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PRESCHOOL INDIVIDUAL DIFFERENCES AND PATTERNS
OF TELEVISION VIEWING

A Dissertation Presented

By

Stephen Ronald Levin

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September

1977

Psychology

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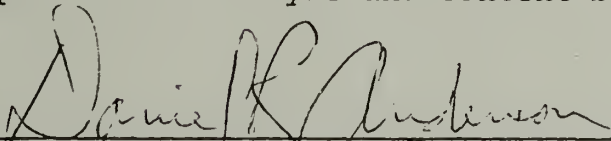
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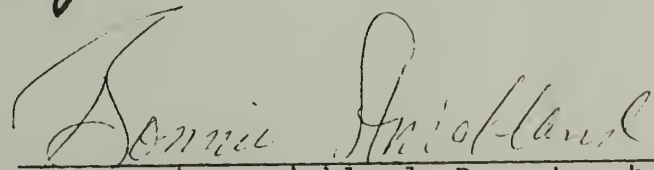
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Finally, to my wife Margaret, who painstakingly typed this manuscript, and without whose help, understanding, and encouragement I could not have succeeded, I extend my infinite thanks and love, and dedicate this dissertation.

ABSTRACT

Preschool Individual Differences and Patterns
of Television Viewing

(February, 1978)

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There is growing concern with the effect heavy television viewing has on cognitive, social and personality development. While there has been a great deal of research on the effects of specific TV content, concern with noncontent effects of heavy viewing has generally been of a speculative nature. The research reported examined patterns of TV viewing in the home and in a standardized situation and related those patterns to a variety of preschool individual difference traits.

Sixty children (3 - 5 years old) were observed on three separate occasions. A battery of structured and semi-structured tests designed to measure a variety of individual difference characteristics was administered during the first half hour of each session. The parent and child were subsequently brought to a comfortably furnished TV viewing room to watch a one-hour videotape of a sample of children's programming. The child's toy playing and television viewing behaviors, and parent-child interactions

were observed through a one-way mirror. While in the viewing room, the parent was given a questionnaire to complete.

The child's individual difference traits comprised the set of dependent variables. These included measures of curiosity, independence, dependence, vocabulary, innovative behavior, persistence, and sex-role development. There were three categories of independent variables--family demographics, parent and child home television variables, and laboratory television viewing variables. Measures which had low test-retest or interobserver reliabilities were dropped from further analysis. Preliminary analyses included 3(age) x 2(sex) analyses of variance of each variable. Intercorrelations between the independent variables were also examined for patterns of TV viewing behaviors.

Home TV viewing. The mean amount of the children's home TV viewing was 29 hours/week with a range of 17-35 hours. There were no age or sex differences. There was a strong relationship between SES and TV viewing such that parents and children of low SES viewed more TV at home, both in absolute amount and in percentage of free time. Parents who viewed a great deal also tended to take their children on fewer outings. The best predictor of how much TV the child viewed at home was how much the parent viewed.

Laboratory TV viewing. Older children viewed a greater percentage of the programming and spent a greater

percentage of time bodily oriented toward the TV than did the younger children. The younger children made more non-TV related verbalizations. Patterns of laboratory TV viewing were unrelated to patterns of home TV viewing.

The major analyses in the study were multiple regression analyses of the individual difference measures with the three sets of independent variables as predictors. There was a moderate correlation between sex-role development and patterns of TV viewing. Children who had greater knowledge of traditional sex-stereotyped activities generally had parents who took a laissez-faire attitude toward the children's television viewing. Children who engaged in more sex-typed toy play in the laboratory viewing room tended to be those children for whom TV watching was the most frequent daily activity and who would often engage in fantasy play based on TV themes. These relationships are consistent with previously reported findings and extend those findings to preschool children. Relationships between the remaining individual difference variables and television viewing were nonsignificant.

The results may be interpreted in terms of specific content effects and noncontent effects. Thus, the relationship of sex-role development and TV viewing may be due to the learning of specific content presented in children's programming. On the other hand, the lack of significant relationships between the other individual difference characteristics and television viewing lends no support to the notion that heavy

TV viewing, per se, has adverse noncontent effects on the preschool child.

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INTRODUCTION

The preschool years are thought by many to be a critical time in the development of the child (Bloom, 1962; Hunt, 1961; White & Watts, 1973). During this period, the child develops language, moves cognitively from a period of sensory-motor thought to a period of representational thought, and develops personality traits which tend to persist throughout adolescence and adulthood. Among the many milestones occurring during these years is the onset of "deliberate" television viewing, beginning around 2.5 years of age (Anderson & Levin, 1976; Schramm, Lyle & Parker, 1961). By age three, patterns of television use are clearly differentiated (Lyle & Hoffman, 1972). Children may watch television on a regular basis, have favorite programs, learn commercial jingles, or ask parents for products they see advertised.

Estimates of amount of time spent watching television by preschoolers have been reported to be between 15 and 20 hours per week (Anderson & Levin, 1976; Gadberry, 1974; Galst & White, 1976; Schramm, Lyle & Parker, 1961). Friedrich and Stein (1973) reported that in their sample of 100 preschool children the mean weekly viewing time was 32 hours (with a range of 5 - 88 hours). Further, they felt this was an underestimate! While exact estimates are

difficult to make, it is clear that although some pre-schoolers may not watch TV at all, others watch a great deal.

Individual difference correlates
of patterns of television viewing

Harold Stevenson (1972) recently wrote that "television viewing consumes large numbers of hours in the lives of preschool children, and an investment of this amount of time must influence their intellectual, social, moral, and personality development" (p. 365). If television indeed has positive or negative effects on young children, then presumably these should vary with the amount of time the children spend watching. Stevenson, however, could cite little evidence bearing on his hypothesis. His survey of the entire available literature from standard bibliographic sources yielded only 29 articles--less than half of which were empirical studies.

The converse of Stevenson's supposition may also be true--specific individual difference characteristics and behavioral tendencies of the children may influence the amount of time spent watching television. Hess and Goldman (1962), for example, presented a check list of personality characteristics to a group of mothers and had them mark one of three alternative categories for each item: (1) children who watch television a great deal, (2) children who watch

frequently, and (3) children who watch seldom. A clear pattern emerged. Children who watched a great deal were described as "lonely", "shy", "listless", and "pampered". At the other extreme, children who rarely watched television were characterized as "unable to concentrate", "irritable", "active", and "has many friends". Children who neither watched too much nor too little were described in the most positive terms--"obedient", "happy", "healthy", "well-rounded", "easy to get along with", and "intelligent". The mothers believed that both television addiction and avoidance are signs of an aberrant child. Similar concerns have been expressed by others (Garry, 1967; Maccoby, 1964; Noble, 1975).

There has actually been little research addressing either of these two hypotheses. Television research with young children has been oriented toward very few issues--demographic surveys of children's viewing habits; the effects of viewing on anti- and prosocial behaviors; and to a lesser extent, the influence of television on social knowledge (cf. Liebert, Neale, and Davidson, 1973; Stein and Friedrich, 1975). One reason for the restricted number of research topics has been the domination of observationa learning theory as a theoretical framework in which to conduct research. While the theory is one of the most developed, the domination of this viewpoint has limited the issues to effects of specific

content: how exposure to TV violence affects aggressive behaviors; how prosocial programming influences prosocial behavior; and how stereotyping on TV affects the young child's attitudes and social knowledge. Little attention, however, has been devoted to the effects of watching television, per se. Stein and Friedrich (1975) suggest that there has been little investigation of noncontent areas in part because they are not easily conceptualized within theoretical frameworks.

Although research on the general effects of watching television has been scant, the popular literature is replete with articles on the topic. Short on fact, this literature is long on glib opinion, value judgments, and unfounded speculation. Anderson, Levin, and Lorch (in press) recently investigated the charges, cited in at least eight articles in the popular literature, that rapid pacing in television programs produces hyperactivity, impulsivity, disorganized behavior, and/or shortened attention spans in preschool children. They found, however, that experimental manipulation of amount of pacing produced no discernible effects.

Pediatricians, psychiatrists, and clinical psychologists represent one source of speculation on the relationship between patterns of TV viewing and children's individual difference characteristics. Such speculations

are usually based on intuition or a few case studies. Teachers are another rich source of opinion. They often report personality differences between generations of students which they attribute to television. Whether these perceived differences are real or merely a reflection of the changing teachers is itself a matter of speculation. Finally, the increased social consciousness in this country in recent years has resulted in a plethora of television content analyses, documenting the sex-role stereotyping and lack of diversity found in much programming. While it has been assumed that these portrayals influence children's attitudes and behavior, research has been sparse. In general, the individual differences characteristics most often cited by clinicians, teachers, and social activists include curiosity, dependence, independence, creativity, intelligence, language acquisition, and sex-role development. The following is a review of that literature.

Curiosity. Most psychological assessments of curiosity in young children have been adapted from the definition developed by Maw and Maw (1966; 1970). The child is said to demonstrate curiosity if he or she:

- a). reacts positively to strange new elements in his/her environment by exploring or manipulating them,
- b). exhibits a need to know more about his/her environment;
- c). scans his/her surroundings seeking new

experiences, and/or

d). persists in examining and exploring stimuli in order to know more about them.

Banta (1970) reported great variability among preschool children in their approaches to novel objects and situations. These approaches ranged from complete withdrawal to thoroughgoing involvement; from a lack of verbal communication to a strategy of asking adults to clarify things. The children had implicit assumptions about the role adults play in relation to their explorations. Some children assumed adults owe them an explanation of the situation and would continually question and comment to the adult. Other children made no such assumptions and made little effort to get the adult to add meaning to the situation.

Presumably, the richer the home environment, the more opportunity a child has to develop a sense of curiosity. One early view of television was that it enriched the environment, exposing children to a variety of people, places, and things they might never experience on their own. Television was believed to be a "window to the world", stimulating children's curiosity about the world around them. (Frank, 1969; Garry, 1967; Schramm, Lyle, & Parker, 1961; Swenson, 1967). Rapid disillusionment with children's programming has led to a more pessimistic view of the medium, particularly prevalent among teachers. Many teachers

believe that children who spend a large portion of their time watching TV may be relying on television to spark direction and purpose (Morris, 1971). By limiting other activities in which children might be engaged, it is believed that television actually reduces the development of curiosity.

In fact, there has been little empirical support for either hypothesis. A survey of English elementary school aged children conducted in the mid-1950's concluded that television did not stimulate children to make things, enter competitions, visit places of interest, or develop new hobbies. On the other hand, the activities television viewing tended to displace were marginal and unorganized. Neither homework nor the reading of serious books, for example, were affected by television. Activities that television viewing has been reported to displace include household chores, sleep, and other mass media, particularly movies and comic books (Furu, 1962; Maccoby, 1951; 1964). Actually, the idea that television "displaces" other activities may be a misconception, at least among young children. The single behavior television viewing would be expected to displace is play, an activity often categorized with exploration and the expression of curiosity (Sutton-Smith, 1967). However, Lyle and Hoffman (1972) reported that among first graders, play was the dominant choice of activity during daylight hours and remained a strong second choice during the evening when television

dominated. Further, 81 percent of Lyle and Hoffman's first graders reported that they do other things at the same time they watch television, including playing, drawing, and even reading. Finally, both Schramm et al. (1961) and Himmelweit et al. (1958) surveyed teachers of children with and without television in the home. Neither study found any difference in initiative (curiosity) between viewers and controls as reported by the teachers.

In sum, there has been little evidence that television viewing is related to curiosity in young children. However, research bearing on the issue has been indirect. For example, no one has used an objective measure of curiosity. Nor has amount of viewing been used as an independent variable. Surveys have tended to use normative samples and have reported results in terms of the "average" child. If amount of television viewing indeed has a relationship with curiosity in young children, one would expect heavy TV viewers to engage in less activity, including play, and thus express less curiosity than children who watch little television.

Dependence and independence. Although dependence and independence are often thought of as opposite ends of a continuum, it is probably useful to view these traits as separate components of a child's behavior. The child moves from complete dependence in infancy to less dependence as he/she grows older. At the same time one is learning to be less

dependent, he/she is learning to be more independent. This is not to say that dependence and independence are unrelated. To be sure, diminished dependence is in part due to the development of independent reactions to situations which would have elicited more dependent reactions when the child was younger. As dependence declines and independence increases the child must strike a balance between the two. The child must learn when and how he/she is expected to be dependent and when and how he/she is expected to be independent. Watson and Lindgren (1973) speculate that the age of three to five is a period critical to the development of this optimal balance.

Beller (1955) examined dependence, independence, and the relationship between the two in preschool children. Dependence was defined along five dimensions: seeking physical contact, seeking proximity to parent, seeking attention, seeking help, and seeking recognition. Behaviors denoting independence included: taking initiative, overcoming obstacles, persistence, wanting to be active, and wanting to do things by oneself. In general, dependent behavior is characterized by reliance on someone else for assistance and assurance while independence is characterized by reliance on oneself.

One of the major indictments of television is that it encourages passivity, an extreme form of dependence, in young children (Demant, 1955; Glyn, 1956; Skornia, 1965).

Bruno Bettelheim, the famed child psychiatrist is particularly strident (quoted by Mayer, 1972):

Children who have been taught, or conditioned, to listen passively most of the day to the warm verbal communication coming from the TV screen, to the deep emotional appeal of the so-called TV personality, are often unable to respond to real persons because they arouse so much less feeling than the skilled actor. Worse, they lose the ability to learn from reality because life experiences are more complicated than the ones they see on the screen, and there is no one who comes in at the end to explain it all. The "TV child"... gets discouraged when he cannot grasp the meaning of what happens to him.... If later in life, this block of solid inertia is not removed, the emotional isolation from others that starts in front of the TV set may continue.... This being seduced into passivity and discouraged about facing life actively on one's own is the real danger of TV. (p. 128)

Similar incriminations have been made by Glynn (1956), based on case studies of psychotic and neurotic patients.

Empirical evidence relating dependence and independence to television viewing has been scant. Furu (1962) reported no differences in passivity, escapist tendencies, or nervousness in third and fourth grade children from homes with TV in comparison with controls who did not yet have television. The only empirical support for a relationship was provided by Murray (1972). He reported that among five and six year old males, there was a nonsignificant trend for heavy television viewers to be more physically active,

interpersonally passive, and less persistent while light viewers were less distractible and more extroverted.

Thus, support for the relationship between dependence and independence and amount of viewing is reduced to speculation based on the observation of a few children. In spite of this, the implication remains that amount of television viewing is positively related to dependency and negatively related to independence in young children.

Creativity. While there has been a great deal of research generated in the general area of creativity, a major problem is the lack of agreement on its meaning, and consequently its measurement (cf. Wallach, 1970). The consensus of researchers seems to be that creativity involves the ability to generate novel responses in dealing with a problem. Creativity tests are usually of the paper and pencil variety and may be timed or untimed. An example of one measure that has been used in one form or another is the "unusual uses" test. The subject is asked to think of as many different uses he or she can imagine for a specified object such as a newspaper, a cork, cardboard boxes, etc. Variables derived from this measure include number and/or uniqueness of responses. Often creativity is assessed on a battery of tests such as the one described above.

The speculation that heavy television viewing

has a negative effect on the child's imagination and creativity has come mainly from teachers (Morris, 1971). They suggest that while reading books or listening to the radio, the child's imagination is free to associate images with the words. With television, however, everything is presented in a concrete manner. However, the three major surveys of children and television (Furu, 1962; Himmelweit, Oppenheim, & Vince, 1958; Schramm, Lyle & Parker, 1961) found no difference in teachers' ratings of "imagination" in the viewer and control groups. Singer and Singer (1976) examined the effectiveness of a Misterogers' Neighborhood program in enhancing creativity (in the form of imaginative play) in preschool children. They too found little impact unless there was an adult present to focus the child's attention to the program and to encourage the child to imitate sequences. The only support for a negative relationship between television viewing and creativity comes from Noble (1970). He reported a decrease in imaginative play among middle-class six year olds after viewing a realistic aggressive film. However, imaginative play actually increased among working-class subjects. Although evidence of a relationship between creativity and television watching is minimal, the belief that the medium has a negative effect persists.

Intelligence and vocabulary. The relationship

between television viewing and cognitive functioning was the focus of the small amount of television research conducted during the 1950's. These studies, which typically compared school-aged children whose families had TV sets to school-aged children whose families did not have TV sets, used school achievement or IQ as their dependent variable. Several other studies correlated amount of TV viewing with school achievement. Six studies found no relationship of TV viewing with school achievement (Clark, 1951; Childers & Ross, 1973; Duggan, 1955; Greenstein, 1954; Himmelweit, Oppenheim & Vince, 1958; Ridder, 1963) and three found a negative relationship (Scott, 1954; Robinson, 1972; Witty, 1951).

The Schramm, et al. (1961) study concluded that for children between the ages of six and eight years, the brightest (based on school IQ scores) were the heaviest viewers, while the reverse was true for ages above ten years. In contrast, Lyle and Hoffman (1972a) found no clear relationship between intelligence and amount of viewing for first and sixth graders, while in tenth grade, the brighter students viewed less television than their classmates. Several other studies which also examined IQ and amount of television viewing among grade school children found no significant relationship (Childers & Ross, 1973; Murray, 1972; Witty, 1951).

Other studies have looked at vocabulary as a function of TV viewing. Schramm, et al. (1961) administered a vocabulary test to first graders from towns with and without television. In general, children from the TV town scored higher than their counterparts without TV. When heavy and light viewers within the TV town were compared, heavy viewers generally had larger vocabularies.

The studies relating cognitive functioning to TV viewing used school-aged children as subjects, and most were done at a time (1950's) when there was relatively little TV programming aimed at children. Those children, furthermore, had not been exposed to TV most of their lives. None of the studies examined the relationship of TV viewing to cognitive functioning in preschool children. It is instructive, therefore, that recently Nelson (1973) reported a negative correlation of early language acquisition and TV viewing, and White and Watts (1974) reported that less competent (socially and cognitively) preschool children were exposed to a far greater amount of TV than were more "competent" children.

In contrast to the research which seeks relationships between cognitive functioning and TV viewing, per se, there has been recent interest in the cognitive effects of specific content. The widely innovative and popular program, Sesame Street, represents a direct effort to teach cognitive

skills to preschool children. Extensive evaluations of the program were conducted by the Educational Testing Service over one- and two-year periods (Ball & Bogatz, 1974; Bogatz & Ball, 1971; 1972). ETS concluded that there was a direct relationship between amount of viewing of the program and gains on several measures of cognitive functioning, although the gains were less dramatic during the second year of viewing. Recent studies, however, have questioned the conclusions of ETS (Cook & Conner, 1976; Liebert, 1976). A reanalysis of the original ETS data suggests that amount of viewing was confounded with encouragement. The new analyses suggest that encouragement to watch the program (toys, books, and games dealing with the show were given to parents) caused both an increase in viewing and an increase in learning. LaPlante (1969) sought to determine whether preschool children acquire a sight vocabulary of words as a result of watching commercial television where these words are frequently shown and spoken. While some children in the study recognized some words, the rate was not as high as educational writers predicted.

By and large, therefore, most studies reveal no clear relationship between amount of television viewing and cognitive functioning. The few studies which found relationships lead to the general prediction that, although heavy viewers may learn specific concepts and vocabulary words

from specific programs, there is a negative relationship between intelligence and vocabulary and amount of television viewing by preschool children.

Sex role development. A prevalent criticism of television is the blatant sex-role stereotyping of characters appearing in both commercials and entertainment programs. A number of studies have documented this problem. A recent review (Courtney & Whipple, 1974) compared four analyses of women in TV commercials. Together, the four studies looked at a total of close to 5,500 commercials. While men and women appeared in commercials equally, women were more likely to be found in daytime commercials while men appeared more frequently during prime-time. Male announcers dominated all commercials, accounting for 87-89 percent of all voice-overs. In occupations depicted in commercials, women were overrepresented in the home while men were overrepresented as celebrities or in business/sales/management roles. The typical female product representative tended to be a young housewife performing duties in the home while her typical counterpart was older and told her what to do and why. Courtney and Whipple concluded that the world for women in commercials was a domestic one--either in the kitchen preparing food or in the bathroom concerning themselves with cleanliness. On the other hand, men were portrayed as authority figures in a wide variety of

occupations--as voice-overs, or giving advice, or demonstrating the product. When men and women appeared together in the home, men were the beneficiaries of the women's work, rarely contributing to household duties. In commercials of products significant to the family and where decision-making processes were involved, it was the male who was clearly the dominant sex.

Commercials on children's television programs do not appear to fare better. Males outnumber females three to one (Liebert, Neale & Davidson, 1973). Girls rarely appear in ads for action toys (boats, cars, planes, etc.) or in cereal ads which offer toys as premiums. Girls do dominate commercials for dolls and toy appliances (Liebert, Neale, & Davidson, 1973; Streicher, 1974). Male announcers are used in "male ads"; female announcers in "female ads". When both boys and girls appear together (board games, riding toys, etc.) the announcers are male.

Recent studies of children's entertainment programming (Busby, 1975; Sternglanz & Serbin, 1974; Streicher, 1974) showed not only an overwhelming majority of males to females depicted, but large behavioral differences. The latter two studies analyzed a sample of children's programming, the Sternglanz and Serbin study specifically including programs depicting females while Streicher concentrated more generally on cartoons.

Sternglanz and Serbin reported that while males were portrayed as either good or evil, there were virtually no evil females. Males dominated females in the areas of aggression, being constructive, and being rewarded for a behavior. Females were more deferent and were more likely to be punished or ignored for a behavior. When females did wield power, it was most likely magical power (four out of the five female title roles were witches). In Streicher's analysis of cartoons, she discovered that many had all male casts (particularly the chase-and-pratfall variety) while there were no all female cartoons. In the weekly series variety of cartoons, girls were represented but usually in stereotyped roles (dumb blond; quiet, reasonable redhead; brunette bossy grouch; super-genius black girl). In general, Streicher concluded that in children's programming females had fewer roles, were less active, less noisy, and had a much more juvenile demeanor than males. Mothers worked only in the house; males did no housework. In cases where females did demonstrate a skill (e.g., cheerleading), that skill was often duplicated by a dog or other pet. Males were not without their stereotypes, either. There were bumbling husbands, egomaniacal villains, and brawny men with no brains.

The logical step after documenting the existence of sex-role stereotyping on television is to

demonstrate its effect, particularly in children. In a recent study (Frueh & McGhee, 1975), "high" television watchers (K, 2nd, 4th and 6th graders) were shown to have had significantly stronger preferences for traditional same-sex sex-typed behaviors and activities than did "low" television viewers.

The measure of sex-typing in the study was Brown's It Scale for Children, a structured projective test in which the child chooses toys and behaviors that a presumably sexless stick figure (It) would prefer. Hypothetically, the child identifies with "It" and it is "It" rather than the child who takes the test. Several studies using this test have reported that boys are more sex-typed than girls. These results have been called into question when several investigators suggested that "It" may appear more masculine than neuter and thus bias results (Brown, 1962; Thompson & McCandless, 1970). Studies which eliminated this bias by concealing "It" in an envelope have yielded conflicting results (see Fling & Manosevitz, 1972). With the masculine bias of the test removed, Fling and Manosevitz reported that both boys and girls at ages 3--4 were sex-typed, but neither significantly more than the other. It is unclear whether Frueh and McGhee used the unbiased version of the test in their study (boys were more sex-typed than girls).

Exposure to non-stereotypic depiction of sex roles on TV apparently can affect young children's conceptions of sex appropriate behavior. In an experimental study on the effects of advertising on children, Atkin and Miller (1975) showed one group of children a commercial in which two boys were playing with racing cars. A second group saw the same commercial except that the actors were two girls. Female subjects in the second group were more likely to feel that playing with racing cars was an activity appropriate for girls. In fact, they were slightly more desirous of playing with the toys themselves.

Content research of children's programming and commercials has generally reached a consensus that males and females are presented in accordance with popular stereotyped views. If, indeed, television viewing affects young children's views of the world, one would expect heavy viewers to be more cognizant of popularly viewed sex-appropriate activities of males and females.

Age and sex. Age of the child is the most reliable individual difference characteristic related to amount of television viewing (cf. Liebert, Neale, & Davidson, 1973). In general, TV viewing appears to increase with age until adolescence when it begins to drop. Anderson and Levin (1976) reported the first data describing the

early development of attention based on actual observation of children. Seventy-two children, 1 - 4 years of age, were brought to a semi-naturalistic viewing room where they were videotaped while a one hour TV program was presented. They found an increase with age in percent visual attention to the television. Consistent with other studies, there was a similar increase with age in amount of home viewing based on parental reports. The correlation between attention to the TV in the laboratory and number of hours viewing TV in the home was $r = .33$, $p < .01$.

Sex of the child appears unrelated to amount of television viewing. Anderson and Levin (1976) found no sex differences in either patterns of TV viewing in the laboratory, or in amount of home viewing as reported by parents. Lyle (1972) reported no sex differences in amount of viewing in childhood, although girls watched slightly more than boys in adolescence. Friedrich and Stein (1973) also found similar viewing habits between boys and girls of preschool age. While there was no difference in amount of viewing, there was a tendency for boys to prefer cartoons more than girls did.

