

## The Role of Television in Language Acquisition

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The conventional view among developmental psychologists is that television viewing does not contribute to a young viewer's language acquisition. That assumption is challenged. Evidence is presented that suggests that children can learn about language as they view television: (1) From age 2, children attend to television and view in an active, purposeful manner. (2) Some programs present dialogue in an attention-getting, content-redundant context. (3) Children can learn word meanings when viewing. (4) Children draw upon television as a source of verbal routines for their own play interactions.

One of the primary accomplishments of childhood is the mastery of verbal language. A sizeable portion of children's development is involved in the task, from toddlerhood to the late elementary grades. This age range corresponds to a time when children are fascinated with television. They spend a great deal of time viewing television; current estimates of the average amount of preschoolers' viewing are as high as 5 hr per day (Nielson, 1979).

These two phenomena of childhood have each attracted the scholarly attention of developmental psychologists. There is an extensive literature regarding children's language acquisition and a growing literature on children's television viewing. While both deal with children's mastery of the communication of messages, there has yet to be convergence on the topic of television's impact on children's language. Child language scholars have ignored television and investigators of children's television have overlooked language. It is the purpose of this paper to lay the first plank of a bridge between these two areas of study. The plank rests on two premises: One is that at least some of the dialogue presented in children's television programs is well suited to their linguistic competencies; the other is that children beyond toddlerhood do not require intensive 1:1 conversational interactions in order to add to their linguistic repertoire. Therefore, it is possible for them to learn at least some kinds of linguistic skills while viewing.

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## THE CHILD LANGUAGE LEARNER AND TELEVISION VIEWER: SEPARATE LITERATURES

The apparent oversight of language in the children's television literature is a reflection of dominant sociopolitical influences that directed researchers' attention elsewhere. During the 1960s societal concern with violence led to studies of the impact of televised violence on children's social behaviors (see Stein & Friedrich, 1975, for a review). The negative impact of violent content was balanced by findings demonstrating that viewing prosocial content could lead to positive changes in social behavior (e.g., Friedrich & Stein, 1973). The negative vs positive aspects of television viewing are evident in the two major research topics that emerged during the 1970s: (1) The study of advertizing and social stereotypes focused on possibly harmful consequences for child viewers; (2) research associated with the development of sophisticated educational programs, such as *Sesame Street*, emphasized television's potential for enhancing children's social and cognitive development. These social topics continue as viable and productive current areas of inquiry (cf. Murray, 1980).

During the mid-1970s a number of investigators independently began to turn their attention from television's content. Emphasis shifted from studying the effects of violence, social stereotypes, or advertising to the manner in which television presented that content. Children's attention to and understanding of production techniques, such as changes in visual perspectives, frequency of scene changes, and amount of action, are currently studied. Associated with the shift to different aspects of the medium (forms instead of content) were new questions regarding the child viewer. While social dimensions were not discarded, there was a new interest in children's cognitive processing while viewing. A group of recent studies coalesce around the issues of information processing and interpretation (see Rice, Huston, & Wright, 1982; Murray, 1980).

Throughout the television literature, the emphasis is on the visual properties of the medium (e.g., Postman, 1979; Salomon, 1979; Singer, 1980). Scholars, as well as lay persons, focus on the characteristic that distinguishes television from its predecessor, radio (a tendency repeated with the advent of each new communications technology (Reeves & Wartella, 1982)). So far the concern with the audio component of television is limited to gross distinctions, such as auditory vs visual (e.g., Hayes & Birnbaum, 1980) and dialogue vs nonlinguistic audio (Anderson, Alwitt, Lorch, & Levin, 1979; Huston, Wright, Wartella, Rice, Watkins, Campbell, & Potts, 1981; Welch, Huston-Stein, Wright, & Plehal, 1979). The dialogue, per se, remains just beyond current taxonomies of the medium.

