

Young Children's Perceptions of Television Reality: Determinants and Developmental Differences

John C. Wright, Aletha C. Huston, Alice Leary Reitz, and Suwatchara Piemyat

Five- and 7-year-old children judged factuality and social realism of favorite TV shows and test clips in pairs matched for content. In each pair one was news or documentary format, the other fictional drama. All children understood that fictional programs were not factual. Children correctly discriminated the purposes and intended audience of news from those of documentaries. Children discriminated factuality by genre of program, and genre of program by formal production features and by content. Age and vocabulary scores (Peabody Picture Vocabulary Test—Revised; PPVT-R) predicted accuracy of factuality judgments, but TV viewing history over the past 2 years did not. By contrast, judged social realism was predicted by viewing history and very little by age and PPVT-R. Older children better understood that fictional characters do not retain their roles in real life and that fictional shows are scripted and rehearsed.

The investigation reported in this article was designed to explore young children's comprehension of the reality or unreality of television. Theorists and commentators from various perspectives cite fiction–reality distinctions when they discuss the effects of television on children. For instance, an extensive semiotic analysis of children's comprehension of cartoons emphasized reality distinctions as a central basis for children's cognitive organization of television messages (Hodge & Tripp, 1986). Interventions to increase media literacy often stress the fictional nature of television entertainment on the assumption that undesirable effects of television are diminished once children understand that it is not real (cf. Corder-Bolz, 1982).

Reality (or unreality) is not, however, a simple dichotomy or unidimensional construct. It can be defined at different levels, ranging from the reasonable, if simplistic, to the abstractly metaphysical. Moreover, all television is not alike. Not only are some events that are shown on TV real (e.g., news) and others fictional, but there is also a wide range of genres and contents that vary in their factual status with respect to real-world events and that vary in their realism or similarity to real-life experiences of viewers. Even for adults, fiction–reality distinction may be blurred by genres like “reality programs,” which show real

events reenacted, and docudramas, in which the artistic license of fiction writers is applied to real-world events. Therefore, any attempt to determine what children understand about the reality of what they see on television must address multiple criteria for reality applied to a range of televised content.

Judged Reality of TV: Taxonomy and Developmental Course

Virtually all children in industrialized parts of the world are exposed to television from birth onward, and they begin paying attention to it quite early. When they are between 2 and 5 years old, they form some basic conceptions about the representational nature of the television medium and begin to understand how the content shown on television is related to events in the real world. Their concepts about television are based in part on more general comprehension of pretense, appearance, and reality in their everyday experiences with objects. Although 3-year-olds understand pretense in the sense of using objects symbolically (Harris & Kavanaugh, 1993), they do not consistently appear to conceptualize the appearance and reality of an object as separate. Flavell's (1986) investigations demonstrate, for example, that 3-year-olds assert that a rock-shaped sponge really is a rock as well as looking like one; older children make the appropriate distinction between the appearance of the object and its reality.

Data on comprehension of television reality in the age range from 2 to 5 years are scant, but suggestive. In an intensive longitudinal study of 3 children from ages 2 to 5 years, 2-year-olds showed little understanding of the boundary between the television and the immediate perceptual environment (Jaglom & Gardner, 1981). When an egg broke on television, they tried to clean it up. By age 3 or 4, they understood the separation of the television and the real world; in fact, they overgeneralized the notion that nothing on television was real. At 4 or 5, they began to recognize some connections between the two (e.g., local news events that were shown really happened in the community).

In an investigation of 3- and 4-year-olds' understanding of televised images, 3-year-olds showed incomplete understanding

John C. Wright, Aletha C. Huston, Alice Leary Reitz, and Suwatchara Piemyat, Department of Human Development, University of Kansas.

This research was supported by grants from the Spencer Foundation and Grant MH-44311 from the National Institute of Mental Health.

We wish to thank the Meninger Foundation, Topeka, Kansas, for providing space in which to test children and interview parents. We are especially grateful to the families who participated in this research over more than 2 years. We also thank Marilyn Bremer, Dennis Kerkman, Mabel L. Rice, David Rolandelli, Jean Siegle, Michelle St. Peters, and Rosemarie Truglio for assistance in the data collection and analysis phase of the longitudinal study. Denise Neapolitan and the late John Condry read earlier drafts of this article and made helpful suggestions for clarification.

Correspondence concerning this article should be addressed to John C. Wright, Department of Human Development, University of Kansas, Lawrence, Kansas 66045.

of the representational nature of television stimuli (Flavell, Flavell, Green, & Korfmacher, 1990). For instance, when asked whether a bowl of popcorn shown on a television would spill if the TV were turned upside down, many 3-year-olds said yes. These children did not appear to believe that televised objects are literally inside the television set; they made the same assertions about still photographs. Instead, their responses seemed to reflect a basic lack of ability to differentiate conceptually between images and the objects they represent. By age 4, most children made the distinction correctly. These data suggest that the cognitive bases for comprehending the nature of television images are similar to those for comprehending appearance-reality distinctions in general: perspective taking and understanding that human beings have mental representations that can be different from the objective reality of perceived objects.

Once children have a basic understanding of the representational nature of television images, they begin to differentiate certain types of television content. The process appears to proceed by identifying markers or attributes of a class of television content and separating that class from a largely undifferentiated remainder. Commercials were the first class type to be discriminated by the children at around age 3 to 3½ years in Jaglom and Gardner's (1981) study. Next came cartoons and *Sesame Street*, then news, children's shows, and adult shows.

These classes of television content (herein called *genres*) not only have characteristic content but also are marked by distinctive formats and forms of production. Cartoons are animated; *Sesame Street* has recognizable routines, musical themes, and logos. In news, adults sit at a table and look at the camera, often with a visual display behind them. Documentaries have an unseen narrator, and they often alternate between interviews and on-location footage. Situation comedies have laugh tracks.

The television genres used by children to organize the TV world differ in their typical levels of reality. It seems likely, therefore, that children develop their understandings about television reality within the framework of genre (Klapper, 1981). They move from the literal mindedness of a *magic window* conceptualization to the overgeneralized notion that all TV is unreal, and thence to a differentiated understanding about the reality of different types of television. In one investigation (Condry & Freund, 1989), children in second, fourth, and sixth grades were shown 40 bits representing all sorts of television content. For each, the child was asked whether or not it was real (i.e., true and not pretend). The youngest children were accurate about the fictional status of programs containing animation, puppets, or impossible feats and about the real status of news and documentaries, but they were less accurate about realistic fiction and situation comedies.