Family characteristics and patterns of children's television viewing

While age and other individual difference characteristics may be related to children's television

viewing behaviors, these relationships occur within the environmental context of the family. Characteristics of the family may thus represent a class of "third variables" mediating correlations between individual differences and patterns of preschool television viewing. Though there exists a large body of literature examining family influences on personality, social, and cognitive development (cf. Mussen, 1970), less is known about the family's influence on children's TV viewing habits. A child with older siblings, for example, may have less control over his/her viewing than the oldest or only child. Parents, too, represent potentially powerful influences over the child's viewing behavior. Some parents view TV programming in negative terms while others emphasize its potentially positive benefits. Still others are indifferent to its effects. While there has been little research examining the relationship of these particular variables to children's television viewing behaviors, there is some evidence of consistent mean group differences on other family characteristics. These include socioeconomic status, parental TV viewing habits, and parental interest in their children's television viewing.

Socioeconomic status. One of the most consistent findings in television research is that children from lower SES groups view more TV than children from higher SES groups. This relationship appears to hold whether the sample of

children represents a wide age range (Blood, 1961; Hollingshead & Redlich, 1958; Schramm, Lyle, & Parker, 1961) or is restricted to teenagers (Greenberg & Dominick, 1969), elementary school aged children (Friedman, 1957; Scott, 1956) or preschoolers (Friedrich & Stein, 1973). While no studies have reported a relationship in the opposite direction, two studies have found no significant differences between groups (Albert & Meline, 1958; Lyle & Hoffman, 1972a). Albert and Meline collected their data from self-reports of TV viewing by 56 fifth grade children, all of whom were classified as middle class (divided into "upper-middle" and "lower-middle" by the authors). The questionable reliability of the 10 year olds' time estimates as well as the restricted range of SES in the sample may represent sources of error in the study. While Lyle and Hoffman also found no significant differences in amount of viewing between sixth and tenth grade children from white and blue collar homes (in an attempt to replicate Schramm, Lyle & Parker, 1961), the trend was in the expected direction. In the present study, it was therefore hypothesized that there would be a negative relationship between amount of viewing by preschoolers and SES.

While SES is often a useful variable, it should be kept in mind that it is a rather global term representing only a shorthand index of a complex range of parental values

and socialization practices. It would therefore be instructive to examine specific parental attitudes and behaviors toward television in relation to their children's patterns of viewing.

Parental television viewing habits. There is evidence that parents may influence their children's TV viewing by acting as role models and/or by virtue of providing the opportunity to watch by watching the TV a great deal themselves (Stein & Friedrich, 1975). Friedrich and Stein (1973) reported that parents whose favorite programs consisted of a high percentage of violent shows (crime programs, westerns, horror shows, etc.) generally had preschoolers with similar program diets. There was no relationship, however, between parental viewing and children whose TV diet could be primarily characterized as children's programs including cartoons. Schramm, Lyle, and Parker (1961) reported a positive relationship between amount of parental television viewing and amount of viewing by the child (2 - 18 years old). The relationship held whether the child was compared to the father, the mother, or both parents combined. It was therefore hypothesized in the present study that amount of parental TV viewing would be positively correlated with amount of viewing by the preschooler.

Parental interest in the child's television viewing. Parental interest in their preschool child's television viewing may be manifest in several ways. Does the

parent have positive or negative opinions about television's influence upon children? Does the parent restrict amount of viewing? Does the parent encourage or discourage the child from watching certain programs? Does the parent watch TV with the child? Does the parent discuss the programs with the child? It is reasonable to expect that the more interest parents express in their children's television viewing, the more the parents will control that viewing and consequently, the less the children will watch.

A recent study of the distribution of maternal time spent engaging in various activities with preschoolers suggested that more time was spent watching TV with children than in teaching and reading activities combined (Goldberg, 1977). While Goldberg's sample was primarily middle class there has been surprisingly little in the literature to suggest strong class differences in parental interests in television viewing by the child. Hess and Goldman (1962) interviewed 99 mothers of children 5 - 10 years old to gain information about their attitudes and action about children's television viewing. They concluded that there was little social class difference in evaluation of children's programs, and that there was little difference in viewing patterns between children of different social classes. Indeed, patterns of viewing were determined by the preference of the child rather than the preference of the mother. The

survey literature suggests that less than half the parents exercise any control over their children's viewing (Albert & Meline, 1958; Barcus, 1969; Blood, 1961; Hess & Goldman, 1962). Of those parents who do exercise control, upper status parents more often attempt to control content, by suggesting programs for their child to watch (Albert & Meline, 1958) while lower status parents use TV as a reward or punishment (Blood, 1961). Blood (1961) suggests that class differences in amount of viewing by young children reflects more the availability of alternative activities than parental control of viewing time.

Measuring Patterns of Children's Television Viewing

Amount of home viewing. Exact estimates of amount of home television viewing must be regarded with extreme caution. Not only are they subject to influence by seasonal and situational variation but little is known about their reliability and validity.

Techniques of collecting home television viewing data originated with commercial television rating services. Early rating systems used a telephone interview technique--until the interviewers discovered they could elicit opinions about programs that never existed (Liebert, Neale & Davidson, 1973). The telephone interview was supplanted by interviewers in the home who used the previous day's television program listing to aid the respondent in recall. The financial

constraints brought on by having interviewers traveling to individual homes led to the self-administered diary questionnaire, the most widely used technique today for gathering TV viewing information (Mayer, 1970). In this technique, the respondent is required to keep a daily diary of TV programs each member of the family views. The diaries are often TV Guide-type program listings covering a one week period. At the end of the week, the diaries are either mailed to or picked up by the experimenter. One potential source of error in this technique is a lack of motivation on the part of the respondents. In one study the investigators collected several hundred diaries two days earlier than the families had been told. A large number were blank and presumably would have been filled out at the last minute; an equally large number had already been completed for the entire seven days (Mayer, 1970).

A variation of the diary technique necessitated by time constraints in many research studies requires a laboratory subject to estimate the amount of previous viewing for a one week period. The diary is completed on the basis of the programs the individual "typically" views or "can recall" viewing during the previous week. Reviewers of the literature have questioned such self-reports (Liebert, Neale, & Davidson, 1973; Stein & Friedrich, 1975). The study cited most often as demonstrating the unreliability of the diary technique was conducted by Bechtel, Achelpol, and

Akers (1972) for the Surgeon General's Report on Television and Social Behavior. The authors actually videotaped 20 families for six days on a continuous basis to examine the relationship between actual television viewing and self-reports. They concluded that families consistently over-reported the amount of time they watched, whether the questionnaire was in diary form, previous day report, or previous five day report. Although this research has been cited as a "careful, complete, and reliable comparison of diary reports..." and actual viewing (Liebert, Neale & Davidson, 1973, p. 116), questionable methodological procedure make the results difficult to interpret. For example, the raters scored the videotapes for "watching--non-watching" on a 2.5 minute interval basis while the families recorded "watching--non-watching" in the diaries on a 15.0 minute interval basis. The difference in record keeping necessitated a more gross measure for the families, increasing the probability of overestimation. A second problem occurred in the analysis of the previous five day questionnaire. Videotape equipment breakdown resulted in a large amount of missing viewing time over the five days (in the case of one family, nearly 50 percent). Instead of working only with the available data, the investigators extrapolated viewing time from the videotape-diary results. Although they concluded that families overestimated previous five day viewing time, a reasonable alternative is that the experimenters actually

underestimated the families' viewing time. Finally, even if one disregards the methodological errors of the study and accepts the authors' conclusion that self-report measures are consistently overestimated, the rank order of viewers could remain the same. In most television research, interest is in relative amount of viewing, i.e., heavy and light viewing; not absolute amount of viewing. Bechtel, et al. never reported and presumably never computed the correlation between amount of actual viewing and amount of reported viewing, a crucial statistic if their results are to have any bearing on future research.

In spite of its unknown reliability and validity, the parentally administered questionnaires remain the most efficient and widely used method of collecting home television viewing data. In the present study, two different forms of the questionnaire were used in order to obtain reliability estimates. Validity estimates, obtained by observing the child in the home were, however, beyond the scope of the present research. Such data should therefore be viewed with extreme caution.

Laboratory viewing. The standardized laboratory situation may provide additional data about the child's individual viewing style. Anderson and Levin (1976) found that measures of laboratory TV viewing, including percent visual attention to the TV, number of visual orientations to

the TV, and mean duration of a visual orientation, all had low but highly significant correlations with measures of home TV viewing as reported by the parent. Sproull (1973) also reported significant correlations between measures of visual attention in a laboratory TV viewing situation and measures of TV viewing in the home. In addition to measuring visual attention, she obtained measures of the children's verbal and non-verbal modeling behaviors. As expected, these measures were significantly correlated with visual attention.

While the validities of both laboratory viewing and the parental TV questionnaire remain formally untested, the significant correlation between the two suggests both measures may indeed be related to the child's actual TV viewing behavior in the home. In the present study, laboratory measures of television viewing and television-related behaviors were collected for each child over three sessions, thus enabling estimates of reliability. Validity estimates, obtained by correlating lab viewing with viewing in the home, were unfortunately beyond the scope of this study.

OVERVIEW

Noncontent influences of television on cognitive, social, and personality development are, for the most part, in a stage of speculation. Stein and Friedrich (1975) suggest that there has been little investigation of non-content effects in part because they are not easily conceptualized within theoretical frameworks. However, an alternative to research based on a simple theory is descriptive research. Indeed, descriptive research is a necessary activity, preliminary to theory development. A descriptive research strategy seeks what is, rather than predicts relations to be found. Kerlinger (1964) suggests that such research has three purposes: to discover significant variables in the field situation, to discover relations between variables, and to lay groundwork for later, more systematic and rigorous testing of hypotheses. The present study was designed with those purposes in mind.

The specific objective of the present study was to examine the relationship between patterns of television viewing and a number of individual difference characteristics of preschool children. The children came to the laboratory on three separate occasions. The first twenty minutes of each session was used for the administration of structured and semi-structured tests. Following testing, the parent and child were brought to a laboratory television viewing

room to watch a one hour videotape of a variety of children's programming. The child was observed through a one-way mirror to obtain further measures of individual differences and to assess television viewing style in a standardized situation. Family demographics and information about the child's home television viewing experience were obtained from parental questionnaires.

METHOD

Subjects

The City birth record of Springfield, Massachusetts was the source of potential subjects. Letters describing the study were sent to parents of children 36, 48, and 60 (\pm one) months of age (Appendix A). Within a week, telephone calls were made to recipients to find parents interested in the study. Sixty children participated in the study--ten males and ten females in each age category. All children in the study were white and primarily middle class. Participants were paid \$4.00 per visit to cover the cost of transportation and any inconvenience incurred.

General Procedure

The parent and child came to the University of Massachusetts Child Study Center in Springfield on three separate days. Each session lasted approximately an hour and a half of which the first 20 minutes was devoted to testing followed by an hour of TV viewing.

After explaining to the parent the general nature of the study and the tests to be administered in that particular session, the parent and child were brought to the testing room. The parent was permitted in the room, but was requested not to prompt or encourage the child and

to keep all conversation to a minimum. The testing room was furnished with a small table with the child seated on one side and the tester opposite. The parent was seated behind the child.

Upon completion of testing, the parent and child were brought to the television viewing room. The room was 10' x 16' (3.05m x 4.88m) with wall-to-wall carpeting and was furnished with pictures on the wall, a couch and chair, an end table with magazines, a floor lamp, two open shelf cabinets, and a 19" (48.3cm) Sony color television set (model CVE-1920). Toys appropriate to preschoolers were placed on the open cabinet shelves and were readily available to the child. Coffee and tea for the parent and juice and crackers for the child were also provided.

Each parent was given a questionnaire to complete during the one hour viewing session and instructed to act as "natural" as possible. The parent was told that observers would be watching through a one-way mirror to record the child's viewing behavior. The experimenter then left the room and the door was closed. After a five minute period, the one hour videotape began. Three videotapes containing a variety of children's programming and commercials were used over the course of the study; all children saw all three tapes.

Test Battery

The schedule of tests over the three sessions is shown in Table 1.¹ Tests came from a variety of sources: the Sex-Role Knowledge Test was designed specifically for this study; the Peabody Picture Vocabulary Test is commercially available (Dunn, 1975). Others came primarily from the Cincinnati Autonomy Test Battery (Banta, 1970) and the Educational Testing Service evaluation of the Head Start Program (Shipman, 1972).

Insert Table 1 about here

Administration of the tests was done by one person. Scoring of the tests was done by the tester and, when feasible, by an observer who watched from behind a one-way mirror. Interobserver reliabilities were obtained by calculating Pearson correlations between the two sets of scores. The Sex-Role Knowledge Test and Replacement Puzzle Test, whose test-retest stabilities were unknown, were administered twice in order to obtain these statistics. The following are brief descriptions of the tests. Detailed descriptions of the test administration and scoring procedures are found in Appendix B.

TABLE 1
SCHEDULE OF TESTS AND THEIR TIME REQUIREMENTS

<u>Day</u>	<u>Test</u>	<u>Estimated Time (min.)</u>
1	Task Initiation Test	2
	Curiosity Box Test	5
	Sex-Role Knowledge Test (1)	5
2	Peabody Picture Vocab. Test	10
	Replacement Puzzle Test (1)	5
	Dog and Bone Test	5
	Risk Taking Test	2
3	Stephens-Delys Locus of Control Test	10
	Sex-Role Knowledge Test (2)	5
	Replacement Puzzle Test (2)	5
	Delay of Gratification Test	2

Task Initiation Test. (Banta 1970) This was the first test given in the first session, when the surroundings of the Child Study Center and tester were still strange to the child. The child was seated at the testing table with the tester opposite. A number of brightly painted wooden animals and shapes were on the table. With no instructions from the tester, the child was given two minutes in which to initiate activity with the objects. The Task Initiation Test score was used as one measure of the child's independence.

Curiosity Box Test. (Banta, 1970) The "curiosity box" was a brightly painted wooden box with latches, hinges, switches, peepholes, etc. The child was given five minutes to play with the toys while the tester scored curiosity in terms of exploratory behavior and verbalizations.

Sex-Role Knowledge Test. The Sex-Role Knowledge Test was designed for the present study to measure the child's knowledge of sex-typed behavior in contrast to actual sex-typed behavior. The child was given a sheet of paper containing six drawings--a boy, girls, man, women, boys and girls together, and men and women together. A series of 30 drawings of objects and activities were then shown and the child was asked to match the person or persons to the object or activity. The Sex-Role Knowledge Test was given the first and third sessions in order to obtain test-retest reliability.

Peabody Picture Vocabulary Test. Three scores were obtained from administration of the Peabody. The PPVT raw score was used as an estimate of the child's vocabulary size while the PPVT MA score and IQ score were used as estimates of the child's intelligence.

Replacement Puzzle. (Banta, 1970) The Replacement Puzzle was administered in order to measure persistence, one component of independent behavior. The task involved the solution of a puzzle which could be solved in one way only and was designed so that its solution was improbable in a three minute period. During this time, the child was observed for indications of "task oriented behavior carried out in an independent and persistent fashion".

Dog and Bone Test. (Banta, 1970) The Dog and Bone Test, a measure of creativity, was a fixed problem with an infinite number of solutions. The child was given a brightly colored test board with a wooden house affixed at each corner. At one end of the board was a small plastic dog and directly opposite, at the other end, was a wooden bone. After showing the child two different paths the dog could take to get to the bone, the child was required to demonstrate additional paths. Only novel solutions were scored. Solutions which merely replicated the demonstrated paths or were repeats of the child's own previous solutions were not given credit.

Stephens/Delys Locus of Control Test. Stephens/Delys, 1973). The research design originally included a measure of locus of control. This test was the first such measure designed for preschool children. The test employed a free response format using questions of a simple nature. When the study was about one-third complete, it was realized that the measure would be of questionable value. Virtually none of the three year olds could grasp the intended nature of the questions. Most never said a word, even after extensive rephrasing of the questions. About one-third of the four year olds exhibited similar responses. Consequently, locus of control was dropped from the analyses.

Risk Taking Test. (Shipman, 1972). Risk taking has been hypothesized to be related to locus of control (Shipman, 1972). Although the locus of control test was eliminated, it was decided to keep the Risk Taking Test since it took less than two minutes to administer. In addition, the child got to take home a "prize". The test simply consisted of presenting the child with a choice between a certainty--a bright shiny penny--and a paper bag which might contain five pennies or none.

Delay of Gratification Test. (Shipman, 1972). The ability to delay gratification has been shown to be related to an internal locus of control (Bialer, 1961; Strickland, 1972; Walls and Smith, 1970). This measure was kept in the test battery for reasons similar to the Risk Taking Test; it was simple and quick to administer and the

child received a "prize". The child was simply given a choice between a small candy he or she could have "right now" and a larger candy which he or she could have only "when it's time to go home".

Laboratory Viewing Room

The viewing room permitted the observations of the child in a semi-naturalistic situation in order to obtain measures of television viewing behaviors, play behaviors, and parent-child interactions.

Open Field Measure. The first five minutes the child and parent were alone in the viewing room (with the TV off) constituted the Open Field Test. Two observers viewed from behind a one-way mirror. Whenever possible, a third observer was used to obtain interobserver reliability. Observer 1 recorded with a stop watch the cumulative time in seconds that the child spent within three feet of the parent. The score could potentially range from 0 to 300 seconds and was used as a measure of the child's dependence. Observer 2 measured play persistence by recording with a stop watch the length of each sustained play behavior. Toy play began when the child touched the toy and ended when he or she left it for another toy or activity. Recorded play behaviors of less than five seconds were considered to be "cursory examinations" and were not measured as sustained play. When a child played with two or more toys simultaneously, the behavior was judged

continuous as long as play continued with at least one of those toys. Two persistence scores were obtained from the Open Field Measure. The longest play behavior exhibited by the child gave an indication of the child's potential attention span. The mean duration of play reflected the child's actual play behavior--whether he or she flitted from toy to toy or engaged in long periods of play. The Open Field Measure was given in each of the three sessions, and session-session reliabilities of the measures were obtained.

Television Viewing Measures. At the conclusion of the five minute Open Field Measure, the videocorder was turned on and the one hour videotape of children's programming began. Observer 1 rated visual attention and body orientation to the television while Observer 2 rated the child's involvement with the TV program material. A third observer was used to obtain interobserver reliabilities of these measures.

When Observer 1 judged the child to be visually oriented to the TV, he depressed a silent handheld push-button which put a signal, via an audio oscillator, on an audio tape. The audio tape thus contained an intermittent signal corresponding to the child's intermittent visual orientations to the television. The audio tapes were then fed into a small computer programmed to record the onset and offset times of the signals. These data were manipulated to obtain the child's percent attention to the TV material, the longest visual orientation, the mean duration of a visual

orientation and the rate of visual orientations (orientations/minute).

Observer 1 also rated body orientation to the TV. When the child was judged to be orienting his or her body (not just eyes) toward the TV set, the observer started a handheld stopwatch. When the child oriented away from the set, the stopwatch was stopped. In this manner, a cumulative measure of the time the child spent oriented toward the television was obtained.

Often children vary in their amount of involvement with television. Some children may verbalize to TV characters, imitate behavior they see in the program, dance to music, etc., while others may sit perfectly still while they are watching. The richness of these behaviors is lost when visual orientation is used as the sole measure of laboratory viewing. For this reason, an attempt was made to measure involvement with the TV. The child's television viewing behaviors and play activities were recorded on a checklist by Observer 2. (A sample of the checklist is shown in Figure 1.) The checklist provided the following scores:

1. Child TV verbalizations: number of discrete verbalizations made that were television referenced.
2. Child non-TV verbalizations: number of discrete verbalizations made that were not television referenced.
3. Parent TV verbalizations: number of discrete

verbalizations made by the parent with reference to the television.

4. Parent non-TV verbalizations: number of discrete verbalizations made by the parent that were not television referenced.

5. Arousal: number of discrete instances of diffuse excitement, exclamations, dancing, etc., because of something the child saw on television.

6. Imitation: number of discrete imitations of someone or something the child saw on television.

7. Eating: duration of time the child spent eating while in the viewing room.

8. Behavior within three feet of the mother: duration of time the child spent within three feet of the mother.

Frequency estimates of discrete behaviors were made by placing a checkmark in the appropriate time interval for each behavior observed, i.e., more than one checkmark could be placed within a given interval. Frequency estimate scores were obtained by summing the number of checkmarks over the one hour period. Behavior durations were estimated by placing only one checkmark in the appropriate time interval. If the behavior continued into consecutive intervals, the checkmarks were connected with a vertical line. When the behavior ended, the last checkmark was underlined.

In a string of checkmarks, each internal checkmark represented 60 seconds, while the end checkmarks represented 30 seconds duration of the behavior. Isolated checkmarks were also scored as 30 seconds each. The total duration score was obtained by summing the individual checkmark durations over the entire one hour session.

Observer 2 also used the checklist to score toy play behavior duration. In pilot work a large selection of toys were rated by 15 graduate students and faculty in response to the direction "Rate each toy as male, female, or neutral, according to how you believe they are perceived by the general public". Only those toys scored in a particular category by 80 percent or more of the raters were considered for the study. Fifteen toys were placed in the viewing room--five classified as "male" (pick-up truck, dump truck, cowboy and Indian figures, tools, and a set of small cars), five "female" (tea set, nursery set, baby doll, iron, and cleaning set), and five "neutral" (building blocks, teddy bear, crayons and coloring books, toy telephone, and a Fisher-Price houseboat). The checklist was scored for the following toy play behaviors:

1. Sex-typed play: an index ranging from -1.00 to +1.00 representing the amount of time the child spent playing with sex appropriate and sex-opposite toys. The index was computed from the following formula: Sex-typed play =
$$\frac{(\text{total time spent with sex appropriate toys} - \text{total time spent with sex opposite toys})}{\text{total time spent in toy play.}}$$

2. Mean play: the average duration of a continuous behavior. This score was considered to be a measure of the child's persistence.

3. Long play: the longest duration of a continuous play behavior. This score was used to estimate the child's potential for persistent behavior.

4. Number of toys: the total number of different toys the child played with during the first session in the viewing room. Number of toys was considered to be another measure of the child's curiosity.

Insert Figure 1 about here

Parent questionnaire. The parent questionnaire was divided into three parts with each part given on a separate day. In addition to demographic information, the questionnaire was used to obtain home television viewing data including parental estimates of the amount of time the child and his parents spent at home viewing television, parental attitudes toward television, the child's interest in television relative to his/her other activities, and information about parent-child interactions in the home. A sample of the questionnaire and its scoring procedures is found in Appendix C.

INVOLVEMENT DATA SHEET

Child's name _____ Age _____

Date _____ Test visit No. _____ Tape _____

Observer _____

Observer										Male										Female										Neutral									
Min	Vocal non-TV child	Vocal non-TV par	Vocal TV child	Vocal TV par	Arous TV	Imit. TV	Min	pic-up tr	dump tr	cowb-Ind	tools	cars	tea set	nurs set	doll	iron	clean set	blocks	bear	color mat	phone	boat																	
1							1																																
2							2																																
3							3																																
4							4																																
5							5																																
6							6																																
7							7																																
8							8																																
9							9																																

Figure 1. Sample page from 60 minute score sheet for viewing room behaviors while the television is on.

Data Reduction and Consolidation

The scoring procedures described resulted in over 150 measures. Variables which had nonsignificant inter-observer or test-retest reliabilities were dropped from further analysis. Measures which were repeated in each of the three sessions of the study were combined to produce either a grand mean or a grand frequency count. Different measures of conceptually related behaviors which were significantly correlated were either combined (e.g., the two questionnaire estimates of an individual's home TV viewing) to produce a single variable, or one variable was dropped in favor of the other (e.g., father's age and mother's age were highly correlated and mother's age was chosen for further analysis). The resulting reduced set of 48 variables is shown in Table 2.