During the time of emerging interest in children and television, new

issues appeared regarding children's language development. Chomsky (1965) provoked a new line of inquiry with his assertion that children cannot benefit from the language they hear because it is fragmented, ungrammatical, and otherwise unsuited to children's limited competencies. A number of investigators responded with detailed descriptions of mother-child and older child-younger child conversations. The evidence overwhelmingly documented that speech directed to children is often simplified or adjusted in ways that correspond to their linguistic competencies (Snow & Ferguson, 1977). The significance of this finding is its relevance to the nature/nurture controversy of the 1960s and 1970s, inspired by Chomsky. He argued that children come biologically equipped for language acquisition. To the extent that the environment provides language models appropriate for children, in a context supportive of a child's interest in learning language, the need to postulate innate mechanisms is lessened. Given this general context, two aspects of the interactions have been emphasized: the simplified nature of the language available to children and the possibility that the adjustments were adaptations to a particular child's abilities, a fine tuning of input to match the language processor (Cross, 1977).

The initial enthusiasm for the epistemological value of "motherese" has dampened with subsequent study. The idea of fine tuning has been disputed (e.g., Retherford, Schwartz, & Chapman, 1981) and the extent to which access to simplified speech is necessary for language acquisition is questionable (Bates, Bretherton, Beeghly-Smith, & McNew, 1982; Schieffelin & Eisenberg, in press). No one denies the potential helpfulness of the simplifications inherent in motherese. It seems, however, that neither special modifications nor linguistically fine-tuned direct interactions are *necessary* for language acquisition.

The growing reluctance to attribute strong causal effects to motherese has led to a differentiation among several issues. One is the basic question of how children learn language, if not in some 1:1, intensive, child-centered interaction. While the matter remains unresolved, it is evident that children are far more robust in their linguistic inference-making competencies than the early models of mother interactions would suggest. One possibility is that children can draw upon indirect observations of interactions between other people as a source for language learning (Rice, in press).

Another issue is how motherese may facilitate language acquisition, that is, how some features of mother-child interactions can support children's language mastery. This issue has two-pronged significance: one is that the identification of discourse features that have tutorial value allows for inference of the mental processes children employ when acquiring language, perhaps in all environmental circumstances; the other is the potential for application to circumstances with pedagogical purpose. For

example, facilitative effects may be rooted in such processes as referent matching (Hoff-Ginsberg & Shatz, 1982), a strategy that children could apply to indirect observations as well as direct interactions.

A third area of clarification evident in recent writings is recognition of the possibility of differential effects of environmental input for different dimensions of language. Some aspects of communicative competence may be more dependent on adult-child interactions than others, for instance, sociolinguistic conventions more than formal grammatical structures (Rice, in press). Another possibility is that environmental inputs can influence one aspect of language, such as vocabulary, which in turn contributes to mastery of another dimension, such as grammar (Hoff-Ginsberg & Shatz, 1982).

To recapitulate, during the 1960s and 1970s interest in the possible role of television in children's language learning was minimal. Attention was directed to adult-child conversations and it was widely assumed that carefully adjusted interactions were essential for language acquisition. Thus, the child language literature pursued a course of inquiry distant from the studies of children and television, while dominant social and content issues lead scholars of children's television toward other aspects of children's development.

However, a number of observations now suggest a link between the child as language learner and the child as television viewer. As is often the case, new evidence reveals associations that cross the arbitrary boundaries of academic enterprise. Two kinds of observations support the possibility of linkage: One is the nature of the language evident in children's television programs and the other is the potential receptivity of the child viewer.

### *The Verbal Language of Television*

What is the nature of the language evident in children's television programs? Given that dialogue is an intrinsic part of television's communicative codes, how does dialogue interact with other codes? While formal empirical descriptions of linguistic features have not been available, scholars have drawn some conclusions. For example, Clark and Clark (1977, p. 330) assert "on television, people rarely talk about things immediately accessible to view for the audience . . . they [children] hear rapid speech that cannot easily be linked to familiar situations." If such assertions are true, then we can dismiss verbal dialogue as some type of noise that the child viewer disregards (cf. Singer, 1980; Postman, 1979). However, that conclusion runs counter to our observations of how even very young children respond to programs designed for them. They often appear to be listening intently, an interpretation supported by their recall of information presented in dialogue (e.g., Watkins, Calvert, Huston-Stein & Wright, 1980).