To make matters more complicated, the meaning of reality also changes with age. Although several dimensions can be identified in existing literature, two appear fairly consistently. The first is *factuality*—whether the events shown are true in the world outside television or are made up and scripted specifically for television. By late childhood, children become reasonably accurate in understanding that fictional programs do not typically show real-world events (Condry & Freund, 1989; Dorr, 1983; Fernie, 1981; Hawkins, 1977; Potter, 1988; Morison, & Gardner, 1978; Morison, Kelly, & Gardner, 1981). For instance, most 11-year-olds know that an actor who plays a police officer does not occupy that role in real life (Dorr, 1985; Hawkins,

1977). Similarly, older children know when televised content is real (e.g., news and documentaries); for example, by age 9, children knew that the televised *Challenger* explosion was real (Wright, Kunkel, Pinon, & Huston, 1989). Little is known, however, about the development of such understanding in the preschool years.

A second dimension of reality is *social realism*. Even though individuals know that a story is scripted and acted, they may judge it as real because they think the people and events are similar to those in the real world. Dorr (1983) referred to this dimension as a judgment of probability—how likely are the televised events to occur in the real world? As children move from middle childhood to adolescence, they are more apt to refer to probability than to possibility or factuality as a basis for judging reality. By adolescence, children's social reality judgments include perceptions of utility (applicability of television lessons to one's life), identification with characters, as well as similarity to real life (Potter, 1988). Studies with children younger than about 8 years, however, suggest that they do not understand the more abstract elements of social reality. They can compare television with their own experience, but questions about other aspects of social reality elicit inconsistent responses that suggest the questions have little meaning (Huston, Wright, Fitch, Svoboda, & Truglio, 1992).

Cues for Reality Judgments

Factual and fictional television programs can sometimes be distinguished on the basis of content (e.g., physically impossible events), but even more reliable cues may reside in the forms and formats used in production (Huston & Wright, 1983). For example, live broadcasts of events are characterized by poor-quality sound and background noise, disfluencies in speech, and narration. These characteristics result from on-site recording and ad-lib, unscripted speech. Documentaries and news typically have a narrator, often as a voice-over during visual footage of an event or topic. The music in documentaries often designates particular content (e.g., nature programs). By contrast, dramatic stories have close-ups of actors, clear dialogue among characters, studio-quality sound, and dramatic music; comedies are often marked by a laugh track, freeze-frames, and other postproduction editing effects. Formal features denoting factual events can override content cues for fiction, leading adults to believe that highly unlikely events are true. One famous example from radio was the *War of the Worlds* broadcast by Orson Wells in 1939. Hundreds of people fled their homes after hearing the dramatic radio program with a news format reporting that an invasion from outer space had taken place.

Existing evidence suggests that children learn form cues for factuality gradually during middle childhood. When children from ages 5 to 11 were asked how they know whether a television program was real or fictional, they typically named content features such as people flying (i.e., physically impossible events). With increasing age, children were more apt to name formal features as indicators of reality or program genre (Dorr, 1983; Hodge & Tripp, 1986; Morison et al., 1981; Wright et al., 1989). These studies relied on verbal self-reports, but children may recognize the cues for fictional and real portrayals before they can describe them. Investigations of children's comprehension of form cues denoting gender-appropriateness (e.g., abrupt

cuts vs. fuzzy dissolves) and time changes (e.g., instant replays) demonstrated that children as young as 5 years have and use implicit knowledge of the meaning of such cues before they can describe that knowledge (Huston, Greer, Wright, Welch, & Ross, 1984; Rice, Huston, & Wright, 1986).

Cognitive Development and Viewing History

The determinants of children's comprehension of television reality may be both cognitive developmental and experiential. Wright and Huston (1983) proposed that children acquired knowledge about television forms and conventions as a result of both cognitive developmental changes and experience with the medium. For example, metacognitive developmental changes in children's comprehension that other people have mental representations different from their own, and in their perspective-taking skills, probably form one basis for comprehension of cues for reality on television (Flavell et al., 1990). Therefore, all else being equal, cognitively advanced children should acquire such knowledge earlier than other children. To the extent that age is a proxy for cognitive development, the available evidence supports this hypothesis for children's understanding of factuality, but not for social realism. There are no clear age changes in perceived social realism; in fact, in one investigation, preschool children and adolescents thought television was less realistic than did children in middle childhood (Hawkins, 1977).

Exposure to different varieties of television ought to provide a basis for learning typical content cues and the meanings of television forms. Therefore, children with extensive and varied viewing experience might be expected to learn television conventions earlier than those with little experience. Indirect support for this notion comes from the finding that children were more accurate about the unreality of the *Teenage Mutant Ninja Turtles* than about other cartoons, presumably because it was a familiar favorite (Barrett & Ames, 1991).

Contrary to this hypothesis, however, for children in middle childhood, those who are heavy viewers of cartoons, situation comedies, and action adventure programs generally consider television more realistic (not more factual) than do those who are light viewers (Dorr, Kovacic, & Doubleday, 1990; Greenberg & Reeves, 1976; Hawkins & Pingree, 1982; Huesmann, Lagerspetz, & Eron, 1984). In most of these studies, viewing experience was measured by brief, concurrent self-reports that did not encompass the child's history of experience with the medium. None of them assessed viewing experience in the early preschool years.

Purpose of Present Study

The purpose of the present investigation was to explore comprehension of television reality among young children. Children who were near their 5th and 7th birthdays were questioned about perceived factuality and social realism. Previous studies indicated that children may be more skilled at making reality distinctions for specific programs with which they are familiar than for television in general (Dorr et al., 1990; Greenberg & Reeves, 1976). Therefore, they were asked about the reality of their favorite programs.

Second, children were shown short clips of television footage in which formal features marked the genre (and thereby de-

noted fiction or reality) but content cues were minimal, and they were asked to judge reality, genre, and purpose. Although age differences were examined, cognitive developmental level was assessed more directly by a vocabulary test. Viewing history was measured over a 2-year period and was examined by types of programs viewed rather than simply as a total amount of television exposure.

Method

Sample

The sample comprised 261 participants in a 2-year longitudinal study of children's television use. Of these, 122 were near their 5th birthday (M age = 60.4 months; SD = 2.9) and 139 were near their 7th birthday (M age = 83.6 months; SD = 3.5) when they were interviewed. The sample was predominantly White and represented a range of occupational status and parent education (see Pinon, Huston, & Wright, 1989, for details of sample composition).

Procedure

Children were brought to a research center by their parents for a series of tasks. During the series, one experimenter administered the Peabody Picture Vocabulary Test—Revised (PPVT-R; Dunn & Dunn, 1981) and the interview about favorite programs. In a different room, another experimenter showed the film clips and questioned the children about them. The order of the two sets of procedures was counterbalanced across children.