Insert Table 2 about here

Data Analysis

The core set of variables were divided into four conceptual categories--the child's individual difference

TABLE 2

DESCRIPTION OF VARIABLES

Measures	Abbreviation ^a	Interobserv. ^b Reliability	Test-Retest ^{bc} Reliability
Demographic Variables			
1. Age of child in years.....	Age (Q)		
2. Sex of child (1 = male, 2 = female).....	Sex (Q)		
3. Total number of siblings.....	Totlsibs (Q)		
4. Mother's age in years.....	Momsage (Q)		
5. Mother's education in years.....	Momseduc (Q)		
6. Hollingshead's Two Factor Index of Social Position.....	HR (Q)		
7. Child Affluence Index--high scores indicate high affluence.....	Kidgot (Q)		
8. Number of outings.....	Outings (Q)		
9. Rank order of amount of time the child plays alone relative to his other daily activities (high scores = high rank).....	Rkplayse (Q)		

TABLE 2
(continued)

Measures	Abbreviation ^a	Interobserv. ^b Reliability	Test-Retest ^{bc} Reliability
10. Parent-child Interaction Index (high scores = high interaction).....Interact (Q)			
Home Television Variables			
11. Presence of color television in the home (1 = no, 2 = yes).....Colortv (Q)			
12. Number of hours per week the TV is on.....Tvonweek (Q)			
13. Number of hours per week the TV is available to the child to watch.....Kidtvavl (Q)			
14. Number of hours per week the child spends viewing television.....Childview (Q)			
15. Relative amount of free time the child spends viewing TV (variable 14/variable 13).....Childratio (Q)			
16. Number of hours per week the TV is avail- able to the mother to watch.....Momtvavl (Q)			
17. Number of hours per week the mother spends viewing televisionMomview (Q)			

TABLE 2
(continued)

Measures	Abbreviation ^a	Interobserv. ^b Reliability	Test-Retest ^{bc} Reliability
18. Relative amount of free time the mother spends viewing TV (variable 17/variable 16)..Momratio (Q)			
19. Number of hours per week the TV is available to the father to watch.....Dadtvavl (Q)			
20. Number of hours per week the father spends viewing television.....Dadview (Q)			
21. Relative amount of free time the father spends viewing TV (variable 20/variable 19).....Dadratio (Q)			
22. Does the child usually view TV alone or with others (1 = alone, 2 = with others).....Viewwith (Q)			
23. Is child permitted to change channels on the television by himself (1 = no, 2 = yes).....Chngchnl (Q)			
24. Parent TV Interest Index (high scores indicate high interest).....Partvint (Q)			
25. Parent TV Attitude Index (high scores indicate positive attitude).....Partvatt (Q)			
26. Child TV Interest Index (high scores indicate high interest).....Kidtvint (Q)			

TABLE 2
(continued)

Measures	Abbreviation ^a	Interobserv. ^b Reliability	Test-Retest ^{bc} Reliability
Laboratory TV Viewing Variables			
27. Percent of time visually oriented to the TV screen.....	Pctlab (D)	.92	.51 ^d
28. The child's longest visual orientation to the TV screen (seconds).....	Longfix (D)		.31 ^d
29. The average length of the child's visual orientations to the screen (seconds).....	Meanfix (D)		.44 ^d
30. The average number of visual orientations per minute.....	Fixmin (D)		.54 ^d
31. The percent of time the child's body was oriented toward the TV.....	Bodyornt (D)		.34 ^d
32. The total number of discrete verbalizations by the child with ref. to TV programming...	Kidtlktv (D)	.95	.48
33. The total number of discrete verbalizations that were not TV referenced made by child..	Kdtklntv (D)		.86

TABLE 2 (continued)

Measures	Abbreviation ^a	Interobserv. ^b Reliability	Test-Retest ^{bc} Reliability
Individual Difference Variables			
34. The total amount of time in seconds the child spent within 3 ft of mother (Open Field Test).....	Threeft (O)	.99	.53
35. Task Initiation Test score.....	Taskinit (T)	.98	
36. Curiosity Box activity score.....	Cbexplor. (T)	.79	
37. Curiosity Box verbalization score.....	Cboxverb (T)		
38. Peabody Picture Vocabulary Test mental age score..	Ppvtma (T)		
39. Peabody Picture Vocabulary Test IQ score.....	Ppvtiq (T)		
40. Peabody Picture Vocabulary Test number of correct responses.....	Correct (T)		
41. Replacement Puzzle score.....	Puzzle (T)	.80	.55
42. Dog and Bone Test score.....	Dognbone (T)		
43. Risk Taking Test score (1 = no bag, 3 = bag on first trial).....	Risktake (T)		

TABLE 2 (continued)

Measures	Abbreviation ^a	Interobserv. ^b Reliability	Test-Retest ^{bc} Reliability
44. Delay of Gratification Test score (1 = immediate, 2 = delay).....	Delay (T)		
45. Number of different toys played with during session one.....	Playone (O)	.93	
46. Sex-Role Knowledge Test score.....	Sexrole (T)		
47. Sex-typed play behavior score.....	Sexplay (O)		
48. Maturity Index.....	Maturity (Q)		

^a The letter in parentheses after the variable refers to the source of the data

Q = parent questionnaire

O = viewing room observation

T = structured test

^b $N = 60$; $r_p < .05 = .25$; $r_p < .01 = .29$; $r_p < .001 = .33$

TABLE 2 (continued)

^c Test-retest reliabilities are partial correlations controlling for age.

^d Correlations were computed tape to tape, rather than day to day.

measures, family demographics, home television variables, and laboratory viewing variables. Preliminary analyses of the variables were then conducted. Pearson product moment correlations were calculated to discover individual relationships among variables within a category and between categories. A 3 (age) x 2 (sex) analysis of variance was performed for each variable. Where age may have been a mediating variable in a significant correlation between two variables, the correlation was computed with age partialled.

The major data analyses in this study were multivariate analyses of the child's individual difference measures. A principal-components factor analysis was made on each set of variables to discover those variables which clustered together. Factor analyses with one varimax rotation resulted in four individual difference factors, four family demographic factors, five home television factors, and three laboratory viewing room factors. Relationships between the individual difference factors and variables and the three categories of independent factors and variables were then analyzed by stepwise multiple regression. A flow chart illustrating the data analysis procedure is shown in Figure 2.

Insert Figure 2 about here

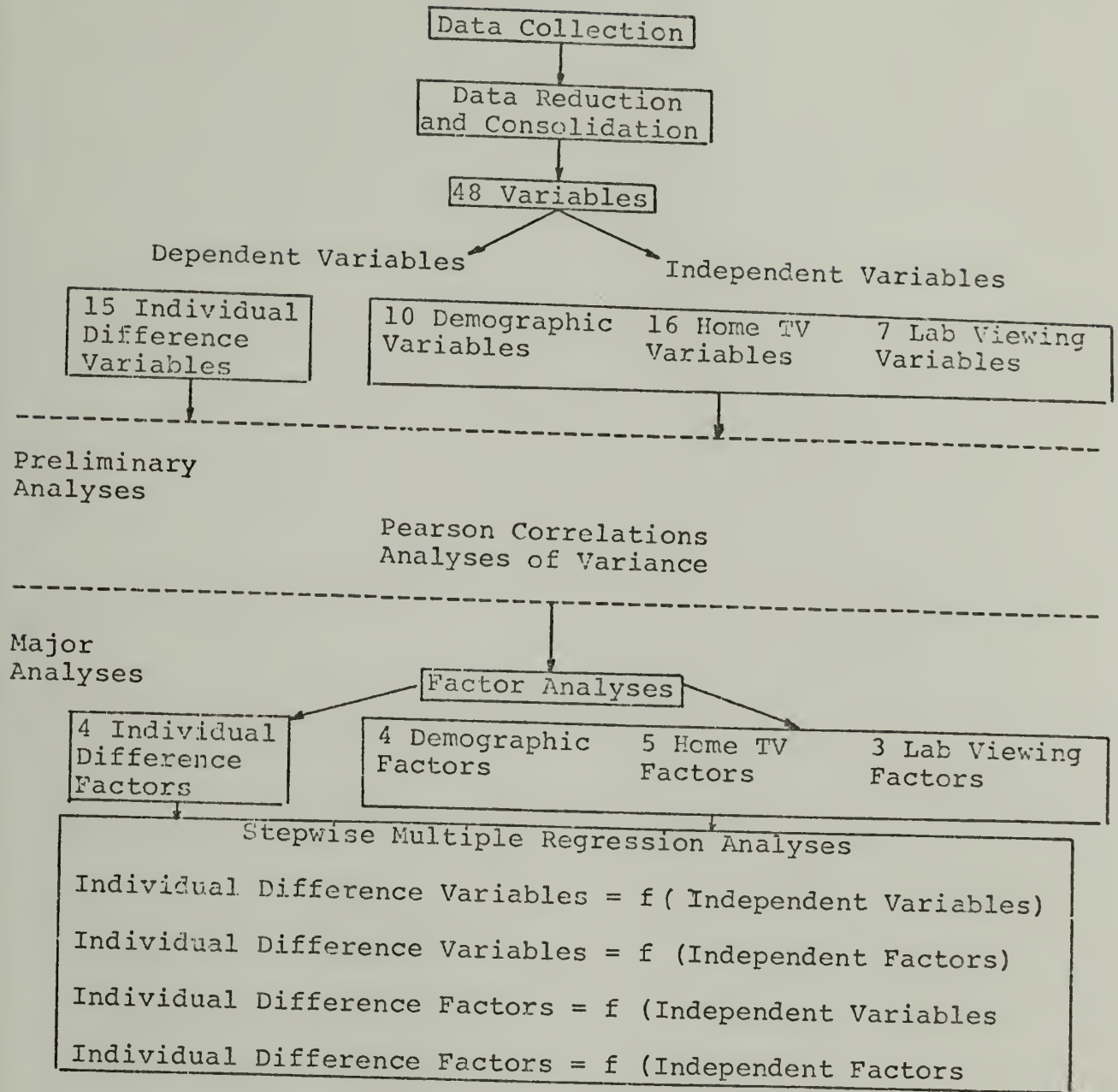


Figure 2. Flow chart illustrating data analysis procedure.

RESULTS AND DISCUSSION

The results of the study will be presented in five parts. Part One describes the differences related to age and sex among the individual family demographic variables and the intercorrelations between those variables. Parts Two, Three, and Four are parallel treatments of the home television, lab viewing room, and individual differences variables. Finally, Part Five examines the relationships between the individual differences variables and the three sets of independent variables.

1. The Family Demographic Variables

All children in the study were white and primarily from middle-class homes. Fifty-three percent of the children were first born and the average number of children in the households was 2.7. Other demographic information about the families, including non-TV behaviors, is shown in Table 3. The distributions of the characteristics were approximately equivalent among the subgroups with the exception of the Hollingshead Index Scores (HR) and frequency of outings. Hollingshead's Index of Social Position (Hollingshead, 1957)

Insert Table 3 about here

TABLE 3

DIFFERENCES IN FAMILY DEMOGRAPHIC VARIABLES RELATED TO AGE AND SEX

Variable ^a	3 Years			4 Years			5 Years			F ^b Age	F ^c Sex	F Interaction Age & Sex
	Male Mean	Female Mean		Male Mean	Female Mean		Male Mean	Female Mean				
Totlsibs	1.3	1.5		1.3	2.1		2.5	1.7		.76	.02	1.00
Momsage	28.1	27.6		28.7	29.7		30.8	30.0		1.15	.00	.16
Momseduc	14.2	13.1		13.8	13.6		14.1	12.7		.15	3.61	.60
HR	71.3	75.0		72.1	69.3		43.3	69.2		3.18*	2.28	2.16
Kidgot	4.2	3.8		4.1	4.3		4.0	4.0		.24	.02	.59
Outings	15.1	12.6		14.9	14.9		16.9	16.8		3.18*	.34	.91
Rkplayse	4.1	4.3		3.1	4.1		3.5	3.7		1.55	1.81	1.09
Interact	5.0	5.3		4.9	4.2		5.4	4.3		.41	1.27	.72

^a Definitions of these variables are in Table 2.^b Analysis of variance, df = 2, 54^c Analysis of variance, df = 1, 54* $p < .05$

is a measure of SES based on the father's education and occupation and is designed such that lower scores indicate higher SES. An analysis of variance of the HR scores yielded a significant age effect. A simple effects test indicated that children in the five year old age group came from slightly higher SES homes than the three year olds: $t(38) = 2.40$, $EW < .10$. The four year olds did not differ from either group. The Outings variable reflected attendance at structured activities outside the home. These activities included attendance at summer day camps and trips to playgrounds, museums, plays, zoos, movies, and public libraries. An analysis of variance of the Outings scores similarly indicated a significant age effect. Simple effects tests showed that children in the five year age group attended more outings than did three year olds: $t(38) = 2.76$, $EW < .05$, while the four year olds did not differ from either group. While one might expect the more cognitively mature five year olds to be taken on more outings than the younger three year olds, it is also the case that outings often require considerable financial resources. Indeed, as shown in Table 4, the correlation between HR and Outings is such that children from higher SES families tend to go on more outings. To control for the possibility that this relationship was a spurious one, since both variables were correlated with age, a partial

correlation holding age statistically constant was computed. The correlation between HR and Outings remained significant, $r = -.30$, $p < .05$, suggesting that the number of outings a child goes on is somewhat dependent on both the child's age and the family's socioeconomic status.

Insert Table 4 about here

Sixty-three percent of the fathers and 53 percent of the mothers attended at least one year of post high school schooling. Fathers' occupations ranged from skilled laborer to college teacher with the majority falling into the "salesman, manager, lesser white collar" category. Seventy-two percent of the mothers classified themselves as full-time housewives, 27 percent were employed part time, and one mother was working full time.

Factor Analysis

A factor analysis of the family demographic variables resulted in four factors, summarized in Table 5. The most powerful factor (I)--labeled "Family size"--was highly correlated with the total number of siblings, mother's age, and the child affluence index. The child affluence index (Kidgot), a measure of the number of the child's personal possessions, proved to be more sensitive to the number

TABLE 4

INTERCORRELATIONS AMONG FAMILY DEMOGRAPHIC, HOME TV,
AND TV VIEWING ROOM VARIABLES

Variables ^a	Intercorrelations									
	1	2	3	4	5	6	7	8	9	10
1. Age										
2. Sex										
3. Totlsibs										
4. Momsage			.77							
5. Momseduc				.27						
6. HR		-.29		-.27	-.39					
7. Kidgot			-.42	-.26						
8. Outings		.34								
9. Rkplayse										
10. Interact										
11. Colortv									.30	
12. Tvonweek					-.30	.40	-.29	-.30		

TABLE 4
(continued)

Variables ^a	Intercorrelations									
	1	2	3	4	5	6	7	8	9	10
13. Kidtvavl										
14. Kidratio										
15. Momtvavl										
16. Momratio		.27			-.43					
17. Dadtvavl										
18. Dadratio	-.27				-.30	.36		-.27		
19. Viewwith										
20. Chngchnl		-.27								
21. Kidtvint					-.29					
22. Partvint								.28		
23. Partvatt										
24. Kidview						.37				
25. Momview					-.32	.37		-.30		

TABLE 4
(continued)

Variables ^a	Intercorrelations									
	1	2	3	4	5	6	7	8	9	10
26. Dadview						.42		-.32		
27. Pctlab	.43									
28. Longfix										
29. Fixmin								-.30		
30. Meanfix								.40		
31. Bodyornt	.40									
32. Kdtlkntv	-.32						-.26			
33. Kdtlktv		.30	.29							

TABLE 4
(continued)

Variables ^a	Intercorrelations							
	11	12	13	14	15	16	17	18
12. Tvonweek								
13. Kidtval		.44						
14. Kidratio			-.74					
15. Momtvavl		.28	.50	-.34				
16. Momratio		.26		.28	-.68			
17. Dadtvavl		.31	.28		.44			
18. Dadratio					-.40	.52	-.52	
19. Viewwith								
20. Chngchnl								
21. Kidtvint		-.38	-.28					
22. Partvint								

TABLE 4
(continued)

Variables ^a	Intercorrelations							
	11	12	13	14	15	16	17	18
23. Partvatt		.27		-.27				
24. Kidview		.66	.36				.29	
25. Momview		.81	.32			.34	.35	
26. Dadview		.65					.50	.29
27. Pctlab								
28. Longfix								
29. Fixmin								
30. Meanfix								-.30
31. Bodyornt								
32. Kdtlkntv								
33. Kidtlktv								

TABLE 4
(continued)

Variables ^a	Intercorrelations					
	19	20	21	22	23	24
20. Chngchnl						
21. Kidtvint						
22. Partvint						
23. Partvatt			.27			
24. Kidview			.46			
25. Momview			.36	.39	.70	
26. Dadview			.27		.51	.73
27. Pctlab						
28. Longfix						
29. Fixmin						
30. Meanfix						
31. Bodyornt						
32. Kdtkntv						
33. Kdtktv						

TABLE 4
(continued)

Variables ^a	Intercorrelations						
	27	28	29	30	31	32	33
28. Longfix	.46						
29. Fixmin		-.32					
30. Meanfix	.69	.65 ^c	-.50				
31. Bodyornt	.82	.37	.56				
32. Kdtlkntv	-.43		-.35		-.44		
33. Kdtlktv	.26					.34	

^aComplete descriptions of these variables are in Table 2.

*All significant correlations shown: $r_p < .05 = .25$; $r_p < .01 = .29$; $r_p < .001 = .33$

of siblings than to the family's social position. As shown in Table 4, Kidgot correlates significantly with Totlsibs, while it is uncorrelated with HR. The relationship between Kidgot and Totlsibs can be reasonably stated as the more siblings a child has, the fewer personal possessions he/she owns.

Insert Table 5 about here

Kidgot, however, did load moderately on the factor labeled "SES" (III). This factor also included the mother's education and the Hollingshead Index.

In contrast to these two demographic factors were two behavioral factors: "Interaction" (II) and "Outings" (IV). Children who scored high on the "Interaction" factor tended to spend most of their time at home not playing alone, but rather playing with the mother and following her around the house. The mothers of these children listed "playing with, reading to and watching TV with their child" as more frequent activities than "doing the housework, or reading or watching TV alone".

A high score on the "Outings" factor indicated that the child came from a higher SES family and often attended structured activities outside the home. "Outings"

TABLE 5

SUMMARY OF FAMILY DEMOGRAPHIC FACTORS

	I Family Size	II Interaction	III Socioeconomic Status	IV Outings
	26.8	21.4	17.9	12.6
	% Variance ^a Accounted For			
Variable ^b	Variable Loadings			
Totlsibs	.89	-.10	-.05	-.08
Momsage	.88	-.05	.30	.01
Momseduc	.12	.08	.83	.10
HR	-.19	.10	-.50	-.68
Kidgot	-.62	-.09	.59	-.05
Interact	-.09	-.88	.11	-.12
Outings	-.15	.10	-.06	.89
Rkplayse	-.09	-.88	.11	-.12

^a Cumulative percentage of variance accounted for = 78.7%

^b Definitions of the variables are in Table 2

was the only factor of the four which was correlated significantly with age, $r = .37$, $p < .01$.

2. The Family Home TV Viewing Variables

Seventy-three percent of the homes contained a color television set and the TV was typically on about 55 hours per week (range--19 to 100 hours). Although the television was available to the mothers about 80 hours per week, they viewed an average of 27 hours (range--15 to 56 hours). As shown in Table 6, there were significant age and sex differences on the viewing/availability ratio for mothers (Momratio) such that mothers of females as a group and mothers of the four year old subgroup spent more of their available time watching TV. Further examination of Table 6 indicates that the most extreme subgroups were mothers of the three year old and five year old males. These are the same two subgroups with the most extreme mothers' education scores (Table 3) suggesting a possible relationship between mothers' education

Insert Table 6 about here

and the mothers' viewing/availability ratio. Indeed, the correlation between Momseduc and Momratio is significant

TABLE 6

DIFFERENCES IN HOME TELEVISION VARIABLES RELATED TO AGE AND SEX

Variables ^a	3 Years		4 Years		5 Years		F ^b Age	F ^c Sex	F Interaction Age & Sex
	Male	Female	Male	Female	Male	Female			
	Mean	Mean	Mean	Mean	Mean	Mean			
Colortv	1.6	1.6	1.8	1.7	1.8	1.9	1.55	.00	.25
Tvonweek	57.7	60.2	53.3	49.4	49.0	60.7	.58	.31	.57
Kidtvavl	53.0	54.9	39.7	45.0	57.7	50.1	1.28	.00	.33
Kidview	31.7	30.9	26.7	21.8	29.9	30.9	2.14	.28	.34
Kidratio	56.6	55.6	67.0	52.0	50.0	70.0	.08	.03	2.10
Montvavl	91.7	68.9	77.1	67.6	91.7	85.8	1.63	3.34	.71
Momview	31.2	32.1	28.1	22.4	22.7	29.6	1.13	.04	1.00
Momratio	26.0	52.0	47.0	46.0	24.0	40.0	3.54*	5.15*	1.39
Dadtvavl	43.4	36.5	36.9	43.2	40.4	53.1	.70	.75	1.11
Dadview	23.4	31.5	21.8	21.3	19.9	24.3	1.78	2.25	.79
Dadratio	50.0	80.0	70.0	55.0	50.0	51.0	2.59	1.56	3.12
Viewwith	1.7	1.5	1.6	1.2	1.4	1.3	.32	.74	.15
Chngchnl	1.9	1.8	1.7	2.0	1.8	1.8	.00	1.02	1.50

TABLE 6
(continued)

Variables ^a	3 Years		4 Years		5 Years		F ^b Age	F ^c Sex	F Interaction Age & Sex
	Male Mean	Female Mean	Male Mean	Female Mean	Male Mean	Female Mean			
Partvint	13.0	13.6	12.0	12.2	12.8	13.1	3.83*	1.27	.11
Partvatt	6.8	5.6	6.3	5.1	5.8	5.9	.65	2.51	1.12
Kidtvint	5.7	5.3	5.4	3.9	5.6	5.8	1.86	1.61	1.13

^a Definitions of variables are found in Table 2.

^b Analysis of variance, df = 2, 54.

^c Analysis of variance, df = 1, 54.

* $p < .05$.

(Table 4), indicating that more educated mothers spend less of their free time watching television. The sex effect for Momratio may also be interpreted in terms of the mothers' education. Although the mothers of males and females in this study did not differ significantly in their education, there was a tendency for mothers of males to be more educated than mothers of females (Table 3). If the significant correlation between Momratio and Sex (Table 4) is recomputed holding mothers' education statistically constant, the correlation falls to $r = .18$, a nonsignificant relationship.

The television was available to the fathers about 42 hours per week, of which they watched an average of 23.7 hours (range--8 to 45 hours) or 59 percent. The amount of the fathers' weekly viewing (Dadview) as well as their viewing/availability (Dadratio) was highly correlated with the mothers' respective scores, probably reflecting a tendency for both parents to view television together in the evening. As with the mothers, the amount of weekly viewing by the fathers as well as the viewing/availability ratio were negatively correlated with education as expressed by the Hollingshead Index (Table 4).

The children viewed about 29 hours per week (range: 17 to 53 hours) out of the 50 hours per week the television was available to them. They thus spent about 58 percent of

their free time watching TV.¹ Eighty-three percent of the children were permitted to and regularly selected their own viewing fare by changing channels on TV. Fifty percent of the children usually viewed alone, 20 percent usually viewed with other children and 18 percent with adults.

As expected, there was a significant correlation between Kidview and Kidtvint (Table 4) suggesting that the children who viewed more television tended to be those children for whom TV watching was the most frequent daily activity, who would ask the parent to watch TV with them, and who would play games based on television programs. A provocative finding was that the best predictor of how much television the child viewed per week was how much the parents viewed (Table 4).

Factor Analysis

A factor analysis of the home television variables provided a further description of family patterns of TV viewing. As shown in Table 7, the most powerful factor (I)--labeled "Family TV viewing and attitudes"--is highly correlated with amount of weekly viewing by the child, mother and father, the amount of time the TV is on per week, the parents' positive attitudes toward the TV, and the child's

¹This study was conducted between January and June. The parents indicated that their children's viewing habits were greatly affected by the weather--viewing dropped in the summer months and rose during the winter months.

positive interest in the television.

"Family television availability" was the name given the second factor which represented the amount of time per week the television was available to the child, mother, and father.

A third factor which appeared in this analysis was labeled "Parent TV interest and attitudes" (III). A high score on this factor represented a mother with generally positive attitudes about television programming for children, and who tended to take a rather laissez-faire attitude toward television and her child.

The fourth factor is difficult to interpret. It is highly correlated with the presence of a color TV in the home and moderately correlated with availability of the TV to the child and the child's positive interest in television.

The fifth factor was a unique factor. Labeled "Changes channels", a high score reflected that the child was permitted to manipulate the controls on the television at home.

Insert Table 7 about here

3. Laboratory Television Viewing Variables

The television viewing room was designed as a standardized simulated home viewing situation in order to

TABLE 7

SUMMARY OF HOME TELEVISION VIEWING FACTORS

	I Amount of Family TV Viewing and Attitudes toward Television	II Family TV Availability	III Parent Interest and Attitudes Toward TV	IV Color TV Ownership, Child Interest in TV, and TV Availability to Child	V Changes Channels
	33.3	13.2	10.7	8.9	8.4
Variables ^b					
Childview	.81	.08	-.20	.26	-.01
Dadview	.78	.25	-.18	-.14	.10
Momview	.89	.18	.13	-.11	-.08
Kidtvav1	.32	.53	.31	.41	.03
Dadtvav1	.31	.72	-.24	-.05	.34
Momtvav1	.08	.84	.11	.09	-.28
Tvonwcek	.82	.27	.23	-.01	-.01

TABLE 7
(continued)

	I Amount of Family TV Viewing and Attitudes toward Television	II Family TV Availability	III Parent Interest and Attitudes toward TV	IV Color TV Ownership, Child Interest in TV, and TV Availability to Child	V Changes Channels
	33.3	13.2	10.7	8.9	8.4
% Variance Accounted For					
Variables ^b	Variable Loadings				
Colortv	-.07	.12	.03	.82	.10
Chngchnl	-.05	-.06	.13	.09	.92
Partvint	.21	-.12	-.82	-.14	-.12
Partvatt	.46	-.12	.60	-.11	.01
Kidtvint	.59	-.14	.02	.46	-.11

^a Cumulative percentage of variance accounted for = 74.5%

^b Definitions of the variables are in Table 2

directly observe the child's television viewing behavior. As shown in Table 8, there were significant age differences on several variables. Simple effects tests indicated that the five year olds viewed a greater percentage of the programming than either the three or four year olds, $t(38) = 3.58$ and 2.51 , $EWS < .01$ and $.05$, while the three and four year olds did not differ. Similarly, the five year olds spent a greater percentage of time oriented toward the TV and made fewer non-TV-related verbalizations than did the three year olds, $t(38) = 3.16$ and 2.77 , $EWS < .01$ and $.05$, but the four year olds did not differ from either group on these variables.

