Accepted by the faculty of the Department of Communication, College of Communication Arts, Michigan State University, in partial fulfillment of the requirements for the Doctor of Philosophy degree.

_____

Director of Thesis

Guidance Committee: _____ Chairman

_____

_____

_____

ABSTRACT

TELEVISION VIEWING AND OCCUPATIONAL KNOWLEDGE
AMONG JAPANESE CHILDREN

By

Junichi Kawashima

This study explores the potential of television as an incidental learning source for children's knowledge of the world of work.

Young children gradually acquire information concerning various occupational roles and their statuses. This ostensibly helps them to choose occupations in the future as well as to help in interaction with adults holding various positions. This part of the child's socialization is assumed to take place informally through direct contact with people at work, through conversation with parents and neighbors, or through exposure to mass media such as television, movies, comic books, etc. Of these, television appears to constitute an importance source of occupational information, because it provides a great deal of indirect information about various jobs, and because children spend a great deal of time watching it.

Following the pattern of the DeFleur study,* this research focuses upon: (1) the relative effectiveness of television as a learning source for children's occupational knowledge; (2) the relationships between the child's knowledge of TV portrayals of occupations and amount of viewing; and (3) the homogenization effect of television regarding children's knowledge of the world of work.

Two dependent variables used in the present study are: (1) role knowledge; and (2) status knowledge. Measures of the two dependent variables were obtained from the Occupations Test, which consists of three sets of six cartoon-like representations of various occupations drawn from six levels of occupational prestige. The three sets of occupations represent the three distinct types of contact through which children may acquire information about occupational roles and their status rankings. Type of contact with roles constitutes the independent variable. The three types of contact with roles are: (1) personal contact; (2) television; and (3) general culture.

Data were collected from 170 fourth and sixth grade children in a typical medium-sized city near Tokyo. The selected children were administered the Occupations Test in a personal interview situation. In addition, they were

*DeFleur, M. L., and L. B. DeFleur, "The Relative Contribution of Television As a Learning Source for Children's Occupational Knowledge," American Sociological Review, 32 (1967), pp. 777-789.

asked to keep a diary of daily activities, from which the data on media exposure habits were derived for three weekend days.

The data on the relationships between occupational knowledge and three types of contact occupations were analyzed first by t-test for the differences between related means and then by mixed design analysis of variance when grade, sex, social class, and intelligence variables were controlled. The relationships between occupational knowledge of televised roles and amount of TV viewing, viewing adult TV fare, and exposure to pictorial media, were tested first by product moment correlations and then by partial correlations controlling each of the four control variables. The homogenization effect of television was examined in terms of coefficients of concordance among status rankings of three types of contact occupations.

Personal contact was found to be the most effective learning source for children's occupational role knowledge, followed by television and then by general culture. The findings on status knowledge, however, were opposite to the predicted direction, general culture being the most effective source. Role knowledge of television contact occupations was significantly and negatively related to amount of television viewing and exposure to pictorial media.

The remaining hypothesized relationships between occupational knowledge and media exposure habits were not significant.

The coefficients of concordance obtained seem to point to a homogenization effect, specifically among children who are in the sixth grade, from upper-middle class families, and in the medium intelligence level. These groups of children were also found to know more about TV roles than other groups.

The present study strongly supports the DeFleur hypothesis on the relative effectiveness of television as a learning source for children's occupational role knowledge. Some negative findings seem to have resulted from methodological problems in selecting three types of contact occupations, especially TV roles, in assessing status knowledge, or in estimating amount of viewing. The Occupations Test needs to be improved or modified in order to become a more valid and reliable test.

TELEVISION VIEWING AND OCCUPATIONAL KNOWLEDGE AMONG JAPANESE CHILDREN

By

Junichi Kawashima

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Communication

1971

ACKNOWLEDGMENTS

The author wishes to express his sincere appreciation to the Chairman of his Guidance Committee, Dr. Hideya Kumata, for his patience and encouragement throughout the writer's doctoral program. Many thanks are also extended to the other members of the Guidance Committee, Dr. Ervin P. Bettinghaus, Dr. Verling C. Troldahl and Dr. Frederick B. Waisanen.

A large number of persons have substantially assisted the author during the course of the dissertation. The writer is particularly indebted to Dr. Melvin C. DeFleur, Washington State University, for his helpful suggestions in the design phase, Dr. Terumi Nakano and Mr. Hisao Sakamoto, International Christian University, Tokyo, for their great assistance in the data collection phase in Japan, and Mrs. Anita Immelé for her considerable help in the data analysis phase. Robert F. Keith and Clyde D. Morris have always provided constructive suggestions during the entire dissertation process.

Special gratitude is also extended to many staff members of the Ontario Educational Communications Authority. In particular, the author wishes to express his thanks to

Mr. T. R. Ide, Chairman and Chief Executive Officer, and Mr. David J. Cook, Executive Director, for their thoughtfulness and support.

To Michiko, Jun and Ken--thank you for your patience and understanding.

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES AND FIGURES

TABLE Page

CHAPTER I

INTRODUCTION: THE PROBLEM AREA

With the advent of television, there has been a common assumption among communication researchers that the new medium serves as an important source of information about a wide variety of topics for children. Obviously, the basic aim of television is to entertain rather than to educate. However, TV is seen to have its full potential as a source for "incidental learning" of various topics for young audiences (Schramm and others, 1961, p. 75). In this regard, Himmelweit and others (1958, p. 229) present the following observations:

> Television is one further source of information--probably an important one, because it fulfills three conditions for effective learning. First, the child enjoys it and so is favourably predisposed to what is put over. Secondly, he spends a lot of time watching and, since the views and values presented are fairly consistent, he receives many cues pointing in the same direction, thus reinforcing one another. Thirdly, television affects two senses at once and so might offer the child more than the same material would offer if it was heard on the radio or read in a book.

Over the past two decades, considerable research has been done to determine the influence of television upon children's general knowledge, interests, or school

performances.[1] These investigations seem to indicate that in general, television does not stimulate interests or broaden horizons among children as much as was expected, and that the kinds of knowledge they acquire, if any, may be of little use. Some communication researchers seem to contend, however, that TV serves most effectively as a source for incidental learning of some topics about which children know very little (e.g., Schramm and others, 1961; Maccoby, 1963).

One such unfamiliar topic, where television is likely to have its effect, is the world of work. Apparently, television content in general, and adult TV shows in particular, provide a great deal of indirect information about a variety of occupations and the people who work at them. In reality, many of these occupations and workers may be rarely seen by most children and thus they are unfamiliar to them. Since children appear to spend a great deal of time watching television, particularly adult TV fare,[2] they may acquire some information about various occupations portrayed on TV and may thereby develop their conceptions of the occupational world through the incidental learning process. With reference to the child's

---

[1]For a brief review of research, see a UNESCO report (Schramm ed., 1964, pp. 11-13)

[2]See the Himmelweit study (1958) and the Schramm study (1961).

incidental learning of occupations from television, Schramm and others (1961, p. 155) state: "He sees surprisingly very little of the actual behavior of making a living . . . information on this little known part of life (little known by the child, that is) is one of the chief topics of incidental learning." In examining children's use of television, Maccoby (1963, pp. 126-127) speculates: "They also use it to prepare themselves for their future lives as students, as marriage partners, as a member of a professional or occupational group." In short, there seems little doubt that the child learns something about the world of work through watching televised portrayals of occupations.

In spite of the accumulation of various documents regarding the importance of television as a source of information about occupations, there has been little systematic research to determine the extent to which TV affects the child's conceptual learning of the world of work.

Actually, some attempts in this field have been made in the past by several communication researchers, although most attention has been focused on the "harmful" effects of mass media. In a laboratory experiment, Siegel (1958) found that children's role expectations of a taxi-driver were influenced by the content of a radio drama which depicted the aggressive taxi-driver. In a field

experiment of the long-term effects of television, Himmelweit and others (1958) asked children to name the occupations which they believed were either well paid or glamorous. Their findings suggest that both viewers and non-viewers mentioned fashion modeling or work in the world of entertainment as glamorous; however, the viewers mentioned more often white-collar jobs as the better paying jobs than their local factory jobs. These studies indicate that media content may affect the child's knowledge about occupations in somewhat stereotyped ways.

In addition, several studies suggest that mass media may affect children's occupational interests or occupational choices in the future. In an experimental study of radio space programs, Zajonc (1954) found that children would wish to be like the successful character depicted on the program, regardless of the methods he employed to gain success. The Himmelweit study (1958) suggests that there was a small but consistent influence of television on the way children thought generally about jobs, job values, success, and social surroundings: i.e., (1) in their job aspirations, viewers proved to be more ambitious than non-viewers; (2) in their job values, viewers were more middle-class; (3) in the assessment of the factors making for personal success, they more often stressed the need for self-confidence, even though it had little effect on the jobs they expected to do; and

(4) some of their descriptions of the homes of rich people reflected the hallmarks of wealth depicted on television. Bailyn (1959) found that boys who possessed certain psychological problems and who were heavy users of pictorial media (i.e., television, movies, and comic books) were no more inclined than other children to give unrealistic answers when they were asked what they would most like to do when they grew up, but when asked what they would like to be changed into, they were more likely to choose media characters such as Superman, FBI agents, or detectives.

It is important to note, however, that television is just one of the many sources of information about the world of work. Children can acquire occupational information through direct contact with workers on the street, through conversations with parents and neighbors, or through exposure to various other mass media such as movies, magazines, comic books, etc. The pertinent question then is: to what extent does television affect the child's knowledge of the world of work as compared with other sources of information? Furthermore, since the influence of television upon children's occupational knowledge is "cummulative" in nature, the question should also be asked as to how can such an effect be measured systematically?

An investigation completed by DeFleur and DeFleur (1967) appears to provide a direction to the questions

raised above. Briefly, three distinct sources of information were first selected on the basis of their influence on children's conceptual learning of the world of work. These were: (1) personal contact, (2) television, and (3) general culture. Occupational roles learned through personal contact refer to jobs with which the average child comes into contact during his normal life in the community, whereas those roles learned through the general community culture refer to jobs which are widely understood by adults in the community but rarely seen by children either in person or on television. Television contact occupations are roles which are frequently portrayed in modern settings on the TV screen. On the basis of these criteria, six occupations drawn from the six levels of occupational prestige were then selected to represent each of the three learning sources. Three sets of cartoon-like representations of the occupations (i.e., the Occupations Test) were presented to children for assessing their knowledge about roles and about their status rankings. The three major findings were: (1) personal contact with roles was the most effective learning source, followed by television and then by general culture; (2) frequent viewers knew more about television contact occupations than infrequent viewers; and (3) there was an indication of the "homogenization" effect, whereby children were more consistent among themselves in ranking

television contact occupations than in ranking personal contact and general culture occupations. It appears that the technique demonstrated in the DeFleur study may provide a possible lead to the questions raised previously. To date, no attempt has been made to evaluate the DeFleur study through replication.