Reality of favorite programs. Two procedures were used to investigate children's reality perceptions. In the first, all of the children were asked the names of their three favorite television programs. They were then asked a series of questions about the reality level of the first-named favorite, except when the question did not make sense in relation to that program (e.g., there was no known central character). In that case, some questions were asked about the second- or third-named favorite.

Four questions were designed to measure perceived factuality and one was designed to measure social realism. They are shown in Appendix A. The first item, *fact*, was a direct question about whether the events in the program happened in real life or just on TV. The next two items, *magic window-job* and *magic window-character*, asked about whether television characters perform their fictional roles in real life. The fourth item, *unscripted*, concerned the extent to which the child believed the program was unplanned, unrehearsed, and spontaneous. One item, *similarity to real people*, was designed to measure one aspect of social realism. All of the items were adapted from earlier measures by Hawkins (1977) and Potter (1988) and were pilot tested for wording and clarity of format.¹

Cues for reality. The purpose of the second procedure was to determine whether children could detect the form cues for reality and fiction, even when content cues were minimal. A subsample of sixty-two 5-year-olds and seventy 7-year-olds (randomly selected) were shown four pairs of videotaped clips, each lasting approximately 2 min. Each pair was matched closely for content, but one member of the pair was factual, and the other member was fictional. Two of the factual clips were live broadcasts of news events: (a) live coverage of a space shuttle launch,

¹ The wording of the questions and alternatives was determined on the basis of extensive pilot testing. In particular, the wording for social realism questions used in earlier studies did not appear comprehensible to 5-year-olds. They did seem to be able to make judgments about similarity to people in their own life experiences. Similarly, the term "kinda" as a midpoint on a Likert-type scale appeared to be clearer to young children than other possibilities.

matched with a scene from *Space Academy*, and (b) live coverage of the wedding of Prince Charles of Britain, matched with *The Royal Wedding* drama. The other two real bits were documentaries: (c) a documentary about a *Dr. Who* convention, matched with a *Dr. Who* drama, and (d) a documentary about the making of *The Wizard of Oz*, matched with parallel scenes from *The Wizard of Oz*. The two members in any pair were always shown contiguously, but the order of members within pairs and the order of pairs were counterbalanced across subjects.

After each clip, children were asked the series of questions shown in Appendix B. These questions were selected and refined on the basis of extensive pilot testing. Three of them duplicated the fact, unscripted, and similarity to real people items used in the procedure described earlier. One additional question, *pretend*, concerned whether the scene was pretend or not. Four questions were designed to assess more general perceptions of program genre and purpose: whether the program was *news*, whether it was intended for *learning*, whether it was *serious*, and whether it was intended for *adult audiences*. We expected that these attributes might characterize programs perceived as real, whereas their opposites (which were not news, were intended for fun, were funny, and were intended for kids) might characterize programs perceived as fictional. Children were asked about single clips rather than asked to compare members of a pair because pilot testing indicated that they had considerable difficulty making comparisons. After each clip, the experimenter asked the questions in Appendix B. She stated the three alternatives after each question.

All children were given the PPVT-R (Dunn & Dunn, 1981). It was selected as an overall indicator of intellectual level because it is brief, it correlates highly with other tests of general ability, and it does not require verbal production by the child.

Television viewing history. Five 1-week television viewing diaries were completed by the parents during the previous 2 years (one every 6 months). The diary contained a report of viewing by all members of the household in 15-min intervals from 6 a.m. to 2 a.m. for each day. Diaries are generally accepted as the most valid method of measuring viewing short of direct observation (Miller, 1987). One investigation included a comparison of diary measures with videotapes of viewers made in the home during viewing (Anderson, Field, Collins, Lorch, & Nathan, 1985). Diaries slightly overestimated children's viewing time, but the correlation between the two methods was .84 for preschoolers, indicating that diaries are a valid method of assessing individual differences.

Each television program was classified according to the intended audience (child or adult) and whether or not it was intended to be informative. Children's viewing frequencies were thus calculated for four types of programs: child audience informative, child audience noninformative, adult audience informative, and adult audience noninformative. Because viewing frequencies were positively skewed, they were converted to square roots of $(X + 1)$.

Results

Perceived Reality of Favorite Programs

Because children answered the factuality and realism questions for a favorite program, appropriate answers might vary depending on the nature of the program being considered. To control for program type, we classified all favorite programs as one of the following: children's informative (educational) programs, cartoons, or adult fiction (comedy, action adventure, and drama). The most frequent children's educational program named was *Sesame Street*.

Children's responses to the five factuality and realism questions were submitted to two-way analyses of variance (ANOVAs) with age group and program type as independent variables.² To protect against an inflated alpha, we applied the Bon-

ferroni correction (alpha/number of comparisons; Pedhazur, 1982, pp. 315-316). The corrected alpha level was .01. Those *F* ratios with *p* values between .05 and .01 are interpreted as borderline. The sample sizes vary slightly because of occasional refusal to endorse any particular answer. The means for each item appear in Table 1.

Level of understanding. Children's level of performance depended on the question asked and the type of program being discussed. Most children were quite accurate when asked whether their favorite program happened in real life or just on TV. The overall mean for this item was 1.20 on a scale of 1.0 to 3.0. Responses varied by program type. Virtually all children said cartoons do not happen in real life, but children more often thought that educational programs occurred outside television. Adult fiction fell in between. The main effect of program type on the fact item was $F(2, 206) = 3.36, p < .036$.

The mean levels on the other questions were closer to the midpoint of 2, and there was considerable variability with many children giving answers at each of the three levels for each question. Cartoons and educational programs were perceived as unrehearsed more frequently than was adult fiction: program type, $F(2, 203) = 5.99, p < .003$. The people in educational programs and adult fiction were considered more similar to real life than those in cartoons: program type, $F(2, 203) = 4.22, p < .016$.

Age differences. Although the means for 5-year-olds were higher than those for 7-year-olds on all four measures of perceived factuality, the main effect of age reached the corrected alpha level only for the unscripted item. Younger children believed that their favorite programs were unrehearsed more often than older children, $F(1, 203) = 32.2, p < .001$. There was a borderline age difference for magic window-jobs (the belief that a character on the show had the same job when he or she was not on TV), $F(1, 215) = 5.15, p < .024$.

By contrast, older children more often perceived their favorites as having people who were similar to people in their own worlds than younger children did, $F(1, 203) = 6.63, p < .011$. There were no significant interactions of age with program type.

Cognitive level and viewing history as predictor. Cognitive level, as indexed by the PPVT-R, and viewing history were considered as predictors of children's perceptions of TV reality. All programs reported in the home-viewing diaries were classified into four groups: children's informative, other children's programs, adult informative, and other adult programs. For each child, the frequencies of viewing in each category were calculated from five 1-week viewing diaries.