Whether or not children attend to and make sense of dialogue hinges on the type of dialogue and how it is presented. A descriptive study (Rice, 1979) of six television programs popular among children indicates that dialogue is not always rapid, abstract, or overwhelmed by other visual or nonverbal codes. In fact, sometimes it is well adapted to children's linguistic competencies.

The programs sampled were: *Bugs Bunny*, *Road Runner*, *Electric Company*, *Fat Albert*, *Gilligan's Island*, and *Mr. Rogers*. This set includes animated, live, commercial, and educational shows, some of which were aimed at a preschool audience and others at an elementary-school-aged level. Program descriptors included a variety of detailed language measures (coded from verbatim transcripts), along with media-specific codes. The programs varied widely in their use of dialogue, ranging from an animated show with virtually no dialogue (*Road Runner*) to a live situation comedy (*Gilligan's Island*) with much dialogue, most of it about events not immediately present. One clear finding was that some shows, especially live educational programs (*Mr. Rogers* and *Electric Company*), adjust dialogue to suit their child audience. These adjustments are of several kinds: (1) Key linguistic items (words or phrases) are highlighted in repeated rephrasings, usually with the referents clearly indicated. The percentage of immediately apparent referents ranged from 37 to 70% across the five shows with dialogue. This finding can be compared with a description of *Sesame Street* reported by Anderson, Lorch, Field, and Sanders (1981). They analyzed 15 different *Sesame Street* programs which were broadcast over a 10-year period. Using a very conservative definition of concrete reference, they reported that 20% of the dialogue had concrete visible (or auditory) referents. (2) The educational show for preschoolers (*Mr. Rogers*) avoided novel words and nonliteral meanings while the one for older children (*Electric Company*) incorporated such vocabulary items. (3) Both educational shows often emphasized key words by presenting them in isolation, or with vocal stress.

Furthermore, in these programs dialogue is not usually or always overpowered by other production techniques. Instead, three patterns of feature distribution were observed: (1) One was a low incidence of dialogue in combination with many salient production techniques, a pattern characteristic of some popular cartoons (*Road Runner*, *Bugs Bunny*). (2) Another pattern was dialogue unadorned with any attention-grabbing production features. This was apparent in two opposing circumstances: simple dialogue aimed at preschoolers and complex, abstract dialogue used in a situation comedy. (3) The third pattern was dialogue supplemented with attention-getting media techniques, such as rapid cuts and visual special effects, found in an animated program aimed at elementary-aged children (*Fat Albert*).

In short, television programs with appeal to children vary widely in

their linguistic demands, from none, to simple dialogue adjusted for children, to unsupported complex verbiage. This conclusion is consistent with a description of the grammatical complexity of different types of television shows. Selnow and Bettinghaus (1982) report that grammatical complexity varies. The order, from simplest grammatical structures to most complex, is: Cartoons, family drama, educational shows, situation comedies, and action dramas. Another conclusion is that just as it is inaccurate to characterize all of television's linguistic messages as too complex or too cluttered for child audiences, it is equally erroneous to assume that the information coded in dialogue is always accessible to young children. Finally, programs differ in their reliance on visual or verbal presentation. While a few programs capitalize on the visual capabilities of the medium, most incorporate linguistic messages, and do so to a great extent.

#### THE CHILD VIEWER AS LANGUAGE LEARNER: THE ROLE OF TELEVISION IN LANGUAGE ACQUISITION

Can television viewing facilitate children's language development? Is it possible that the mixture of TV codes and content may occasionally be helpful to the child who is learning language?