In this context, the present research is proposed to replicate the DeFleur study in Japan, based on the following considerations:

1. While television ownership has reached more than 20 million households in Japan, the problem of the effects of television on children has long been one of the major questions confronting Japanese communication researchers. Some attempts have been made to investigate the influence of television upon the child's view of the world of work (e.g., Yoda ed., 1964). Thus, the present study may provide relevant information not only to the DeFleur study but to the repertory of Japanese studies.

2. The data obtained in Japan as a non-Western country may increase the generalizability of the DeFleur hypotheses much more than those collected in Western countries. For example, a replication study[3] done in Japan on the hypotheses proposed by Himmelweit and others (1958) tests the limits of generalizability of certain propositions.

3. Although some discrepancies exist in rankings of some occupations between the United States and Japan, there is an extremely high level of agreement as to the relative prestige of a wide range of specific occupations between the two countries (Inkels and Rossi, 1956). Thus, the results of the present study, which deals in part with occupational prestige, are directly comparable to those of the DeFleur study.

---

[3]See Furu (1962).

It is the purpose of this study: (1) to investigate the relative contribution of television, as compared with other types of contact, as a learning source for children's occupational knowledge; (2) to find out the relationships which exist between children's occupational knowledge and their media exposure habits; and (3) to probe the extent to which the TV portrayals of various occupations standardize children's conceptions of the world of work.

While the present research is concerned with the cumulative effect of television, its methodological approach is restricted to survey research. Even with this limitation, the present study may be of high value. First, little systematic research has been done regarding the potential of television as a source of incidental learning. Second, the present data may provide some answer to the question as to what specific part television plays in the socialization of children. Third, more empirical evidence is needed to ascertain the "homogenization" effect of television.

CHAPTER II

TELEVISION VIEWING AND INCIDENTAL LEARNING

Much has been written in regard to the potential of television as a source for incidental learning of various topics for children. Surprisingly, very little is as yet known regarding the complex processes by which television has an effect upon the child's knowledge under voluntary viewing conditions. In this chapter, attention will be focused on how children learn about the world of work while watching television at home.

Incidental Learning

Various views and explanations are given to describe the process of incidental learning. Maccoby and Wilson (1957, p. 76) discuss "observational learning" from films as follows:

> . . . all the leading learning theories emphasize that the to-be learned response must somehow be made to occur in the learning organism, not just in a model, before its association with a given set of conditions can be strengthened. Yet it is evident that viewers of movies and television dramas do learn much of the content of dramatic programs, at least to the extent of being able to recall subsequently many details of the characters actions, and they sometimes incorporate material thus learned into their own overt behavior.

Krugman and Hartley (1970) examine "passive learning" from television. Comparing active and purposive learning at school, they regard passive learning at home as learning that is typically effortless, responsive to animated stimuli, amenable to artificial aid to relaxation, and characterized by an absence of resistance to what is learned.

Similarly, Schramm and others (1961, pp. 75-76) present the following views:

> Most of a child's learning from television . . . is incidental learning. By this we mean the learning that takes place when a viewer goes to television for entertainment and stores up certain items of information without seeking them. . . .
> The idea of going purposely to television at home, to seek information, is a relatively uncommon behavior, learned later, and likely to be restricted in large part to the small percentage of children who are . . . active reality seekers.

In actuality, the child may not learn anything from television simply through watching. Schramm and others (1961, pp. 76-78) assume that the extent of a child's incidental learning from television depends on his ability to learn, his needs at the moment, and what he pays attention to. Since brighter children can learn more from any kind of experience than duller children, Schramm and others suggest the following five principles on incidental learning from television, taking into account "needs" and "attention" factors:

1. A child is more likely to pay attention to and store up some fact or behavior if it is new to him.

2. Television is an especially effective agent on incidental learning while the child is still young because at that time it seems so real.

3. The amount of incidental learning from television depends in part on the amount of identification with a television character.

4. An item is more likely to be picked out of an entertainment context and remembered if it is useful to the child.

5. The child is more likely to learn and act on something he believes will work.

Of these, the principle of identification appears to be an important one in understanding the processes of television viewing and incidental learning. Gaer (1961) demonstrated that identification with television characters would play an important role in program preference. Maccoby and Wilson (1957, p. 76) assume that "a viewer's learning of the actions of movie characters is enhanced if he reproduces these actions himself, at least covertly, during the screen portrayal." It seems that identification is an important factor in determining the extent of the child's learning from television.

In an attempt to speculate on how children learn about the world of work from television, the five principles presented above will be applied in a discussion of the process of television viewing under voluntary viewing conditions at home.

The Process of Television Viewing

The process of television viewing is generally conceived as consisting of three successive phases.[4] The first phase deals with the selection process of television and its programs before viewing, the second phase with the reaction process in viewing some programs, and the third phase with the reinforcement and effect process after viewing. In the following, children's viewing behavior will be traced through each of these phases, in order to understand their incidental learning from television.

The Selection Process

When a child comes to television, he has just chosen the medium from a variety of activities. Thus, the first question should be asked: Why has he selected television rather than any other activity?

In examining some psychological forces that lead children to television rather than some alternative activity, Schramm and others (1961, p. 62) assume: ". . . television has come into use, and children have given it the great amount of time they have given it, because it is seen to be a way of meeting certain important needs, and the best way of meeting them among known and available

---

[4]The present model is based on Carter (1962) and Emery and Martin (1957).

alternatives." By "certain important needs," they refer to the need for escape from conflicts and frustrations of the child's daily life.

There seems little doubt that every child has conflicts and frustrations to some extent. However, it may also be true that some children have more conflicts and frustrations than do other children. Thus, Maccoby (1954) hypothesized that children would spend more time watching television if they were highly frustrated in real life than if they were not. She found that the amount of television viewing was a function of social class: i.e., young children in the upper-middle class who experienced difficulty in the parent-child relationship (thus the higher degree of frustrations) spent more time watching television than those in the lower-middle class. Somewhat contrary to the Maccoby findings, Bailyn (1959) found that there was no significant relationship between having personal problems and the amount of exposure to pictorial media such as television, movies, and comic books. It was found, however, that older children who have many personal problems and are rebelliously independent, are more likely to expose themselves heavily to the pictorial media, perhaps for escape.

As soon as children have chosen television from a variety of activities, they must now select one program at a time from a list of alternative programs. Since children

appear to prefer the "fantasy" type of program to the "reality" type by a ratio of 20 to 1,[5] they are likely to select one of the fantasy type of programs such as westerns, situation comedies, crime drama, and so on. Further, according to the Himmelweit study (1958) and the Schramm study (1961), young audiences from the age of six years upwards also appear to be very much interested in so-called "adult TV fare."

Riley and Riley (1951) found that radio and television programs which were characterized by violence, action and aggression, were more popular with non-members of peer groups because they use the programs for sheer escape. In particular, this liking remained strongest among older children who were more frustrated in wanting to belong to and be accepted by peer groups. Similarly, Bailyn (1959) found that boys who were rebelliously independent, who got spanked, were not restricted on exposure time, and who had low intelligence scores were more likely to prefer the "aggressive hero" type of content, including such programs as westerns, crime, spy and war, and space. Thus, as with the amount of television viewing, aggressive TV programs are more likely to be liked by children who are highly frustrated in real life, for such content may

---

[5]The ratio is suggested by Schramm and others (1961, p. 69).

provide them with escape or wish-fulfillment and meet their needs accordingly.

There is little empirical evidence regarding the reasons why children like adult TV fare. However, according to Klapper (1960, p. 209), the following are posited as the main reasons for viewing adult TV shows: (1) children have desires to know the adult world; (2) family viewing itself is regarded by children as a "grown up" activity; (3) late evening viewing is adult sanctioned; and (4) evening programs are attractive.

In light of facts on heavy viewing by children possibly to meet their needs, there probably is a great chance that they will learn something from the content of those aggressive programs or adult TV fare that provide new, real, or useful experiences to them.

The Reaction Process

Following the selection of programs, the child enters into the viewing situation. Since he is motivated to satisfy his needs through watching a particular program, his motivational states are considered as "goal-strivings." This may be particularly true for highly frustrated children, since they want to express aggression vicariously while watching aggressive programs. However, many experiments with children indicate that aggressive content in television is more likely to increase the

amount of aggressiveness or instigate aggressive tendencies rather than to reduce it (Berkowitz, 1963a). That is to say, if satisfaction or wish-fulfillment results in the reduction of tension or aggression, which is derived from conflicts and frustrations, the findings of prior experiments suggest that it may not happen in the viewing situation. In addition, Himmelweit and others (1958) found that detective, murder and crime thrillers tended to frighten adolescents as well as young children, and also that some incidents in horror programs, space fiction, and some other dramatizations frightened young children. Yet, this type of programming appears to be children's favorite.
What is the underlying psychological mechanism of television viewing?

Part of the answer is provided by Martin and Emery (1957, pp. 14-15) as follows:

> In the sense that there may be goal regions in the programmes it is more reasonable to identify them with the climax or series of climaxes that occur within the story. Serial programmes throw some light on this problem. They are usually organized so that the end of each part corresponds with incomplete climax. The resultant tensions toward completion are resolved by further viewing. . . . In the extreme case of a viewer entering the situation seething with anger and desire to do violence to someone who has just frustrated him this concept would lead us to think that he will only react to scenes that fit his anger. This does not fully accord with experience. Such a viewer may, depending upon the programme, quickly forget his anger and be laughing at the antics or sympathizing with the dilemmas of the actors. . . .
> In the absence of disruptive barriers to easy perception it seems that even if nothing more than the curiosity of the viewer is involved he will attend

> the programme. Curiosity probably represents the minimum level of forces that will sustain a person in the viewing situation.

It appears, then, that once children enter into the viewing situation, they are more likely to be involved in or react to what is shown on television. The key to the child's involvement in the viewing situation is "identification" with characters on the screen.

As discussed previously, children are likely to select so-called "TV drama," such as westerns, situation comedies, crime, and so on. The most typical reaction in viewing such dramatic productions is said to be "identification" (Maccoby and Wilson, 1958). According to Freudian theory, identification is defined as "the method by which a person takes over the features of another person and makes them a corporate part of his own personality" (Hall and Lindsay, 1957, p. 46). Thus, in identifying with a character in a television program, children may tend to suffer, feel, and act, as he does on the screen.