For each of the five dependent variables, three hierarchical regressions were performed, one for each program type. In each regression, the predictors were age group, PPVT-R score, and the frequencies of viewing four types of television programs during the past 2 years (in that order). The results are summarized in Table 2.

PPVT-R score. High PPVT-R scores were expected to be associated with relatively low perceived reality scores. That is, children with more advanced intellectual development were expected to understand that television fiction was not real. That prediction was supported for ratings of adult programs on the

² Sometimes, a child answered one question about one program and another question about another program or a character from another program. Therefore, each item had to be analyzed separately.

Table 1
Means and Standard Deviations of Judged Reality Scores for Favorite Programs

Age group	Program type named as favorite								
	Educational			Cartoon			Adult audience		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Item 1: Fact									
5-year-olds	23	1.52	0.90	47	1.10	0.42	31	1.13	0.50
7-year-olds	9	1.20	0.63	31	1.00	0	67	1.29	0.67
Both		1.42			1.06			1.29	
Item 2: Magic window-job									
5-year-olds	26	2.15	0.88	41	2.30	0.93	35	2.09	0.95
7-year-olds	10	2.09	0.94	24	1.77	0.97	81	1.68	0.84
Both		2.14			2.12			1.80	
Item 3: Major window-character									
5-year-olds	22	2.09	0.97	47	1.66	0.92	33	1.79	0.99
7-year-olds	10	1.36	0.81	28	1.59	0.93	79	1.85	0.92
Both		1.85			1.64			1.83	
Item 4: Unscripted									
5-year-olds	24	2.21	0.83	45	2.28	0.83	30	2.03	0.85
7-year-olds	7	1.25	0.71	31	1.83	0.79	68	1.29	0.52
Both		1.97			2.10			1.51	
Item 5: Similarity to real people									
5-year-olds	23	1.81	0.85	46	1.54	0.68	31	1.71	0.82
7-year-olds	8	2.22	0.67	31	1.70	0.92	66	2.18	0.77
Both		1.94			1.60			2.03	

Note. The possible range of scores on each item was 1.00 (*unreal*) to 3.00 (*real*). See Appendixes A and B for exact definitions. There are slight variations in sample sizes because children declined to answer in some instances.

two items for which there were also age differences. Children with high PPVT-R scores were less likely to believe that adult programs were unscripted and less likely to think television characters in adult fiction performed the same job in real life. However, PPVT-R scores were positively associated with the belief that educational programs occurred in real life, not just on TV. These responses are not necessarily inaccurate; it is true that some of the material shown in such programs is from real-life footage.

Viewing history. Viewing history was not a significant predictor in every analysis, but the relations that occurred were, for the most part, consistent. Children who thought cartoons were factual had been heavy viewers of child entertainment (Item 2, magic window-job). Children who thought educational programs were real had been heavy viewers of child informative programs (Item 2, magic window-job). That is, when children had watched a lot of either category—cartoons or child informative—they later perceived characters in that type of program as more real than when they had not often watched that category of programs.

For adult fiction favorites, viewing histories for adult programs were predictive. Children who had watched a lot of adult entertainment (situation comedies and dramas) thought their favorite adult programs were rehearsed and similar to people in

their lives. Children who had watched a lot of adult informational programs thought that characters in adult fiction were dissimilar to people they knew.

Cues for Reality Judgments

In the second procedure, children made judgments about four pairs of real and fictional clips closely matched for content. In two of the pairs, the real segment was a live news broadcast of an event; in the other two, it was a documentary.

Stimulus and Genre Differences

For each dependent variable, we performed a 2 (age group) \times 2 (stimulus type: real or fictional) \times 2 (genre: news or documentary) ANOVA. The genre classification for the fictional stimuli was the same as that for the factual stimuli with which they were paired. Therefore, each cell of the design contained two stimuli and had a possible range of 0 to 4. The Bonferroni correction for eight analyses set the alpha level at .00625. All *F* ratios whose associated *p* values were between .05 and .00625 are reported but are interpreted as borderline.

Perceived factuality. On all three items intended to measure perceived factuality, children judged the real stimuli as signifi-

Table 2

Hierarchical Regressions (Beta Values) Predicting Perceived Reality of Favorite Programs (Divided by Type of Program)

Dependent variable	Predictor						<i>R</i> ²
	Age group	PPVT-R score	Child inform	Child entertain	Adult inform	Adult entertain	
Cartoon ^a							
Magic window-job	-.22	-.03	.07	.27*	.14	0	.18†
Magic window-character	-.03	.04	-.02	.03	-.01	0	0
No script	-.18	-.12	.22†	-.01	-.22	-.05	.16†
Realism	.24†	-.03	.20	.06	.24	-.19	.10
Educational							
Fact	-.12	.40*	-.17	.37	-.01	-.37	.30
Magic window-job	.10	-.24**	.63**	-.01	-.28	.17	.39*
Magic window-character	-.40*	.14	.29	.07	-.35	.29	.36†
No script	-.48**	.05	.02	-.06	-.22	-.13	.43*
Realism	.21	.06	-.09	.20	.39	-.34	.16
Adult							
Fact	.09	.01	-.12	.07	.13	.03	.05
Magic window-job	-.24*	-.20*	-.05	.09	.01	.03	.12†
Magic window-character	0	-.08	.04	-.17	.01	.12	.03
No script	-.41**	-.36**	.08	.05	-.03	-.24†	.36**
Realism	.16	.11	-.01	-.15	-.03*	.41**	.14†

Note. PPVT-R = Peabody Picture Vocabulary Test—Revised.

^a The fact variable for cartoons was not analyzed because there was little variance (see Table 1).

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

cantly more factual than the fictional stimuli (see Figure 1). Although they judged both news and documentaries as more factual than their fictional counterparts, the difference was greater for news clips than for documentary clips. In fact, the absolute

level of the scores for documentaries was below the midpoint of two of the scales, indicating that children often said documentaries were "just on TV" and were pretend.

