonstrate ingenuity and achieve a goal than female characters. However, it is important to keep in mind that our study and Thompson and Zerbinos' (1995) study were not equivalent. Our sample was comprised of the favorite cartoons of a small sample of first and second graders; their sample was generated by a listing of cartoons in *TV Guide*. This study does not eliminate the possibility that children are drawn to programs that are gender neutral and are repelled by programs that contain more traditional gender stereotyping.

Because our sample selection was based on the viewing preferences of a sample of children and thus only included their six most preferred programs, our sample does not have the generalizability that would be afforded to a randomly selected sam-

ple of children's television. For example, all programs in the sample were cartoons. Other research has shown that older children, even as early as third grade, favor live-action sitcoms and variety shows (e.g., Harrison, 2000). At first and second grade, animated programs were most preferred by this sample of children. Moreover, a disproportionate number of programs in our sample—four out of six, *Rugrats*, *Catdog*, *Doug*, and *Rocko's Modern Life*—were shown on the Nickelodeon network, and one of the programs, *Arthur*, was shown on PBS. This is significant because both Nickelodeon and PBS make concerted efforts to include prosocial, "parent-friendly" content in their programming while still making it interesting for child viewers (Hainer, 1997; Hankin, 1998; Salamon, 2000). Indeed, Nickelodeon executives argue that the network's programs "pour green slime on children's TV stereotypes" (Heller, 1999, p. 98). On the one hand, we find it noteworthy that despite these prosocial programming strategies, incorporating at least some gender-role stereotypes into children's programming appears to be deeply rooted in the content and characters in children's television. On the other hand, it is encouraging that Nickelodeon and PBS programs are popular among child viewers despite the network's efforts to deviate from portraying gender-role stereotypes in children's programming.

Instead of considering the focus on Nickelodeon a drawback, we argue an empirical focus on the network is needed. After all, at the time this sample was selected, Nickelodeon cartoons attract the largest number of child viewers (2- to 11-year-old viewers) compared to their competitors such as the Cartoon Network and the Disney Channel (Grover & Siklos, 1998; Petrozzello, 1998). Thus we hope future research will continue to examine the gender-role content in this popular network's programs.

Also noteworthy was the finding that there was not much female stereotypical content in the sample to complement the relatively larger amount of male stereotypical content. Although 9 variables (out of 24) intended to measure female stereotypical communication activities and behaviors, the results revealed that female characters did not do these activities proportionately more than male characters, and in some cases, male characters did these activities more.

The lack of female stereotypes makes sense from a theoretical point of view. Williams, LaRose, and Frost (1981) found that children attend to male-typical behavior in both boys and girls and do not pay attention to female-typical behavior in television programming. The failure of the content analysis to tap female stereotypicality could be a result of two factors. First, documenting female stereotypical content was difficult because much of what it means to be female stereotypical is not performing behaviors typically performed by boys or men. Thus it was difficult to measure the passivity of female characters, and, as a result, the measures might have been tipped in favor of male characters. Second, an optimistic

view is that cartoons are less female stereotypical than in the past, or, at least, this sample of first and second graders is attracted to programs with a low level of female stereotypes. Perhaps there has been some reduction in the amount of male stereotyping in children's cartoons, but female stereotyping, in terms of communication activities and behaviors, is becoming even more rare. Even though the character ratings of the lead characters showed that female characters still conformed to female stereotypical appearance stereotypes, for the more instrumental stereotypes, such as importance to the plot and assertiveness, male and female characters yielded comparable ratings.

Limitations of the Study

A limitation of the study is the nonrandom sample that was comprised of five consecutive days of programming. To permit generalizability to all of children's television, future research should be based on a composite week of randomly selected programming. Also, only 145 of the 190 children in the sample of first and second graders listed one of the six programs as their favorites. We chose to analyze content of only six programs because there was a reasonable critical mass of preference votes for only six programs. Thus the favorite programs of 45 children were not represented by the sample.

STUDY 2: SURVEY RELATIONSHIPS BETWEEN MEDIA EXPOSURE AND CHILDREN'S GENDER-RELATED PERCEPTIONS

The purpose of Study 2 was to examine the relationships between gender stereotypes and counterstereotypes in children's favorite television programs and their gender-role values and interpersonal attraction to same- and opposite-gender characters. It should be noted that the design of Study 2 did not allow us to definitively pinpoint whether children are drawn to stereotypical or counterstereotypical content or whether the programs children prefer contain stereotypes or counterstereotypes.

Gender-Role Values

Cultivation analyses have shown a positive relationship between general television viewing and gender-role stereotypical attitudes and behaviors in children and ado-

lescents (Freuh & McGhee, 1975; Rothschild, 1984; Signorielli & Lears, 1992). For example, Morgan (1982) found that both female and male adolescent students who watched more television tended to report higher scores on sexism measures than adolescents who watched less television.