The assertion that television could contribute to children's language acquisition is provocative in that it runs counter to prevailing assumptions. Investigators from both fields of inquiry have expressed skepticism regarding the possibility that television viewing may influence a child's language learning. Clark and Clark (1977, p. 330) sum up current opinion among many child language researchers (e.g., Hoff-Ginsberg & Shatz, 1982) in their assertion that "children seem not to acquire language from radio or television." Evidence in support of this conclusion includes: (1) Anecdotal observations of second language learning (Snow et al., 1976, p. 2), suggest that children do not profit from television viewing.<sup>1</sup> (2) Deficits in language development have been reported for some hearing children of deaf parents, even though those children watched television (Sachs & Johnson, 1976; Sachs, Bard, & Johnson, 1981).<sup>2</sup> (3) Nelson (1973) found a negative correlation between amount of television viewing and language acquisition for children of approximately 18 months. This relationship, she acknowledges, may be mediated by other variables, such as the mother's behavior, and influenced by the young age of the children. Carew (1981) reported nonsignificant correlations between TV watching at earlier ages and measures of receptive language at age 3 years.

Children's television researchers are also uncertain about television's role in language development. In a field study of three Canadian com-

<sup>1</sup> Yet *Sesame Street* is incorporated into many Japanese preschool classrooms as a means of teaching English (Ed Palmer, Children's Television Workshop, personal communication).

<sup>2</sup> See Schiff (1979) and Schiff and Ventry (1976) for counterevidence.

munities (one with no television initially, where testing was done before and after television was available, one with only public television, and one with both public and commercial television), Williams (in press) reported no differences in children's vocabulary (as measured by the WISC), although children's verbal ideational fluency apparently declined after the advent of television. This type of fluency was measured by a task in which the child was asked to name uses for a common item, such as a newspaper. Interestingly, there was no effect for another closely related task of figural ideational fluency, in which children were shown a line drawing and asked to say all the things the drawing could be.

Inconclusive results are evident in studies in which amount of viewing is correlated with general measures of children's linguistic performance. Singer and Singer (1981) correlated the amount of preschoolers' viewing (in a 2-week period) with a variety of measures of the children's spontaneous language in a preschool setting (obtained in four observations over 1 year). They report modest positive correlations between viewing and imperative sentences and exclamations; slight positive correlations between viewing and questions, future verbs, and adjectives (p. 54). Selnow and Bettinghaus (1981) correlated scores of preschool children's grammatical competence, using the Developmental Sentence Scoring procedure (Lee, 1974), with the number of hours they viewed certain categories of programs during 1 week. The overall correlations for all categories was negative, with a probability level of .08. The authors also correlated a weighted index of viewing hours according to category type (the categories were scored for DSS and varied in grammatical complexity) with each child's DDS score. This correlation was positive ( $P < .12$ ), suggesting a positive relationship between the child's DSS and the grammatical level of programs viewed. Thus, children with lower language ratings tended to view a greater number of hours of programs lower on the language scale, and vice versa. It is not clear how to interpret the findings of these two studies. A major unresolved ambiguity is the direction of influence. Children may like to watch TV programs with language levels similar to their own or programs with low language complexity may contribute to the language deficiencies of the child viewers.

Two aspects of television viewing have been identified as responsible for negative findings. One is that the dialogue of television is unsuited to the competencies of young children. As argued above, this assumption is refuted by the empirical description of TV language. Television viewing is also criticized for the lack of conversational interaction specifically tailored to a particular child (Sachs et al., 1976, 1981), under the assumption that conversational input is especially important for the acquisition of formal syntactic structures of English. Structured conversational interactions, however, may be of less import for language learning than previously thought. Furthermore, the emphasis on syntactic learning tends to

diminish the significance of other kinds of linguistic learning, such as word meanings and semantic relations. In fact, the older of two hearing children of deaf parents studied by Sachs et al. (1981) did learn words from television, and insofar as television was the primary source of oral language, TV viewing evidently accounted for the boy's ability to express himself in multiword utterances and carry on effective conversational interchanges.

In short, dismissal of television's possible contributions to children's verbal language learning is premature. The available evidence is inconclusive and the assumptions underlying its interpretation are questionable. Current interpretation of the available findings assume that the influence of the medium must be pervasive in nature, generalizing from accumulated viewing experiences to broad parameters of linguistic knowledge, such as total vocabulary, general grammatical competence, or propensity to verbalize experiences or existing knowledge. However, there is reason to believe that effects are to be found in specific, localized linkages between different categories of programs and particular kinds of linguistic knowledge.