Older children differentiated between real and fictional stim-

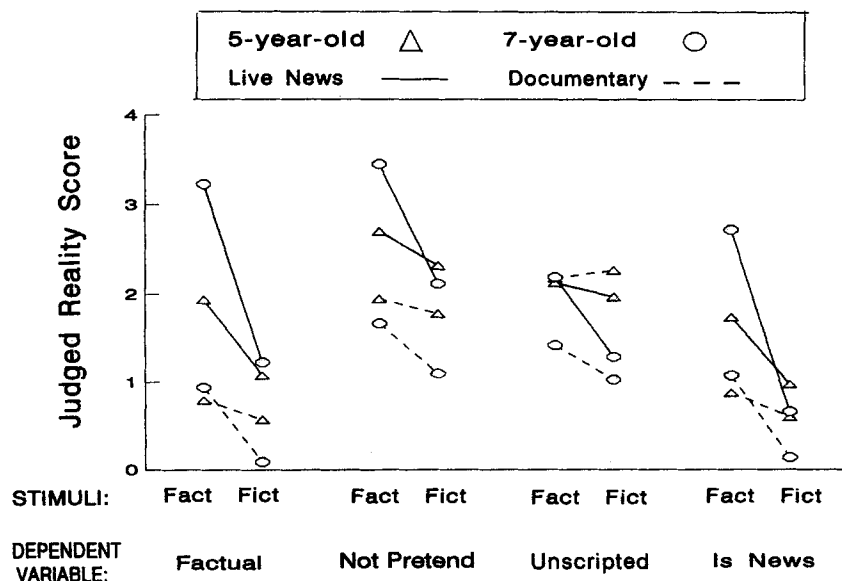


Figure 1. Mean ratings of factuality and genre for real (Fact) and fictional (Fict) television clips. High scores indicate the "real" end of each dimension. The genre classification (live news or documentary) of the real stimuli determined the classification of the fictional stimuli with which they were matched for content.

uli more clearly than younger children did, and they distinguished news from documentaries more clearly than younger children did. Older children were quite accurate in response to questions about whether news clips showed real life and whether they were pretend. They were less certain whether such bits were unrehearsed and, in fact, said that documentaries were rehearsed more often than younger children did.

The main effects of stimulus were as follows: fact, $F(1, 130) = 97.29, p < .001$; not pretend, $F(1, 130) = 56.67, p < .001$; and unscripted, $F(1, 130) = 18.32, p < .001$. The interactions of Stimulus Reality \times Genre were as follows: fact, $F(1, 130) = 23.66, p < .001$; not pretend, $F(1, 130) = 11.97, p < .001$; and unscripted, $F(1, 130) = 5.52, p < .02$. The interactions of Age \times Stimulus were as follows: fact, $F(1, 130) = 19.82, p < .001$; not pretend, $F(1, 130) = 14.10, p < .001$; and unscripted, $F(1, 130) = 15.05, p < .001$. The interactions of Age \times Genre were as follows: fact, $F(1, 130) = 25.84, p < .001$; not pretend, $F(1, 130) = 19.93, p < .001$; and unscripted, $F(1, 130) = 15.00, p < .001$.

Recognition of news. Older children correctly labeled news clips as news most of the time; younger children were accurate about half of the time (see Figure 1). Both groups correctly labeled the news bits as news more often than they said the documentary bits or any of the fictional bits were news. The interaction of Stimulus \times Genre was significant, $F(1, 130) = 20.56, p < .001$. The interaction of Age \times Genre was significant, $F(1, 130) = 5.92, p < .016$.

Purposes of program. Three items measured perceptions of the purposes of the program—whether it was intended for learning, whether it was serious, and whether it was intended for adults. The means appear in Figure 2. There were small differences between real and fictional clips but much larger differences between genres. Children rated the news clips and their content-matched fictional counterparts as intended for learn-

ing, as serious, and as intended for adults more than the documentary clips and their fictional counterparts. Children rated the documentary clips as less serious than their fictional counterparts.

Older children differentiated genres more clearly than younger children did. They considered the news bits to be more intended for learning, to be serious, and to be intended for adult audiences than did 5-year-olds; they also rated the documentaries as lower on these attributes than did 5-year-olds.

The main effects of genre were as follows: for learning, $F(1, 130) = 47.81, p < .001$; serious, $F(1, 130) = 47.79, p < .001$; and for adult audience, $F(1, 130) = 39.62, p < .001$. The interaction of Genre \times Stimulus for the serious rating was, $F(1, 130) = 18.84, p < .001$. The interaction of Age \times Genre was significant on two variables: for learning, $F(1, 130) = 11.29, p < .001$; and serious, $F(1, 130) = 9.95, p < .002$. It was at a borderline level for adult audience, $F(1, 130) = 4.40, p < .038$.

Similarity to real people. Children perceived the factual stimuli as more similar to people they knew than the fictional stimuli. The difference occurred primarily for 7-year-olds' ratings of news clips. On the whole, older children rated the segments as slightly more similar to people they knew than did younger children. The main effect of stimulus was significant, $F(1, 130) = 16.97, p < .001$. The interaction of Age \times Stimulus \times Genre was at a borderline level of significance, $F(1, 130) = 5.40, p < .022$.

Cognitive Level and Viewing Experience

Cognitive level and viewing experience were examined as predictors of children's reality judgments. For this analysis, the scores for all questions except similarity to real people were recoded so that high scores were accurate (i.e., for the fictional clips, a *fictional* answer was high; for the real clips, a *factual*

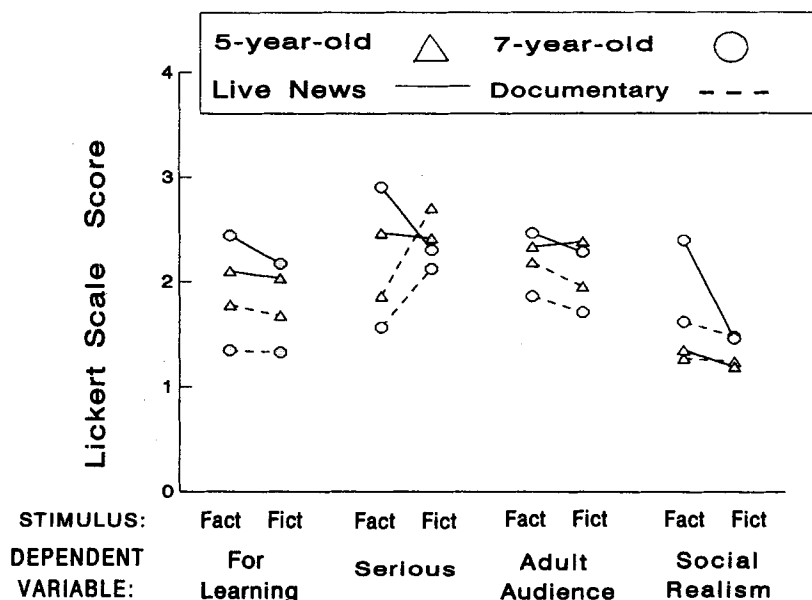


Figure 2. Mean ratings of purposes and social realism for real (Fact) and fictional (Fict) segments. High scores indicate the "real" end of each dimension. The genre classification (live news or documentary) of the real stimuli determined the classification of the fictional stimuli with which they were matched for content.