In addition, experimental designs have revealed behavioral and attitudinal effects using stimuli classified as gender-stereotyped or counterstereotyped. McArthur and Eisen (1976) found that after viewing a videotaped clip of a female performing a stereotypical activity, nursery-school girls performed relatively more feminine activities than those who viewed counterstereotypes. Similarly, nursery-school boys who watched a clip of a male stereotypical activity were more likely to perform masculine activities than those who viewed counterstereotypes. Similarly, Davidson et al. (1979) found that girls 5 to 6 years old exposed to a counterstereotyped program reported significantly lower gender-role stereotype scores than girls in a high-stereotyped condition.

Based on this research, we posited the following:

- H1: For girls preference for stereotypical content will predict the valuing of female stereotypical traits such as those related to appearance (thin and good-looking) and those related to being demure and a "good citizen" (truthful and well behaved). In contrast, for boys preference for stereotypical content will predict the valuing of male stereotypical traits such as those related to being instrumental (smart, hard-working, good at sports, and good at telling jokes).
- RQ1: Will preference for gender-neutral or counterstereotypical (male or female) television content predict gender-role values?

Interpersonal Attraction to Favorite TV Characters

Boys are more likely to report same-gender characters as their favorite media characters than girls (Hoffner, 1996; Reeves & Miller, 1978). Indeed, boys and girls are more likely to attend to male-typical behavior in television content than female-typical, suggesting that children might be more drawn to characters who exhibit instrumental behaviors (Williams et al., 1981). Moreover, gender-role preferences influence the types of characters with whom children will identify. Eisenstock (1984) found that after viewing a TV program designed to diminish gender-role stereotypes, the tendency to identify with nontraditional televised characters was stronger for girls than for boys.

Hoffner (1996) examined the characteristics that made children choose same-gender media characters as their favorites. She found that the only signifi-

cant predictor of 7- to 12-year-old girls' wishful identification with female favorite characters was the characters' physical attractiveness, a stereotypically feminine trait; in contrast, girls' wishful identification with male favorite characters was predicted by the characters' intelligence and humor, stereotypically masculine traits. Boys, however, identified only with male characters.

Together, these findings suggest that boys will favor male characters, especially those who conform to masculine traits. However, girls' interpersonal attraction to television characters might be more malleable. Research suggests that girls will be attracted to either male or female characters, depending on which characters exhibit the more desirable characteristics.

H2: For boys preference for male stereotypical content will predict interpersonal attraction to male characters. Because it is unlikely that male characters would be attracted to female characters, preference variables will not predict interpersonal attraction to female characters. For girls preference for male stereotypical content will predict interpersonal attraction to male characters, whereas preference for female counterstereotypical content will predict interpersonal attraction to female characters.

Method

Participants

Children who listed at least one of the six programs included in the content analysis were included in the sample of Study 2. Participants were 145 (68 boys, 77 girls) first and second graders from two elementary schools in a small, middle to upper middle class Midwestern township. The ages ranged from 6 to 9 years ($M = 6.86$, $SD = .79$). Although the children were not asked to report their ethnicity, they were representative of the district in general, which is primarily White with Asian American ethnic minorities. The two participating schools draw their students from families of comparable wealth and ethnic distribution. The computed t tests of differences between schools on the primary measures taken in this study did not show significant mean differences.

Procedure

A team of two to six trained research assistants interviewed the participants two at a time in the spring of 1999. The research assistants separated each pair of first and second graders and read the instructions for each item to both children while pointing to the answer options on their questionnaires. Answer options involving

varying degrees of agreement with a stated position or participation in some behavior (e.g., *not at all* to *a lot*) were printed in varying font sizes so that the greatest value was associated with the largest font sizes. To reduce the possibility of copy-cat effects, we asked participants to just point to their responses on separate response sheets.

Measures

Means and standard deviations for the key variables, broken down by participant gender, appear in Table 3.

Computing the predictor variables based on the content analysis. The predictor variables were computed by linking results for the behavior and communication variables⁴ contained in Table 2 from the content analysis with data indicating children's preferences of the programs. A total of four predictor variables resulted: preference for male stereotypical television content, preference for female counterstereotypical television content, preference for male counterstereotypical content, and preference for gender-neutral television content.⁵

To compute these variables, we took the following four steps. First, ratings of stereotypicality, counterstereotypicality, and gender neutrality were assigned to each program. To do this, we performed paired t tests comparing the means between male and female characters participating in the communication activities and behaviors for each program. If the difference in means was in the hypothesized direction (see Table 4), the mean for that variable was added to the rating of stereotypicality (male). If the difference in means was in the opposite direction than was hypothesized, the mean for the variable was added to the counterstereotypicality ratings (male or female). If there was not a statistically significant difference between the female-character and male-character means, the mean for the variables was added to the gender-neutral rating.