What is there about children's viewing experiences that could contribute to linguistic development? Before addressing this question, we must clarify that the claim is not that television viewing, in and of itself, can account for the beginnings of language that usually appear during the time between 12 and 24 months. One reason is that children do not begin purposive, systematic viewing until between 2 and 3 years of age (Anderson et al., 1979; Carew, 1980). One can speculate that children under 24 months are interested in environmental stimuli with physically interactive potential, i.e., objects and persons to be touched, pulled, and responsive in turn. Even so, it is not safe to assume that television has no influence on infants. Babies as young as 6 months attend to television in naturalistic circumstances, differentiate audio and visual dimensions, and prefer the combination of sound-plus-picture (Hollenbeck & Slaby, 1979). Furthermore, they imitate the vocal rhythmic pattern of televised repetitive speech that is close to their own speech repertoire (Hollenbeck & Slaby, 1982).

Once children start to view purposively, their viewing is selective and active in nature (Anderson, 1979). Furthermore, their viewing increases rapidly with age. In home viewing circumstances, given that the children are in the room, 2-year-olds look at the set 40% of the time it is on, and 3 to 4-year-olds look 67% of the time (Anderson, 1983). At least some of the programs children view provide information consistent with their processing abilities. Contrary to those who depict young children's viewing as a rapidly changing experiential blur (e.g., Singer, 1980), programs tend to package information differentially, with several

possible packaging formats suitable for young children: simple dialogue combined with key production features; salient visuals, without dialogue, with simple, repetitive plots; more complex dialogue, content, and production features combined with built-in redundancies to facilitate the viewer's mental processing.

In fact, one of the most striking characteristics of some children's programs is the amount of redundancy (Rice, 1979). In *Bugs Bunny* and *Roadrunner* the visually presented plot lines are highly repetitive; in *Electric Company* and *Mr. Rogers* the verbally presented information is supported by focusing operations. A common type of focusing is a partial or complete repetition of a particular linguistic form (often accompanied by stress) in a new communicative and/or linguistic context. In an example from *Electric Company* one character said:

"You would want to *reach* for it. *Reach* for it, not see it."

The other replied:

"But if I can't see it, I can't *reach* for it."

A few utterances later the first character said:

"Ingrid, the line is:

'I can't *reach* it!' *Reach* it! *Reach*,

Ingrid, *reach*!"

and Ingrid responded: "*Reach* it. I'll get it."

Such repetitions and recastings sometimes continue for many instances. A viewer certainly can recognize the particular linguistic form, that is, can segment the targeted form out of the ongoing stream of speech. In some instances, the obviousness of the repetitions is worked into a humorous context. It seems reasonable to presume that such verbal techniques serve to draw attention to the linguistic forms themselves, a necessary first step for learning the meaning of the forms.

Furthermore, there is some indication that the tutorial potential of such focusing operations may extend beyond orienting the viewer to particular linguistic forms. In some programs the meanings of the words are often explicitly depicted, usually visually. This depiction of linguistic reference is sometimes highlighted by attention-maintaining visual production techniques, such as cuts to a closer focus or a different perspective. For instance, in the preceding example, Ingrid was shown reaching for a stick. The reaching motion was clearly depicted and repeated several times.

Such moment-to-moment co-occurrences of linguistically relevant information would be useful for the child viewer who is working out the meanings of words and word-to-word relationships. Hoff-Ginsberg and Shatz (1982) argue that similar patterns in mothers' speech to children can support the acquisition of words and syntax in two ways: (1) Such word/referent pairings can facilitate referent matching which reduces the task

demands for syntax analysis; (2) recastings of words, with minimal changes in linguistic structure, may suggest or clarify syntactic relationships for children.

Such production packages are not limited to explicitly educational programs. In the program descriptions discussed above, there were many instances of focusing in the segment from a situational comedy, where any educational intent is presumably fortuitous. While the rate of occurrence is certain to vary across shows, it is apparent that the child viewer encounters minipackages of televised information that constitute small lessons in the meanings and grammatical role of certain words.