Insert Table 8 about here

The values of mean attention to the television (Pctlab), mean visual orientation (Meanfix), and mean number of visual orientations per minute (Fixmin) for the three and four year olds were quite comparable to values obtained in a previous study using a different sample of three and four year olds and a different sample of television programming (Anderson & Levin, 1976).

As seen in Table 4, there were very few inter-correlations of lab viewing variables with either family

TABLE 8

DIFFERENCES IN TV VIEWING ROOM VARIABLES RELATED TO AGE AND SEX

Variable ^a	3 Years		4 Years		5 Years		F ^b Age	F ^c Sex	F Interaction Age & Sex
	Male Mean	Female Mean	Male Mean	Female Mean	Male Mean	Female Mean			
Pctlab	35.	34.	37.	40.	50.	46.	6.57**	.07	.45
Longfix	213.7	173.0	173.4	238.5	211.9	229.3	.30	.23	1.12
Meanfix	9.5	8.1	8.4	10.7	11.4	11.0	1.72	.04	1.03
Fixmin	2.4	2.6	2.8	2.4	2.9	2.7	.74	.54	.52
Bodyornt	26.	27.	29.	33.	43.	38.	5.57**	.01	.54
Kidtlktv	22.3	26.1	19.1	18.0	36.8	19.1	1.60	1.34	2.27
Kdtlkntv	110.1	122.5	105.0	103.4	96.2	69.7	3.22*	.23	1.10

^a Definitions of these variables are in Table 2.^b Analysis of variance, df = 2, 54^c Analysis of variance, df = 1, 54* $\bar{p} < .05$.** $\bar{p} < .01$

demographic or home television viewing variables. The few correlations obtained were only marginally significant, relatively uninterpretable, and could probably be attributed to Type I error. There are several possible interpretations for this result. One possibility is that the laboratory viewing room might not be a representative situation in which to observe the child's behavior. The surroundings were new and strange as was the experimenter with whom the child interacted. The child's behavior may thus have been distorted. However, most parents reported that their child's behavior in the viewing room was "typical" of the television viewing in the home. Further, the children's behaviors in the viewing room were moderately stable over the three sessions (Table 2). Day-to-day (or tape-to-tape) correlations of the variables ranged from .31 ($p < .05$) to .58 ($p < .001$).

A second possibility is that the parental questionnaires were inaccurate. Indeed, the results of the present study indicate that different techniques used for obtaining the same home viewing estimate may yield different results. The Day One questionnaire, in which the parents were asked to estimate the number of hours their children viewed TV each morning, afternoon, and evening of each day of the week, resulted in a mean of 24.3 hours per week with a range of 1.5 to 49 hours. The Day Three questionnaire, administered about two weeks later, presented the parents with a current list of TV programs on which they estimated weekly viewing times

for each program. Using this procedure, the same parents estimated an average of 32.7 hours per week with a range of 10 to 65 hours. Although the two techniques correlated reasonably well ($r = .77$), the difference in estimated times was highly significant (52 of 59 of the program estimates were greater than the daily time estimates, $p < .001$).

The third and most appealing interpretation is that there really is no significant relationship between the laboratory viewing room and the home TV viewing situation. The constructs in the two situations are different. The viewing room variables represent an extremely fine analysis of the child's viewing style--not only how much one views but how one views. On the other hand, amount of viewing as represented by the parental questionnaire probably reflects the amount of time the child is in the TV room at home ostensibly to "watch television".

To be sure, previous research has shown that when children (and adults) are "watching television" they are also doing other things--talking, eating, playing, and even reading (Allen, 1965; Bechtel, Achelpol & Akers, 1972). The heavy viewer based on parental estimates of home viewing probably only represents a child who spends a great deal of time at home in the TV room with the TV on. The heavy viewer in the laboratory viewing room, on the other hand, literally spent most of the time "watching television". The reasons may be varied (e.g., the toys were boring, the specific TV

programs were interesting, or the child was afraid to move from the couch) but it is certain they are different from the reasons the heavy viewer at home "watches television".

Factor Analysis

The factor analysis of the laboratory viewing room behaviors resulted in three factors (Table 9). The first and most comprehensive viewing room factor was called "Amount of laboratory viewing". Subjects who scored high on this factor watched a large percentage of the programming, were oriented bodily toward the TV a greater percentage of the time, had relatively long visual orientations toward the television, and produced few non-TV-related verbalizations. As might be expected from the previous discussion, this factor was correlated with age, $r = .45$, $p < .001$.

Insert Table 9 about here

The second factor is labeled "Zombie viewing". A high score on this factor indicated that the child exhibited few visual orientations per minute, although those orientations tended to be of long duration.

"Laboratory verbalization" was the name given to the third factor. It simply represents the degree of verbalization while in the viewing room--both TV- and non-TV-related.

TABLE 9

SUMMARY OF LABORATORY VIEWING ROOM FACTORS

I	II	III
Amount of Laboratory Television Viewing	"Zombie-like" Viewing	Laboratory Viewing Room Verbalizations
% Variance ^a Accounted For		
43.5	22.9	18.2
Variable Loadings		
Variables ^b		
Pctlab	.95	.13
Longfix	.40	.71
Fixmin	.34	-.88
Meanfix	.59	.76
Bodyornt	.92	.05
Kdtkntv	-.53	-.02
Kidtlktv	.26	-.07
		.07
		-.06
		.06
		.01
		-.02
		.71
		.89

^a Cumulative percentage of variance accounted for = 84.6%

^b Definitions of the variables are in Table 2

4. Individual Difference Measures

Task Initiation Test

There were no age or sex differences on the Task Initiation Test (Table 10). The mean score of the group was 2.6, somewhat higher than the mean score of 1.58 that Banta (1970) obtained in his original study. The higher scores, reflecting less inhibition in initiating play with the test figures, could be attributed to the presence of the mother in the room during testing. In contrast, Banta's work was conducted in a preschool with the child alone in the room with the tester. The distribution of the scores in the present study were bimodal. The children tended either to become immediately involved in playing with the Task Initiation figures ($N = 27$) or to sit back unwilling to initiate any sort of play ($N = 25$). A similar distribution of scores was reported by Banta.

Insert Table 10 about here

Curiosity Box Test

The Curiosity Box test was scored for two behaviors--exploratory activity (Cbexplor) and verbalizations while exploring (Cboxverb). There were no age differences

TABLE 10

DIFFERENCES IN DEPENDENT VARIABLES RELATED TO AGE AND SEX

Variables ^a	3 Years		4 Years		5 Years		F ^b Age	F ^c Sex	F Interaction Age & Sex
	Male	Female	Male	Female	Male	Female			
	Mean	Mean	Mean	Mean	Mean	Mean			
Threeft	360.8	353.4	326.5	212.7	267.9	282.7	.94	.37	.46
Taskinit	3.4	2.6	2.1	3.1	2.6	1.8	1.72	.32	2.90
Cbexplor	16.1	12.8	17.0	14.2	17.0	14.5	.36	4.36**	.03
Cboxverb	6.9	5.1	4.1	5.0	5.3	3.2	1.02	.87	.80
Ppvtma	44.1	42.7	62.9	52.0	77.0	66.6	25.04***	5.81**	1.00
Ppvtiq	112.4	108.0	111.2	99.5	114.0	104.3	.81	5.77**	.49
Correct	36.9	34.4	50.2	41.5	57.8	53.0	21.11***	1.84	.92
Puzzle	17.9	19.6	20.2	20.1	25.4	24.7	12.94***	.10	.48
Dognbone	3.4	2.5	4.2	6.4	10.2	8.0	11.92***	.41	3.24*
Risktake	2.7	1.3	1.2	1.6	1.8	1.4	.32	1.41	1.09
Delay	1.3	1.3	1.2	1.6	1.8	1.4	2.29	.54	5.80**
Playone	10.2	10.1	10.2	9.5	7.9	10.2	.95	.96	1.85

TABLE 10
(continued)

Variables ^a	3 Years		4 Years		5 Years		F ^b Age	F ^c Sex	F Interaction Age & Sex
	Male Mean	Female Mean	Male Mean	Female Mean	Male Mean	Female Mean			
Sexplay	1.0	1.3	1.0	1.3	1.3	1.3	1.79	2.11	.55
Sexrole	0.6	0.7	0.8	0.6	0.9	0.8	2.49	1.32	1.00
Maturity	1.8	2.9	4.5	4.1	5.6	6.3	11.85***	1.83	1.13

^a Definitions of the variables are in Table 2.

^b Analysis of Variance, df = 2, 54.

^c Analysis of Variance, df = 1, 54

* $P < .05$.

** $P < .01$.

$P < .001$.

on either of these two measures, although boys tended to engage in more exploratory activity than did girls, a result consistent with a recent study which employed the same test (Miller & Dyer, 1975). Banta (1970) reported no sex differences.

The Curiosity Box verbalization scores obtained in the present study were higher than those reported by either Banta or Miller and Dyer. In the Miller and Dyer study, verbalizations were so infrequent that the authors combined both Curiosity Box test subscores in their analyses. As with the Task Initiation test, the presence of the mothers in the testing room may have had a disinhibiting effect on the children. Informal observations indicated that most of the verbalizations were directed at the mothers.

Banta went to great length to discuss the relationships between the Curiosity Box scores and the Task Initiation scores in the context of convergent validity on a curiosity dimension. There was not strong support for the generality of those results in the present study. There was a low but significant correlation of the Task Initiation test with Curiosity Box verbalizations, $r = .28$ $p < .05$, but Curiosity Box exploration was not significantly correlated with either.

Peabody Picture Vocabulary Test

There was a significant tendency for the males to score higher than the females on the PPVT (Table 10).

The mean IQ equivalent scores were 112.5 and 103.9, respectively. Since the test has been standardized, the only reasonable explanation for the difference is sampling error.

Replacement Puzzle

As shown in Table 10, there was a significant age effect for the Replacement Puzzle test. Simple effects tests indicated that the five year olds were more persistent than either the three or four year olds, $t(38) = 5.39$ and 4.35 , $EWS < .01$. There was no significant difference between the three and four year olds. The five year olds' scores were very close to ceiling on this test, a result also reported by Miller and Dyer (1975).

After partialling out age, the Curiosity Box verbalization score was the only test score significantly correlated with the Replacement Puzzle, $r = -.37$, $p < .01$. Children who tended to talk a great deal while exploring the Curiosity Box (often to the mother and often interrupting their ongoing exploratory behavior) tended to be those children who were less persistent in solving the puzzle (often requesting help from the mother).

Dog and Bone Test

There was a significant increase in Dog and Bone test scores with age (Table 10). The five year olds scored higher than the four year olds, $t(38) = 3.77$, $EW < .01$, who in turn scored higher than the three year olds, $t(38) = 2.48$,

$EW < .10$. A similar age effect was also reported by Miller and Dyer (1975), although not by Banta (1970). After partialling age, the Dog and Bone test was not correlated with any other dependent variable, a finding supported by both Banta and Miller and Dyer.

Risk Taking Test

Scores on the Risk Taking test were negatively skewed. Seventy-four percent of the children gave up the penny to take the unknown bag on the first trial, 19 percent took the penny on both trials, while 7 percent took the penny on the first trial but the bag on the second trial. The Risk Taking test was unrelated to any other dependent variable. A Chi-square analysis indicated no age or sex differences.

Delay of Gratification

Like the Risk Taking test, the Delay of Gratification test was not related to any other dependent variable. Fifty-six percent of the children chose the immediate reward while 44 percent chose the delayed reward. A Chi-square analysis revealed no age or sex differences.

Sex-Role Knowledge Test

Although the age differences did not reach significance in the analysis of variance of the Sex-Role Knowledge test scores (Table 10), age was significantly correlated with the scores, $r = .30$, $p < .05$. Older children

not only made more sex-appropriate choices on the test, they also made fewer age-inappropriate choices (i.e., pairing and adult with a child's activity or a child with an adult activity).

With age partialled, the Sex-Role Knowledge test scores were significantly correlated with the Peabody Picture Vocabulary Test IQ scores, $r = .37$, $p < .01$. The relationship suggests that children with higher intelligence are more aware of sex-typed activities in their environment, an interpretation consistent with the view put forth by Kohlberg and Zigler (1967).

Open Field Test--proximity to the mother

The child's attachment to the mother was measured in terms of time in close proximity when both were alone in a room containing attractive toys. The amount of time the child spent within three feet of the mother during the first five minutes the two were in the viewing room was summed over the three sessions. As shown in Table 10, there were no age or sex differences. The proximity scores were relatively stable over the three sessions, $r = .53$, $p < .001$.

The proximity scores were correlated with the Curiosity Box exploration scores, $r = -.29$, $p < .05$. Both measures are conceptually similar. In one situation the child is given the opportunity to actively explore a novel object while in the other the child has the opportunity to

explore a novel environment. Children who stayed close to the mother could be characterized as low curious as well as dependent.

Toy Play

During each of the one hour viewing sessions, a variety of toys was available to the children. It was thought that one measure of curiosity might be the number of different toys the child played with during the first session when the toys were still novel. Although the number of toys played with (Playone) ranged from 0 to 14 (of a possible 15 toys), the mean number was about 10 toys. There were no age or sex differences and Playone was not correlated with any other dependent variable.

The child's sex-typed toy play behavior was computed over the three sessions. As shown in Table 10, there were no age or sex differences. The five neutral toys were apparently much more attractive than either the five "male" or five "female" toys and may have masked potential sex-typed play behavior. The children spent 49 percent of their play time with the neutral toys. The remainder of the time was generally equally divided between the male and female toys, although there was a slight tendency to favor sex-appropriate toys. Sex-typed play was uncorrelated with any other individual difference measure including the Sex-Role Knowledge test.

Maturity Index

The Maturity Index was obtained from the parent questionnaire by having the mother check off those activities that the child could do alone (e.g., dress, undress, make bed, etc.). As expected, there was a significant age effect. A simple effects test indicated that the five year olds scored higher than the four year olds, $t(38) = 2.47$, $EW < .10$, who in turn scored higher than the three year olds, $t(38) = 4.08$, $EW < .01$. The correlation between age and the Maturity Index was $r = .62$, $p < .001$. After partialling age, the Maturity Index was uncorrelated with any other individual difference measure.

Factor Analysis

A factor analysis of the 13 individual difference measures resulted in four factors as shown in Table 11. The first factor was labeled "Cognitive ability and physical maturity". The variables loading high on this factor included the Replacement Puzzle, the Dog and Bone test, the Peabody Picture Vocabulary Test (raw score), the Sex-Role Knowledge Test, and the Maturity Index. The four tests included in this factor were highly structured, requiring the child to listen to and comprehend instructions from the tester and to respond within the constraints of the tests. The four tests as well as the Maturity Index were significantly correlated with the age of the child. Factor I was also correlated with

age, $r = .67$, $p < .001$.

Insert Table 11 about here

"Independence and sex-typed play" was the name given to the second factor (II). Children scoring high on this factor tended not to spend much time close to the mother during the Open Field test, tended to score high on Curiosity Box exploration and the Risk Taking test, and tended to play more with sex-appropriate toys than with sex-opposite toys.

High scores on the third factor, "Task Irrelevant behavior", characterized those children who verbalized a great deal during the Curiosity Box test, were not persistent in trying to solve the Replacement Puzzle, and played with sex-opposite toys more than with sex-appropriate toys.

The fourth factor was labeled "Planfulness and continuity in play". This factor represented the tendency to delay gratification and to engage in play without adult direction in a structured situation. Children scoring high on this factor also limited their play to a few toys during the first session.

TABLE 11

SUMMARY OF INDIVIDUAL DIFFERENCE FACTORS

Variable ^b	% Variance ^a Accounted For			
	I Structured Test Taking and Physical Maturity	II Independence and Sex-typed Play	III Task Irrelevant Behavior	IV Planfulness and Continuity in Play
	22.5	14.6	10.9	8.8
Variable Loadings				
Threeft	.07	-.66	.04	.12
Taskinit	-.37	.33	.34	.44
Cbexplor	.27	.54	.20	-.27
Cboxverb	.06	.23	.78	.10
Puzzle	.43	.11	-.66	.10
Dognbone	.59	.29	.08	.37
Risktake	.12	.61	.21	.05
Delay	.04	-.12	.09	.78

TABLE 11
(continued)

	I Structured Test Taking and Physical Maturity	II Independence and Sex-typed Play	III Task Irrelevant Behavior	IV Planfulness and Continuity in Play
% Variance ^a Accounted For				
	22.5	14.6	10.9	8.8
Variable ^b	Variable Loadings			
Playone	-.19	.08	.31	-.52
Sexplay	.06	.58	-.46	.17
Corrppvt	.84	.04	-.06	.12
Sexrole	.72	.05	-.06	-.22
Maturity	.68	.00	-.36	-.17

^a Cumulative percentage of variance accounted for = 56.7%

^b Definitions of the variables are in Table 2.

5. Linear Relations Between Individual
Difference Variables and Family Demographic,
Home TV Viewing, and Laboratory TV Viewing Variables

Linear relations between the individual difference variables and the family demographic, home TV viewing, and laboratory TV viewing variables--the primary focus of the study--were statistically analyzed by step-wise multiple regression. Multiple regression allows one to predict the value of a dependent criterion variable on the basis of a weighted combination of independent variables. Individual difference variables were thus predicted from the sets of family demographic and television viewing variables. The step-wise procedure enables one to enter the independent variables one by one in a prediction equation on the basis of predetermined statistical criteria. Variables that fail to meet those criteria are not entered in the equation.

The stability of the results of multiple regression analysis depends in part on the ratio of sample size to the number of independent variables (Kerlinger & Pedhazur, 1973, pp. 282-283). Authors vary on the recommended ratio but 10:1 seems to be a general rule of thumb. In the present study, there were 60 subjects and 33 independent variables, making it statistically unreasonable to perform a multiple regression with all independent variables simultaneously. Two techniques were used to reduce the number of independent

variables. The first technique consisted of submitting the independent variables to a screening procedure and then using only the screened variables in a final regression analysis. It was reasoned that since the independent variables could be categorized into three conceptually distinct sets (family demographic, home television, and laboratory television) a separate multiple regression analysis for each individual difference variable could be performed three times, once with each set. The resulting significant independent variables from the three initial multiple regression equations could then be combined in a final regression analysis.²

Table 12 presents the results of the initial screening procedure. For example, the regression analysis between the Individual Difference Factor I scores and the laboratory viewing and home TV viewing variables yielded no significant predictors. The analyses using the family demographic variables as predictors yielded Momseduc and Outings as significant predictors. Thus, the final step-wise multiple regression analysis of the Individual Difference Factor I scores included Age, Sex, Momseduc, and Outings as independent variables. The final regression equations for all individual difference factors are shown in Table 13 and for selected individual difference variables in Table 14. Each

²In these and all subsequent multiple regression analyses, Age was entered on the first step not only as a predictor variable but also to "partial it out" of all remaining predictor variables. Sex of the child was also included as a predictor variable in all final regression analyses.

step of the regression analyses up to a point where a nonsignificant regression coefficient would have entered the equation is indicated.

Insert Tables 12, 13 and 14 about here

The second technique used to increase power consisted of using family demographic and television viewing factors as predictor variables. Thus, each dependent variable or factor was predicted from the 12 independent factors, Age and Sex. The results of these analyses are shown in Tables 15 and 16.

Insert Tables 15 and 16 about here

Factor I--Cognitive Ability and Physical Maturity Factor

There was no significant relationship between television viewing and the child's cognitive ability and physical maturity as expressed in Individual Difference Factor I. As expected, the child's age accounted for the major portion of the variance (45 percent). Mother's education and number of outings on which they went accounted for a

INITIAL SCREENING OF INDEPENDENT VARIABLES -- STEPWISE MULTIPLE REGRESSIONS^a

Initial Sets of Variables						
	Lab Viewing Room		Home TV		Family Demographics	
	Pctlab	Bodyornt	Colortv	Momtvavl	Kidview	Totlsibs Kidgot
	Longfix	Kdtlknrtv	Tvonweek	Kidtvint	Momview	Momsage Outings
	Fixmin	Kidtlktv	Kidtvavl	Partvint	Dadview	Momseduc Rkplayse
	Meanfix		Dadtavvl	Chngchnl	Partvatt	Interact
Dependent Variable						
Individual Difference Factor I, Test Taking	-			-		Momseduc, Outings
Individual Difference Factor II, Independence		Chngchnl		-		Momseduc
Individual Difference Factor III, Task Irre- levant Behavior	-			-		Momseduc
Individual Difference Factor IV, Planfulness	-				Rodyornt	-
Sex-Role Knowledge Test	-				Partvint	Kidgot
Sex-Typed Play Behavior	-				Kidtvint, Momtvavl	Momseduc
Curiosity Box Exploration	-					-

TABLE 12
(continued)

Initial Sets of Variables										
Dependent Variable	Lab Viewing Room				Home TV				Family Demographics	
	Pctlab	Bodyornt			Colortv	Montvavl	Kidview	Totlsibs	Kidgot	
	Longfix	Kdtlknrtv			Tvonweek	Kidtvint	Momview	Momsage	Outings	
	Fixmin	Kidtlktv			Kidtvavl	Partvint	Dadview	Momseduc	Rkplayse	
	Meanfix				Dadtvavl	Chngchnl	Partvatt	HR	Interact	
Final Variables										
Curiosity Box										
Verbalizations	-					Chngchnl				-
Dog and Bone Test	-					Dadtvavl				-
PPVT IQ		Longfix, Pctlab				-				HR
Replacement										
Puzzle Test	-					-				-

Note. Age entered on first step of each analysis.

^a F to enter or remove = 4.02, $p < .05$; tolerance = 0.3.

TABLE 13

SUMMARY TABLES OF STEPWISE MULTIPLE REGRESSION EQUATIONS FOR
INDIVIDUAL DIFFERENCE FACTORS WITH INDEPENDENT VARIABLES AS PREDICTORS

Step	Variable Entered	F to Enter	Significance	Multiple R	R ²	R ²	Simple r	Overall F	Significance
Individual Difference Factor I, Cognitive Ability and Physical Maturity									
1	Age	48.1	.000	.67	.45	.45	.67	48.1	.000
2	Momseduc	5.7	.020	.71	.50	.05	.18	28.9	.000
3	Outings	4.8	.033	.74	.54	.04	.43	22.1	.000
Individual Difference Factor II, Independence and Sex-Typed Play									
1	Age	1.1	.299	.14	.02	.02	.14	1.1	.299
2	Chngchnl	9.9	.003	.41	.16	.14	.37	5.6	.006
3	Momseduc	10.0	.002	.54	.29	.13	-.32	7.7	.000
Individual Difference Factor III, Task Irrelevant Behavior									
1	Age	4.2	.046	.26	.07	.07	-.26	4.2	.046
2	Momseduc	10.5	.002	.46	.21	.14	.39	7.7	.001

TABLE 13
(continued)

Step	Variable Entered	F to Enter	Signi- ficance	Multiple R	R ²	R ²	Simple r	Overall F	Signi- ficance
Individual Difference Factor IV, Planfulness and Continuity in Play									
1	Age	4.4	.040	.27	.07	.07	.27	4.4	.040
2	Bodyornt	8.2	.006	.43	.19	.12	.42	6.6	.003

1 Age forced into equation on step 1.

TABLE 14

SUMMARY TABLES OF STEPWISE MULTIPLE REGRESSION EQUATIONS FOR SELECTED INDIVIDUAL DIFFERENCE VARIABLES WITH INDEPENDENT VARIABLES AS PREDICTORS

Step	Variable Entered	F to Enter	Significance	Multiple R	R^2	Simple r	Overall F	Significance
CBEXPLO, Curiosity Box Exploration Score								
1	Age	0.6	.445	.10	.01	.10	0.6	.445
2	Sex	4.6	.036	.29	.07	-.27	2.6	.082
CBOXVERB, Curiosity Box Verbalizations Score								
1	Age	1.8	.182	.17	.03	-.17	1.8	.182
2	Chngchnl	7.4	.009	.38	.11	.32	4.7	.013
PPVTIQ, Peabody Picture Vocabulary Test IQ Score								
1	Age	0.1	.743	.04	.00	-.04	0.1	.743
2	Longfix	9.1	.004	.37	.14	-.37	4.6	.014
3	HR	9.2	.004	.51	.26	-.29	6.6	.001
4	Pctlab	4.4	.041	.56	.31	.05	6.3	.000

TABLE 14
(continued)

Step	Variable Entered	F to Enter	Signi- fiance	Multiple R	R ²	Simple r	Overall F	Signi- fiance
PUZZLE, Replacement Puzzle Test Score								
1	Age	23.7	.000	.54	.29	.54	23.7	.000
SEXROLE, Sex-Role Knowledge Test Score								
1	Age	5.7	.021	.30	.09	.30	5.7	.021
2	Kidgot	4.9	.031	.41	.17	-.27	5.5	.007
3	Partvint	7.4	.009	.52	.27	.24	6.5	.001
SEXPLAY, Sex-Typed Toy Play Score								
1	Age	2.8	.102	.22	.05	.22	0.3	.102
2	Momseduc	8.8	.004	.42	.18	-.37	6.0	.004
3	Kidtvint	4.2	.045	.48	.23	.32	5.6	.002
4	Montvavl	5.1	.028	.55	.30	-.21	5.8	.001

TABLE 14
(continued)

Step	Variable ₁ Entered	F to Enter	Signi- ficance	Multiple R	R ²	Simple r	Overall F	Signi- ficance
DOGNBONE, Dog and Bone Test Score								
1	Age	38.8	.000	.64	.41	.64	38.8	.000
2	Dadtvav1	8.6	.005	.70	.49	.37	26.3	.000

¹ Age forced into equation on Step 1.