The following is an illustration of this procedure using *Rugrats* as an example. The results of only one variable were in male stereotypical direction. On average, male characters offered their opinions 1.03 times per the number of seconds male characters were shown on screen in an episode, whereas female characters offered their opinion .47 times per the number of seconds female characters were shown on screen in an episode. Thus the mean for the male characters for this variable constituted the male stereotypical rating for *Rugrats*. Three variables were added to the male counterstereotypical rating. Male characters were more likely to follow ($M = .50$ for male characters, $M = .15$ for female characters); obey ($M = .72$ for

TABLE 3
Descriptive Statistics for Key Variables by Gender of Participant (N = 145)

Descriptive Statistics for Study 1							
Variable	Minimum	Maximum	Female		Male		<i>t</i> Test
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Preference variables							
Preference for male stereotypical content	.41	23.69	6.40	5.10	7.23	5.25	-.79
Preference for gender-neutral content	6.33	48.80	23.10	9.90	21.03	9.02	1.63
Preference for female counterstereotypical content	0	8.59	6.36	2.70	4.58	3.55	2.82**
Preference for male counterstereotypical content	0	9.22	6.31	2.40	4.59	3.55	3.02**
Gender-role values							
Importance of smart	1	3	2.75	.49	2.69	.55	.68
Importance of various traits							
Importance of good at sports	1	3	2.44	.73	2.62	.69	-1.41
Importance of hard-working	1	3	2.77	.51	2.79	.56	-.35
Importance of telling jokes	1	3	2.14	.90	2.12	.91	.21
Importance of good looks	1	3	2.37	.68	2.12	.79	1.71
Importance of thin	1	3	2.14	.76	1.74	.77	3.14**
Importance of well-behaved	1	3	2.73	.51	2.75	.50	-.34
Importance of truth telling	1	3	2.73	.56	2.72	.60	.00
Interpersonal attraction to media characters							
Interpersonal attraction to female characters	4	9	7.23	1.33	6.95	1.24	.61
Interpersonal attraction to male characters	3	9	7.00	1.40	7.41	1.33	-1.52

* $p < .05$. ** $p < .01$.

TABLE 4
Hypothesized Stereotypicality of Communication and Behavior Variables

Communication Variables	Hypothesized Direction	Sources Cited	Behavior Variables	Hypothesized Direction	Sources Cited
Answer questions	Male stereotypical	Thompson & Zerbinos (1995)	Show ingenuity	Male-stereotypical	Thompson & Zerbinos (1995)
Express opinions	Male stereotypical	Thompson & Zerbinos (1995)	Physical aggression	Male stereotypical	Mayes & Valentine (1979); Sternglanz & Serbin (1974); Thompson & Zerbinos (1995)
Laugh at others	Male stereotypical	Thompson & Zerbinos (1995)	Verbal aggression	Male stereotypical	Sternglanz & Serbin (1974); Thompson & Zerbinos (1995)
Brag	Male stereotypical	Thompson & Zerbinos (1995)	Show leadership	Male stereotypical	Mayes & Valentine (1979); Thompson & Zerbinos (1995)
Make commands to others	Male stereotypical	Thompson & Zerbinos (1995)	Rescue/Bravery	Male stereotypical	Thompson & Zerbinos (1995); Mayes & Valentine (1979)
Insult others	Male stereotypical	Thompson & Zerbinos (1995)	Eat	Male stereotypical	Hill, Oliver, & Rogers (1992); Kaufman (1980)
Threaten others	Male stereotypical	Thompson & Zerbinos (1995)	Follow others	Female stereotypical	Greenberg (1988); Sternglanz & Serbin (1974); Thompson & Zerbinos (1995)
Verbally express anger	Male stereotypical	Thompson & Zerbinos (1995)	Achieve a goal	Male stereotypical	Greenberg (1988); Sternglanz & Serbin (1974); Thompson & Zerbinos (1995)

(continued)

TABLE 4
Continued

Communication Variables	Hypothesized Direction	Sources Cited	Behavior Variables	Hypothesized Direction	Sources Cited
Receive comment about body/beauty	Female stereotypical	Mayes & Valentine (1979)	Fail at a goal	Female stereotypical	Greenberg (1988); Thompson & Zerbino (1995)
Make comment about body/beauty	Female stereotypical	Mayes & Valentine (1979)	Show physical affection	Female stereotypical	Thompson & Zerbino (1995)
Express verbal affection	Female stereotypical	Thompson and Zerbino (1995)	Primp	Female stereotypical	Mayes & Valentine (1979)
			Cry	Female stereotypical	Mayes & Valentine (1979)
			Obey	Female stereotypical	Sternglanz & Serbin (1974)