Table 3
*Hierarchical Regressions Predicting Accuracy of
 Factuality Scores and Perceived Similarity
 Scores for Experimental Segments*

Dependent variable	Predictor		R^2
	Age	PPVT-R	
Accuracy ^a			
Fact	.38**	.35**	.27**
Not pretend	.37**	.18†	.14**
Unscripted	.16†	.01	0
News	.40**	.40**	.33**
Learn	.05	.05	0
Serious	-.01	.13	0
Adult	.07	.04	0
Similarity ^b			
Live news	.36**	.22*	.17**
Documentary	.16†	.14	.03†
Fiction	.12	.18†	.03†

Note. PPVT-R = Peabody Picture Vocabulary Test—Revised.

^aAccuracy scores represent sum of correct answers for all eight segments. ^bSimilarity scores shown separately for three types of segments.

* $p < .05$. ** $p < .001$. † $p < .10$.

answer was high). The sum of these scores for the eight clips was the child's accuracy score.

We performed hierarchical multiple regressions for each of the dependent variables using age group, PPVT-R score, and total viewing frequency for each of four program categories (child informative, child noninformative, adult informative, and adult noninformative) as predictors. The equations for age and cognitive levels appear in Table 3.

Age group effects merely duplicated the ANOVAs. Cognitive level, as indexed by the PPVT-R, was positively related to accuracy on three items: fact item (whether the stimulus was just on TV or real life), pretend (whether it was pretend), and news (whether or not it was news). Cognitive level did not predict children's beliefs about whether the program was practiced or about the purposes of the programs.

For the social realism item, perceived similarity to real people, there was no clearly accurate answer. Therefore, regressions were performed on scores for three types of stimuli separately: the real news segments, the documentary segments, and the fictional segments. Both age and PPVT-R were positively related to each score, but PPVT-R was significant only for news segments. That is, children with high PPVT-R scores tended to perceive people in both real and fictional segments as similar to people in their experience, but that was especially true for people in live news broadcasts.

Viewing history, by contrast, bore little relation to accuracy. There was no equation for which television viewing added significantly to variance accounted for.

Discussion

The results of these investigations demonstrate that young children have more refined concepts of television reality than most prior research in the field would lead one to believe. Moreover, children's perceptions of reality were multidimensional. We organized the investigation around two dimensions—factu-

ality and social realism—but the data indicate multiple dimensions within the rubric of factuality. Most children were aware that their favorite programs were not slices of real life, but they were less aware that the characters did not retain their roles off screen or that fictional programs were rehearsed. The expected improvement with age occurred on these more difficult aspects of judgment.

Similarly, when viewing matched segments, children recognized that news and documentaries represented real events and were not pretend. They were quite sure that fictional segments were just for TV, but less certain that they were pretend. The question about whether a bit was rehearsed is more complex; children's answers fell at the midpoint of the scale (uncertain) when asked about news and documentaries; 7-year-olds were aware that fictional segments were rehearsed.

Although children made clear distinctions between real and fictional stimuli, the data also support the hypothesis that young children have an overgeneralized or default belief that television is fiction or that they learn cues for fiction earlier than those for factual content. Our data suggest that 5-year-olds have a bias toward assuming that television is unreal. When asked directly, children were apt to say that a program showed events that occurred just on TV and not in real life. The means on the fact questions about favorite programs fell well below the midpoint for all program types, as did those for most of the clips viewed. In fact, for 5-year-olds, even the mean ratings of news clips fell at the midpoint of the scale, which was labeled *can't tell*. Children, especially 5-year-olds, are not so likely to assume unreality when asked about whether people on TV have the same jobs in real life or whether a program was scripted or rehearsed.

Only one aspect of social realism was assessed—similarity to people “around here”—largely because questions typically used with older children seemed to have little meaning to younger children during pilot testing. Perceptions of social realism followed a different pattern than those for perceived factuality, a finding consistent with most earlier studies of older children. Unlike factuality judgments, which became more differentially accurate with age, social realism judgments tended to be higher across the board for older than for younger children across a wide range of program genres. Although 7-year-olds rated factual programs as more realistic than fictional ones, they also rated fictional programs as more realistic than 5-year-olds did. This pattern is consistent with earlier findings by Hawkins (1977) that 4-year-olds perceived television in general as less socially realistic than did 7- or 9-year-olds. This finding may be another reflection of young children's bias toward saying all television is unreal.

One needs to bear in mind that social realism is not a reliable index for discriminating fact from fiction. It primarily serves to differentiate realistic from unrealistic fiction. Because it indexes typicality or the probability of encountering similar characters and situations in real life, ironically, it ought to be somewhat low in documentaries and very low in many news programs, because one of the things that makes events newsworthy in the first place is their rarity or improbability of occurrence in the real-life experience of most viewers. Such subtleties are probably well beyond the understanding of younger viewers, who may not possess an idea of more than one aspect of reality. Even children in middle childhood may rate the social realism of a

news or documentary program as high largely because of their certainty about its factuality.

Genre and Reality Judgments

Children's reality perceptions are embedded in their emerging concepts of television genres. It appears that, during their many hours of exposure to television, children differentiate classes or subsets of programming that are marked by both form and content. They then expand their knowledge of a marked class or genre by learning its label, its factuality, its purpose, whether it is scripted and rehearsed, its intended audience, its typical forms and formats, and its typical content.

Because children use genre or program type as a basic organizer for understanding TV, their concepts of reality as well as other aspects of their comprehension of television are specific to particular genres. Cartoons are one of the earliest genres recognized by children, and the data in this study indicate that 5-year-olds clearly understood the unreality of cartoons. Jaglom and Gardner (1981) proposed that *Sesame Street* was another program category identified early by preschoolers. Our data indicate that children have a fairly sophisticated understanding that *Sesame Street* (the program named by most children who chose a child informative favorite program) has some factual and some fictional elements. Both cartoons and such educational programs as *Sesame Street* were considered less rehearsed than adult programs, and the characters in programs containing live people (educational and adult programs) were rated as being more like real people than cartoons. These perceptions are partially accurate. Children also identified and labeled news clips, which is the genre that Jaglom and Gardner suggested is learned next.

Children's understanding of television genres seems to be more schematically than categorically organized (Mandler, 1979). A genre is identified by a set of salient attributes that co-occur. The remainder of television continues to be conceptualized in a fairly undifferentiated way. Children do not seem to form a taxonomic, hierarchically arranged view of television in which abstract properties can be used to group or separate its parts. Instead, it seems that genres gradually emerge from the blur, each with its own identifying configuration of production features and content attributes. We are, as Bruner (1957) noted, a species preprogrammed to recognize recurrent regularity in the environment. Familiarity begins with recognition of an entity in the environment. When a second television program, episode, or series is experienced that reminds us sharply of the first, a "protogenre" begins to crystallize, and it will grow by accretion with continued viewing.