There is evidence that children can and do learn from such viewing experiences. Meringoff, Vibbert, Kelly, & Char (1981) reported that children who viewed a televised story learned the names of the depicted objects. Evaluative research indicated that preschool children who viewed *Sesame Street* learned to name body parts and object relationships, such as amount, size, and position, along with learning to recognize letters, classify and sequence objects. During the second year of viewing, children who were encouraged to watch *Sesame Street* had higher scores on the Peabody Picture Vocabulary Test than did the control groups (Ball & Bogatz, 1970, 1972; Bogatz & Ball, 1971). These findings are consistent with the pattern of linguistic competencies demonstrated by preschool hearing children of deaf parents, children for whom television served as a primary source of linguistic information (Sachs et al., 1981). While not encompassing all of language, such linguistic and language-related learning is far from trivial.

In addition to referential meanings, another aspect of language, not included in the studies reported here, is a good candidate for television's tutorial role. That is the social dimension of language, the selection of a linguistic alternative suitable for the social occasion, such as formal talk for information dissemination and slang for conversations among peers. Television programs present a wider variety of social contexts and their associated language than is available to young children within their immediate environment. TV programs portray courtrooms, police stations, ethnic groups, foreign countries, sports events, informal interchanges among peers and families, job interviews, and so on, each with their associated jargon and socially defined rules for interaction. There is evidence that children do draw upon television for sociolinguistic formation. Watson-Gegeo and Boggs (1977) observed that Hawaiian children picked up verbal routines from entertainers on television that were subsequently incorporated into their own play routines. Newman and McCoy (no date) provide similar examples of TV-inspired verbal interactions among kindergarten children.

It is important to acknowledge that the probability that television

viewing will play a role in a particular child's linguistic learning is a function of several factors. At a macrolevel, television's utility for children's language learning will be affected by the amount and types of programs viewed, the child's general facility for learning language and access to other sources of experience, and the degree to which the viewed language corresponds to the child's primary language. Such macrolevel factors do not eliminate the reality of the microlevel "lessons" to be encountered within programs, but instead serve to mediate the usefulness of these opportunities.

Detection of particular effects will require a shift from the correlational designs evident in current investigations to carefully specified descriptive or laboratory studies. Correlational studies have proven to be troublesome in determining the contributions of mother's speech to children's language development (see Bates et al., 1982, for a thoughtful critique). Likewise, correlational data are inherently limited as a means of ascertaining if and what children can learn from television. Another issue to consider is the difference between two kinds of research questions: *can* vs *do*. While the *can* question is addressable in laboratory studies, the *do* question requires studies that take into account naturalistic viewing circumstances, such as the viewing situation itself (for example, the presence or absence of parents when viewing, or repeated viewing of favorite programs may affect whether TV *does* have an affect on language learning). The present level of concern is with the *can* question. (See Hornik (1981, pp. 207–210), for a discussion of methodological issues involved with the *do* question.)

In summary, there are several reasons why it is likely that children may learn about language as they view television: (1) From age 2, children attend to television and view in an active, purposeful manner. (2) Some programs package linguistic information in an attention-getting, content-redundant context. (3) Children can learn word meanings and closely related cognitive skills, such as categories of objects, when viewing. To the extent that referent matching facilitates grammatical acquisition, learning words while viewing has at least indirect relevance for syntactic rules. (4) Children draw upon television as a source of verbal routines for their own play interactions. The available counterevidence is limited by a concern with pervasive, global effects, sketchy data, and unsupported interpretations and assumptions.

Contrary to existing divisions in the scholarly literature, children's language learning and television viewing are not separate, isolated processes. Furthermore, exploration of their intersection may illuminate such unresolved issues as the nature of environmental input relevant to language acquisition and the dimensions of language amenable to indirect, observational learning. An additional incentive for testing the plank between the

two areas is the potential social value of positive findings. Specification of the linkage between program characteristics and children's language learning would allow for the development of programs designed to enhance language acquisition. Given the popularity of broadcast commercial television, the pedagogical import is beyond estimation.

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