male characters, $M = .24$ for female characters); and express verbal affection ($M = .54$ for male characters, $M = .01$ for female characters). The means for the male characters were added to the male counterstereotypical rating, which was 1.76. Four variables were added to the female counterstereotypical rating. Female characters were more likely to demonstrate verbal aggression ($M = .35$ for female characters, $M = .04$ for male characters); boss or order ($M = 1.65$ for female characters, $M = .86$ for male characters); insult ($M = .36$ for female characters, $M = .03$ for male characters); and threaten ($M = .22$ for female characters, $M = .05$ for male characters). Adding the means for the female characters, the female counterstereotypical rating was 2.58. There were no statistically significant differences between male and female characters for the remaining variables. Thus the average of the means for male and female characters was summed for the gender-neutral rating, which was 3.93.

Second, weights were assigned to the participants' favorite programs. The first program listed was considered the most favorite, followed by the second and third programs they listed. The preference rankings were reverse coded. For example, if a child listed *Rugrats* first, that program received a weight of 3. If a child listed *Doug* second, that show received a weight of 2, and if a child listed *Pokemon* third, that show received a weight of 1.

Third, we multiplied the two variables: the ratings of male stereotypicality, female and male counterstereotypicality, and gender neutrality in each program by the ranking of their preference for each program. For example, if a child listed *Rugrats* as his or her most favorite program, that child received the following scores on the predictor variables: $3 \times 1.03 = 3.09$ for preference for male stereotypical content, $3 \times 1.76 = 5.28$ for preference for male counterstereotypical content, $3 \times 2.58 = 7.74$ for preference for female counterstereotypical content, and $3 \times 3.93 = 11.79$ for preference for gender-neutral content.

Fourth, this procedure was repeated for the five other programs in the sample, and the scores for each program were summed for each child. Thus the resulting predictor variables represent an index of two factors: how much the children preferred the programs and how many stereotypical, counterstereotypical, and gender neutral variables were contained in the programs.

Gender-role values. Eight questions measured how important participants thought it was to exhibit each of four male stereotypical attributes: smart, good at sports, hard-working, and good at making jokes, and four female stereotypical attributes: good-looking, thin, truthful, and well-behaved. Response options ranged from 1 (*not at all*) to 3 (*very much*). Each attribute was analyzed separately. We argue that it is adequate to call this measure gender-role values as opposed to gen-

der-role traits because this measure asked the children to consider how important these attributes were for boys and girls in general. If it were a measure of traits, on the other hand, it would have asked how well these attributes described themselves.

Interpersonal attraction to television characters. Interpersonal attraction was measured by first asking the children to name up to three favorite television characters. After recording the character's name, the interviewer noted the character's gender, asking the child to clarify when necessary. Then, based on the procedure of Hoffner and Cantor (1991), the children were asked three questions about each character: how much they liked the character, how much they wanted to be like the character, and how much they were like the character. For each question, the response options ranged from 1 (*not at all*) to 3 (*very much*). Two variables resulted: interpersonal attraction to female characters ($\alpha = .80$) and interpersonal attraction to male characters ($\alpha = .66$).

Results

For the following analyses, hierarchical multiple regression analyses were conducted to determine if the preference variables predicted the criterion variables when age was controlled on the first step. Age was controlled because it could predict the criterion variables separately from television preferences. For example, for gender-role values, children might learn that stereotyping in general is negative as they get older. The analyses were performed separately by gender because separate predictions were posited for male and female children. However, as a preliminary step, gender was entered as a dummy variable, and we tested for interaction effects. Because there were few consistent interactions, the data analysis was more easily interpreted by performing separate regression analyses by gender.

Gender-Role Values

H1. Preference for male stereotypical content did not predict gender-role values for girls. Thus H1 was not supported for girls.

For boys preference for male stereotypical content positively predicted valuing being good at telling jokes and being hard-working, two of the possible eight gender-role values investigated. Table 5 shows the results.

RQ1. In answering RQ1, we found several intriguing results. First, preference for female counterstereotypical content negatively predicted the importance of be-

TABLE 5
Summaries of Hierarchical Regression Analysis for Preference Variables Predicting Male Gender-Role Values for Boys

Variable	Good at Making Jokes			Hard Working		
	B	SE B	β	B	SE B	β
Step 1						
Age	-.21	.15	-.17	.08	.09	.10
Step 2						
Age	-.18	.15	-.15	.07	.09	.09
Preference for female-counterstereotypical content	-.49	.24	-1.93*	.35	.14	2.20*
Preference for male-counterstereotypical content	.47	.26	1.70*	-.32	.16	-1.85*
Preference for gender-neutral content	.05	.03	.46+	-.03	.02	-.42
Preference for male-stereotypical content	.10	.05	.59*	.07	.03	.65*

Note. For good at making jokes, $R^2 = .03$; $\Delta R^2 = .09$ for Step 2 ($p < .10$). For hard working, $R^2 = .01$; $\Delta R^2 = .19$ for Step 2 ($p < .001$).
+ $p < .10$. * $p < .05$.

ing good at telling jokes for boys whereas preference for male counterstereotypical content positively predicted the importance of telling jokes. Also among boys, preference for male counterstereotypical content negatively predicted the importance of being hard-working, whereas preference for female counterstereotypical content positively predicted the importance of being hard-working.