TABLE 15

SUMMARY TABLES OF STEPWISE MULTIPLE REGRESSION EQUATIONS FOR INDIVIDUAL DIFFERENCE FACTORS WITH INDEPENDENT FACTORS AS PREDICTORS

Step	Variable Entered	F to Enter	Significance	Multiple R	R ²	Simple r	Overall F	Significance
Individual Difference Factor I, Cognitive Ability and Physical Maturity								
1	Age	48.2	.000	.67	.45	.67	48.2	.000
2	Fam Demo IVA	5.6	.021	.71	.50	.45	28.8	.000
Individual Difference Factor II, Independence and Sex-typed Play								
1	Age	1.1	.299	.14	.02	.14	1.1	.299
2	Home TV V ^a	6.9	.011	.35	.12	.32	4.0	.023
Individual Difference Factor III, Task Irrelevant Behavior								
1	Age	4.2	.046	.26	.07	-.26	4.2	.046
2	Fam Demo III ^a	4.5	.038	.37	.14	.27	4.5	.016
3	Home TV V ^a	4.1	.046	.44	.20	.23	4.5	.006
4	Sex	6.2	.016	.53	.28	-.26	5.3	.001

TABLE 15
(continued)

Step	Variable Entered	F to Enter	Significance	Multiple R	R ²	R ²	Simple r	Overall F	Significance
Individual Difference Factor IV, Planfulness and Continuity in Play									
1	Age	4.4	.040	.27	.07	.07	.27	4.4	.040

1 Age forced into equation on Step 1.

a Fam Demo IV -- Outings Factor

Home TV V -- Changes Channel Factor

Fam Demo III -- SES Factor

TABLE 16

SUMMARY TABLES OF STEPWISE MULTIPLE REGRESSION EQUATIONS FOR SELECTED INDIVIDUAL DIFFERENCE VARIABLES WITH INDEPENDENT FACTORS AS PREDICTORS

Step	Variable Entered	F to Enter	Significance	Multiple R	R ²	Simple r	Overall F	Significance
CBEXPLOR, Curiosity Box Exploration Score								
1	Age	0.6	.445	.10	.01	.10	0.6	.445
2	Sex	4.6	.036	.29	.08	-.27	2.6	.082
CBOXVERB, Curiosity Box Verbalization Score								
1	Age	1.8	.182	.17	.03	-.17	1.8	.182
2	Home TV V ^a	7.0	.011	.37	.14	.33	4.5	.015
PPVTIQ, Peabody Picture Vocabulary Test IQ Score								
1	Age	0.1	.747	.04	.00	-.04	0.1	.747
2	Fam Demo IVa	7.2	.010	.34	.12	.30	3.6	.033
3	Lab TV II ^a	9.1	.004	.49	.24	-.27	5.8	.002
4	Fam Demo III ^a	4.8	.033	.55	.31	.19	5.9	.001

TABLE 16
(continued)

Step	Variable Entered	F to Enter	Signi- fiance	Multiple R	R ²	Simple r	Overall F	Signi- fiance
PUZZLE, Replacement Puzzle Test Score								
1	Age	23.7	.000	.54	.29	.54	23.7	.000
SEXROLE, Sex-Role Knowledge Test								
1	Age	5.7	.021	.30	.09	.30	5.7	.021
2	Home TV III	5.5	.023	.42	.17	-.30	5.8	.005
SEXPLAY, Sex-Typed Toy Play Score								
1	Age	2.7	.105	.22	.05	.22	2.7	.105
2	Home TV IIa	4.5	.039	.34	.12	-.24	3.7	.032
DOGNBONE, Dog and Bone Test Score								
1	Age	40.2	.000	.64	.41	.64	40.1	.000
2	Home TV IIa	5.7	.021	.68	.46	.30	24.5	.000

TABLE 16
(continued)

Step	Variable Entered	F to Enter	Significance	Multiple R	R^2	Simple r	Overall F	Significance
DOGNBONE, Dog and Bone Test Score (continued)								
3	Home TV Va	5.3	.024	.71	.51	.20	19.4	.000

1 Age forced into equation on Step 1.

a Home TV II -- Family TV Availability Factor

Home TV III -- Parent TV Attitude Factor

Home TV V -- Changes Channel Factor

Lab TV II -- Zombie Factor

Fam Demo III -- SES Factor

Fam Demo IV -- Outings Factor

much smaller but significant portion of the variance (Tables 13 and 15). The following discussion examines analyses of the major components of this first individual difference factor.

Peabody Picture Vocabulary Test. Age was not related to the children's PPVT IQ scores (although $r = .68$, $p < .001$, between age and PPVT raw scores). Children who came from higher SES homes and attended more outings tended to score higher on the PPVT, a finding consistent with a well established body of literature (see Hess, 1970, for an extensive review). Although PPVT scores were not related to home television variables, there did appear to be a relationship to TV viewing style in the laboratory. Children with higher PPVT scores attended more to the TV. Attention for these children was due to many short fixations to the television. This relationship is particularly intriguing because among the sample as a whole there was a significant positive correlation between amount of laboratory viewing and the longest fixations (Table 4). One interpretation is that children scoring high on the PPVT were "monitoring" the TV while playing in the room; i.e., looking up from their play to watch a short while, returning to play, looking up at TV, etc., whereas children who scored lower on the PPVT tended to get "locked in" to the TV. Thus, children who scored high on the PPVT were better able to alternate between two activities. This ability may represent a form of higher

cognitive processing.

Replacement Puzzle. Scores on the Replacement Puzzle Test were related only to the age of the child ($r = .54, p < .001$).

Sex-Role Knowledge Test. Generally, older children had more knowledge of sex-typed activities than did younger children. The parents' positive interests and negative attitudes toward television were also related to higher sex-role knowledge scores. Positive interests in television took the form of watching and discussing programs with the child, encouraging and discouraging the viewing of certain programs, and being generally aware of what was or was not attractive to the child on TV. A negative attitude toward TV was reflected by the parents' naming few positive and many negative aspects of television programming for children. Television interests and attitudes thus would appear to be part of the general constellation of child rearing practices. Parents who take an active interest in their children's television viewing appear to have preschoolers who are more aware of the sex roles around them, perhaps due to more active teaching by the parents.

Dog and Bone Test. Innovative behavior as measured by the Dog and Bone test was correlated positively with age. Children who were permitted to select their own TV programs by changing the channels tended to score higher on this test. There was also a small but significant

relationship between the Dog and Bone test and family television availability such that the more the TV was available for viewing (which in turn was correlated with amount of viewing) the more innovative the children appeared on the basis of this test.

Factor II--Independence and Sex-typed Play Factor

Contrary to expectations, there was no age relationship with the second individual difference factor. Children who were permitted to change channels on the TV set at home as well as those whose mothers were less educated tended to score higher on this factor.

Sex-typed play behavior. Mother who were less educated and who had fewer hours of television viewing time available to them tended to have children who engaged in more sex-typed play. These children also expressed a high interest in television viewing at home (their most frequent activity)--a factor reflected in their asking the mother to watch TV with them, and in their engaging in fantasy play based on television programming.

Curiosity Box exploration. The only predictor of Curiosity Box exploration was the child's sex. Boys engaged in more exploratory activity than did girls. Similar findings have been reported elsewhere (Baumrind & Black, 1967; Hutt, 1970; Marvin, 1971). In their comprehensive review of sex differences, Maccoby and Jacklin (1974)

conclude..."In the age range 3 - 6, there is a clear trend for boys to show more exploratory behavior..." although there are several studies finding no differences at this age.

Factor III--Task Inappropriate Behavior Factor

Children who could be characterized as engaging in task inappropriate behavior were generally young, males, and from homes where the parents were more educated. Those scoring high on this factor also were more likely to change channels on the television set in the home. The relationship between task inappropriate behavior and parents' education is at first somewhat puzzling. However, task inappropriate behavior in this study was generally in the form of inappropriate verbalization--the children talked to the mother when they should have been solving the puzzle or exploring the novel toy. A consistent finding in the literature is that there is more verbal interaction between middle class mothers and their children in a variety of situations than is found among lower class mother-child pairs (Greenberg & Formanek, 1974; Hess & Shipman, 1965; Zeglob & Forehand, 1975; Zunich, 1961). Task inappropriate behavior of middle class children in the present study may represent a further example of this finding.

Curiosity Box verbalizations. The only significant predictor of the number of verbalizations made by the

child during the Curiosity Box test was whether he or she changed channels on the TV at home. Children who verbalized freely during the Curiosity Box test tended to be those able to self-select their own TV viewing material.

Factor IV--Planfulness and Continuity in Play

Older children tended to score higher on this factor. Planfulness and continuity in play also appeared to be related to planfulness and continuity in television viewing--after partialling age, a relationship remained between this factor and body orientation toward the TV. Amount of body orientation to the television is a likely measure of "deliberate" TV viewing. In contrast, some children, particularly those at very young ages, appear to be more "captured" by the TV (Anderson & Levin, 1976).

GENERAL DISCUSSION AND CONCLUSIONS

Television has become a pervasive and integrated element in American culture. By 1972, nearly 96 percent of all families in the United States owned one or more television sets and the average set was on more than six hours a day (Rubinstein, Comstock, & Murray, 1972). Almost since its earliest introduction, there has been concern with the impact of television on the developing child. Garbarino (1975) suggested that it is not unreasonable to ask: "Is the fact that the average American family during the 1950's came to include two parents, two children and a television set somehow related to the psychosocial characteristics of the young adults of the 1970's?" (p. 399). Although the popular literature supports such a belief, Garbarino's question remains largely unanswered from a scientific point of view. The present study is an attempt to contribute a measure of understanding of television's impact on preschool children. Patterns of TV viewing in the home and in a standardized situation were examined and related to a variety of preschool individual difference traits. The findings of the study can be summarized as follows:

Curiosity

Curiosity in the present study was measured in

terms of exploration of a novel environment. This variable showed a significant sex effect in that boys were more curious than girls, a finding consistent with the literature (cf. Maccoby & Jacklin, 1975). Curiosity, however, had little association with patterns of preschool television viewing. The sole relationship was a tendency for children who self-selected their home television diet to verbalize to the mother about the Curiosity Box during administration of that test. Although Banta (1970) considered such verbalization to be a manifestation of curiosity, it could also be interpreted as task inappropriate behavior, as borne out by the factor analysis. In general, then, there is little support for a relationship of curiosity with television viewing.

Dependence and Independence

Neither dependence nor independence was strongly related to patterns of preschool television viewing. As expected, older children were associated with greater independence in terms of the number of self-help activities they were able to perform alone as well as their persistence in completing a difficult task. Children who were more independent were more likely to self-select television programs in the home.

Creativity

Creativity, as measured by the Dog and Bone test,

was positively correlated with age. Children scoring high on the test also came from families who had more available time to watch television, a relationship not readily interpretable. In general, then, there was little association between creativity and patterns of television viewing.

Vocabulary and Intelligence

There was no relationship between vocabulary or intelligence and patterns of television viewing in the home. However, one of the more provocative findings in the study was the relationship between the child's PPVT IQ score and television viewing style in the laboratory. Children who scored higher on the PPVT tended to have higher attention to the TV. But these children also tended not to have the longest visual orientations to the television. It may be that the higher PPVT IQ children were able to alternate their activities (i.e., playing and TV viewing) more easily than children who scored lower on the PPVT. A finer examination of the lengths and distributions of visual orientations to the television would confirm or disconfirm this hypothesis. If confirmed, one direction for future research would be an examination of the relationship between visual nonattention and comprehension or recall for the TV material. When high IQ children are not visually oriented to the TV, they may still be oriented aurally. Children with lower IQs would not be expected to "monitor" the TV while engaged in another

activity. Thus, one hypothesis would be that children with higher IQs would have greater recall and comprehension of events on the TV during periods of visual nonattention than would children with lower IQs.

Sex-Role Development

Sex-role development was the only area which had a relationship, albeit weak, with home television viewing. One finding was that parents' interest in the child's television viewing was positively correlated with the Sex-Role Knowledge Test scores. It is not clear, however, that it was television per se which mediated this relationship. Parents who take an active interest in their children's television viewing probably interact more with their children, in general. This hypothesis is supported by the positive correlation between the Parent TV Interest Index and the number of outings on which the child went. These parents may engage in more active teaching, including, presumably, sex appropriate activities.

It was also found that children who scored higher on the Child TV Interest Index tended to exhibit more sex-typed toy play behavior. The parents of these children reported that television viewing was their child's most frequent daily activity. Further, the children often engaged in fantasy play based on television themes and often asked the parent to watch television with them. This relationship

is consistent with Frueh and McGee (1974) who found that heavy TV viewers (kindergarten and elementary school age children) were more sex-typed in their toy preferences than were light TV viewers. Thus, although there was no significant correlation between number of hours of TV viewing and sex-typed play, the relationship between the child's interest in television and sex-typed play does lend some support to the notion that TV may influence the child's sex-role development.

The central finding of the present study, then, is actually a negative finding: the results indicate no strong relationship between patterns of television viewing in the home and preschool individual differences. There were, in fact, no significant correlations between number of hours spent watching television at home and any of the individual difference traits. There were, of course, several potential sources of error in the study. The first is the parents' estimates of home viewing. The limitations of self-report measure of television viewing were discussed earlier. While the present questionnaire estimates surely are not without error, there is evidence to support their use. First, the parents' reports have high reliability. The Day 1 questionnaire required the parent to estimate the number of hours of television viewing during the morning, afternoon, and evening of each day of a "typical" week. Viewing estimates were again obtained during the third session (usually after

a one to three week interval) by having the parent check off programs on a TV Guide-type listing that the child viewed regularly during a "typical" week. The Pearson correlation between the two estimates is $r = .77$, $p < .001$. Second, the negative relationship between socioeconomic status and amount of television viewing replicates similar findings reported elsewhere (Blood, 1961; Geiger & Sokol, 1959; Greenberg & Dominick, 1969; Hollingshead & Redlich, 1958).

A second potential source of error is the individual difference measures. However, they generally have high interobserver reliabilities and moderate to high test-retest reliabilities. Although there have been no extensive validation studies conducted on the measures (with the exception of the Peabody Picture Vocabulary Test), patterns of intercorrelations between the tests and correlations with age and sex appear to "make sense".

Finally, one could question the adequacy of the sample. While the children in the study represent a wide cross-section of the population of preschoolers with respect to age, SES, and amount of television viewing, it may well be that significant relationships can be found only in extreme subjects. Frueh and McGhee (1975), for example, found strong differences in sex-role preference between heavy and light viewers screened from a larger sample of children. One direction for future research might therefore be a replication of the present study with extreme groups of preschool

television viewers.

How might one reconcile the nonsignificant findings of the present study with the several studies which have reported significant effects of TV viewing on preschoolers? For example, Friedrich and Stein (1973; 1975) and Coates, Pusser and Goodman (1976) reported that exposure of preschoolers to aggressive and prosocial programs will lead to changes in aggressive and prosocial behavior, persistence, rule obedience, and delay of gratification. Gorn, Goldberg, and Kanungo (1976) have demonstrated that exposure to different racial and ethnic characters on television result in increased tolerance toward those groups among preschool viewers. The principal difference is that the studies above examined short term effects of viewing due to specific content, measured immediately after exposure to the programs. In contrast, the present study measured differences due to television viewing in general, without regard to particular programs viewed. The only area in the present research which yielded a significant relationship with patterns of preschool television viewing was sex-typed play behavior. Since sex stereotyping on children's television programming has been well documented, this relationship is consistent with the hypothesis of the effects of specific content on young children. Children for whom television viewing is a major activity are exposed to an enormous amount of sex stereotyping and presumably have an opportunity to learn and

exhibit such behavior. Of course, causality cannot be inferred from correlation and such a hypothesis would need to be tested. Nonetheless, the lack of significant relationships between the other individual difference characteristics and television viewing lends no support to the notion that heavy TV viewing, per se, has adverse noncontent effects on the preschool child.

Television viewing is a complex and diverse phenomenon. The methodological problems encountered in trying to study this behavior are at times frustrating and often overwhelming. To be sure, future research cannot ignore the role of the family in the child's television viewing behaviors. In the present study, variables such as parental interest and control over the child's viewing, parent-child TV interactions, and TV availability to the parent were significant predictors of the child's individual difference measures. These data were crudely obtained from a parent questionnaire. It would certainly be worthwhile to collect data based on home observation, preferably in a longitudinal investigation. Questions to guide this research might include the following: How does television viewing change with age? At what point does one begin to see the "cumulative" effects of television viewing? Does the influence of siblings and parents on television viewing change over time?

Although the data in the present study were limited, one cannot disagree with Stevenson (1972, p. 366)

who recently stated that "television probably has not had as negative an influence on the lives of preschoolers as some of its severest critics have suggested." The findings of the current research further suggest that neither has it had a major positive influence.

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APPENDICES

APPENDIX A
Letter to Parents

Dear

We are engaged in a research project concerning the impact of television on preschool children. Although a number of TV programs and a large amount of advertising is directed at these very young children, little is known about why they like to watch TV, and how it affects their development. Our research, which is financially supported by the National Science Foundation, is aimed at providing some understanding of the influence of this aspect of the child's environment. We hope that you and your child will help us in our project which is being conducted at the University of Massachusetts Child Study Center on Chestnut Street. Our plan is to show you and your child three hours of videotaped TV programs while we film your child's reaction to the programs as they go on. We would also like to take some measures of your child's attention span, vocabulary, curiosity, and attitudes so that we can relate these factors to television viewing behavior. In addition, you will also receive a questionnaire inquiring mostly about your child's TV habits and your own attitudes toward television. We would like you to come with your child to the Child Study Center for about an hour and a half on four different occasions to help us in this project. We are able to provide a small sum of \$3.00 for each visit to help compensate for any inconvenience or expense associated with coming to the Center. In the past, parents have told us they enjoyed the visits very much and were themselves very interested in the impact of television on development.

Ms. Pearlie Pitts will be calling you within a few days to arrange a time for participating. If you would like to quickly arrange a time or are particularly interested in learning about the project, please call Pearlie at 734-4900 or 734-4909. She will be delighted to hear from you. We hope you will help us in our investigation of what we feel is a most important influence in our children's lives.

Yours truly,

Daniel R. Anderson
Assistant Professor
(Project Head)

Steve Levin
Graduate Assistant

Bernadette Nelson-Shapiro
Assistant Professor

Nanciann Machnik
Project Assistant

APPENDIX B

Test Battery

1. Task Initiation Test (Banta, 1970)

Task Initiation Test Administration

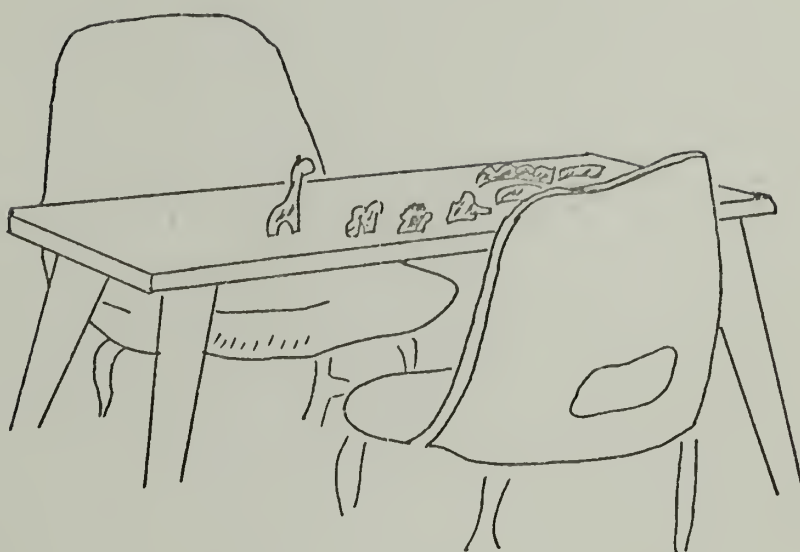
Before the child enters the testing room, seven brightly painted wooden figures (an elephant, camel, lion, giraffe, two bridges, and a mountain) are placed in a standard arrangement (Figure 3) on the testing table. The child is seated at the table in front of the figures while the tester takes a seat on the opposite side of the table. Nothing is said to the child, and the tester starts a stopwatch and gives the appearance of busying himself with paperwork. The tester waits for one minute for the child to inspect, pick up, or begin playing with the figures. If there is no initiation after one minute the tester gathers the figures and begins the Curiosity Box test. If initiation does occur within the first minute, the tester continues observing until two minutes has elapsed.

Scoring

Banta's scoring procedure is based on the following definitions given below with examples (Banta, 1970):

Code 1: No initiation. No initiation--child sat looking at objects while tapping his feet on the floor.

Code 2: Minimal contact. As child sat down, he



(Adapted from Banta, 1970)

Figure 3. Task Initiation Test figures as they appear to a child entering the testing room.

knocked over giraffe. Reached out hesitatingly to stand it up and then withdrew. No further contact with materials.

Code 3: Initiation with minimal involvement. Child started as soon as she sat down. Put all objects flat on the table. Picked up one at a time and looked at it. Stopped and looked at the examiner.

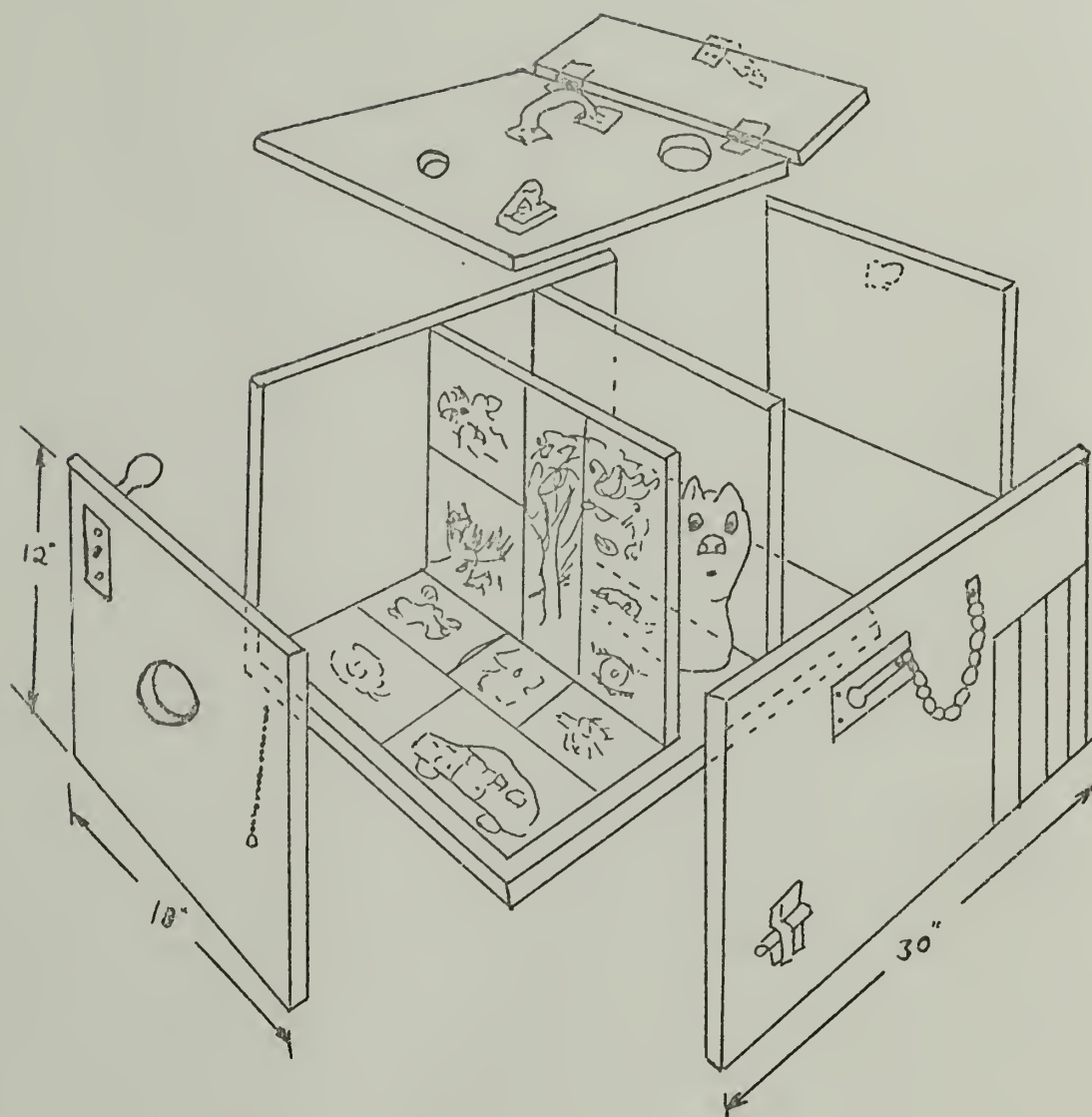
Code 4: Initiation with high degree of involvement. Began as soon as she sat down. Arranged everything in a row--put bridges end to end and placed animals on bridges. Lined up others at end of bridge--walked one across. Was very involved.