Gaer (1961) found that viewers, children, teenagers, and adults, would identify more strongly with members of their own age group. She also found that teenagers preferred to watch programs containing characters with whom they most closely identified, while children and adults did not. Maccoby and Wilson (1958, p. 76) assume that "when a viewer becomes absorbed in a dramatic production, he identifies himself, at least momentarily,

with one or more of the characters." They add: "the viewer, in fantasy, puts himself in the place of a character and momentarily feels that what is happening to that character is happening to himself." Thus they hypothesized that viewers would identify themselves with the character whose actions were most relevant to the viewers' needs and to the character who was most similar to the viewer in major social characteristics such as age, race and sex. They found that a child identified with the like-sexed leading character and with the character whose social class corresponded with the viewer's aspired class rather than his membership class. It was also found that children tended to remember somewhat better the actions and words of the character with whom they identified, but that the advantage in learning did not apply equally to all the actions of the viewer's chosen character. Maccoby and others (1958) extended their investigation to determine whether viewers would watch mostly their own character, or whether they would watch the person with whom their chosen character was interacting. They found that males spent more time watching the hero, and that female viewers spent more time looking at the heroine.

Zojonc (1954) showed that children would rather be similar to the character who was successful than the character who was unsuccessful, regardless of the methods

used to make him successful. He found that children incorporated the values of the characters with whom they identified.

These investigations seem to suggest that the child's incidental learning from television is enhanced if he can identify with the character portrayed in a dramatic TV production, perhaps because he likes the program, because he spends more time watching the character with whom he identifies than other characters, or because he wishes to be like the character with whom he identifies.

In addition to identification, there is some evidence to indicate that the child's incidental learning from television is increased through "imitation."[6] As Schramm (1964, p. 13) points out: There is no doubt that children imitate some of the fashions and customs they see on television. They 'play out' television situations, and 'take the parts of' their favorite television heroes and heroines."

Bandura and others (1961) hypothesized and found that young children exposed to aggressive adult models reproduced a good volume of aggression resembling that of the adult models. This hypothesis was confirmed in a

---

[6]According to Lazowick (1955, p. 175), ". . . identification refers to the action of the entire personality, while imitation is more restrictive in terms referring to isolated skills or acts."

subsequent experiment, when an aggressive film was used as a stimulus rather than an actual model (Bandura and others, 1963). In the second experiment, children saw a film of an adult hitting and kicking a "bobo-doll"--i.e., a large balloon-like doll with weights in the feet which could be used as a kind of a punching bag. On a subsequent occasion, when something had happened to make children feel irritated or frustrated, they were taken one at a time into a room which contained a bobo-doll as well as other toys. Bandura and others found that children who had seen the film imitated quite exactly what they had seen in it, while children who had not seen the film did not do this. Siegel (1958) provided two groups of children two different radio presentations of the role of a taxi driver; i.e., an aggressive driver and a non-aggressive driver. Children were later asked to respond to a story completion test containing two situations involving a taxi driver; i.e., one story similar to a story heard in the radio presentation and one unlike any radio presentation. Siegel found that children who heard of the aggressive driver attributed more aggression to the taxi driver than did those who heard of the non-aggressive driver, but only in the situation similar to the radio presentation.

These experiments suggest that children learn adult behavior such as occupational roles through imitating

adult models which appeared on television. In this regard, Bandura and Walters (1963, p. 49) assume that pictorially presented models, mainly through television, may "play a major part in shaping behavior and in modifying social norms and thus exert a strong influence on the behavior of children and adolescents."

The Reinforcement Process

It should be noted that the immediate effect of a single program may not persist for a long time. In a discussion of the effects of media violence, Berkowitz (1964b, p. 45) states: "The emotional reaction produced by film violence probably dies away rather rapidly as the viewer enters new situations and encounters new stimuli." Similarly, Maccoby (1963, p. 124) suggests:

> One can show them a single program or movie and question them afterward to discover effects of this one experience upon their attitudes. But attitudes acquired from one program might be counteracted by an opposite attitude presented in the next program the child saw.

Children select fantasy programs with reference to their existing needs and may do so continuously. They may identify with some characters in dramatic TV productions in terms of "perceived similarity" of personality and needs as well as of "objective similarity" such as age, sex, and so on (Himmelweit and others, 1958, p. 404). Through continued viewing, children are likely to store

some items of information which were obtained from television through identification or through imitation, regardless of whether the information acquired is useful or not. Himmelweit and others (1958) suggest five principles of the conditions under which the maximal effect is likely to occur:

1. If the values or views recur from program to program.
2. If the values are presented in dramatic form so that they evoke primarily emotional reactions.
3. If they link with the child's immediate needs and interests.
4. If the viewer tends to be uncritical of and attached to the medium.
5. If through his friends, parents, or immediate environment, the viewer is not already supplied with a set of values which would provide a standard against which to assess the views offered on television.

According to Schramm and others (1961), the average child begins to watch television at age two, and from three to sixteen he spends more time on television than on school. There seems little doubt that television may affect children, one way or another, over a long period of time. However, as Maccoby (1963, p. 125) clearly points out:

> . . . television is not the only, and not even the major influence upon children's attitudes and values in most spheres of life. . . . It is in the area of unfamiliar, where parents have not yet made clear their own point of view and where the child has little real life experience to use as a guideline, that television will influence beliefs and attitudes and establish stereotypes.

It is with this line of reasoning that the present study is concerned.

Television Viewing and Occupational Knowledge

The present research focuses on the relative contribution of television, as compared with other sources, as a learning source for children's occupational knowledge.

The child's conceptual learning of the world of work is considered to be an important part of the socialization process. Young children must gradually acquire information concerning the characteristics and consequences of various occupational roles and statuses so that they may prepare themselves to choose the right kind of occupation in the future. Such knowledge is also required for children as members of society, in the sense that through role-expectations, they may be able to interact effectively with adults holding various positions.

Most of the child's socialization is said to occur deliberately within the family, the school, or other formal institutions (Broom and Selznick, 1968). However, socialization concerning the occupational structure is assumed to take place largely through direct personal contact with people at work, through conversation with parents and neighbors, or through exposure to mass media

such as television, movies, comic books, etc. That is, television constitutes just one of the many sources of information concerning the labor force. Yet, as discussed on the preceding pages, TV is viewed as a major source of occupational information because of the great amount of time children spend watching, particularly adult TV fare, and also because of its potential as an incidental learning source of occupational information. The pertinent question then is how much television contributes to the child's knowledge about the world of work.

In an attempt to measure children's knowledge about various occupational roles and their status rankings, DeFleur (1966) selected direct personal contact, vicarious contact via television, and limited personal contact as three distinct sources of occupational information. Direct personal contact with roles was seen to be the most effective learning source, since actual personal contact serves not only as an initial learning source but as a reinforcement and retention factor. Television was chosen to represent vicarious contact, because it provides a great deal of indirect information about jobs in the various mass media. Limited personal contact was added to make a distinction from personal contact. Thus, DeFleur suggested three hypotheses concerning the relative effectiveness of each of the three learning sources upon

children's occupational role knowledge: (1) of the three categories of selected occupations (personal contact, vicarious contact and limited personal contact), children will be most familiar with occupational roles with which they have had direct personal contact; (2) occupational roles through television presentation will result in more awareness of occupational roles in the vicarious contact category than occupational roles with which children have had limited contact; and (3) as a corollary hypothesis to (1) and (2), personal contact will be a more important learning source than will be vicarious contact for acquiring occupational knowledge. These hypotheses were all confirmed.

In subsequent research, DeFleur and DeFleur (1967) tested the three hypotheses listed above through modifications of measurement techniques developed in the earlier study. In connection with television, they also attempted to analyze the relationship between role knowledge of television contact occupations and amount of television viewing, and to determine the extent of the "homogenization" effect of television regarding children's knowledge about the world of work. In this study, one source of occupational information, "limited personal contact," was replaced by "general culture," which, in turn, may be defined as a complex of many information sources for all occupations, particularly for those which are widely

understood by the adults in the community but rarely seen by the child, either in person or on television. As a result, DeFleur and DeFleur present the following findings: (1) personal contact with roles was the most effective learning source, followed by television and general culture; (2) heavy viewers knew more about role knowledge of television contact occupations than light viewers; (3) children were more consistent among themselves in ranking of television contact occupations than in ranking of personal contact and general culture occupations.

The present research, as a replication study, set up the hypotheses to be tested on the basis of the DeFleur hypotheses and findings. Thus, the following seven hypotheses are posited:

H 1: Of the three sources of occupational information, personal contact is the most effective learning source for the child's occupational role knowledge, television is the next most effective, and general culture is the least effective.

H 2: Of the three sources of occupational information, personal contact is a more effective learning source for the child's occupational status knowledge than either television or general culture.

H 3: The more the child spends watching television, the more he will have role knowledge of television contact occupations.

H 4: The more the child spends watching television, the more he will have status knowledge of television contact occupations.

H 5: The more the child is exposed to pictorial media, the more he will have role knowledge of television contact occupations.

H 6: The more the child is exposed to pictorial media, the more he will have status knowledge of television contact occupations.

H 7: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of either personal contact or general culture occupations.

Of these, Hypothesis 2 is proposed as a corollary hypothesis to Hypothesis 1. Regarding the influence of television upon children's rankings of occupations, DeFleur and DeFleur (1967, p. 787) conclude that "television is a more potent source of occupational status knowledge than either personal contact or the general culture." In spite of this, Hypothesis 2 is posited because of the following. DeFleur (1966) found that occupational role awareness preceded status knowledge, which was determined by "correct" status placements rather than social ranking of occupations. In the present study, status knowledge consists of two forms of measures, which will be discussed in the next chapter, and Hypothesis 2 deals with status knowledge as determined by correct status placements. Thus, if Hypothesis 1 is correct, it seems reasonable to assume that personal contact also serves as a more important learning source for the child's status knowledge than either television or general culture.

Hypothesis 5 is also included especially for the present study. Movies and comic books also portray various occupations. A recent survey of children in Japan shows that there was no significant difference in amount of comic book reading between heavy and light viewers (Program Research Department of NHK, 1970, No. 9, p. 15). Thus, the intention is to investigate the relationship between the child's knowledge of television contact occupations and amount of his exposure to pictorial media as a whole, in order to compare the findings for Hypothesis 5 with those for Hypothesis 3.

Hypotheses 4 and 6 are proposed following the same reasonings as provided for Hypotheses 2 and 5, respectively.

CHAPTER III

METHODOLOGY

This study was designed to evaluate the hypotheses and research techniques suggested by DeFleur and DeFleur (1967), using a sample of Japanese children. While a great many social and cultural differences exist between the United States and Japan, an attempt was made to follow the DeFleur study as closely as possible so that cross-cultural comparisons could be accomplished.