Interpersonal Attraction to Television Characters

H2. For boys hierarchical regression analysis revealed that preference for female counterstereotypical content positively predicted interpersonal attraction to male characters. Although not what we predicted, these results supported the general rationale behind the hypothesis. In essence, preference for content featuring presumably strong, active characters such as those featured in female counterstereotypical content predicted boys' interpersonal attraction to male characters. Also, as predicted, none of the preference variables predicted boys' interpersonal attraction to female characters. The results are in Table 6.

For girls preference for female counterstereotypical and gender-neutral content positively predicted interpersonal attraction to female characters. On the other hand, preference for male stereotypical and male counterstereotypical content negatively predicted interpersonal attraction to female characters. Although H2 was not supported because preference for male stereotypical content did not predict interpersonal attraction to male characters, the opposite was true; preference for male stereotypical content negatively predicted interpersonal attraction to female characters. The results are in Table 6.

Discussion

Previous research has shown that children who are exposed to gender stereotypes on television are more likely to endorse gender stereotypes and act in a gender-stereotyped way than children who are exposed to gender counterstereotypes in television programming (e.g., Davidson et al., 1979; Eisenstock, 1984; McArthur & Eisen, 1976; Morgan, 1982). This study attempted to extend the literature by explicitly linking results of a content analysis that examined gender stereotypes and counterstereotypes with results from a survey that measured children's gender-role values and interpersonal attraction to same- and opposite-gender characters. We consider this linking between the studies to be exploratory. For example, there were a number of possible predictor variables that could have been constructed based on the content analysis. We chose to construct predictors that investigated the amount of stereotypical, gen-

TABLE 6
Summaries of Hierarchical Regression Analysis for Preference Variables Predicting Interpersonal Attraction to Favorite Characters

Variable	Girls' Interpersonal Attraction to Female Characters			Boys' Interpersonal Attraction to Male Characters		
	B	SE B	β	B	SE B	β
Step 1						
Age	-.20	.37	-.10	-.29	.23	-.17
Step 2						
Age	-.22	.50	-.12	-.33	.22	-.19
Preference for female counterstereotypical content	1.26	.72	2.47**	.88	.40	2.28*
Preference for male counterstereotypical content	-1.53	.81	-2.83**	-.89	.46	-1.87+
Preference for gender neutral content	.18	.06	1.25*	-.03	.05	-.25
Preference for male stereotypical content	-.27	.12	-.87*	.12	.08	.46

Note. For girls' interpersonal attraction to female characters, $R^2 = .01$; $\Delta R^2 = .28$ for Step 2 ($p < .001$). For boys' interpersonal to male characters, $R^2 = .01$; $\Delta R^2 = .16$ for Step 2 ($p < .001$).

+ $p < .10$. * $p < .05$. ** $p < .01$.

der-neutral, and counterstereotypical (female or male) content in children's preferred programs. Most programs contained all four types of content; thus this study assumed that children are affected by multiple messages about gender stereotypes in the same program. Another way to construct the predictor variables would have been to categorize the programs in the sample as stereotypical, counterstereotypical, or gender neutral on the program level. However, we chose not to construct the predictors based on these criteria because it would have been difficult to make an overall program evaluation based on only five episodes representing each program.

Surprisingly, the findings for the first hypothesis and research question were relevant for boys only. In line with the hypothesis, for boys preference for male stereotypical content predicted valuing hard work and humor, which were both considered male traits. With respect to the research question, preference for both female counterstereotypical content and male stereotypical content positively predicted the importance of being hard-working. One possible explanation for this is female characters featured in female counterstereotypical content and male characters featured in male stereotypical content were more likely to be instrumental and involved in the action of the programs than female characters in male stereotypical content and possibly male characters in female counterstereotypical content. If this is the case, the female characters in female counterstereotypical content and the male characters in male stereotypical content might be similarly evaluated by children because they are both active and instrumental, suggesting that children are influenced by characters' desired attributes and not necessarily by their gender (Feilitzen & Linne, 1975).