The results of this study are important in showing that young children recognize and use form and content cues that mark genres and reality status of television. In the second procedure, the content of the real and fictional bits was closely matched; the major differences were form cues, which were often subtle. Only one of the fictional clips contained any animation. The others were characterized by dramatic music, suspense, close-ups of conversations, and dialogue among characters. These young children also distinguished live news from documentaries on the basis of seeing 2-min clips. The form cues for live news include disfluencies in speech, unseen narrators or narrators at desks, distant shots, and slow time progressions. Docu-

mentaries include interviews mixed with footage of the events being discussed and a narrator who occasionally appears on screen, but many of their features are similar to news. Of course, children may have used content cues as well, because the bits were selected from actual television rather than being experimentally constructed. For example, the content of the documentaries was related to light entertainment (*Dr. Who* and *The Wizard of Oz*), whereas the news bits were serious events. Children knew the documentaries were more factual than their fictional counterparts, but they judged these documentaries as less serious, less useful for learning, and less clearly intended for an adult audience than the news segments. In fact, they perceived correctly that the documentaries (especially the *Dr. Who* convention) were less serious than the fictional dramas they referred to.

Cognitive Development and Viewing Experience

Both cognitive developmental change and viewing experience were proposed as possible bases for the development of children's reality concepts. The age changes and associations with vocabulary score in these data support the cognitive developmental basis for children's understanding of factuality and their knowledge of genre labels (i.e., news). Older children and more intellectually advanced children were more accurate about factuality than younger and less advanced children. In the analyses of favorite programs, comparisons were always made within genres, so these differences cannot be attributed to age differences in program preferences.

Older and more cognitively advanced children were more apt, however, to perceive the people in televised segments as similar to their own experience. The difference was especially pronounced for live news segments, but a similar trend occurred for documentaries and fictional segments as well. Children's concepts of the purposes of programs and intended audience were less clearly associated with age and were unrelated to vocabulary.

The measure of viewing experience in this study was unusually powerful because it represented viewing during the 2 years before testing and because it was a detailed and representative sample of all of the child's viewing experience. Nevertheless, there was scant evidence for relationships between viewing history and reality judgments. Children with a history of viewing particular types of children's programs were more apt to perceive them as having some factual qualities than children who had not viewed such programs extensively. Of course, viewing could result from perceived reality as well as influencing it, but the temporal relationships in this longitudinal study make such a conclusion less likely.

The near absence of relations between viewing history and judged factuality is consistent with earlier investigations of older children using less extensive viewing measures. For example, heavy television viewers do not understand the nature of commercials earlier than light viewers; the opposite is sometimes true (Atkin, 1983). Such knowledge appears to depend on children's general cognitive abilities; mere exposure to television does not accelerate its acquisition. Experience is, of course, necessary, but beyond some minimum, it is cognitive skill more than history of viewing that determines understanding.

By contrast, perceptions about social realism are more sub-

jective and subject to individual opinion and belief than are perceptions of factuality. That is, there are some objective criteria for evaluating factuality, but judged realism depends more on individual experiences and background. Accordingly, among older children, the latter are more closely associated with viewing and less with age. Heavy viewers of entertainment television perceive fictional programs as more realistic than light viewers do (Dorr et al., 1990; Greenberg & Reeves, 1976; Hawkins & Pingree, 1982).

For children in this study who named adult programs as favorites, perceived realism was related to a history of viewing adult entertainment programming. Other analyses of these data have demonstrated that exposure to adult entertainment programs is due largely to parental viewing preferences (St. Peters, Fitch, Huston, & Wright, 1991); therefore, it may be that parents' beliefs about the social realism of television mediate their children's judgments. Parents' interest and involvement in the worlds of soap operas, situation comedies, and action adventures may give credence to their relevance for real life.

Taken together, these data demonstrate that by their 5th birthday, children have clear concepts of the fictional nature of certain program genres and that they can recognize form and content cues denoting fact and fiction on television. Between ages 5 and 7, children become more skilled at understanding the separation of fictional roles on television from real-life roles of the actors and more aware of the fact that television fiction is scripted and rehearsed. Five-year-olds appear to have a general bias toward assuming that television is not factual; 7-year-olds are better able to recognize cues indicating whether an event shown is factual. Children's understanding about television appears to develop as a set of schemata in which genre is the organizer. They learn to recognize the form and content markers for a particular genre; then they acquire an understanding about many features of that genre, including the likely factuality and social realism of its content.