Community and Sample Selection

The DeFleur study was conducted with 237 children in Bloomington, Indiana; a small midwestern city with a population of 35,000 and the home of Indiana University.[7] It was not possible, of course, to locate a Japanese community having similar characteristics to the city of Bloomington, simply because there is no such city in Japan that has been developed by the foundation of a university. In a search for a valid comparison, the city of Kofu in

[7]The information was provided by Melvin DeFleur through personal correspondence. Also see DeFleur and DeFleur (1967, p. 778).

the prefecture of Yamanashi was selected for the present research, taking into account the following conditions:

1. Although Yamanashi is located just west of Tokyo metropolis, it appears to have maintained its local characteristics without significant change. Perhaps because of its natural and geographical conditions surrounded by high mountains. In addition, with the rank of 17th, it is considered to be at the medium level in political, economic, social, and cultural development among 46 Japanese prefectures.[8]

2. Kofu is the capital of Yamanashi and serves as the center for political, economic, and cultural activities in the prefecture. It is widely known as the main gate to various recreational and religious sightseeing places. With a population of 170,000 it is regarded as a medium sized city in Japan.

3. At the time of the present research, in the spring of 1970, there were three VHF and one UHF television stations in the local area.[9] Of these, one VHF station was providing educational and cultural programming only.

Since the city of Kofu as a whole seemed to be too large to be included, its north side only was selected to serve as the community under study. Several conditions were taken into consideration in selecting this community. First, it is clearly separated from the downtown section of Kofu by the national railways' tracks, thus commonly called Senro-Kita (north of the railway tracks). Second, the area consists of both urban and rural sections, with

---

[8]See a NHK report (Program Research Department, 1970, No. 7, p. 14).

[9]DeFleur (1964) reported that four major stations were in operation in the city of Bloomington.

one quarter of the city's population living there. Third, the only national university in the prefecture is situated in the central part of the community. It was felt that the data collected from children in this community could possibly provide relevant information for the purposes of the present study.

Following the selection of the community, a sample of children had to be selected. There are five public elementary schools in the north side of Kofu. From these, three schools were selected on the basis of their geographical locations representing various sections of the community. A 15% systematic sample of 179 children was then drawn from the list of all students in the fourth and sixth grades who were attending the three schools selected. Unlike the DeFleur study which used seven different age groups from 6 to 12-13 years as a sample, children from two grade levels only were selected for the present research, in order to ease some administrative problems involved in the sampling and data collection procedures. Of 179 children sampled, the data of 9 children were excluded from the analysis because of their incomplete interviews or diary-keeping. Thus, the data from a total of 170 children were used for the present analysis. Of these, 90 children were in the fourth grade and 80 in the sixth grade. Their ages ranged from 9 to 12 years, with the average age of 10.6.

Development of the Measuring Instrument

The measuring instrument used for assessing children's occupational knowledge was a Japanese version of the Occupations Test, which was first developed by DeFleur (1966) and later modified by DeFleur and DeFleur (1967). While the development of the Japanese test followed basically the same procedures as demonstrated in the DeFleur study, some modifications and simplifications were made in accordance with their degree of importance to the present study.

In an attempt to select "television contact occupations," content analysis of TV programs was first carried out, using a daily review of several programs presented in the TV column of a local newspaper, The Yamanashi Nichinichi (The Yamanashi Daily) during the period of January 1 to June 30, 1969. Those programs selected for the review appeared to be either of highly informational value or of popular entertainment value, most of those programs were telecast in the evening. The review of a popular entertainment program such as TV drama contains a short summary of the story, including actors' names, both central and supporting. Here is an example of a review introducing the series, "Two Detectives," which appeared in the TV column of The Yamanashi Nichinichi, May 13, 1970.

> A salesman called Nakahara was found dead near the Tachikawa family. Detective Sergeant Katsumata (Shinsuke Ashida) and Detective Tamiya (Akira Nakao)

> from the First Investigation Section immediately called at the Tachikawas. They were received by the daughter of the family, Mizue (Emiko Nishio), who is well known among the neighbors because of her beauty. She is still not married at the age of over 30 years. Mizue responded to the questions raised by Katsumata and Tamiya with a calm reply that she had no idea about the incident nor about the victim.
>
> In the meantime, Katsumata and Tamiya questioned the neighbors and searched through Nakahara's room. As the result, they came to believe that Mizue and Nakahara had been dating for some time. Yet, Mizue, who is proud of her beauty, kept insisting that she had nothing to do with the incident at all, and she took an airy attitude toward them. . . .

Following DeFleur (1964, p. 60), the subject for analysis was defined as "those programs which depicted people interacting in modern (as opposed to historical) settings, where recognizable work or occupational activities were being carried out." All programs reviewed in the TV column which fit this definition were then selected from the newspapers over a period of 181 days. From these, 133 different occupational roles were identified with a total of 713 appearances from all roles described in the reviews. In the example presented above, two detectives were included for analysis but the heroine was not, simply because her occupational role was not clearly indicated. Table 1 shows the results of such content analysis. Since DeFleur (1964) used special procedures for content analysis through viewing a sample of programs, it is not possible to compare the Japanese data with the American data in a strict sense. For the purpose of interest only, the 133 occupational roles which appeared on television in Japan

Table 1. Relative Frequency of Appearance on Television of 24 Professional Categories and Occupational Groupings.

Category or Grouping*	Frequency of Appearance	
	Japan	U.S.A.*
Secretaries and office workers	15.0%	5.2%
Educators	12.1	2.5
Executives, managers & superintendents	11.2	4.1
Occupations related to journalism	10.9	2.7
Occupations related to the law	10.2	29.1
Owners of small business	8.8	6.1
Artists, writers & composers	5.9	0.7
Skilled workers, technicians & specialists	4.6	3.0
Occupations related to health & medicine	3.9	8.9
Occupations related to entertainment business	3.1	9.8
Salesmen	2.2	0.9
Bartenders and waiters	2.1	1.4
Taxi, truck & bus drivers	2.0	2.5
Unskilled workers	1.3	1.4
Personal servants	0.8	5.9
Semi-skilled workers	0.7	3.0
Hazardous or adventurous occupations	0.4	1.8
Miscellaneous lower professions	0.4	0.9
Foremen	0.3	0.9
Members of the clergy	0.1	1.4
Ranch owners	0.1	0.5
Military personnel	0.0	5.0
Bank tellers & hotel clerks	0.0	1.4
Miscellaneous service workers	3.7	1.1
	(N=713)	(N=440)

*Adapted from DeFleur (1964, p. 63). The order of listing categories or groupings were rearranged in order to demonstrate the Japanese data.

were grouped into 24 categories as suggested by DeFleur and are presented with the American data.

The selection of both "personal contact occupations" and "general culture occupations" was carried out simultaneously, based on the examination of local occupational structure. As discussed in the previous chapter, personal contact occupations refer to jobs with which the average child comes into contact during his normal life in the community, whereas general culture occupations refer to jobs which are widely understood by adults in the community but rarely seen by children, either in person or on television. On the basis of these definitions, a large number of candidate occupations were initially selected for each type of contact through inspection of parents' occupations among children who were attending the three public elementary schools under study (Table 2), and through review of the local characteristics of Kofu as presented on the previous page. These occupations were then compared with the results of a recent survey of occupational rankings, obtained from a sample of adults in Tokyo (Appendix A) and reduced to 23 candidate occupations representing various levels of occupational prestige. Since the occupational structure of a capital city such as Kofu reflects that of Tokyo on a smaller scale, it was felt that the Tokyo data could be used as guide lines without any serious variations. The 23 candidate occupations selected and their

Table 2. Classification of Parents' Occupations.

	Elementary School			
	A School	B School	C School	Total
Farming and Fishing	6.6%	1.4%	0.3%	2.6%
Forestry	0.8	0.0	0.4	0.4
Mining	1.4	0.0	1.0	0.9
Construction	9.4	9.6	9.6	9.5
Production	12.5	7.3	10.2	10.2
Wholesale and Retail	13.9	8.8	12.4	12.0
Transportation	13.6	9.0	14.3	12.7
Services	12.3	7.5	18.1	13.6
Power and Gas	4.5	4.4	4.7	4.6
Finance	4.3	5.6	2.7	4.0
Real Estate	0.4	1.1	0.3	0.5
Public Service	20.3	39.3	20.7	25.3
Other	0.0	6.0	5.4	3.8
	(N=1,058)	(N=840)	(N=1,413)	(N=3,311)

corresponding ranks (from highest to lowest) were: (1) prefectual governor--10; (2) company president--12; (3) medical doctor--17; (4) civil engineer--24; (5) bank manager--32; (6) mining engineer--32; (7) company section head--33; (8) elementary school teacher--34; (9) Buddhist priest--37; (10) inn owner--44; (11) power-house technician--45; (12) bell captain--56; (13) barber--60; (14) auto mechanic--63; (15) train station employee--64; (16) automobile driver--69; (17) postman--72; (18) train porter--76; (19) grocery store clerk--81; (20) printer--82; (21) service station attendant--87; (22) baker--89; and (23) door-to-door salesman--96.

To this list, nine candidate occupations were selected on the basis of the results of the content analysis of television programs. The nine TV candidate occupations and their corresponding ranks were: (1) scholar--11; (2) airline pilot--19; (3) writer--28; (4) newspaper reporter--31; (5) detective--42; (6) guardsman--62; (7) department store clerk--70; (8) laborer--92; (9) window cleaner--95.