The results for H2 also supported our rationale. For boys the preference variables did not predict interpersonal attraction to female characters, suggesting that boys are unlikely to be attracted to female characters, regardless of what kind of content they prefer. Boys' preference for female counterstereotypical content positively predicted interpersonal attraction to male characters. It is surprising that preference for male stereotypical content did not significantly predict interpersonal attraction to male characters. The direction of the β (.46, $p = .11$) was positive, but it did not reach statistical significance. However, as mentioned already, female counterstereotypical content and male stereotypical content might be similarly evaluated by the children.

For girls preference for female counterstereotypical and gender-neutral content predicted interpersonal attraction to female characters. Thus if the characters do not overtly exhibit gender stereotypes or if the characters buck traditionally female stereotypes, it appears that girls will be attracted to female characters. Also, as expected, girls' preference for male stereotypical content negatively predicted inter-

personal attraction to female characters. Perhaps girls who view content that conforms to male stereotypes are simply not impressed with female characters who might not measure up to the admired attributes of male characters. The same rationale could also extend to male counterstereotypical content. Preferring content in which male characters buck male stereotypes reduces attraction to female characters. Contrary to expectation, the preference variables did not predict interpersonal attraction to male characters for girls. As was the case for boys, the preference variables did not impact the girls' preference for opposite-gender characters. Thus it might be possible to enhance or detract from children's preference for same-gender characters, but their preference for opposite-gender characters was not related to the gender-role messages in their favorite television programs. This finding supports previous research (Hoffner, 1996) that children are most attracted to same-gender characters. There might not be enough variance in children's preference for opposite-gender characters to be able to predict it.

Limitations of the Study

Given the cross-sectional nature of this study, no conclusions can be made about causality. For example, gender-role values and preference for gender-role content in television are closely related. We examined the possibility here that the preference for gender-role content predicted gender-role values. However, we cannot rule out the reverse hypothesis that gender-role values guide what children prefer to watch on television. Although this is a possibility, we argue that it is more likely that children prefer programs based on other factors such as the attractiveness of the storylines and characters, rather than on the gender-role content.

As already mentioned, the survey responses of the children who did not name one of the six programs in the content analysis sample were excluded from the survey analysis. Thus this study does not provide information about the 45 children in the sample whose top three favorite programs did not include *Rugrats*, *Pokemon*, *Arthur*, *Doug*, *Rocko's Modern Life*, and *CatDog*.

We were not able to compute a variable for preference for female stereotypical content because the content analysis did not detect any female stereotypes. If it were included here, it would have been possible to test the analogous hypothesis that among girls, preference for female stereotypical content positively predicts interpersonal attraction to male characters and negatively predicts interpersonal attraction to female characters. Also, we could have tested the hypothesis that preference for female stereotypical content positively predicts valuing female-typed attributes.

Finally, using the data from the content analysis to compute the preference variables is likely to contribute a rather high level of "noise" to the predictor variables, given the relative lack of control over extraneous, unmeasured, or uncontrolled influences on the content. This might help explain some of the nonsignificant findings.

GENERAL DISCUSSION

Given past evidence on the effectiveness of modeling and on television as a medium for teaching attitudes and behavior, these results suggest that, when children prefer television programs that feature gender stereotypes, counterstereotypes, or gender-neutral content, they sometimes conform to these norms. In the case of counterstereotyping and gender-neutral content, this study shows that the relationship can be prosocial. For example, preference for female counterstereotypical content among girls positively predicted interpersonal attraction to female characters. In the case of gender stereotyping, the relationship can conform to expected gender norms. As expected, boys who favored male stereotypical content were likely to value two stereotypically male traits: hard work and humor.

Instead of imposing content that children might or might not watch or assuming television-viewing habits can be equated with acceptance of messages, this study investigated the portrayals of men and boys, and women and girls in content children favor. Indeed, the content analysis revealed that the children did not favor programming that was uniformly gender stereotypical. Although there was some male stereotypical content in the programs, there were virtually no female stereotypes, especially related to deference. The majority of the content was either gender-neutral or counterstereotypical. Based on these findings, we assigned the children's favorite programs relative weight based on how much they prefer the programs and the amount of stereotyping, counterstereotyping, or gender neutrality in them. We argue that this was a rather unobtrusive way of testing these relationships because we did not rely on our own or the children's subjective evaluations of the programs. We also see this as an important step in examining the simultaneous function of a "drip, drip" effect and a drench effect on children's construction of gender-related perceptions. That is, viewers probably stake out a few shows that are particularly influential to them, as predicted by the drench hypothesis. Then, as predicted by the drip, drip hypothesis, children could be influenced by the repetition of the gender-typed portrayals in these favorite programs.

It is our hope that this research will spark not only empirical work examining the portrayal of gender in children's television but also research that unobtrusively

examines the relationship between children's preference for and exposure to such content and their perceptions.