References

- Anderson, D. R., Field, D. E., Collins, P. A., Lorch, E. P., & Nathan, J. G. (1985). Estimates of young children's time with television: A methodological comparison of parent reports with time-lapse video home observation. *Child Development*, 56, 1345-1357.
- Atkin, C. (1983). Effects of realistic television violence vs. fictional violence on aggression. *Journalism Quarterly*, 60, 615-621.
- Barrett, M., & Ames, K. (1991, September). *Children's understanding of the fictional status of the Teenage Mutant Hero Turtles*. Paper presented at the British Psychological Society Developmental Section Annual Conference, Cambridge, England.
- Bruner, J. S. (1957). On perceptual readiness. *Psychological Review*, 64, 123-152.
- Condry, J. C., & Freund, S. (1989, April). *Discriminating real from make-believe: A developmental study*. Paper presented at the biennial meeting of the Society for Research in Child Development, Kansas City, MO.
- Corder-Bolz, C. R. (1982). Television literacy and critical television viewing skills. In D. Pearl, L. Bouthilet, & J. Lazar (Eds.), *Television and human behavior: Ten years of scientific progress and implications for the eighties: Vol. 2. Technical reports* (pp. 91-102). Washington, DC: U.S. Department of Health and Human Services.
- Dorr, A. (1983). No shortcuts to judging reality. In J. Bryant & D. R. Anderson (Eds.), *Children's understanding of television: Research on attention and comprehension* (pp. 199-220). San Diego, CA: Academic Press.
- Dorr, A. (1985). Context for experience with emotion, with special attention to television. In M. Lewis & C. Saarni (Eds.), *The socialization of emotion* (pp. 55-85). New York: Plenum Press.
- Dorr, A., Kovacic, P., & Doubleday, C. (1990). Age and content influences on children's perceptions of the realism of television families. *Journal of Broadcasting and Electronic Media*, 34, 377-397.
- Dunn, L. M., & Dunn, L. M. (1981). *Manual for the Peabody Picture Vocabulary Test—Revised*. Circle Pines, MN: American Guidance Service.
- Fernie, D. E. (1981). Ordinary and extraordinary people: Children's understanding of television and real life models. In H. Kelly & H. Gardner (Eds.), *Viewing children through television* (pp. 47-58). San Francisco: Jossey-Bass.
- Flavell, J. (1986). The development of children's knowledge about the appearance-reality distinction. *American Psychologist*, 41, 418-425.
- Flavell, J. H., Flavell, E. R., Green, F. L., & Korfmacher, J. E. (1990). Do young children think of television images as pictures or real objects? *Journal of Broadcasting and Electronic Media*, 34, 399-419.
- Greenberg, B. S., & Reeves, B. (1976). Children and the perceived reality of television. *Journal of Social Issues*, 32, 86-97.
- Harris, P. L., & Kavanaugh, R. D. (1993). Young children's understanding of pretense. *Monographs of the Society for Research in Child Development*, 58(1), Serial No. 231.
- Hawkins, R. (1977). The dimensional structure of children's perceptions of television reality. *Communications Research*, 4, 299-320.
- Hawkins, R. P., & Pingree, S. (1982). Television's influence on social reality. In D. Pearl, L. Bouthilet, & J. Lazar (Eds.), *Television and behavior: Ten years of scientific progress implications for the eighties* (pp. 224-247). Washington, DC: U.S. Government Printing Office.
- Hodge, B., & Tripp, D. (1986). *Children and television: A semiotic approach*. Stanford, CA: Stanford University Press.
- Huesmann, L. R., Lagerspetz, K., & Eron, L. D. (1984). Intervening variables in the TV violence-aggression relation: Evidence from two countries. *Developmental Psychology*, 20, 746-775.
- Huston, A. C., Greer, D., Wright, J. C., Welch, R., & Ross, R. (1984). Children's comprehension of televised formal features with masculine and feminine connotations. *Developmental Psychology*, 20, 707-716.
- Huston, A. C., & Wright, J. C. (1983). Children's processing of television: The informative functions of formal features. In J. Bryant & D. R. Anderson (Eds.), *Children's understanding of television: Research on attention and comprehension* (pp. 35-68). San Diego, CA: Academic Press.
- Huston, A. C., Wright, J. C., Fitch, M., Svoboda, H., & Truglio, R. M. (1992). *What children understand about news and fictional television*. Unpublished manuscript, University of Kansas, Center for Research on the Influences of Television on Children.
- Jaglom, L. M., & Gardner, H. (1981). The preschool television viewer as anthropologist. In H. Kelly & H. Gardner (Eds.), *New directions in child development: Viewing children through television* (pp. 9-30). San Francisco: Jossey-Bass.
- Klapper, H. L. (1981). Children's perception of the realism of televised fiction: New wine in old bottles. In J. F. Esserman (Ed.), *Television advertising and children: Issues, research, and findings* (pp. 55-82). New York: Child Research Service.
- Mandler, J. M. (1979). Categorical and schematic organization in memory. In C. R. Puff (Ed.), *Memory organization and structure* (pp. 259-299). San Diego, CA: Academic Press.
- Miller, P. (1987, November). *Measuring TV viewing in studies of TV effects*. Paper presented at the U.S. Office of Educational Research and Improvement Conference on Children and Television, Washington, DC.
- Morison, P., & Gardner, H. (1978). Dragons and dinosaurs: The child's capacity to differentiate fantasy from reality. *Child Development*, 49, 642-648.
- Morison, P., Kelly, H., & Gardner, H. (1981). Reasoning about the real-

- ities on television: A developmental study. *Journal of Broadcasting*, 25, 229-242.
- Pedhazur, E. J. (1982). *Multiple regression in behavioral research: Explanation and prediction* (2nd ed.). New York: Holt, Rinehart, & Winston.
- Pinon, M. F., Huston, A. C., & Wright, J. C. (1989). Family ecology and child characteristics that predict young children's educational television viewing. *Child Development*, 60, 846-856.
- Potter, W. J. (1988). Perceived reality in television effects research. *Journal of Broadcasting and Electronic Media*, 32, 23-41.
- Rice, M. L., Huston, A. C., & Wright, J. C. (1986). Replays as repetitions: Young children's interpretation of television forms. *Journal of Applied Developmental Psychology*, 7, 61-76.
- St. Peters, M., Fitch, M., Huston, A. C., & Wright, J. C. (1991). Television and families: What do young children watch with their parents? *Child Development*, 62, 1409-1423.
- Wright, J. C., & Huston, A. C. (1983). A matter of form: Potentials of television for young viewers. *American Psychologist*, 38, 835-843.
- Wright, J. C., Kunkel, D., Pinon, M., & Huston, A. C. (1989). Children's affective and cognitive reactions to televised coverage of the space shuttle disaster. *Journal of Communication*, 39, 27-45.

Appendix A

Items Measuring Perceived Reality: Favorite Programs and Characters

Factuality

1. *Fact*: "The stuff on (favorite show), did it happen in real life or just on TV?"

1 = just on TV, 2 = can't tell, 3 = real life.

2. *Magic window-job*: "Is (character with job on favorite show) still a (job title) when he/she is not on TV?"

1 = no, 2 = maybe, 3 = yes.

3. *Magic window-character*: "If you (name a problem that favorite show character often encounters) could (favorite show character) help you?"

1 = no, 2 = maybe, 3 = yes.

4. *Unscripted*: "Do the people on (favorite show) practice what they say/do before going on the TV?"

1 = a lot, 2 = kinda, 3 = not at all.

Social Realism

5. *Similarity to real people*: "Do the people on (favorite show) look/talk/do stuff like people around here?"

1 = not at all, 2 = kinda, 3 = a lot.

Appendix B

Items Measuring Perceived Reality: Cues for Reality

Factuality

1. *Fact*: "Was it about something that happened in real life or just on TV?"

1 = just on TV, 2 = can't tell, 3 = real life.

2. *Not pretend*: "Was it pretend stuff?"

1 = a lot, 2 = kinda, 3 = not at all.

3. *Unscripted*: "Did the people practice what they said and did before going on TV?"

1 = a lot, 2 = kinda, 3 = not at all.

Genre and Purpose

4. *News*: "Was it from news, or a TV movie, or some other kind of TV show?"

1 = movie or other, 2 = news.

5. *For learning*: "Was it for learning, for fun, or kinda in between?"

1 = fun, 2 = in between, 3 = learning.

6. *Serious*: "Was it serious, funny, or kinda in between?"

1 = funny, 2 = in between, 3 = serious.

7. *Adult audience*: "Was it for kids, grown-ups, or both kids and grown-ups?"

1 = kids, 2 = both, 3 = grown-ups.

Social Realism

8. *Similarity to real people*: "Did the people look, talk, or do stuff like people around here?"

1 = not at all, 2 = kinda, 3 = a lot.

Received May 23, 1992

Revision received July 19, 1993

Accepted July 19, 1993 ■