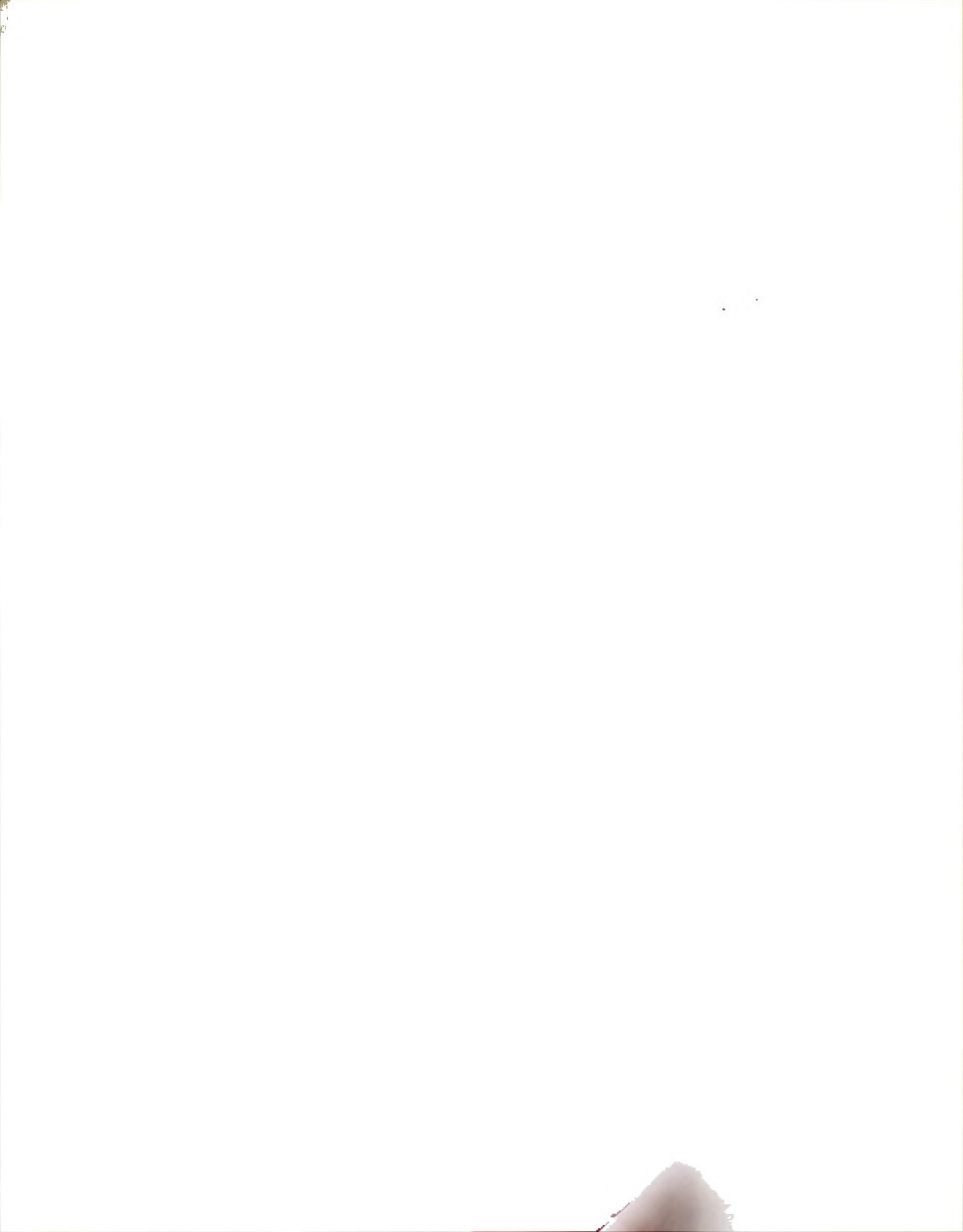
It should be noted that since 9 out of 32 candidate occupations did not have exactly corresponding ranks in the list in Appendix A, their ranks assigned were not absolute. For example, the rank of "company president" in Kofu must be lower than the 12th in a hierarchical order. The same is true for the rank of "bank manager."

In order to make the final selection of six occupations each from a set of personal contact, television contact, and general culture occupations, the names of 32 candidate occupations were presented to 148 children in the fourth and sixth grades from two public elementary schools in the south side of the city of Kofu. They were asked to respond to the following questions for each occupation:

1. Have you ever seen this man?
2. If the answer to Question 1 is "Yes":
   Where or by what means did you see him?
3. Have you ever talked to this man?

Since many children indicated that they had seen most of the 32 candidate occupations either in person or on television, the third question, "Have you ever talked to this man?," was used to distinguish personal contact occupations from general culture occupations: e.g., those occupations which children had seen in person and had talked to more frequently than others were considered to be the best candidate occupations for personal contact.

On the basis of the results of this pre-test, three sets of six occupations each were finally selected. The six personal contact occupations selected were: (1) doctor; (2) company section head; (3) Buddhist priest; (4) barber; (5) postman; and (6) baker. The six occupational roles selected as television contact occupations



were: (1) scholar; (2) airline pilot; (3) detective; (4) guardsman; (5) department store clerk; and (6) window cleaner. The six general culture occupations selected were: (1) company president; (2) bank manager; (3) power-house technician; (4) bell captain; (5) train porter; and (6) door-to-door salesman. Table 3 indicates the selected occupations with their corresponding ranks. In examining three sets of selected occupations, one might question the selection of "company section head." This occupation had to be selected due to the fact that both "civil engineer" and "mining engineer"--presumably better candidates at this level--had to be dropped according to the results of the pre-test.

It should be noted that the pre-test was administered with a paper-pencil test rather than with the use of cartoon-like cards. In spite of this, almost similar results were obtained from the selected children in the main survey when the pre-test question was given to them (Table 4).

Each of the selected occupations was then portrayed in a cartoon-like representation on a separate 5 x 4 inch card. Care was taken to minimize the number of cues in drawing, since the kind of cues provided might affect the child's responses to some of the questions which would be used for assessing his role knowledge. All were male occupations, each portrayal was stylized and simplified,

Table 3. Ranks Assigned to the Selected Occupations.

Personal Contact Occupations	Rank	Television Contact Occupations	Rank	General Culture Occupations	Rank
Doctor	17	Scholar	11	Company president	12
Company section head	33	Airline pilot	19	Bank manager	26
Buddhist priest	37	Detective	42	Powerhouse technician	45
Barber	60	Guardsman*	62	Bell captain	56
Postman	72	Department store clerk	70	Train porter	76
Baker	89	Window cleaner	95	Door-to-door sales	96

*This is a new kind of the occupation dealing with the safety of private properties. Since no comparable rank is available in Appendix A, the rank of the Self-Defense Army member was given to this occupation.

Table 4. Average Numbers of Three Types of Contact Occupations Seen, Seen via Television, and Talked to by Children (N=170).

	Personal Contact	Television Contact	General Culture
Average number:			
Number of occupations seen*	5.3	4.9	3.1
Number of occupations seen via TV only**	0.7	3.2	1.6
Number of occupations talked to***	2.7	0.7	0.5
Standard deviation:			
Number of occupations seen	0.8	1.4	1.8
Number of occupations seen via TV only	0.7	1.5	1.5
Number of occupations talked to	1.2	0.7	0.8

*The average number of occupations seen in person or via television out of six occupations selected.

**The average number of occupations seen via television only out of the average number of occupations seen within each set.

***The average number of occupations talked to out of the average number of occupations seen.

and the same "man" appeared in each. In addition, the name of each occupation was printed in the Japanese alphabet to clearly show children what this occupation was. Figure 1 shows three sets of role representations used in the Japanese version of the Occupations Test. These cards served as stimuli in assessing the child's knowledge of the role characteristics and the hierarchical order of each occupation.

Data Collection

Data collection consisted of two forms: (1) personal interviews with the Occupations Test; and (2) diaries of daily activities.

The selected children were interviewed during and after school hours by their classroom teachers, who received special instructions. Unfortunately, it was not possible to bring outside interviewers into the school due to local school conditions. It was also difficult to conduct efficient interviewing at the child's home because of the typical openness of Japanese house settings. In order to minimize the "halo" effect, a special interviewer's manual was developed to indicate how to score the degree of children's role knowledge with sample answers attached. Each interviewer had six to ten interviews to be completed. Administering of the Occupations Test averaged one and one-half hours.

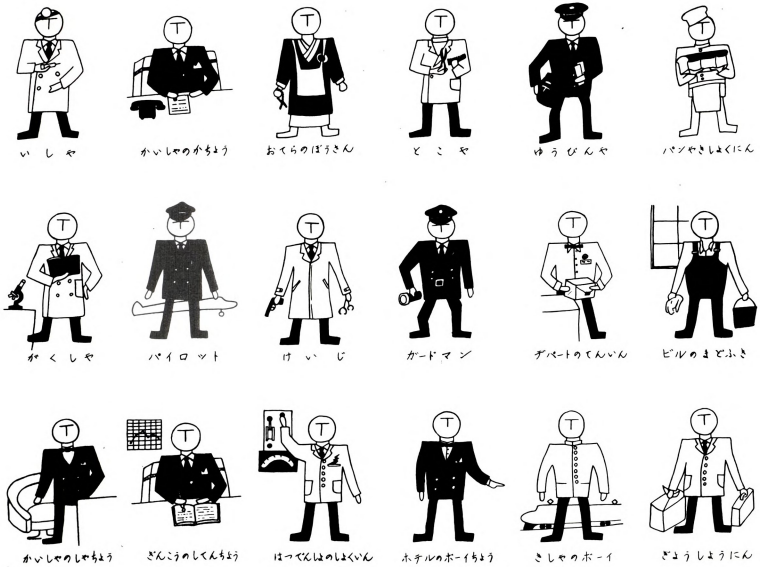


Figure 1. Role Representations used in the Occupations Test

Each child was asked to keep a diary of daily activities for three weekend days, including Friday, Saturday and Sunday. The same period was applied to all children. Personal data such as IQ score, occupation of the head of the household, and educational levels of both parents were copied from the child's school record. In case the information concerning occupation and education was not sufficient, the child was asked to acquire it from his parents at the time when the diary method was being carried out.

Operationalization of Variables

In an attempt to test the hypotheses presented in the previous chapter, two dependent and four independent variables were empirically indexed in various manners. In addition, four control variables were introduced to see any possible interaction effects operating with the independent variables. The operational procedures for all the variables will be discussed first, followed by a restatement of the hypotheses.

Dependent Variables

Role knowledge is defined as the degree of understanding about the roles expected from any holder of a given occupational status. The Occupations Test was designed to measure the child's knowledge about five

different aspects of a given occupational role: i.e., (1) role requirements; (2) role relationships; (3) physical environment; (4) cultural artifacts, tools, symbols; and (5) role prerequisites. (See Appendix B for explanation of test items and grading procedures.) The child was asked to answer the following five questions relating to the five aspects presented above:

1. What kind of work does this man do?
2. Whom does he work for?
3. Where does he do his work?
4. What kinds of things does he use in his job?
5. Does he have to prepare in some special way to get this job?

For each question, points from zero to three were given depending upon the child's performance. The first three questions were given arbitrary weights of two and the last two questions were given weights of unity, simply because the former appeared to be much more difficult than the latter.[10] Thus, a total score on role knowledge of a given occupation could range from 0 to 24. Since there were six selected occupations representing each of the three types of contact, total scores could range between 0 and 144 per set.

---

[10]The statement was made by Melvin L. DeFleur through personal correspondence.

Status knowledge is defined as the degree of understanding about the status hierarchy of given occupations. In the present research, the measures of status knowledge were obtained by: (1) ranks given to six occupations within each type of contact according to occupational prestige; and (2) status scores calculated by counting "correct" status placements of the six occupations within each type of contact. In order to make the child understand the concept of occupational prestige, he was first asked to arrange a pair of cards, portraying "school teacher" and "bus driver," in a hierarchical order. He was then given three cards, portraying "civil engineer," "newspaper reporter," and "service station attendant," for the second practice. When it was clear that the child understood what he had to do, he was presented with each set of six cards to arrange them in a hierarchical order. The status hierarchy which the child arranged within each set of cards was simply recorded, giving a rank number to each occupation. This set of responses was then compared with the "correct" status positions originally assigned. Two points were given to each correct placement and one point was given to the "near" correct placement: i.e., the one which was placed one level of rank up or down in a hierarchical order. Thus, total status scores could range from 0 to 12 per set.

In measuring both role knowledge and status knowledge, each one of the three sets of cards and six cards within each set were randomly ordered and presented to the child, in order to avoid possible serial effects.