ACKNOWLEDGMENTS

An earlier version of this manuscript was presented at the 2000 meeting of the International Communication Association, Acapulco, Mexico.

NOTES

¹Of the 190 first and second graders in the sample, 76.3% ($n = 145$) listed at least one of the six programs as their favorite.

²A complete list of all shows listed by the children is available from the first author.

³*Pokemon* yielded five discrete narratives in total, one per episode. All other programs yielded two discrete narratives per episode, with the exception of one episode of *CatDog*, which yielded three.

⁴Only the behavior and communication data were used to compute the stereotypicality ratings because they shared the discrete narratives as the units of analysis. The personality characteristic assessments relied on lead characters, a different unit of analysis. Also, from a theoretical standpoint, observable acts are likely to be more salient to children than global character assessments (Thompson & Zerbino, 1997).

⁵Preference for female stereotypical content was not computed because Study 1 found that none of the variables that were hypothesized to be female stereotypical were actually found to be female stereotypical.

REFERENCES

- Albert, R. S. (1957). The role of mass media and the effect of aggressive film content upon children's aggressive responses and identification choices. *Genetic Psychology Monographs*, 55, 221-285.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

- Bandura, A. (1994). Social cognitive theory of mass communication. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 61–90). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment*. Newbury Park, CA: Sage.
- Davidson, E. S., Yasuna, A., & Tower, A. (1979). The effects of television cartoons on sex-role stereotyping in young girls. *Child Development*, 50, 597–600.
- Eisenstock, B. (1984). Sex-role differences in children's identification with counter-stereotypical televised portrayals. *Sex Roles*, 10, 417–430.
- Feilitzen, C., & Linne, O. (1975). Identifying with television characters. *Journal of Communication*, 25(4), 51–55.
- Freuh, T., & McGhee, P. E. (1975). Traditional sex role development and amount of time spent watching television. *Developmental Psychology*, 11, 109.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1980). The "mainstreaming" of America: Violence profile no. 11. *Journal of Communication*, 30, 10–29.
- Greenberg, B. S. (1988). Some uncommon television images and the drench hypothesis. In S. Oskamp (Ed.), *Television as a social issue* (pp. 88–102). Beverly Hills: Sage.
- Grover, R., & Siklos, R. (1998, November 2). Romancing the *Rugrats* crowd. *Business Week*, 3602, 89.
- Hainer, C. (1997, April 1). Modest "Arthur" has a nose for kids. *USA Today*, pp. D1.
- Hankin, S. (1998, December). Nickelodeon: Not just kids' play. *The World & I*, 12, 106–113.
- Harrison, K. (2000). Television viewing, fat stereotyping, body shape standards, and eating disorder symptomatology in grade school children. *Communication Research*, 27, 617–640.
- Heller, S. (1999, January/February). Kids' stuff. *ID magazine*, 46(1), 98–99.
- Hill, A. J., Oliver, S., & Rogers, P. J. (1992). Eating in the adult world: The rise of dieting in childhood and adolescence. *British Journal of Clinical Psychology*, 31, 95–105.
- Hoffner, C. (1996). Children's wishful identification and parasocial interaction with favorite television characters. *Journal of Broadcasting and Electronic Media*, 40, 389–402.
- Hoffner, C., & Cantor, J. (1991). Perceiving and responding to mass media characters. In J. Bryant & D. Zillmann (Eds.), *Responding to the screen: Reception and reaction processes* (pp. 63–101). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Kaufman, L. (1980). Prime-time nutrition. *Journal of Communication*, 30(3), 37–46.
- Klinger, L. J., Hamilton, J. A., & Cantrell, P. J. (2001). Children's perceptions of aggressive and gender-specific content in toy commercials. *Social Behavior & Personality*, 29, 11–20.
- Levinson, R. M. (1975). From Olive Oyl to Sweet Polly Purebread: Sex role stereotypes and televised cartoons. *Journal of Popular Culture*, 9, 561–572.
- Mayes, S. L., & Valentine, K. B. (1979). Sex role stereotyping in Saturday morning cartoon shows. *Journal of Broadcasting*, 23, 41–50.
- McArthur, L. Z., & Eisen, S. V. (1976). Television and sex-role stereotyping. *Journal of Applied Social Psychology*, 6, 329–351.
- McQuail, D. (1984). With the benefit of hindsight: Reflections on uses and gratifications research. *Critical Studies in Mass Communication*, 1, 177–193.
- Miller, M. M., & Reeves, B. (1976). Dramatic TV content and children's sex-role stereotypes. *Journal of Broadcasting*, 20, 35–50.
- Morgan, M. (1982). Television and adolescents' sex role stereotypes: A longitudinal study. *Journal of Personality and Social Psychology*, 43(5), 947–955.
- Oliver, M. B., & Green, S. (2001). Development of gender differences in children's responses to animated entertainment. *Sex Roles*, 45, 67–88.
- Oppliger, P. A. (1999, November). *Gender stereotyping in the media: A meta-analysis*. Paper presented at the meeting of the National Communication Association, Chicago, IL.
- Perloff, R., M., Brown, J. D., & Miller, M. M. (1982). Mass media and sex-typing: Research perspectives and policy implications. *International Journal of Women's Studies*, 5, 265–273.
- Petrozzello, D. (1998, July 27). Cable competition for kids intensifies. *Broadcasting & Cable*, 31, 27–28.
- Powlisha, K. K., Sen, M. G., Serbin, L. A., Poulin-Dubois, D., & Eichstedt, J. A. (2001). From infancy through middle childhood: The role of cognitive and social factors in becoming gendered. In R. K. Unger (Ed.), *Handbook of the psychology of women and gender* (pp. 116–132). New York: Wiley.
- Reep, D. C., & Dambrot, F. H. (1989). Effects of frequent television viewing on stereotypes: "Drip, drip" or "drench"? *Journalism Quarterly*, 66, 542–550.
- Reeves, B., & Miller, M. M. (1978). A multi-dimensional measure of children's identification with television characters. *Journal of Broadcasting*, 22, 71–86.
- Rothschild, N. (1984). Small group affiliation as a mediating factor in the cultivation process. In G. Meliscek, K. E. Rosengren, & J. Stappers (Eds.), *Cultural*