2. Curiosity Box Test (Banta, 1970)

Curiosity Box Test Administration

When the Task Initiation Test is completed, the tester brings out the "curiosity box" and places it on the floor near the child and says "This is something for you to play with". The tester then takes a seat to the left and behind the child, and starts the stop-watch, and records the child's behavior on the score sheet.

An exploded view of the "curiosity box" is shown in Figure 4. The left compartment containing the colorful magazine pictures is lighted by the switch on the side of the box. The center compartment is dark and the opening to the compartment is covered by a rubber gasket. The right hand compartment is empty.



(Adapted from Banta, 1970)

Figure 4. Exploded view of the Curiosity Box.

The score sheet is shown in Figure 5. On the sheet are listed several forms of exploratory behaviors and verbalizations. Within each 0.5 minute interval, the child's behavior is observed and the appropriate activity class is circled. At least one item within an interval must be circled. The observation period is five minutes unless the child does not explore or manipulate the box within the first three minutes. The termination procedure is as follows: if the child does not interact with the box within the first two minutes, the tester says, "This is for you to play with", and simultaneously manipulates the chain lock and bolt on the front of the box. If the child does not touch the box within one minute after the prompt, the test is terminated.

Curiosity activity in this test is defined in terms of manipulatory activity, tactual exploration and visual exploration. Manipulatory exploration is scored when the child attempts to lift the box or move parts of the box; e.g., flicking light switch, moving bolt back and forth, opening and closing hinged lid. Tactual exploration refers to mild forms of "surface exploration" of the box or its parts, with no attempts to move them; e.g., rubbing fingers over the sandpaper strips, fingering links of chain lock. Visual exploration is scored when the child shows active visual interest in the box; e.g., putting eye

TASK INITIATION SCORE

CURIOSITY BOX SCORE

NAME

AGE

Time	Manip. Explor.	Tact. Explor.	Curiosity Box Score Sheet			
			Visual Explor.	Other	Question &/or Comment	Question &/or Comment
.50	me	te	ve	other	q&/or c	q&/or c
1.00	me	te	ve	other	q&/or c	q&/or c
1.50	me	te	ve	other	q&/or c	q&/or c
2.00	me	te	ve	other	q&/or c	q&/or c
prompt						
2.50	me	te	ve	other	q&/or c	q&/or c
3.00	me	te	ve	other	q&/or c	q&/or c
term						
3.50	me	te	ve	other	q&/or c	q&/or c
4.00	me	te	ve	other	q&/or c	q&/or c
4.50	me	te	ve	other	q&/or c	q&/or c
5.00	me	te	ve	other	q&/or c	q&/or c

Figure 5. Sample score sheet for Task Initiation and Curiosity Box Test.

up to hole of lighted chamber, looking in cracks of box, looking in empty compartment of box.

Curiosity verbalizations are defined in terms of box related questions or comments. Typical verbalizations made by the children while exploring include, "The light switch doesn't work", "There's something in there", and "Who made this?". Verbalizations falling in "other" category include singing, humming, questions and comments unrelated to box; e.g., "What are you writing?", "Have you ever been to the Bahamas?", and fantasy verbalizations; e.g., "Batman is flying around in there".

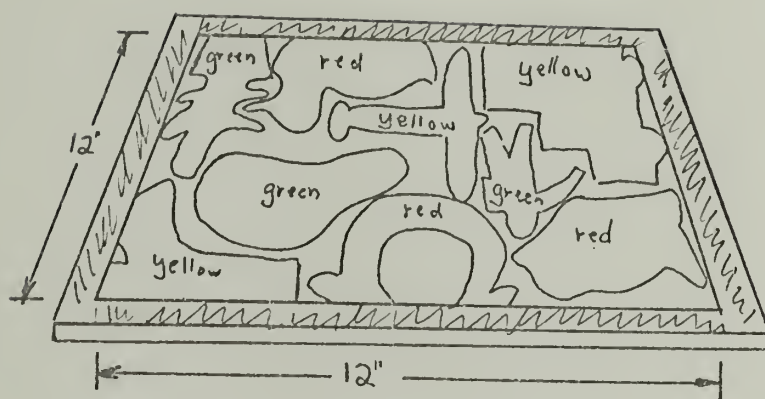
Scoring

Curiosity activity and curiosity verbalizations are scored separately. One point is given for each of the four activity classes circled in each 0.5 minute interval. Curiosity activity scores may thus range from 0 - 30. One point is given for each curiosity verbalization circled and scores in this part of the test may range from 0 - 10.

3. Replacement Puzzle Test (Banta, 1970)

Replacement Puzzle Test Administration

The puzzle is shown in Figure 6 from the child's point of view during training. The tester says, "I want to show you how flat all these pieces lie in the tray. This looks something like a puzzle, but there are spaces between the pieces." (Tester rubs the tray in several



(Adapted from Banta, 1970)

Figure 6. Replacement Puzzle.

different spaces between the figures. "Some of these pieces come out. The boy comes out." (Tester lifts the "boy" from the tray and holds the piece up before the child.) "When we put it back in, it can't rest on another piece." (Tester replaces it so that it rests on another piece, not flat.) "It must lie flat." (Tester puts it in flat.) "That's very important. Now you try." (Tester sees to it that child understands how to put the piece in flat, correcting the child if necessary.) "Now, rub your hand across here (across 'boy' and all adjacent pieces) and feel how flat it is."

The instructions continue. "I'm going to take some of the pieces out." (Tester removes horseshoe and boy placing the horseshoe on top of the boy at the child's left, and then removes the plane and pear, placing them in that order on top of the other two pieces. Tester now rotates the tray 180 .) "Now, you put them back in the tray."

At this point the stop-watch is started and observations of the child's behavior are recorded on the score sheet. Prompting is permitted in response to the child's requests for help, wandering away from the task, or looking up as though finished, but must be limited to the words "put the pieces in flat". (If a child completes the puzzle within the three minute period, the pieces are

removed and the tester rotates the tray 180° and says, "Put them back in for me".) After the three minute period, the tester terminates the test by saying, "Would you like me to help you put these back?" and puts back all the pieces except for the boy. "Can you put this piece back? Good, we've finished the puzzle."

Scoring

The Replacement Puzzle observation sheet is shown in Figure 7. In each 20 second interval, the child's behavior is scored as puzzle-goal directed (plays with puzzle pieces without trying to solve puzzle) and/or other (e.g., wandering off) by circling the appropriate category. Goal directed behavior is scored two points for each 20 second interval, while non-goal directed behavior or other is scored minus one point for each interval in which they appear. A constant of +18 is added to eliminate negative scores. With nine 20 second intervals, the score may range from 0 to 36.

4. Sex-Role Knowledge Test

The Sex-Role Knowledge Test was designed by giving a group of 15 graduate students a series of 60 pictures of objects and activities (many of which were chosen because of their sex-stereotyped representation on TV) to be classified as male, female, and neutral, as they felt the general public would perceive them. From this group, a subgroup of 20 objects

NAME

AGE

REPLACEMENT PUZZLE SCORE

Time	Activity			
	Puzzle Goal Direct	Puzzle--Non- Goal Direct	Other	Prompt
.33	pgd	pngd	other	p
.66	pgd	pngd	other	p
1.00	pgd	pngd	other	p
1.33	pgd	pngd	other	p
1.66	pgd	pngd	other	p
2.00	pgd	pngd	other	p
2.33	pgd	pngd	other	p
2.66	pgd	pngd	other	p
3.00	pgd	pngd	other	p

Figure 7. Observation and scoring form for Replacement Puzzle Test.

and activities were selected for the test. Each of the 20 items had at least 80 percent agreement among the adults. In addition, the ten most stereotyped toys (five male and five female) in the toy picture section of Brown's It Scale for Children (Brown, 1956) were included to comprise the 30 item Sex-Role Knowledge Test. There are five items for each of the six categories (boys, girls, men, women, boys and girls, men and women).

Sex Stereotyping Knowledge Test Administration

The child is shown a sheet of paper on which are drawn a small boy, small girl, adult woman, adult man, group of children, and group of adults. The tester asks, "Can you point to the boy (girl, man, woman, all the grown-ups, all the children)?" The terminology is very flexible and may vary from child to child (e.g., woman, mommy, mother, lady, etc.). When the tester is sure the child can identify all the pictures, a series of 30 drawings is shown one at a time to the child. The pictures depict objects and activities and the child is asked to point to the appropriate person or persons for the picture. The questions are on the score sheet shown in Figure 8. After the child points to a picture, the tester should express the choice verbally in the form of a question (Girls play with dolls?). The tester waits for the child's response and follows with the same question for the opposite sex ("Do boys play with dolls?"). In the case of a choice of a group picture, the

NAME

AGE

1. _____ (5) Who washes the car?
2. _____ (2) Who uses the vacuum cleaner?
3. _____ (1) Who plays with the toy airplane?
4. _____ (2) Who bakes the pie?
5. _____ (3) Who rides the tricycle?
6. _____ (1) Who plays with the toy gun?
7. _____ (4) Who plays with the doll?
8. _____ (6) Who drinks coffee?
9. _____ (5) Who uses the tools?
10. _____ (1) Who plays with the toy tractor?
11. _____ (5) Who shaves with the razor?
12. _____ (6) Who reads the newspaper?
13. _____ (5) Who mows the lawn?
14. _____ (6) Who drives the car?
15. _____ (1) Who plays with the toy truck?
16. _____ (4) Who plays with the toy purse?
17. _____ (6) Who plays tennis?
18. _____ (5) Who drives the bus?
19. _____ (3) Who plays at the playground?
20. _____ (2) Who holds the baby?

Figure 8. Sample score sheet for Sex-Role Knowledge Test.

21. _____(4) Who plays with the toy highchair?
22. _____(2) Who washes the dishes at night?
23. _____(4) Who plays with the toy carriage?
24. _____(3) Who plays with the paints?
25. _____(1) Who plays with the toy train?
26. _____(3) Who plays with the blocks?
27. _____(4) Who plays with the toy dishes?
28. _____(3) Who plays with the bucket and shovel?
29. _____(6) Who makes the toast in the morning?
30. _____(2) Who sews on the sewing machine?

tester questions the child for each sex ("Daddies mow the lawn?", "Mommies mow the lawn?"). Questioning in this manner should clear up ambiguous responses.

Sex-Role Knowledge Test Scoring

The scoring procedure is designed to correct for "guessing".

1. Count up the number of errors (Err). An error is defined as an incorrect cross-age response. For example, in response to the question, "Who mows the lawn?", the answers "the little boy" or "the little girl" would be errors.
 2. After deleting questions on which errors were made, divide the number of remaining stereotyped questions by the total number of remaining questions (P).
 3. Multiply $\text{Err} \times P$ to yield the expected number of guesses to the remaining stereotyped questions (G_s).
 4. Divide up the expected number of guesses (G_s) into stereotyped ($G_{s_{st}}$) and unstereotyped ($G_{s_{un}}$) responses. Since for a given stereotyped question 2/6 of the responses will be stereotyped and 4/6 of the responses will be unstereotyped,
- $$G_{s_{st}} = 1/3 G_s$$
- and
- $$G_{s_{un}} = 2/3 G_s.$$
5. Count up the number of stereotyped responses (St) and unstereotyped responses (Un) to the remaining stereotyped questions.

6. Subtract the respective expected number of guesses from these two values.

$$S = St - Gs_{st}$$

$$U = Un - Gs_{un}.$$

$$7. \text{ Sex-Role Knowledge Test score} = \frac{S}{S + U}.$$

Total scores may range from 0.00 to 1.00.

Example: Figure 9 illustrates a typical score sheet. Response code: 1 - boy

2 - woman

3 - boys and girls

4 - girl

5 - man

6 - men and women

$$1. \text{ Err} = 2 \text{ (Questions 17 and 20).}$$

$$2. P = 19/28 = .68.$$

$$3. Gs = .68 \times 2 = 1.36$$

$$4. Gs_{st} = 1/3 \times 1/36 = .45$$

$$Gs_{un} = 2/3 \times 1.36 = .90$$

$$5. St = 16 \text{ (Questions 1, 2, 3, 4, 6, 7, 9, 10, 13, 15, 16, 18, 21, 22, 23, and 30).}$$

$$Un = 3 \text{ (Questions 11, 25, and 27).}$$

$$6. S = 16 - .45 = 15.55$$

$$U = 3 - .90 = 2.10$$

$$7. \text{ Sex-Role Knowledge Test score} = \frac{15.55}{15.55 + 2.10} = .89$$

NAME

AGE

1. _____(5) Who washes the car?
2. _____(2) Who uses the vacuum cleaner?
3. _____(1) Who plays with the toy airplane?
4. _____(2) Who bakes the pie?
5. _____(3) Who rides the tricycle?
6. _____(1) Who plays with the toy gun?
7. _____(4) Who plays with the doll?
8. _____(6) Who drinks coffee?
9. _____(5) Who uses the tools?
10. _____(1) Who plays with the toy tractor?
11. _____(5) Who shaves with the razor?
12. _____(6) Who reads the newspaper?
13. _____(5) Who mows the lawn?
14. _____(6) Who drives the car?
15. _____(1) Who plays with the toy truck?
16. _____(4) Who plays with the toy purse?
17. _____(6) Who plays tennis?
18. _____(5) Who drives the bus?
19. _____(3) Who plays at the playground?
20. _____(2) Who holds the baby?

Figure 9. Example of typical Sex-Role Knowledge score sheet.

21. _____(4) Who plays with the toy highchair?
22. _____(2) Who washes the dishes at night?
23. _____(4) Who plays with the toy carriage?
24. _____(3) Who plays with the paints?
25. _____(1) Who plays with the toy train?
26. _____(3) Who plays with the blocks?
27. _____(4) Who plays with the toy dishes?
28. _____(3) Who plays with the bucket and shovel?
29. _____(6) Who makes the toast in the morning?
30. _____(2) Who sews on the sewing machine?

5. Peabody Picture Vocabulary Test (Dunn, 1965)

PPVT Administration and Scoring.

The score sheet listing the stimulus words and correct response key is shown in Figure 10. Administration and scoring procedure for this test will be followed according to the Expanded Manual, Peabody Picture Vocabulary Test (Dunn, 1965).

Introduce the test by saying: "I want to play a picture game with you". Turn to example A and say: "See all the pictures on this page". (Indicate this by pointing to each in turn.) "I will say a word, then I want you to put your finger on the picture of the word I have said. Let us try one. Put your finger on 'bed'". When a subject makes the desired response, turn to example B, saying: "That's fine. Now put your finger on 'fish'". Then turn to example C, saying: "Good! Show me 'butterfly'". Then say: "Fine! Now I am going to show you some other pictures. Each time I say a word, you find the picture of it. When we get further along in the book you may not be sure you know the word, but I want you to look carefully at all of the pictures anyway and choose the one you think is right". Point to _____.

For subjects three years of age begin with plate no. 1, four years of age, plate no. 15, and five years of age, plate no. 25. Continue until the child makes his/her first

NAME _____

AGE _____

- | | |
|-----------------------|-----------------------|
| 1. _____(4) car | 22. _____(3) bush |
| 2. _____(3) cow | 23. _____(1) pouring |
| 3. _____(1) baby | 24. _____(1) sewing |
| 4. _____(2) girl | 25. _____(4) wiener |
| 5. _____(1) ball | 26. _____(2) teacher |
| 6. _____(3) block | 27. _____(3) building |
| 7. _____(2) clown | 28. _____(3) arrow |
| 8. _____(1) key | 29. _____(2) kangaroo |
| 9. _____(4) can | 30. _____(3) accident |
| 10. _____(2) chicken | 31. _____(3) nest |
| 11. _____(4) blowing | 32. _____(4) caboose |
| 12. _____(2) fan | 33. _____(1) envelope |
| 13. _____(1) digging | 34. _____(2) picking |
| 14. _____(1) skirt | 35. _____(1) badge |
| 15. _____(4) catching | 36. _____(3) goggles |
| 16. _____(1) drum | 37. _____(2) peacock |
| 17. _____(3) leaf | 38. _____(3) queen |
| 18. _____(4) tying | 39. _____(4) coach |
| 19. _____(1) fence | 40. _____(1) hip |
| 20. _____(2) bat | 41. _____(4) net |
| 21. _____(4) bee | 42. _____(4) freckle |

Figure 10. Peabody Picture Vocabulary Test score sheet.

- | | |
|------------------------------|---------------------------|
| 43. _____ (3) eagle | 67. _____ (1) stadium |
| 44. _____ (2) twist | 68. _____ (1) excavate |
| 45. _____ (4) shining | 69. _____ (4) assaulting |
| 46. _____ (2) dial | 70. _____ (1) stunt |
| 47. _____ (2) yawning | 71. _____ (1) meringue |
| 48. _____ (2) tumble | 72. _____ (3) appliance |
| 49. _____ (1) single | 73. _____ (4) chemist |
| 50. _____ (1) capsule | 74. _____ (3) arctic |
| 51. _____ (4) submarine | 75. _____ (4) destruction |
| 52. _____ (4) thermos | 76. _____ (3) porter |
| 53. _____ (3) projector | 77. _____ (2) coast |
| 54. _____ (4) group | 78. _____ (4) hoisting |
| 55. _____ (3) tackling | 79. _____ (1) wailing |
| 56. _____ (1) transportation | 80. _____ (2) coil |
| 57. _____ (1) counter | 81. _____ (3) kayak |
| 58. _____ (2) ceremony | 82. _____ (2) sentry |
| 59. _____ (3) pod | 83. _____ (4) furrow |
| 60. _____ (4) bronco | 84. _____ (1) beam |
| 61. _____ (3) directing | 85. _____ (3) fragment |
| 62. _____ (4) funnel | 86. _____ (2) hovering |
| 63. _____ (2) delight | 87. _____ (3) bereavement |
| 64. _____ (3) lecture | 88. _____ (4) crag |
| 65. _____ (2) communication | 89. _____ (2) tantrum |
| 66. _____ (4) archer | 90. _____ (1) submerge |

Figure 10. (continued)

error. In the event that the child has not made eight consecutive correct responses prior to this first error, drop back to the starting point and work backward until a total of eight consecutive responses have been made by the child. Continue (or recontinue) testing forward from the first error until the child makes six errors in any eight consecutive presentations. At this point the test is discontinued.

The total raw score is the number of correct responses. Unanswered items below the basal point are assumed correct; unanswered items above the ceiling item are assumed incorrect. To get the total raw score, subtract the errors from the number of the last item presented.

6. Dog and Bone Test (Banta, 1970)

Dog and Bone Test Administration

The test board consists of a 9" x 12" green board with a white house glued at each corner. The tester places the board in front of the child, points to the houses and says, "These are houses". The child is then shown the dog and asked, "What is this?". The tester pauses and if the child does not answer, the tester says it is a dog. After placing the dog between the houses nearest the child, the tester holds up the bone to the child and says, "This is the doggie's bone. The doggie likes to chew his bone". The bone is then placed between the houses opposite the child.

The tester demonstrates two paths by which the dog can get his bone by saying, "One way he can get his bone is to come up this way". Tester moves dog in a straight path as in Figure 11a. He then says, "Another way he can go is around this way", as shown in Figure 11b. "Now, you take the doggie and find another way for him to get his bone." As the child moves the dog to the bone the tester diagrams the path on the score sheet. After each path is made by the child, the tester says, "Now find another way for him to get his bone." The child is asked in this manner to make ten responses and each response is diagrammed.

Scoring

The score sheet resembles Figure 12. On any one trial the child can get 0, 1, 2, or 3 points. A zero score is assigned if the child repeats a demonstrated path or if he/she repeats one of his/her own previous paths. Standard variations are shown in Figure 11c and are scored one point each. Paths very similar to standard variations in which a small retrace to the path is added are also scored one point, and are illustrated in Figure 11d. Two points are given for reversal of direction in a pathway (Figure 11e) and a crossover in a pathway (Figure 11f). Three points are given for a response containing both a reversal and a crossover. Examples are given in Figure 11g.

Some children move the dog in a hopping fashion

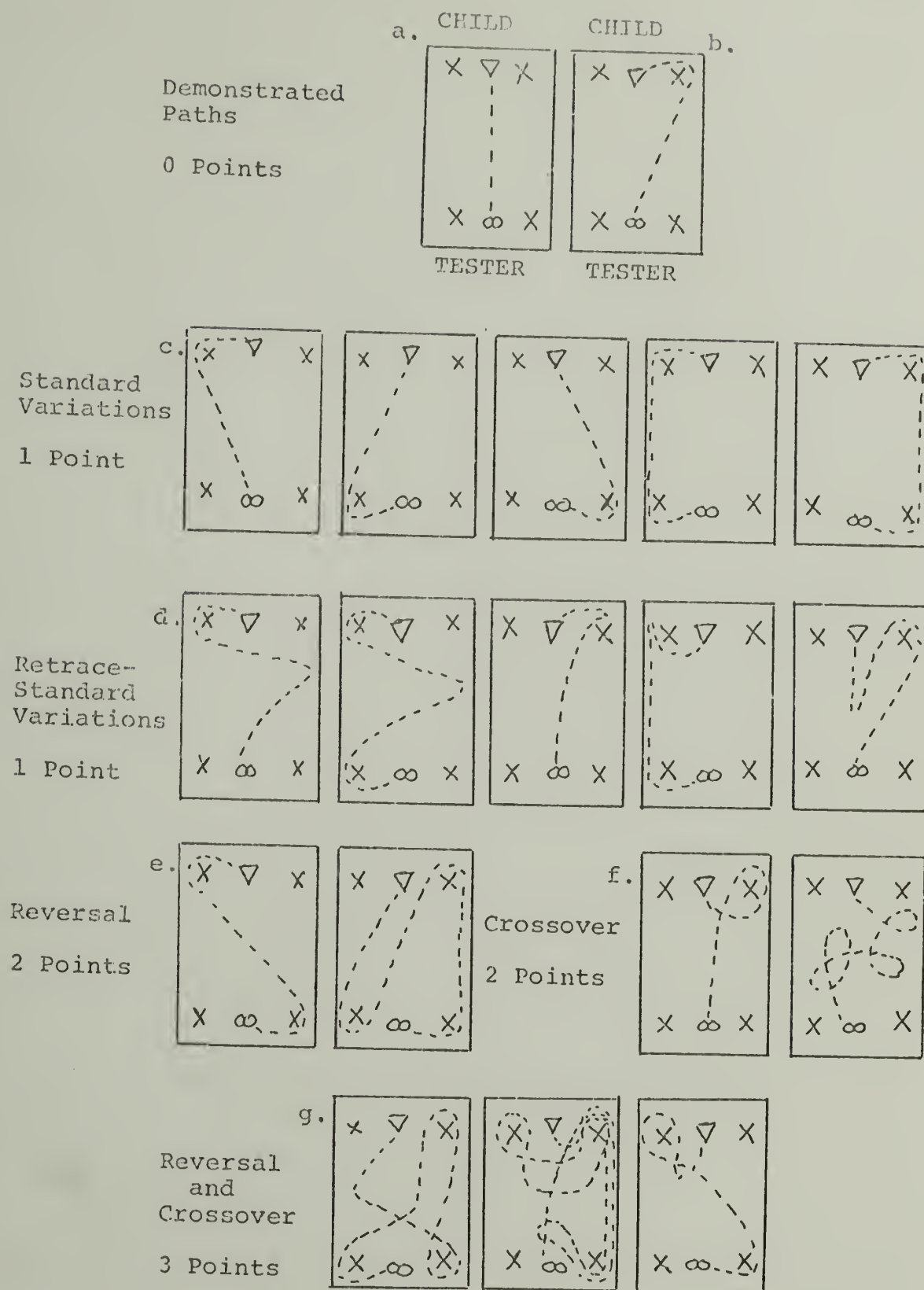


Figure 11. Scoring procedure for Dog and Bone Test

NAME		AGE	
X	X	X	X
△	8	△	8
X	X	X	X
	5		10
X	X	X	X
△	8	△	8
X	X	X	X
	4		9
X	X	X	X
△	8	△	8
X	X	X	X
	3		8
X	X	X	X
△	8	△	8
X	X	X	X
	2		7
X	X	X	X
△	8	△	8
X	X	X	X
	1		6

Figure 12. Dog and bone observation form.

over the tops of the houses. These responses are diagrammed and scored in the same way as the more typical responses: one point for standard variation or retrace-standard variation; two points for a reversal or a crossover; three points for both a reversal and a crossover. If two paths are identical except that one is an over-the-house move, the second is not scored as a novel response.

Total scores may thus range between 0 and 30.