Independent Variables

Type of contact with roles is defined as the source of learning through which children may acquire information concerning occupational roles and their status rankings. The three main types of contact with occupational roles were: (1) personal contact, (2) television, and (3) general culture. Each type of contact was characterized by six selected occupations which were mainly learned through this type of contact.

Amount of television viewing, amount of viewing adult TV fare and amount of exposure to pictorial media[11] are respectively the total number of minutes a child spends watching television, watching programs telecast after 8 p.m., and watching television and reading comic books for given weekend days. Each child was asked to keep a diary of daily activities for three weekend days, including Friday, Saturday, and Sunday. The diary was sectioned by 30 minutes interval on a table form. A list of the description of daily activities was provided to help the

[11]Since children rarely go to movies nowadays, amount of viewing films was not collected.

child indicate the time periods spent doing any single activity. (See Appendix C for description of daily activities and record form.)

Control Variables

The following four variables, suggested by DeFleur (1966) and DeFleur and DeFleur (1967), are expected to have some effect on children's occupational knowledge: (1) age, (2) sex, (3) social class, and (4) intelligence. They were controlled in the present research.

Age was replaced by the child's grade level, thus fourth or sixth grade. Sex was indexed as male or female. Social class was determined by the occupational prestige level and educational level of the male head of the household. Both occupational prestige and education variables were given weights of unity. Six quantitative levels were then provided for each set of these variables, and thus a total weighted score ranged from 2 to 12 for each family. The family was classified into one of the three levels of social class: i.e., (1) upper-middle, (2) lower-middle, and (3) lower. Finally, the child's intelligence was represented by the standard score of his IQ test.

Hypotheses

Following the operationalization of variables, each general hypothesis will be operationalized, accompanied by empirical hypotheses:

GH 1: Of the three sources of occupational information, personal contact is the most effective learning source for the child's occupational role knowledge, television is the next most effective, and general culture is the least effective.

EH 1-1: Personal contact is more effective than television as a learning source for the child's occupational role knowledge.

EH 1-2: Personal contact is more effective than general culture as a learning source for the child's occupational role knowledge.

EH 1-3: Television is more effective than general culture as a learning source for the child's occupational role knowledge.

GH 2: Of the three sources of occupational information, personal contact is a more effective learning source for the child's occupational status knowledge than either television or general culture.

EH 2-1: Personal contact is more effective than television as a learning source for the child's occupational status knowledge.

EH 2-2: Personal contact is more effective than general culture as a learning source for the child's occupational status knowledge.

GH 3: The more the child spends watching television, the more he will have role knowledge of television contact occupations.

EH 3-1: The number of hours the child spends watching television is positively related to his role knowledge of television contact occupations.

EH 3-2: The number of hours the child spends watching adult TV fare is positively related to his role knowledge of television contact occupations.

GH 4: The more the child spends watching television, the more he will have status knowledge of television contact occupations.

EH 4-1: The number of hours the child spends watching television is positively related to his status knowledge of television contact occupations.

EH 4-2: The number of hours the child spends watching adult TV fare is positively related to his status knowledge of television contact occupations.

GH 5: The more the child is exposed to pictorial media, the more he will have role knowledge of television contact occupations.

EH 5-1: The number of hours he spends watching television and reading comic books is positively related to his role knowledge of television contact occupations.

GH 6: The more the child is exposed to pictorial media, the more he will have status knowledge of television contact occupations.

EH 6-1: The number of hours he spends watching television and reading comic books is positively related to his status knowledge of television contact occupations.

GH 7: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of either personal contact or general culture occupations.

EH 7-1: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of personal contact occupations.

EH 7-2: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of general culture occupations.

Data Analysis

Two statistics are utilized to test the various hypotheses proposed in the present research. They are: (1) t-test for the difference between related means, and (2) Pearson product moment correlation.

Empirical Hypothesis 1-1, 1-2, 1-3, 2-1, and 2-2 will be tested using a t-test for the difference between related means (Walker and Lev, 1953). In addition, mixed design analysis of variance (i.e., treatments by subjects by subgroups) will be applied for testing the significance of the interaction between independent and control variables (Scheffé, 1959).

Empirical Hypothesis 3-1, 3-2, 4-1, 5-1, and 6-1 will be tested using product moment correlation coefficients to determine the degree of hypothesized relationship (McNemar, 1962). Partial correlations will then be computed to find out the influence of any control variable on the relationships between independent and dependent variables.

For Empirical Hypothesis 7-1 and 7-2, coefficients of concordance (Siegel, 1956) will be computed for

children's rankings of television contact, personal contact, and general culture occupations, respectively. This will be done within each of the four control variables. These coefficients will then be directly compared.[12]

[12]This approach was suggested by Melvin DeFleur through personal correspondence.

CHAPTER IV

FINDINGS

The data collected from 170 children were provided for the testings of seven main hypotheses proposed in the present research. In addition, several related hypotheses posited by DeFleur and DeFleur (1967) were also tested with available data. In the following, the findings for each main hypothesis will be presented first, followed by those for each related hypothesis.

Tests of Main Hypotheses

GH 1: Of the three sources of occupational information, personal contact is the most effective learning source for the child's occupational role knowledge, television is the next most effective, and general culture is the least effective.

EH 1-1: Personal contact is more effective than television as a learning source for the child's occupational role knowledge.

EH 1-2: Personal contact is more effective than general culture as a learning source for the child's occupational role knowledge.

EH 1-3: Television is more effective than general culture as a learning source for the child's occupational role knowledge.

As shown in Table 5, the mean role-knowledge scores on personal contact, television contact, and general culture occupations are 93.4, 87.1, and 73.7, respectively. The t-values for the differences between related means are 5.39 for Empirical Hypothesis 1-1, 10.00 for Empirical Hypothesis 1-2, and 8.92 for Empirical Hypothesis 1-3, all of which are significant at less than the one percent level. Empirical Hypotheses 1-1, 1-2 and 1-3 are all confirmed.

Table 5. Mean Role-Knowledge Scores and Standard Deviations On Three Types of Contact Occupations (N=170).

Type of Contact	Mean (SD)		
1. Personal contact	93.4 (20.9)	$t_{1:2}=5.39$ $p<.0001$	$t_{1:3}=10.00$ $p<.0001$
2. Television	87.1 (21.3)	$t_{2:3}=8.92$ $p<.0001$	
3. General culture	73.7 (22.5)		

Thus, General Hypothesis 1 is confirmed.

These results strongly support the hypothesis, originally proposed by DeFleur and DeFleur (1967), regarding the relative effectiveness of television as a learning

source for the child's occupational role knowledge. It is important to note, however, that children learn occupational roles more through direct personal contact than through television.

Tables 6 to 9 show summaries of analyses of variance when grade, sex, social class, and intelligence are controlled[13] (see Tables 25 to 28 for mean role-knowledge scores for these variables). From these tables, it is apparent that both grade and sex variables are significantly interacting with the independent variable. That is, sixth grade children and males know more about role knowledge of three types of contact occupations than fourth grade children and females.

Table 6. Mixed Design Analysis of Variance (Treatments x Subjects x Grade: Dependent Variable = Role Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Grade	1	10,887.08	9.70	.002
Error	158	1,122.61		
Contact type	2	15,660.64	153.44	<.0005
Grade x contact type	2	1,583.18	15.51	<.0005
Error	316	102.06		
Total	479			

[13]Since an equal N was used for each subgroup in this analysis, a total N differs from one table to another. No significant interaction effects of social class and intelligence variables seem to be largely due to this procedure.

Table 7. Mixed Design Analysis of Variance (Treatments x Subjects x Sex: Dependent Variable = Role Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Sex	1	793.95	0.68	.412
Error	162	1,176.10		
Contact type	2	16,580.60	147.06	<.0005
Sex x contact type	2	506.06	4.49	.012
Error	324	112.74		
Total	491			

Table 8. Mixed Design Analysis of Variance (Treatments x Subjects x Social Class: Dependent Variable = Role Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Social class	2	2,616.01	2.39	.095
Error	153	1,094.97		
Contact type	2	15,196.87	130.21	<.0005
Social class x contact type	4	226.51	1.94	.104
Error	306	116.71		
Total	467			

Table 9. Mixed Design Analysis of Variance (Treatments x Subjects x Intelligence: Dependent Variable = Role Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Intelligence	2	4,200.08	3.60	.030
Error	156	1,165.82		
Contact type	2	16,094.91	143.45	<.0005
Intelligence x contact type	4	146.80	1.31	.267
Error	312	112.20		
Total	476			

GH 2: Of the three sources of occupational information, personal contact is a more effective learning source for the child's occupational status knowledge than either television or general culture.

EH 2-1: Personal contact is more effective than television as a learning source for the child's occupational status knowledge.

EH 2-2: Personal contact is more effective than general culture as a learning source for the child's occupational status knowledge.

The mean status-knowledge scores on personal contact, television contact, and general culture occupations are 6.5, 6.9, and 8.3 respectively (Table 10). The t-values for the differences between related means are -1.67 for Empirical Hypothesis 2-1 and -6.73 for Empirical Hypothesis 2-2. The former is not significant, but the

latter is significant at less than the one percent level in the negative direction. Empirical Hypotheses 2-1 and 2-2 are not confirmed.

Table 10. Mean Status-Knowledge Scores and Standard Deviations on Three Types of Contact Occupations (N=170).

Type of Contact	Mean (SD)		
1. Personal contact	6.5 (2.3)	$t_{1:2}=-1.67$ $p=.0974$	
2. Television	6.9 (2.5)		$t_{1:3}=-6.73$ $p<.0001$
		$t_{2:3}=-5.19$ $p<.0001$	
3. General culture	8.3 (2.5)		

Thus, General Hypothesis 2 is not confirmed.

Why should this be so? Table 11 indicates average status ranks given by children to three sets of six occupations each. From this table, it is obvious that both personal contact and television contact occupations were not ranked as accurately as general culture occupations. For example, "Buddhist priest," "barber," "scholar," and "airline pilot" were ranked relatively low, while "postman," "detective," and "guardsman," were ranked relatively high, as compared with their ranks given by adults. Such

Table 11. Mean Role-Knowledge Scores on/and Average Status Ranks Given to Individual Occupations Included in the Occupations Test (N=170).