- indicators: An international symposium.* Vienna, Austria: Osterreichischen Akademie der Wissenschaften.
- Rubin, A. M. (1994). Media uses and effects: A uses-and-gratifications perspective. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 437–462). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Salamon, J. (2000, November 23). Aardvark and pals celebrate. *The New York Times*, p. E14.
- Signorielli, N. (1989). Television and conceptions about sex roles: Maintaining conventionality and the status quo. *Sex Roles*, 21, 341–360.
- Signorielli, N. (1991). *A sourcebook on children and television*. New York: Greenwood.
- Signorielli, N., & Lears, M. (1992). Children, television and conceptions about chores: Attitudes and behaviors. *Sex Roles*, 27, 157–170.
- Sternglanz, S. H., & Serbin, L. A. (1974). Sex-role stereotyping in children's television programs. *Developmental Psychology*, 10, 710–715.
- Streicher, H. W. (1974). The girls in the cartoons. *Journal of Communication*, 24(2), 125–129.
- Thompson, T. L., & Zerbinos, E. (1995). Gender roles in animated cartoons: Has the picture changed in 20 years? *Sex Roles*, 32, 651–673.
- Thompson, T. L., & Zerbinos, E. (1997). Television cartoons: Do children notice it's a boy's world? *Sex Roles*, 39, 415–432.
- University of California at Santa Barbara, Center for Communication & Social Policy (1998). *National television violence study, Vol. 2*. Thousand Oaks, CA: Sage.
- Williams, F., LaRose, R., & Frost, F. (1981). *Children, television and sex-role stereotyping*. New York: Praeger.

Developing a Typology of Humor in Audiovisual Media

Moniek Buijzen and Patti M. Valkenburg
 The Amsterdam School of Communications Research
 University of Amsterdam

The main aim of this study was to develop and investigate a typology of humor in audiovisual media. We identified 41 humor techniques, drawing on Berger's (1976, 1993) typology of humor in narratives, audience research on humor preferences, and an inductive analysis of humorous commercials. We analyzed the content of 319 humorous television commercials to investigate (a) whether and how humor techniques cluster into higher order humor categories and (b) which humor techniques and categories characterize commercials aimed at different audience groups. From principle components analysis, 7 categories of humor emerged: slapstick, clownish humor, surprise, misunderstanding, irony, satire, and parody. Our findings showed some marked differences in the humor techniques and categories in commercials aimed at different age and gender groups.

Since the time of Aristotle, philosophers and other scholars have tried to understand the origin, functions, and importance of humor (McGhee, 1971; Veatch, 1998). Over the years numerous theories have been proposed to explain why we laugh and what makes us laugh. Although classic theories on humor and laughter often appear under different names, in the literature three humor theories show up repeatedly: relief theory, superiority theory, and incongruity theory (Berger, 1993; Meyer, 2000).

From the perspective of relief theory, people laugh because they need to reduce physiological tension from time to time (Berlyne, 1972; Meyer, 2000). Relief theory assumes that laughter and mirth results from a release of nervous energy. In this view humor is mainly used to reveal suppressed desires and to overcome

Requests for reprints should be sent to Moniek Buijzen, The Amsterdam School of Communications Research ASCoR, University of Amsterdam, Kloveniersburgwal 48, 1012 CX Amsterdam. E-mail: m.a.buijzen@uva.nl