7. Risk Taking Test (Shipman, 1972)

Risk Taking Test Administration

The tester says to the child, "Look in these bags". (The child is shown a group of 10 bags, five of which each contain five pennies and five of which are empty.) "What's in the bag?" (The bag contains five pennies.) What's in this bag?" (The bag is empty.) When the tester is certain that the child understands that some of the bags contain pennies and some are empty, the child is brought to a table containing three closed bags. The tester says, "Maybe these bags have pennies in them, or maybe they're empty. I don't know." He reaches in his pocket, pulls out a single penny and says, "I'll tell you what I'll do. I'll give you this penny (extends penny to the child) or I'll let you have this bag (points to center bag). You can't have both, only one. Which would you like?" If the child chooses the certain penny, the tester hands him/her the penny and says, "Let's look

in the bag. Well, the bag has five pennies. Let's play the game again." The procedure is repeated. If the child chooses the certain penny on the second trial, the tester shows him/her the bag and gives it to him/her also, with the penny.

The following scoring procedure is used:

Code 1 -- if the child does not choose the bag on either trial,

Code 2 -- if the child chooses the bag on the second trial,

Code 3 -- if the child chooses the bag on the first trial.

8. Delay of Gratification Test (Shipman, 1972)

Mischel Technique Administration

The tester should check with the parent for permission to give the child candy. The child is presented with a large "Peppermint Pattie" in the tester's one hand and a small "Peppermint Pattie" in the other. He/she is first asked to identify the hand with "more to eat". The tester then says, "You can have this little one right now or you can have this big one when it's time to go home. If the child chooses both hands or wants the bigger one immediately, further explanation is given and a second trial is given.

Scoring

Code 1: for immediate choice

Code 2: for "delayed" choice

APPENDIX C

Parent QuestionnaireFamily demographics

This information included the number of older siblings as well as the total number of siblings, the parents' ages and education, and the father's occupation (father's occupation and education was used to obtain an SES rating based on Hollingshead's two factor index of social position). Since the TV programs presented in the viewing room were in color, the presence or absence of a color television at home was also obtained.

Amount of TV viewing in the home

On day 1, the parent estimated the number of hours the child and each parent view television in the morning, afternoon, and evening on each day of the week. Weekly viewing of the three individuals were obtained by summing the numbers in each matrix.

On day 2, the parent was given a television schedule and was asked to print next to each program the number of times a week the child typically watches it. These numbers were then converted to hours and summed over the week.

On day 3, the television schedule procedure was repeated, except that the parent marked next to each program two numbers--the number of times per week she and her spouse typically watch the program. These numbers were also converted

to hours and summer over the week.

Parental attitudes toward the television

One measure of parental attitude toward television is the number of hours the TV is on per week, whether anyone is watching it or not. Parents who disdain television may make it a point to keep the TV off, while in other households the TV may be on constantly. In a day (Monday - Sunday) x time (morning, afternoon, evening) matrix, the parent estimated the number of hours the television is typically on. These numbers were summed to obtain a weekly total.

While amount of television viewing is also a measure of attitude toward TV, it is somewhat confounded since the TV may not be available to watch equally among parents (some parents work, engage in volunteer activities, etc.). A more accurate measure is the ratio of the amount of television viewing to the amount of television availability. Amount of TV availability was obtained for each parent from a day x time matrix as described above and the respective ratios were computed.

The Parent Television Interest Index is derived from answers to selected questions on the day 3 questionnaire. It measures the extent to which the parent is involved in the child's TV viewing expressed both as interest in and control over the child's viewing. The index is obtained by totaling the scores on questions 2 (0 - 4), 3 (0 - 4), 5 (0 - 6,

number of circles on don't know or can't tell, 13 (yes - 0, no - 1), and 14 (yes - 0, no - 1), and subtracting the result from 16. The index ranges from 0 - 16 with high scores indicating high interest on the part of the parent.

Finally, the Parent Television Attitude Index reflects the parent's attitude toward TV in the number of positive aspects attributed to television. The index is obtained by summing the number of yes responses in question 18 and the no responses in question 19. Scores range from 0 - 11 with high scores indicating a positive attitude toward television.

Child's attitude toward television

A ratio of amount of home TV viewing to amount of TV availability based on parental estimates was computed for the child. Since some children may attend nursery school, may be subject to parental restrictions, etc., the ratio is a better estimate of the amount of free time the child spends with television than is amount of home viewing alone.

Another measure, the Child Television Interest Index, indicates the role television plays in the life of the child. It examines whether the child asks the parent to watch TV with him or her, whether the child engages in fantasy based on television programs, and the rank of TV viewing relative to the child's other activities during the day. Scores on this index are derived from the day 3 questionnaire and are obtained by totaling the scores on questions 1 and 4,

and the rank given watches TV in question 6, and subtracting the result from 14. High scores indicate a high interest in television. Of the three questions making up this index, question 6 intuitively seemed like it would discriminate between children the best. The results of question 6 were therefore used alone as a further indication of the child's interest in TV.

Finally, two data that may also reflect the child's interest in television are the age the child began watching TV, and the age the child began changing channels.

Parent-child interactions in the home

The Parent-Child Interaction Index is derived from the day 3 questionnaire. It measures the extent to which the parent spends time interacting with the child in the home. The index is obtained by adding the responses in question 8 (ranks of play with him, read to him, and watch TV w/ him) and question 10 (numbers inverted for consistency), and subtracting the result from 24. A high score indicates a large amount of parent-child interaction.

The Maturity Index measures the extent to which the child exhibits independent behavior in his or her everyday activities. It is obtained by summing the number of can do it already responses in the first six items of question 12, and the scores on questions 16 (yes - 1, no - 0) and 17 (number of years). High scores reflect high independent

behavior.

Other questions which measure the extent of parent-child interactions include the number of outings (sum of weighted responses in question 15), and the ranks given to each individual item in question 6 (How does your child spend most of his/her free time at home?) and question 8 (What do you usually do when you are with your child?).

SESSION 1 QUESTIONNAIRE

The information contained in the following questionnaire will be invaluable to us in evaluating our research. Any information imparted, however, will be kept in strict confidence.

1. Date
2. Child's name
3. Address

About the Family

4. Other children in the family:

Sex

Age

5. Parents' education: indicate number of years

Mother

Father

Elementary

High School

College

Graduate

6. Mother's occupation (full or part time?)
7. Father's occupation
8. Father's age in years
9. Mother's age in years

About Your Television

10. How many TV's do you own?
11. How many years have you owned a TV?
12. How large is the screen of the TV your child watches most often?
13. Is the TV your child watches most often color or black and white?

About Your Child's TV Viewing Habits

14. How many hours per day would you estimate that your TV set is actually on:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

15. How many hours is a television available to your child to watch during the following times:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

16. How many hours would you estimate your child actually watches TV during the following times:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

About Your and Your Spouse's TV Viewing Habits

17. How many hours is a television available to you to watch during the following times:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

18. How many hours would you estimate you actually watch TV during the following times:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

19. How many hours is a television available to your spouse to watch during the following times:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

20. How many hours would you estimate your spouse actually watches TV during the following times:

	Morning	Afternoon	Evening
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

SESSION 2 QUESTIONNAIRE

The information contained in the following questionnaire will be invaluable to us in evaluating our research. Any information imparted, however, will be kept in strict confidence.

Date

Child's Name

About Your Child's TV Viewing Habits

1. Can you recall at what age your child first started watching TV?
2. Does your child usually view TV alone or with others?
3. Are the others usually children or adults?
4. If you use a crib or playpen for your child during no-sleep times, can the child view a TV from the crib or playpen?
5. Can you recall at what age your child first purposely (as opposed to simply glancing at it occasionally) started watching TV?
6. Can you recall at what age your child first started asking that the TV set be turned on or that the channel be changed?
7. Can you recall at what age your child started having favorite programs?
8. Can you recall at what age your child first started turning the TV on, and/or changing channels for himself/herself?

9. What are your child's favorite programs, in order?
(List as many as you are aware of)

10. What are your child's least favorite programs, (specific programs or types of programs) in order?

SESSION 3 QUESTIONNAIRE

The information contained in the following questionnaire will be invaluable to us in evaluating our research. Any information imparted, however, will be kept in strict confidence.

Date

Child's Name

1. Does your child ask you to watch TV with him/her? (circle one number)

Almost always--1

Which programs?

Usually-----2

Sometimes-----3

Hardly ever----4

2. Do you watch TV with your child? (circle one number)

Almost always--1

Which programs?

Usually-----2

Sometimes-----3

Hardly ever----4

3. Do you and your child talk about television either when the show is on or after it is over. (circle one number)

Almost always--1

Usually-----2

Sometimes-----3

Hardly ever----4

4. Does your child play games based on television programs? For example, does he/she pretend he/she is one of the people on television? (circle one number)

Almost always--1

Usually-----2

Sometimes-----3

Hardly ever----4

5. When your child watches television how interested does he/she seem to be when the following things are on? (circle one number)

Circle 1 if your child seems not interested.

Circle 2 if your child seems somewhat interested.

Circle 3 if your child seems very interested.

Circle 4 if you don't know or can't tell.

	Not Interested	Somewhat Interested	Very Interested	Don't know or Can't tell
People	1	2	3	4
Puppets	1	2	3	4
Cartoons	1	2	3	4
Animals	1	2	3	4
Films	1	2	3	4
Commercials	1	2	3	4

6. How does your child spend most of his/her time at home?
 (Place a 1 next to his/her most frequent activity, a 2 next to the second most frequent, and so on for all the activities listed.)

Watches TV

Plays with me

Follows me around

Plays by himself/herself

Plays with other children

Other (specify)

7. About how much time is your child with you each day not including the time he/she sleeps? (circle one number)

11 or more hours a day---1

8 - 10 hours-----2

5 - 7 hours-----3

2 - 4 hours-----4

1 hours or less-----5

8. What do you usually do when you are with your child?
 (Place a 1 next to your most frequent activity, a 2 next to the second most frequent and so on for all the activities listed.)

Play with him/her

Read to him/her

Do the housework (cooking, cleaning, shopping)

Watch TV by myself

Watch TV with him/her

Read by Myself

Other (specify)

9. How often does your child use such things as paper, crayons, or paints at home? (circle one number)

Never-----1

Less than once a week---2

About once a week-----3

Several times a week----4

At least once a day-----5

I don't know-----6

10. How often is your child read to? (circle one number)

Never-----1

Less than once a week---2

About once a week-----3

Several times a week----4

At least once a day-----5

I don't know-----6

11. Does your child have his/her own: (circle 1 for YES and 2 for NO for each one)

	Yes 1	No 2
Room		
Art things like crayons, paints, blackboard	1	2
Toys like puzzles, blocks, games	1	2
Books	1	2
Radio or phonograph	1	2
TV	1	2

12. At what age do you expect your child to do the following things?

	Can already do it	3-4	5-6	7-8	9 or more
Undress himself/ herself					
Dress himself/ herself					
Tie his/her own shoes					
Make his/her own bed					
Cross the street himself/herself					
Go to the store himself/herself					
Say the alphabet					
Count to twenty					
Write his/her name					
Write the numbers from 1 to 10					
Read stories with- out your help					

13. Do you specifically encourage your child to watch certain TV programs?

Yes No Which programs?

14. Do you specifically discourage your child from watching certain TV programs?

Yes No Which programs?

15. How often does your child go to each of the places listed below? (circle one number for each place)

	Often	Sometimes	Rarely	Never
Summer Day Camp	4	3	2	1
Public Library	4	3	2	1
Playground	4	3	2	1
Museum	4	3	2	1
Live theatre (for plays or puppet shows)	4	3	2	1
Zoo	4	3	2	1
Movie theatre	4	3	2	1

16. Does your child go to school now? (circle one number)

No, my child is not in school now----1

Yes, a Kindergarten-----2

Yes, a nursery school-----3

Yes, a Head Start Program-----4

Yes, a day care center-----5

Yes, a play group-----6

Yes, other(specify)-----

17. When did your child first start going to school?

Month

Year

18. What in your opinion are the good aspects of TV for your child? (circle 1 for Yes or 2 for No for each one)

	Yes	No
Entertaining	1	2
Educational	1	2
Enables me to get work done	1	2
Keeps him/her company	1	2
Other (specify)		

19. What in your opinion are the bad aspects of TV for your child? (circle 1 for Yes or 2 for no for each one)

	Yes	No
Poor quality of programs	1	2
Advertising to children	1	2
Takes up too much of his/her time	1	2
Teaches bad habits	1	2
Teaches bad language	1	2
Other (specify)		

20. If you have anything you would like to say about television, please do so below. Specific examples would be appreciated. (You may use the back of this sheet if necessary.)

TV LISTINGS

Session 2 Instructions

The following pages are a copy of a weekly listing of all the television programs, the times they are shown daily, and the station on which they appear. Please print next to each program the number of times a week your child watches each program.

If, to your knowledge, your child never watches a particular program please leave the space blank.

Session 3 Instructions

The following pages are a copy of a weekly listing of all the television programs, the times they are shown daily, and the station on which they appear. Please print next to each program the number of times a week you watch each program. Then do the same thing for your spouse. If both you and your spouse watch the same program, let the first number refer to you and the second number to your spouse. You will be provided with two different color pens. Please use red to designate your program selections and black for designating your spouse/s selections.

If you or your spouse never watch a program, please leave the space blank.

DAYTIME LISTINGS

Monday - Friday

Morning Listings

- 5:50 (3) Prayer
 5:55 (3) Town Crier
 (5) Morning Glory
 6:00 (3) Sunrise Semester.
 (Mon-Wed-Fri.)
 (3) Leeks in LeTras
 (Tues.-Thurs.)
 (5) Eye Opener News
 (30) Adelante (MON.)
 Let Us Celebrate (TUES.)
 Ring Around The World
 (WED.)
 What About Women (THURS.)
 Agriculture On Parade (FRI.)
 6:15 (4) Seminar
 6:25 (5) News For The Deaf
 (8) Yale 74 (MON.)
 Eight Day (TUES.)
 Make it Real (WED.)
 Conn. Scene (THURS.)
 Dialogue (FRI.)
 6:30 (3) Face The State (MON.)
 Congressional Rpt. (TUES.)
 Que Hay De Nuevo (Wed.)
 What's Happening (Thurs.)
 Faculty Conversation (FRI.)
 (8) Depending On Trucks
 (Mon.)
 (10) 8th Day (Tues.)
 (10) Summer Semester
 (30) Consultation (MON.)
 Black Exposure (TUES.)
 Across The Fence (WED.)
 It is Written (THURS.)
 This is the Life (FRI.)
 6:45 (4) Daily Almanac
 6:50 (22-32) News
 6:55 (8) Local News
 (22-32) Special Report
 7:00 (3) News
 (4-22-30-32) Today Show
 (5) Jabberwocky
 (8) New Zoo Revue
 (10) Popeye
 7:25 (4) News
 (22-30-32) Weather
 7:30 (4) News
 (5) Leave it To Beaver
 (8) Lost in Space
 (10) Popeye Cartoons
 7:40 (10) Goodship News
 7:55 (4) Heritage Corner
 8:00 (3-10) Captain Kangaroo
 (5) Father Knows Best
 (40) Jack LaLanne Show
 8:25 (4) News
 8:30 (4-30) Today Show
 (5-40) Romper Room
 (8) I Dream Of Jeannie
 (24) The Black Experience
 9:00 (3) New England Journal
 (4) Sonya Hamlin Show
 (5) Good Morning
 (8) Phil Donahue Show
 (10) Dialing For Dollars
 (22-32) Kitty Today
 (30) Lucy Show
 (40) Cartoon Jubilee
 9:15 (24) Ripples
 9:20 (24) Numbers Game
 9:25 (40) Heritage Corner
 9:30 (4) Who, What or Where
 Game
 (8) Dialing For Dollars
 (10) Tattle Tales
 (22-32) Not For Women Only
 (24) Math
 (30) Beverly Hillbillies
 (40) The Flintstones
 9:45 (24) Out of Order
 9:55 (4-30) News
 10:00 (3-10) Jokers Wild
 (4-22-30-32) Name That Tune
 (8) Dialing For Dollars
 (24) Sesame St.
 (40) Leave it to Beaver
 (57) Preview of 21 Classroom
 10:30 (3-10) Gambit
 (4-22-30-32) Winning Streak
 (10) \$10.000 Pyramid
 (40) I Love Lucy
 11:00 (3) Now You See It

DAYTIME LISTINGS

Monday - Friday

Morning Listings

11:00 (4-22-30-32 High Rollers
(5-40) The \$10.000 Pyramid
(8) Password
(27) Phil Silvers
(38) Tom Larson Show

11:10 (8) News

11:25 (40) Weather View

11:30 (3-10) Love Of Life
(4-22-30-32) The Hollywood
Squares
(5-8-40) Brady Bunch
(24) Your Future is Now
(27) Jack Benny

11:55 (10) News

Daytime Listings

12:00 (3-4-5) News
(22-30-32) Jackpot
(8) Action News
(40) Password
(10) The Young And The
Restless
(24) Teaching Children with
Special Needs
(27) Daily Mass
(38) Beat The Clock

12:25 (3) Eye On Women
(10) News

12:30 (3-10) Search For
Tomorrow
(4-22-30-32) Celebrity Sweep-
Stakes
(5-40) Split Second
(8) The Farmers Daughter
(24) Western Civilization
(27) Matinee
(38) Can You Top This

12:55 (22-30-32) News

1:00 (3) Match Game
(5-40) All My Children
(10-38) Jack LaLanne Show
(4-22-32) Somerset
(22-32) Major League Game
(Mon.-Thurs.-Fri.)
(24) Elections
(30) Not For Women Only

1:15 (24) Let's All Sing

1:30 (3-10) As The World Turns
(4-22-30-32 Jeopardy
(5-8-40) Let' Make A Deal
(24) Picture Book Park
(38) The Flying Nun

1:45 (24) Cover to Cover

2:00 (3-10) The Guiding Light
(4-22-32) Days Of Our Life
(22-32) Baseball Playoff (Oct.
7,8,9)

(5-8-40) Newlywed Game
(24) World of B.J. Vibes
(38) Porky Pigs

2:05 (24) Playground II

2:30 (3-10) Edge Of Night
(4-22-30-32) The Doctors
(5-8-40) The Girl In My Life
(24) Animals and Such
(27) Felix The Cat
(38) Bugs Bunny

2:45 (24) Inside-Out

3:00 (3-10) The Price Is Right
(4-22-30-32) Another World
(5-8-40) General Hospital
(24) TV Utilization
(27) Popeye
(38) Bullwinkle

3:30 (3) Ranger Station
(4-22-30-32) How To Survive
A Marriage
(5-8-40) One Life To Live
(10) The Match Game
(18) The Living Word
(24) Enica
(27) Timmy & Lassie
(38) Superman

(57) Maggie and The Beautiful
Machine

4:00 (3-4) Mike Douglas Show

(5) Bonanza
(40) Merv Griffin Show
(8) The \$10.000 Pyramid
(10) Tattletales
(18) Black Buffalo's Pow Pow
(22-32) Lucy Show
(24-57) Sesame Street
(27) Bowery Boys

DAYTIME LISTINGS

Monday - Friday

Daytime Listings

- 4:00 (38) The Three Stooges
- 4:30 (3) Mike Douglas Show
- (8-10) Merv Griffin Show
- (18) Popeye
- (22-32) Hogan's Heroes
- (30) Mod Squad

MONDAY

Evening

- 5:00 (5) Raymond Burr Show
- (4) Mike Douglas Show(In Prog.)
- (5) The F.B.I.
- (8-10) Merv Griffin Show(In Progress)
- (18) The Real McCoys
- (22-32) Big Valley
- (24-57) Mister Rogers' Neighborhood
- (38) F Troop

- 5:30 (4) Family Affair
- (18) Green Acres
- (24-57) Villa Augre
- (27) Gomer Pyle
- (30) Hogan's Heroes
- (38) I Dream of Jeannie
- (40) News

- 5:55 (3) What's Happening?

- 6:00 (3-4-5-8-22) News
- (18) Twelve O'Clock High
- (24-57) The Electric Company
- (27) Petticoat Junction
- (30) Nightly Newsreel
- (38) Dick Van Dyke Show
- (40) Bonanza

- 6:30 (3-5-8-22-30-32) News
- (10) Evening News
- (24) Open Video
- (27) Early Show
- (38) Bewitched
- (57) Zoom

- 6:45 (24) Human Growth & Development

- 6:55 (40) News

- 7:00 (3) News
- (4-22-40-57) News
- (5) To Tell The Truth
- (8) Truth Or Consequences
- (10-30) To Tell The Truth
- (18) Dick Van Dyke Show
- (38) Hogan's Heroes
- (57) The Science & Art of Football

- 7:30 (3) The Price Is Right
- (4) World at War
- (5) 5 On Sports
- (22-30-32) Hollywood Squares
- (8) Police Surgeon
- (10) Beat The Clock
- (18) Wilburn Brothers
- (24) Antiques
- (38) Andy Griffith Show
- (40) Polka
- (57) News

- 8:00 (3) After Dinner Showcase
- (4-22-30-32) Born Free
- (5-8-40) The Rookies
- (10) Life Around Us
- (18) Sharing Our Faith
- (24-57) Special Feature-HowT To Be A Good Father
- (38) Beverly Hillbillies

- 8:30 (27) Safari to Adventure
- (38) Green Acres

- 9:00 (3-10) Maude
- (4-22-30-32) Monday Night Movie

MONDAY

Evening

- 9:00 (5-8-40 NFL Football-N.Y Jets-
Miami Dolphins
(18) The Other Six Days
(24) The Garden Party
(27) Jack Benny Show
(38) Hogan's Heroes
(57) The United Way
- 9:30 (3-7) Champion '74
(10) Rhoda
(24) President Ford in Vermont
(27) Phil Silver's Sargeant Bilko
(38) Dick Van Dyke
(57) Caught in the Act
- 10:00 (3-10) Medical Center
(18) Jimmy Swaggert
(27) Newshour
(38) Movie
(57) Washington Straight Talk
- 10:30 (18) Connecticut Report
(27) Portuguese Around Us
(57) Woman
- 11:00 (3-8-22-30-32) News
(4-18-27) News
(24) Washington Straight Talk
- 11:30 (3) Late Movie
(4-22-30-32) Tonight Show
(10) Late Movie
(27) Charlie Chaplin
(38) Laugh Classics
- 11:45 (8-10) News
- 12:00 (57) News
- 12:15 (40) Football-1974
Highlights
- 12:30 (5) 5 On Sports
(8) Rock Concert
- 12:45 (40) Dragnet
- 1:00 (4-30) Tomorrow
(5) Screening Room
- 1:15 (4) Religious Film
- 2:30 (5) Looking Ahead
- 3:10 (5) You, Me & Joe

TUESDAY

Evening

- 5:00 (3) Raymond Burr Show
 (4) Mike Douglas Show (in progress)
 (5) The FBI
 (8-10-40-) Merv Griffin Show (in progress)
 (18) The Real McCoys
 (22-32) Big Valley
 (24-57) Mister Rogers' Neighborhood
 (38) F Troop
- 5:30 (4) Family Affair
 (18) Green Acres
 (22-32-38) I Dream of Jeannie
 (24-57) Villa Allegre
 (27) Gomer Pyle
 (30) Hogan's Heroes
 (40) News
- 5:55 (3) What's Happening?
- 6:00 (3-4-5-8-22-32) News
 Weather and Sports
 (18) Secret Agent
 (24-57) The Electric Company
 (27) Petticoat Junction
 (30) Nightly Newsreel
 (38) Dick Van Dyke Show
 (40) Bonanza
- 6:30 (3-5-8-22-30-32) News
 Weather and Sports
 (10) Evening News
 (24) The Black Experience
 (27) Early Show
 (38) Bewitched
 (40) News
 (57) Zoom
- 6:55 (40) News
- 7:00 (3-4-40-57) News
 (5-10) To Tell the Truth
 (8) Truth or Consequences
 (18) Dick Van Dyke Show
 (24) The Black Experience
 (30) To Tell the Truth
 (38) Hogan's Heroes
 (57) Woman Is
- 7:30 (3) Sale of the Century
 (4) The Price Is Right
 (5-8) Lets Make a Deal
- 7:30 (24) Elections 74
 (30) Masquerade Party
 (38) Andy Griffith Show
 (40) Room 222
 (57) News
- 7:45 (24) Making Things Work
- 8:00 (3-10 Good Times
 (4-22-30-32) Adam 12
 (5-8-40 Happy Days
 (18) Sharing Our Faith
 (24-57) America
 (38) Beverly Hillbillies
- 8:30 (3-10) M*A*S*H
 (4) Movie
 (22-30-32) World Premiere Movie
 (5-8-40) Tuesday Movie of Week
 (24-57) Evening At Symphony
 (27) Journey To Adventure
 (38) Green Acres
- 9:00 (3-10) Hawaii Five-0
 (18) Science and Art of Football
 (27) Jack Benny Show
 (38) Hogan's Heroes
- 9:30 (18) American Ski Scene
 (24) Witness To Yesterday
 (27) Phil Silvers
 (38) Dick Van Dyke Show
 (57) Woman
- 10:00 (3-10 Barnaby Jones
 (4-22-30-32) Police Story
 (5) Burt Bacharach and Associates
 (8-40) Marcus Welby M.D.
 (18) Washington Debates
 (24) Elections 74
 (28) Movie
- 10:30 (27) Music For All Americans
- 11:00 (3-4-5-8-22-30-32-40) News,
 Weather and Sports
 (10) Action News
 (18) News
- 11:30 (3) Starlight Movie
 (4-22-30-32 Tonight Show