	Role Knowledge		Status Ranking	
	Mean	Standard Deviation	Average Rank	Standard Deviation
Personal Contact Occupations				
Doctor	15.8	4.3	1.8	1.0
Company section head	12.5	5.2	1.9	1.1
Buddhist priest	12.9	4.6	3.7	1.5
Barber	18.7	4.0	4.8	1.0
Postman	16.1	4.2	3.6	1.1
Baker	17.5	4.1	5.2	1.0
Television Contact Occupations				
Scholar	12.0	4.9	2.1	1.3
Airline pilot	16.9	4.6	3.2	1.2
Detective	13.8	4.9	2.3	1.1
Guardsman	11.6	5.6	2.7	1.0
Department store clerk	15.7	3.7	5.1	0.8
Window cleaner	17.1	4.5	5.6	0.7
General Culture Occupations				
Company president	12.5	4.9	1.6	1.0
Bank manager	11.8	5.2	2.1	0.8
Powerhouse technician	12.8	4.7	3.3	1.3
Bell captain	13.8	4.0	3.9	1.0
Train porter	13.1	4.8	4.6	1.0
Door-to-door salesman	9.5	6.4	5.5	0.9

disorderly rankings of both personal contact and television contact occupations appear to be reflected in a relatively low correlation between the two status-knowledge scores (Table 12). It should be noted that role-knowledge scores on three types of contact occupations are significantly and positively related (Table 13). Probably, children may have confused themselves in ranking of familiar personal contact and television contact occupations much more than in ranking of unfamiliar general culture occupations.

Table 12. Intercorrelations among Status-Knowledge Scores on Three Types of Contact Occupations (N=170).

Variable	Variable 1	Variable 2
1. Personal contact	.06	.22*
2. Television	--	.20*
3. General culture	--	--

*Significance at less than the one percent level.

Tables 14 to 17 present summaries of analyses of variance when grade, sex, social class, and intelligence variables are controlled. (See Tables 1 to 4 in Appendix D for mean status-knowledge scores for these variables.) Significant interaction effects were found, although

Table 13. Intercorrelations among Role-Knowledge Scores on Three Types of Contact Occupations (N=170).

Variable	Variable 1	2
1. Personal contact	.78*	.72*
2. Television	--	.79*
3. General culture	--	--

*Significance at less than the one percent level.

Table 14. Mixed Design Analysis of Variance (Treatments x Subject x Grade: Dependent Variable = Status Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Grade	1	137.60	18.79	<.0005
Error	158	7.32		
Contact type	2	153.63	30.33	<.0005
Grade x contact type	2	19.43	3.84	.023
Error	316	5.07		
Total	479			

contrary to the hypothesized direction, in regard to status knowledge between the independent variable and grade and sex variables, each of which is significant at less than the five percent level.

GH 3: The more the child spends watching television, the more he will have role knowledge of television contact occupations.

EH 3-1: The number of hours the child spends watching television is positively related to his role knowledge of television contact occupations.

EH 3-2: The number of hours the child spends watching adult TV fare is positively related to his role-knowledge of television contact occupations.

Table 15. Mixed Design Analysis of Variance (Treatments x Subjects x Sex: Dependent Variable = Status Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Sex	1	11.13	1.41	.237
Error	162	7.91		
Contact type	2	156.40	31.01	<.0005
Sex x contact type	2	16.82	3.33	.037
Error	324	5.04		
Total	491			

Table 16. Mixed Design Analysis of Variance (Treatments x Subjects x Social Class: Dependent Variable = Status Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Social class	2	8.85	1.10	.334
Error	153	8.02		
Contact type	2	148.54	30.11	<.0005
Social class x contact type	4	9.51	1.93	.106
Error	306	4.93		
Total	467			

Table 17. Mixed Design Analysis of Variance (Treatments x Subjects x Intelligence: Dependent Variable = Status Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Intelligence	2	5.90	0.73	.486
Error	156	8.13		
Contact type	2	139.25	26.68	<.0005
Intelligence x contact type	4	1.75	0.34	.854
Error	312	5.22		
Total	476			

The product moment correlation between role knowledge of television contact occupations and amount of television viewing is -.21, which is significant at less than the one percent level in the negative direction. Empirical Hypothesis 3-1 is not confirmed. The product moment correlation between role knowledge of television contact occupations and amount of viewing adult TV fare is -.05, which is not significant at the five percent level (Table 18). Empirical Hypothesis 3-2 is not confirmed.

Thus, General Hypothesis 3 is not confirmed.

As with the zero-order correlation, the partial correlations between role knowledge of television contact occupations and amount of television viewing, when grade, sex, social class, and intelligence variables are partialled out, are all significant at less than the five percent level in the negative direction (Table 18). On the other hand, the partial correlations between role knowledge of television contact occupations and amount of viewing adult TV fare, when each one of the control variables is partialled out, are not significant.

These findings are totally unexpected. One of the possible reasons for the negative correlations may lie in the fact that amount of television viewing in the present sample of children appears to be relatively low when compared with the results of a NHK survey in November, 1967 (Table 19). In addition, of the six hours of

Table 18. Correlations between Media Exposure Variables and Role-Knowledge Score of Television Contact Occupations (N=170).

Independent Variables	Zero-order Correlation	Role Knowledge: Partial Correlation controlling Grade	Sex	Social Class	Intelligence
Amount of TV viewing	-.21**	-.22**	-.24**	-.18*	-.18*
Amount of viewing adult TV fare	-.05	-.07	-.08	-.02	-.03
Amount of pictorial media exposure	-.26**	-.26**	-.28**	-.23**	-.22**

*Significance at less than the five percent level.

**Significance at less than the one percent level.

television viewing only two hours were spent watching adult TV fare. If this is a typical pattern of viewing among the selected children, the amount of television viewing is less likely to be related to role knowledge of the television contact occupations, which were selected from adult TV dramas only.

Table 19. Total Amounts of Various Media Exposure for Three Weekend Days.

Media	Mean	
	Present Study	NHK Survey*
Television	369.2 min.	567.3 min.
Adult TV fare	120.1	--
Comic books	37.1	53.7
Pictorial media	406.4	621.0
	(N=170)	(N=1,121)

*Adapted from a survey report prepared by Program Research Department (1969, pp. 46-50). The data collected from a sample of fifth grade children are presented to compare with those from the present sample.

GH 4: The more the child spends watching television, the more he will have status knowledge of television contact occupations.

EH 4-1: The number of hours the child spends watching television is positively related to his status knowledge of television contact occupations.

EH 4-2: The number of hours the child spends watching adult TV fare is positively related to his status knowledge of television contact occupations.

The product moment correlation between status knowledge of television contact occupations and amount of television viewing is -.01, which is not significant (Table 20). Empirical Hypothesis 4-1 is not confirmed. The product moment correlation between status knowledge of

television contact occupations and amount of viewing adult TV fare is .04, which is not significant. Empirical Hypothesis 4-2 is not confirmed.

Thus, General Hypothesis 4 is not confirmed.

The partial correlations between status knowledge of television contact occupations and amount of television viewing and of viewing adult TV fare are not significant when grade, sex, social class and intelligence variables are partialled out (Table 20). These findings are similar to those for Empirical Hypotheses 3-1 and 3-2.

Table 20. Correlations between Media Exposure Variables and Status-Knowledge Score of Television Contact Occupations (N=170).

		Status Knowledge			
		Partial Correlation			
Independent Variables	Zero-order Correlation	Grade	Sex	Social Class	Intelligence
Amount of TV viewing	-.01	-.00	-.03	.00	.01
Amount of viewing adult TV fare	.04	.02	.02	.06	.05
Amount of pictorial media exposure	.01	-.00	-.03	-.00	.00

GH 5: The more the child is exposed to pictorial media, the more he will have role knowledge of television contact occupations.

EH 5-1: The number of hours he spends watching television and reading comic books is positively related to his role knowledge of television contact occupations.

The product moment correlation between the role knowledge of television contact occupations and amount of pictorial media exposure is -.26, which is significant at less than the one percent level in the negative direction (Table 18). Empirical Hypothesis 5-1 is not confirmed.

Thus, General Hypothesis 5 is not confirmed.

Since amount of exposure to pictorial media virtually means the amount of television viewing (Table 19), the finding for Empirical Hypothesis 5-1 is parallel to that for Empirical Hypothesis 3-1. It is important to realize, however, that both the zero-order and the first-order correlation values dealing with Empirical Hypothesis 5-1 became larger in the negative direction than those dealing with Empirical Hypothesis 3-1 (Table 18). This means that amount of reading comic books is also negatively correlated with role knowledge of television contact occupations (r=-.19).

GH 6: The more the child is exposed to pictorial media, the more he will have status knowledge of television contact occupations.

EH 6-1: The number of hours he spends watching television and reading comic books is positively related to his status knowledge of television contact occupations.

The product moment correlation between status knowledge of television contact occupations and amount of exposure to pictorial media is .01, which is not significant (Table 20). Empirical Hypothesis 6-1 is not confirmed.

Thus, General Hypothesis 6 is not confirmed.

The partial correlations between status knowledge of television contact occupations and amount of exposure to pictorial media are not significant when grade, sex, social class and intelligence variables are partialled out (Table 20).

GH 7: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of either personal contact or general culture occupations.

EH 7-1: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of personal contact occupations.

EH 7-2: Children will be more consistent among themselves in ranking of television contact occupations than in ranking of general culture occupations.

The coefficients of concordance among status rankings of television contact, personal contact, and general culture occupations are .63, .57, and .65 respectively (Table 21). Although no significance test is performed, it seems that Empirical Hypothesis 7-1 is likely to be supported, while Empirical Hypothesis 7-2 is not.

Tables 21 to 24 show the coefficients of concordance among status rankings of three types of contact

Table 21. Coefficients of Concordance among Status Rankings of Three Types of Contact Occupations for Fourth and Sixth Grade Children.

Grade	N	Personal Contact	Television	General Culture
4	90	.56	.54	.64
6	80	.59	.76	.66
Both grades	170	.57	.63	.65

Table 22. Coefficients of Concordance among Status Rankings of Three Types of Contact Occupations for Male and Female Children.

Sex	N	Personal Contact	Television	General Culture
Male	82	.56	.64	.68
Female	88	.59	.64	.62

Table 23. Coefficients of Concordance among Status Rankings of Three Types of Contact Occupations for Children of Three Social Class Levels.

Social Class Level	N	Personal Contact	Television	General Culture
Upper-middle	39	.64	.74	.72
Lower-middle	96	.55	.57	.63
Lower	35	.58	.70	.62

Table 24. Coefficients of Concordance among Status Rankings of Three Types of Contact Occupations for Children of Three Intelligence Levels.

Intelligence Level	N	Personal Contact	Television	General Culture
High	49	.57	.63	.68
Middle	64	.62	.70	.66
Low	57	.53	.58	.61

occupations by grade, sex, social class, and intelligence variables, respectively. From these tables, it is clear that the highest coefficients of concordance among status rankings of television contact occupations are found among sixth grade children, upper-middle class children, and children of medium intelligence.

Tests of Related Hypotheses

Exploration of other pertinent relationships between role knowledge and four control variables was done following the pattern of the DeFleur study.

First, with respect to age, DeFleur and DeFleur (1967) hypothesized and found that role knowledge would increase linearly with age. As shown in Table 25, the mean role-knowledge scores on personal contact, television contact, and general culture occupations are 95.6, 92.3,

Table 25. Mean Role-Knowledge Scores on Three Types of Contact Occupations for Fourth and Sixth Grade Children.