TUESDAY

Evening

- 11:30 (5) Mission Impossible
- (8-40) Wide World of Entertainment
- (10) Late Show
- (27) Charlie Chaplin
- (38) Laugh Classics
- 12:30 (5) Wide World Special
- 1:00 (4-30) Tomorrow
- (8) News
- (40) Religious Series
- 1:10 (3) News
- 2:10 (5) Charlie Chan Mystery
- 2:40 (5) Theatre One
- 3:30 (5) House Call
- 4:00 (5) Candlepin Super Bowl
- 4:30 (5) Good Morning

WEDNESDAY

Evening

- 5:00 (3) Raymond Burr Show
- (4) Mike Douglas Show (in progress)
- (5) The FBI
- (10-40) Merv Griffin Show (in progress)
- (18) Real McCoys
- (22-32) Big Valley
- (24-57) Mister Rogers' Neighborhood
- (38) F Troop
- 5:30 (4) Family Affair
- (8) Mr. Goober and Friends
- (18) Green Acres
- (24-57) Villa Allegre
- (27) Gomer Pyle
- (30) Hogan's Heroes
- (38) I Dream of Jeannie
- (40) News
- 5:55 (3) What's Happening
- 6:00 (3-4-5-8-40) News, Weather and Sports
- (18) The Champions
- (22-32) News
- (24-57) The Electric Company
- (27) Petticoat Junction
- (30) Nightly Newsreel
- (38) Dick Van Dyke Show
- 6:00 (40) Bonanza
- 6:30 (3-5-8-22-32) News, Weather and Sports
- (10-30) Evening News
- (24) Open Video
- (27) Early Show
- (38) Bewitched
- (57) Zoom
- 6:45 (24) Human Growth and Development
- 6:55 (40) News
- 7:00 (3-4-22-30-32-40-57) News
- (5-10-30) To Tell the Truth
- (8) Truth or Consequences
- (18) Dick Van Dyke Show
- (30) To Tell the Truth
- (38) Hogan's Heroes
- (57) The French Chef
- 7:30 (3) Name That Tune
- (4) Last of the Wild
- (5) Let's Make a Deal
- (8) Jeopardy
- (10) Beat the Clock
- (18) Country Carnival
- (22-32) Hollywood Squares
- (24) Bookbeat
- (30) Animal World
- (38) Andy Griffith Show

THURSDAY

Evening

- 5:00 (3) Raymond Burr Show
 (4) Mike Douglas Show (in progress)
 (5) The FBI
 (8-10-40) Merv Griffin Show (in progress)
 (18) The Real McCoys
 (22-32) Big Valley
 (24-57) Mister Rogers' Neighborhood
 (38) F Troop
- 5:30 (4) Family Affair
 (18) Green Acres
 (22-32-38) I Dream of Jeannie
 (24-57) Villa Allegre
 (27) Gomer Pyle
 (30) Hogan's Heroes
 (40) News
- 5:55 (3) What's Happening?
- 6:00 (3-4-5-8-22-32) News
 Weather and Sports
 (18) I Spy
 (24) The Electric Company
 (27) Petticoat Junction
 (30) Nightly Newsreel
 (38) Dick Van Dyke Show
 (40) Bonanza
- 6:05 (3) News, Weather and Sports
- 6:30 (3-10) News, Weather and Sports
 (5) News
 (24) The Black Experience
 (27) Early Show
 (38) Bewitched
 (57) Zoom
- 6:55 (40) News
- 7:00 (3-4-22-30-32) News
 (5-10-30) To Tell the Truth
 (8) Truth or Consequences
 (18) Dick Van Dyke Show
 (24) Ready Or Not
 (38) Hogan's Heroes
 (57) Western Mass Business Report
- 7:30 (3) Secrets of the Deep
 (4-8) 25,000 Pyramid
 (5) House Call
 (10) Ozzie's Girls
- 7:30 (18) Good Old Nashville Music
 (22-32) Hal Stanton Presents
 (24) Burglar-Proofing
 (30) The New Treasure Hunt
 (38) Andy Griffith Show
 (40) Dragnet
 (57) News
- 8:00 (8-10) The Waltons
 (4-22-30) Sierra
 (5-8-40) The Odd Couple
 (18) Sharing Our Faith
 (24-57) The Way It Was 1950
 Colts-Giants
 (32-38) Hockey-Boston-Buffalo
- 8:30 (5-8-40) Paper Moon
 (24-57) Religious America
 (27) Animal World
- 9:00 (3-10) Thursday Night Movie
 (4-22-30-32) Ironside
 (5-8-40) Streets of San-Francisco
 (18) World Football-Houston-So. California
 (24) The Epic of Buster Friend
 (27) Jack Benny Show
 (57) International performance
- 9:30 (27) Phil Silvers Show
- 10:00 (4-22-32) Movin On
 (5-8-40) Harry O
 (24) Caught in the Act
 (27) News
- 10:30 (27) Joe Hyder Show
 (38) Wrap-up
 (57) Open Door
- 10:45 (38) Movie
- 11:00 (3-5-8-10-22-30-32-40) News, Weather and Sports
 (18-57) News
- 11:30 (3) Starlight Movie
 (4-22-30-32) The Tonight Show
 (5) Mission Impossible
 (8-40) Wide World Special
 (10) Late Show
 (27) Charlie Chaplin

WEDNESDAY

Evening

- 7:30 (40) Room 222
 - (57) News
- 8:00 (3-10) Sons and Daughters
 - (4-22-30-32) Little House on the Prairie
 - (5-8-40) That's My Mama
 - (18) Sharing Our Faith
 - (24-57) Men Who Made the Movies
 - (38) Beverly Hillbillies
- 8:30 (5-8-40) Movie of the Week
 - (27) Untamed World
 - (38) Green Acres
- 9:00 (3-10) Special - Bing Crosby and Friends
 - (4-22-30-32) Lucas Tanner
 - (10) Life Around Us
 - (18) Family Cinema
 - (27) Jack Benny Show
 - (38) Hogan's Heroes
- 9:30 (24) This Time Around
 - (27) Phil Silvers Show
 - (38) Dick Van Dyke Show
 - (57) The United Way
- 10:00 (3-10) Man Hunter
 - (4-22-30-32) Petrocelli
 - (5-8-40) Get Christie Love
 - (24-57) Festival Films
 - (27) News
 - (38) Movie
- 10:30 (18) Mayor's Half Hour
 - (24) Video Visionaires
 - (27) The Elder Americans
 - (57) Bookbeat
- 11:00 (3-5-8-10-22-30-32-40) News
 - Weather and Sports
 - (27) News
- 11:30 (3) Late Movie
 - (4-22-30-32) The Tonight Show
 - (5) Mission Impossible
 - (10) The Late Movie
 - (8-40) Wide World Special
 - (27) Charlie Chaplin
 - (38) Laugh Classics
- 12:30 (5) Wide World Special
- 1:00 (4-22-30-32) Tomorrow
 - (40) USAF Religious Film
- 1:20 (3) News
- 2:10 (5) Wanted Dead or Alive
- 2:40 (5) The Rogues
- 3:40 (5) 5 All Night
- 4:00 (5) Outlook
- 4:30 (5) Good Morning

THURSDAY

Evening

12:15 (38) News
 12:30 (5) Wide World Special
 (22-32) Tonight Show
 1:00 (4) Tomorrow
 (40) USAF Religious Film
 1:20 (22-32) Tomorrow
 2:00 (5) News
 2:10 (5) Hollywood and the Stars
 2:40 (5) Highway Patrol
 3:10 (5) The Detectives
 4:10 (5) All Night
 4:30 (5) Good Morning

FRIDAY

Evening

<p>5:00 (3) Raymond Burr Show (5) The F.B.I. (8-10-40) Merv Griffin Show (in progress) (18) The Real McCoys (22-32) Big Valley (24-57) Mister Rogers' Neighborhood (38) F Troop</p> <p>5:30 (4) Family Affair (18) Green Acres (24-57) Villa Algyre (27) Gomer Pyle (30) Hogan's Heroes (38) I Dream of Jeannie</p> <p>6:00 (3-4-5-8-22-32) News (18) The Prisoner (24-57) The Electric Co. (27) Petticoat Junction (30) Nightly Newsreel (38) Dick Van Dyke Show (40) Bonanza</p> <p>6:05 (3) News</p> <p>6:30 (3-8-10-22-32) News (24) Zoom (27) Early Show (38) Bewitched (57) Zoom</p> <p>6:55 (40) News</p> <p>7:00 (3) News</p>	<p>7:00 (4-22-30-32-40-57) News (5-10-30) To Tell The Truth (8) Truth of Consequences (18) Dick Van Dyke Show (38) Hogan's Heroes (57) Erica</p> <p>7:00 (18) Dick Van Dyke Show (38) Hogan's Heroes (57) Erica</p> <p>7:15 (57) Theonie 06</p> <p>7:30 (3) Campaign 74 (4) Name That Tune (5) 5 At Large (30) Hollywood Squares (8-22-32) Let's Make A Deal (18) Porter Wagoner (24) News (38) Andy Griffith Show (40) Nanny And The Professors</p> <p>8:00 (3-10) Planet of the Apes (4-22-30-32) Sanford & Son (5-8-40) Kodiak (18) Sharing Our Faith (24-57) Washington Week in Review (38) Beverly Hillbillies</p> <p>8:30 (4-22-30-32) Chico and The Man (5-8-40) The Six Million Dollar Man</p>
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FRIDAY

Evening

- 8:30 (24-57) Wall Street Week
 (27) The Challenging Sea
 (38) Green Acres
- 9:00 (3-10) Friday Night Movie
 (4-22-30-32) The Rockford Files
 (18) Billy Graham Crusade
 (24) Canada Week at Chautauqua
 (27) Jack Benny
 (38) Hogan's Heroes
 (57) Masterpiece Theatre
- 9:30 (5-8-40) Texas Wheelers
 (24) Nana
 (27) Phil Silvers
 (38) Dick Van Dyke Show
- 10:00 (4-22-30-32) Police Woman
 (5-8-40) The Night Stalker
 (18) The Dawson-McAllister Show
 (24) Masterpiece Theatre
 (27) News
 (38) Soul Train
 (57) Chavez-An Interview
- 10:30 (18) New Directions
 (27) In Session
 (57) Western Mass Business Journal
- 11:00 (3-4-5-8-10-22-30-32-40) News
 (38) Right On
- 11:30 (3) Friday Spectacular
 (4-22-30-32) Tonight Show
 (5) Mission Impossible
 (8-40) In Concert
 (10) Late Movie
 (27) Charlie Chaplin
 (38) Laugh Classics
- 12:30 (5) Wide World of Mystery
- 1:00 (4-22-30-32) The Midnight Special
 (40) News-Religious Series
- 1:30 (3) Great Mysteries
- 2:00 (3) News
 (5) News
- 1:30 (57) America
 2:10 (5) 5 All Night Movie
 4:00 (5) 5 At Large
 4:30 (5) Good Morning

SATURDAY

Morning And Afternoon

- 6:00 (4) International Zone
(5) Across The Fence
- 6:30 (3) Agriculture USA
(4) The First Americans
(5) Looking Ahead
(24) Silent Comedy Film Festival
- 7:00 (3) Arthur & Co.
(4) For Kids Only
(50) Pixanne
(8) Lost in Space
(10) Semester
- 7:15 (8) A New Day
08
- 7:29 (30) Morning Prayer
- 7:30 (4) Run Joe Run
(5) These Are The Days
(10) Big Blue Marble
(30) Gilligan's Island
- 7:55 (5) Schoolhouse Rock
- 8:00 (3) Captain Bob
(4-22-30-32) The Addams Family
(5-8-40) Yogi's Gang
(10) Speed Buggy
- 8:25 (5-40) Scholastic Rock
- 8:30 (3) Vision on
(4-22-30-32) Wheelie and the Chopper Bunch
(5-8-40) Bugs Bunny
(10) Scooby Doo
(57) Zoom
- 9:00 (3) Jeannie
(4-22-30-32) Emergency Plus 4
(5-8-40) Hong Kong Phooey
(10) Popeye
(58) Sesame Street
- 9:25 (40) Multiplication Rock
- 9:26 (10) In The News
- 9:30 (3-10) The Partridge Family
(Something Else
(5-8-40) The New Adventure of Gilligan
- 9:30 (22-30-32) Run Joe Run
- 9:55 (5) Scholastic Rock
- 10:00 (3-10) Valley of the Dinosaurs
(4-22-30-32) Land of The Lost
(5-8-40) Devlin
(24-57) The Electric Company
- 10:25 (40) Multiplication Rock
- 10:26 (10) In The News
- 10:30 (3-10) Shazan
(4-22-30-32) Sigmund and the Sea Monsters
(5-8-40) Korg 70,000 B.C.
(57) Zoom
- 10:55 (5) Scholastic Rock
(38) News
- 10:56 (10) In The News
- 11:00 (3-10) Harlem Globe-trotters
(4-22-30-32) The Pink Panther
(5) Captain Bob
(8-40) Super Friends
(24) Carrasco Lendas
(27) Roller Derby
(38) Celebrity Bowling
(57) Sesame St.
- 11:30 (3-10) Hudson Brothers
Comedy Hour
(4) News
(22-30-32) Star Trek
(5) News
(24) Zoom
(38) Wrestling
- 12:00 (3-10) US of Archis
(4-22-30-32) The Jetsons
(5-40) Candlepin Bowling
(8) These Are The Days
(24) Mister Rogers' Neighborhood
(27) NFL In Action
(57) Electric Co.

SATURDAY

Morning And Afternoon

12:30 (3-10) Fat Albert
 (4-22-30-32) Go
 (8) Mr Goober & Friends
 (24-57) Villa Alegre
 (38) Laugh Classics

4:30 (27) U.F.O.
 (30) The Three Stooges

EVENING

1:00 (3) Special-No Place For A
 Picnic
 (4) Star Trek
 (5) Treasure Hunt
 (8) Make It Real
 (10-38) Soul Train
 (18) Capital Wrestling
 (24) Sesame St.
 (27) Secret Agent
 (30) Jaberwocky
 (40) Dragnet

1:30 (3) U Conn Football-
 Delaware-Storrs
 (4) Survival
 (5) Boston Blackie
 (8-40) NCAA Football
 (30) The World of Survival
 (57) Wall St. Week

2:00 (3) SoulTrain
 (4) Major League Baseball
 (10) Black Paper
 (24) Electric Co.
 (27) Nashville Music
 (38) Can You Top This

2:30 (10) Gaññer Ted Armstrong
 (24) Vibrations Encore
 (27) Music For All Americans
 (38) Saturday Afternoon
 Theatre

3:00 (3) Big 3 Theatre
 (10) Roller Game of the
 Week
 (24) Open Video
 (27) Country Carnival

3:30 (18) Journey to Adventure
 (27) Thriller

4:00 (10) Big Movie
 (18) Car and Track
 (24) International Performance
 (38) Daktari
 (57) Sesame Street

4:30 (18) Celebrity Bowling

5:00 (3) Perry Mason
 (4) Untamed World (58-40)
 Wide World of Sports
 (18) Wally's Workshop
 (22-32) Star Trek
 (38) Daniel Boone
 (57) Black Perspective on
 the News

5:30 (4) Animal World
 (18) Celebrity Tennis
 (27) Bobby Goldsboro Show
 (57) The Electric Company

6:00 (3-4) News, Weather and
 Sports
 (18) Movie 18
 (22-32) News
 (24) Open Video
 (27) Abbott and Costello
 (38) Century Cinema
 (57) Bookbeat

6:30 (3-4-10) News Weather
 and Sports
 (5-8-40) Report
 (22-32) News
 (57) Western Mass Business
 Journal

7:00 (3) Agronsky and Co.
 (4) Sixteen 74
 (5) Candlepin Super Bowl
 (8) Action News
 (10) Treasure Hunt
 (22-32) Big News
 (24) Evening At Pope
 (30) Hee Haw
 (40) Here Come the Bride
 (57) Compass Weekly

7:30 (3) What's Happening
 (4) Starring the Editors
 (5) Third World
 (8) Wild Refuge
 (10) The Price Is Right
 (18) Public Affairs

SATURDAY

Evening

- 7:30 (22-32) As Schools Match
Wits PETERSON
- 8:00 (3-10) All in the Family
(4-22-30-32) Emergency
(5-8-40) The New Land
(18) Bobby Goldsboro Show
(24) Family Theatre
(27) Race of the Week Belmont
(38) Showcase
(57) The Men Who Made the Movies
- 8:30 (3-10) Paul Sand in Friends and Lovers
(18) This Week in the NFL
(24) Family Theatre
(27) Wrestling
(57) The Men Who Made the Movies
- 9:00 (3-10) Mary Tyler Moore Show
(4-22-32) Saturday Night Movie
(5-8-40) King Fu
(24) Open Video
- 9:30 (3-10) Bob Newhart Show
(18) Can You Top This
(27) Roller Game
(57) The Unique Death of Ethel and Julius Rosenberg
- 10:00 (3-10) Carol Burnett Show
(5-8-40) Nakia
(18) Old Time Gospel Hour
(24) David Susskind Show
(38) Movie
(40) It Takes a Thief
- 10:30 (27) Football-Dartmouth-Holy Cross
- 11:00 (5-8) News
- 11:15 (5) The Great Entertainment
(22-32) News
- 11:30 (3) Saturday Spectacular
(8) Million Dollar Movie
(10) Late Movie
(18) News
(38) Viewpoint
- 11:35 (40) Night Gallery
- 11:45 (4) Tonight Show
(22-32) Down the Stretch
- 12:35 (40) Religious Series
- 1:00 (30) In Session
- 1:15 (4) Rock Concert
- 1:25 (5) 5 All Night Movie
- 1:45 (3) Judd For the Defense
- 3:00 (5) News
- 3:15 (5) 5 All Night
- 3:30 (5) Boston Blackie
- 4:00 (5) Third World
- 4:30 (5) Good Morning

SUNDAY

Morning And Afternoon

- 6:00 (3) Christopher Closeup
(5) This is The Life
- 6:30 (3) Camera 3
(4) Insight
(5) Christopher Closeup
- 6:50 (30) Morning Prayer
- 7:00 (3) Insight
(4) Living Word
(5) Directions
(8) This Is The Life
- 7:15 (4) Davey & Goliath
- 7:30 (3) Faculty Conversation
(4) A Show of Faith
(5) Davey & Goliath
(8) Worship for Shutins
(10) Voice of Victory
(30) Ring Around The World
- 7:45 (40) Sacred Heart Program
- 7:55 (38) News
- 8:00 (3) We Believe
(4) Nosotros Theatre
(5) Vision On
(8) Celebration of the Eucharist
(10) Old Time Gospel Hour
(27) Day of Discovery
(30) Sunday Adventure Theater
(38) Nutty Squirrels
(40) Christopher Close-Up
- 8:30 (3) Spread A Little Sunshine
(5) Lassie's Rescue Rangers
(5-40) Day of Discovery
(8) Insight
(22-32) Oral Roberts Presents
(27) Old Time Gospel Hour
(38) Mr Magoo & Friends
- 9:00 (3) What's New
(5) Jaberwocky
(7) Asian Focus
(8) Big Blue Marble
(10) Town & Country
(22-32) I Dream of Jeannie
(38) Wally Gator & Friends
(40) Spring St. USA
- 9:15 (7) Sunday Mass
- 9:30 (3) Every Woman
(5) Make A Wish
(8) Captain Noah
(10) Table of The Lord
(22-32) I Dream of Jeannie
(27) American Religious
Town Hall Meeting
(30) Let Us Celebrate
(30) Mel O Toons
(40) Insight
- 9:45 (18) Share
- 10:00 (3) Lamp Unto My Feet
(5) New Heaven/New Earth
(8) Mormon Tabernacle World
Conference
(22-32) Chalice of Salvation
(27) Gospel Singing Jubilee
(30) The Sacrifice of the Mass
(38) Porky Pigs & Friends
(40) Latino
- 10:30 (3) Look Up & Live
(4) For Kids Only
(5) Outlook
(10) Face to Face
(18) Norman Vincent Peale
(38) Bugs Bunny
(40) Jewish Heritage
- 10:45 (30) Jewish Life
- 11:00 (3) Challenge
(4) Community Auctions
(5) Opportunity Line
(40) Goober & The Ghost
Chasers
(10) Football-Notre Dame
(18) Hour of Power
(22-32) Dr. Norman Vincent
(24-57) Hockey-Canada-Russia
(27) Rex Humbard
(38) Rocky & Friends
- 11:30 (3) Face The Nation
(4) News
(5) NFL Game of the Week
(40) Make A. Wish

SUNDAY

Morning And Afternoon

- 11:30 (40) Make A Wish
 (22-32) 1974 Notre Dame Football Michigan-East Lansing
 (30) Adelante
 (38) Underdog
- 12:00 (3-10) NFL Game-
 Atlanta-N.Y Giants
 (4) Eyewitness News Conference
 (5) News
 (8) Connecticut Scene
 (18) Day of Discovery
 (27) Best In Bowling
 (30) What About Women
 (38) Top Cat
 (40) Roller Game
- 12:15 (8) Speaking For The Consumer
- 12:30 (4-22-30-32) Meet The Press
 (5) You Me & Joe
 (8) Dialogue
 (18) The Best of Sharing our Faith
 (38) Day of Discovery
- 1:00 (4) Football Oakland Cleveland
 (5) Your Place & Mine
 (22-30-32) Baseball-Divisional Playoff
 (8) Eight Day
 (27) Charlie Chaplin Comedy Theatre
 (38) Hour of Power
 (40) Conversation With
- 1:30 (5-8-40) Issues & Answers
 (18) Oral Roberts Presents
 (24) Tennis
 (27) Wally's Workshop
- 2:00 (5) Great Entertainment
 (8) Sunday Cinema
 (18) Kathryn Kuhlman
 (27) Day of Discovery
 (38) Worship for Shutins
 (40) Picture for Sunday
- 2:30 (18) Happy Goodman Family
 (27) Love Story
 (38) Sunday Matinee Theatre
- 3:30 (3) NFL Game-Minnesota Dallas
 (18) Hour of Power
- 3:45 (5) That's Entertainment
- 4:00 (4-22-30-32) American League Football Playoff
 (5) National Geographic Specials
 (8) Cinema
 (24) Open Video
 (27) Shirley Temple Theatre
 (38) Wildlife Theatre
 (40) Wild Wild West
- 4:30 (18) Teach In
 (38) Comedy Festival
 (57) National Town Meeting
 08

SUNDAY EVENING

- 5:00 (5) Sunday Movie
(40) The Persuaders
- 5:30 (18) Jimmy Swaggert
(24) Family Theatre
(27) Safari To Adventure
(57) Tim Weisberg
- 6:00 (8) Lawrence Welk Show
(18) Day of Discovery
(27) Wild Kingdom
(38) Wild, Wild West
(40) Departments
(57) Washington Week in Review
- 6:30 (18) Amazing Grace
(24) Zoom
(27) Bay State Bowling
(57) Wall Street Week
- 7:00 (3) News
(4:30) Wild Kingdom
(5) News
(8) News
(10) Police Surgeon
(18) Gospel Singing Jubilee
(22-32) Big News
(24-57) Journey to Japan
(38) Hazel
(40) The Baron
- 7:30 (3-10) Apple's Way
(2-22-30-32) Wonderful World of Disney
(5) Campaign 74
(8) Confrontation for Congress
(24) Open Video
(27) Movie of the Week
(57) Candidate Night
- 8:00 (5-8-40) Sonny Comedy Hour
(18) Good News
(10) Oral Roberts
(38) Hockey-Special
- 8:30 (3-10) Kojak
(4-22-30-32) Sunday Mystery Movie
(18) Challenge of Truth
(24-57) Masterpiece Theatre
- 9:00 (5-8-40) Sunday Night Movie
(18) Kathryn Kuhlman
(38) The Saint
- 9:30 (3-10) Mannix
(18) Oral Roberts Presents
(24-57) Firing Line
(27) David Susskind
- 10:00 (4-22-30-32) Special
Tornado
(18) Living Faith
(30) T.V. Presents
(38) Ask the Manager
- 10:30 (3) Face The State
(10) 30 Minutes
(22-32) Feature
(24) The Way It Was-1951
Dodgers-Giants Playoff
(38) The Drum
(30) TV Reports
- 11:00 (4-10-30) News
(38) Human Dimensions
- 11:15 (3) News
(10) Face The Nation
- 11:30 (3) Cinema Club 3
(4) Mod Squad
(5) News
(18) News
(22-32) Tonight Show
(30) This Is Music
(38) Ronda Musicale Hispana
- 11:45 (5) Mission Impossible
(8) The Avengers
(10) Perry Mason
(40) Movie of the Week
- 12:00 (30) Late Show
08
- 12:30 (4) Late Show
- 12:45 (5) News
(8) News
- 1:00 (5) New Heaven/New Earth
(8) Speaking for the Consumer
- 1:15 (40) Religious Film
- 1:30 (5) Your Place & Mine
- 2:00 (5) Campaign 74