	Grade	N	Personal Contact	Television	General Culture
Mean	4	90	91.5	82.4	65.9
	6	80	95.6	92.3	82.5
Standard Deviation	4	90	20.5	21.9	21.5
	6	80	21.0	19.1	20.2

and 82.5 for sixth grade children, and 91.5, 82.4, and 65.9 for fourth grade children. The t-value (by one-tailed test)[14] for the difference between the means on personal contact occupations is 1.30, which is not significant. However, the t-values for the differences between the means on television contact and general culture occupations are 3.16 and 5.24, both of which are significant at less than the one percent level. Thus, the DeFleur hypothesis is not supported concerning role knowledge of personal contact occupations, although the difference is in the hypothesized direction. Regarding role knowledge of television contact and general culture occupations, the DeFleur hypothesis is confirmed. Probably fourth grade children are old enough to have better ideas about personal contact occupations.

[14] See DeFleur and DeFleur (1967, p. 784).

Concerning sex differences on role knowledge, DeFleur and DeFleur hypothesized that male children would be more aware and informed about roles than female children. The findings of the DeFleur study showed that there was a significant difference only in role knowledge of general culture occupations between sexes, but not in that of personal contact or television contact occupations. The present findings show different results. The mean role-knowledge scores on personal contact, television contact and general culture occupations, are 93.2, 90.4, and 74.6 for males, and 93.6, 83.9, and 72.9 for females, respectively (Table 26). The t-values for the differences between the means on personal contact and general culture occupations for both sexes are -.13 and .50, both of which are not significant. However, the t-value for the difference between the means on television contact occupations is 2.04, which is significant at less than the five percent level. Thus, the DeFleur hypothesis is confirmed regarding the sex difference on role knowledge of television contact occupations only. One reason for this may be due to the fact that males in the present sample appear to spend more time watching television, including adult TV fare, than females (r=.14).

The DeFleur hypothesis on the differences among three social class levels is that children of upper- and middle-class know more about occupational roles than

Table 26. Mean Role-Knowledge Scores on Three Types of Contact Occupations for Male and Female Children.

	Sex	N	Personal Contact	Television	General Culture
Mean	Male	82	93.2	90.4	74.6
	Female	88	93.6	83.9	72.9
Standard Deviation	Male	82	21.9	20.2	22.2
	Female	88	19.8	21.7	22.6

children of lower class. This hypothesis was confirmed in the DeFleur study. Table 27 presents the mean role-knowledge scores on three types of contact occupations for children of each social class. Through inspection of the data in this table, the differences between the means were tested only between upper-middle and lower-middle classes, and between upper-middle and lower classes. The t-values for the differences between the means for children of upper- and lower-middle classes are 1.59 on personal contact, 2.77 on television contact and 1.11 on general culture occupations. The t-value of 2.77 on the TV roles is significant at less than the one percent level, but other t-values are not significant. In comparing children of upper-middle class with those of lower class, the t-values for the differences between the means are 1.07 on personal contact, 1.68 on television contact, and .85 on general culture occupations. Of these, the t-value of

Table 27. Mean Role-Knowledge Scores on Three Types of Contact Occupations for Children of Three Social Class Levels.

	Social Class Level	N	Personal Contact	Television	General Culture
Mean	Upper-middle	39	98.0	94.9	77.4
	Lower-middle	96	91.8	84.4	72.7
	Lower	35	92.7	85.8	72.4
Standard Deviation	Upper-middle	39	21.7	23.3	27.4
	Lower-middle	96	20.1	18.5	19.9
	Lower	35	20.9	23.2	22.6

1.68 on TV roles is significant at the five percent level, whereas other t-values are not. Thus, the DeFleur hypothesis is not confirmed concerning the social class differences on role knowledge of personal contact and general culture occupations. It is important to note, however, that as with sex, significant differences were found only in role knowledge of television contact occupations between children of upper-middle and lower-middle or lower classes.

In the DeFleur study, no comparison was made regarding mean role-knowledge scores for different intelligence levels. However, in the earlier study by DeFleur (1966), it was hypothesized that brighter children would have greater knowledge of the role requirements of the selected occupations than duller children. This hypothesis was not confirmed, although the difference was in the

hypothesized direction. Table 28 shows the mean role-knowledge scores on three types of contact occupations for children of three intelligence levels. The t-test for the difference between the means was performed between any combination of the two intelligence levels. The t-values for the differences between the means for children of high and middle intelligence levels are .34 on personal contact, 1.65 on television contact, and .38 on general culture occupations. The t-value of 1.65 on television contact occupations is significant at the five percent level, but other t-values are not significant. For children of high and low intelligence levels, the t-values for the differences between the means are 1.79 on personal contact, 2.94 on television contact, and 2.03 on general culture occupations. The t-value of 2.94 on television contact occupations is significant at less than the one percent level, and other t-values are significant at the five percent level. The t-values for the difference between the means for children of middle and low intelligence levels are 1.63 on personal contact, 1.66 on television contact, and 1.77 on general culture occupations, of which the last two t-values are significant at the five percent level. It is apparent that role knowledge is very much influenced by the level of the child's intelligence.

Table 28. Mean Role-Knowledge Scores on Three Types of Contact Occupations for Children of Three Intelligence Levels.

	Intelligence Level	N	Personal Contact	Television	General Culture
Mean	High	49	96.4	93.6	77.2
	Middle	64	95.2	87.3	75.6
	Low	57	88.9	81.2	68.5
Standard Deviation	High	49	18.8	21.7	22.5
	Middle	64	18.5	18.9	22.5
	Low	57	24.0	21.6	21.5

Finally, comparisons were also made regarding the relationships between status knowledge and grade, sex, social class, and intelligence variables. (See Tables 1 to 4 in Appendix D for mean status-knowledge scores for each of the control variables.) Briefly, the differences between the means for all possible comparisons within each variable were analyzed by a t-test. Significant differences were found between the following four comparisons: (1) between the means on personal contact occupations for fourth and sixth grade children ($t=2.24$; $p<.05$); (2) on television contact occupations for fourth and sixth grade children ($t=4.97$; $p<.01$); (3) on general culture occupations for fourth and sixth grade children ($t=1.74$; $p=.05$); and (4) on television contact occupations for male and female children ($t=2.19$; $p<.05$). The differences between the means for all other comparisons are not significant.

Table 29 shows similarities and differences in the findings for related hypotheses on both role and status knowledge between Japanese and American children. From this table, it is clear that age or grade is the most important variable in determining the degree of occupational role knowledge and status knowledge among the selected children in the present research. In an attempt to clarify the negative correlation between role knowledge of television contact occupations and amount of television viewing, the grade variable was further divided into two groups by the amount of viewing: i.e.--heavy viewers; and (2) light viewers. Mixed design analysis of variance (Treatments x Subject x Grade x TV Viewing) was then performed to see whether there is any interaction effect between grade and amount of viewing. As seen in Tables 30 and 31, no significant interaction effects were found on both role knowledge and status knowledge.

In order to investigate the effects of television viewing further, the coefficients of concordance among status rankings of three types of contact occupations were computed for heavy and light viewers within each grade level. As shown in Table 32, there were no noticeable differences in the status rankings of television contact occupations between heavy and light viewers at each grade level.

Table 29. Summary of the Findings for Related Hypotheses on Occupational Knowledge.

Independent Variable	Dependent Variable	Type of Contact Occupations	Hypothesized Direction	Findings: Japan	Findings: U.S.A. First Study*	Findings: U.S.A. Second Study**
Age (or Grade)	Role Knowledge	All Contacts	Older>Younger		+	
		Personal Contact		n.s.		+
		Television		+		+
		General Culture		+		+
	Status Knowledge	All Contacts	Older>Younger		+	
		Personal Contact		+		
		Television		+		
		General Culture		+		
Sex	Role Knowledge	All Contacts	Male>Female		n.s.	
		Personal Contact		n.s.		n.s.
		Television		+		n.s.
		General Culture		n.s.		+
	Status Knowledge	All Contacts	Male>Female		+	
		Personal Contact		n.s.		
		Television		+		
		General Culture		n.s.		

Table 29. (Continued)

Independent Variable	Dependent Variable	Type of Contact Occupations	Hypothesized Direction	Findings: Japan	Findings: U.S.A. First Study*	Findings: U.S.A. Second Study**
Social Class	Role Knowledge	All Contacts	Higher>Lower		n.s.	
		Personal Contact		n.s.		+
		Television		+		+
		General Culture		n.s.		+
	Status Knowledge	All Contacts	Higher>Lower		n.s.	
		Personal Contact		n.s.		
		Television		n.s.		
		General Culture		n.s.		
Intelligence	Role Knowledge	All Contacts	Brighter>Duller		n.s.	
		Personal Contact		+		
		Television		+		
		General Culture		+		
	Status Knowledge	All Contacts	Brighter>Duller		+	
		Personal Contact		n.s.		
		Television		n.s.		
		General Culture		n.s.		

*Adapted from DeFleur (1966).

**Adapted from DeFleur and DeFleur (1967).

Table 30. Mixed Design Analysis of Variance (Treatments x Subjects x Grade x TV Viewing: Dependent Variable = Role Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Grade	1	9,378.26	50.50	<.0005
TV viewing	1	8,150.02	43.88	<.0005
Grade x TV viewing	1	423.13		.135
Contact type	2	14,798.98	2.28	<.0005
Error	76	185.72	79.69	
Grade x contact type	2	1,462.29	9.73	<.0005
Error	76	150.35		
TV viewing x contact type	2	12.49	0.07	.934
Error	76	182.41		
Grade x TV viewing x contact type	2	91.44	0.59	.558
Error	76	155.64		
Not accounted for	152			
Total	467			

Table 31. Mixed Design Analysis of Variance (Treatments x Subjects x Grade x TV Viewing: Dependent Variable = Status Knowledge).

Source of Variance	df	Mean Square	F Statistic	P
Grade	1	124.10	26.03	<.0005
TV viewing	1	2.33	0.49	.487
Grade x TV viewing	1	0.36	0.08	.784
Contact type	2	148.04	31.04	<.0005
Error	76	4.77		
Grade x contact type	2	20.84	3.78	.027
Error	76	5.51		
TV viewing x contact type	2	9.37	2.02	.140
Error	76	4.64		
Grade x TV viewing x contact type	2	5.58	1.05	.356
Error	76	5.32		
Not accounted for	152			
Total	467			

Table 32. Coefficients of Concordance Among Status Rankings of Three Types of Contact Occupations for Heavy and Light Viewers by Grade.

Grade	Amount of TV Viewing	N	Personal Contact	Television	General Culture
4	High	45	.58	.54	.61
	Low	45	.55	.55	.71
6	High	40	.64	.77	.68
	Low	40	.55	.76	.66

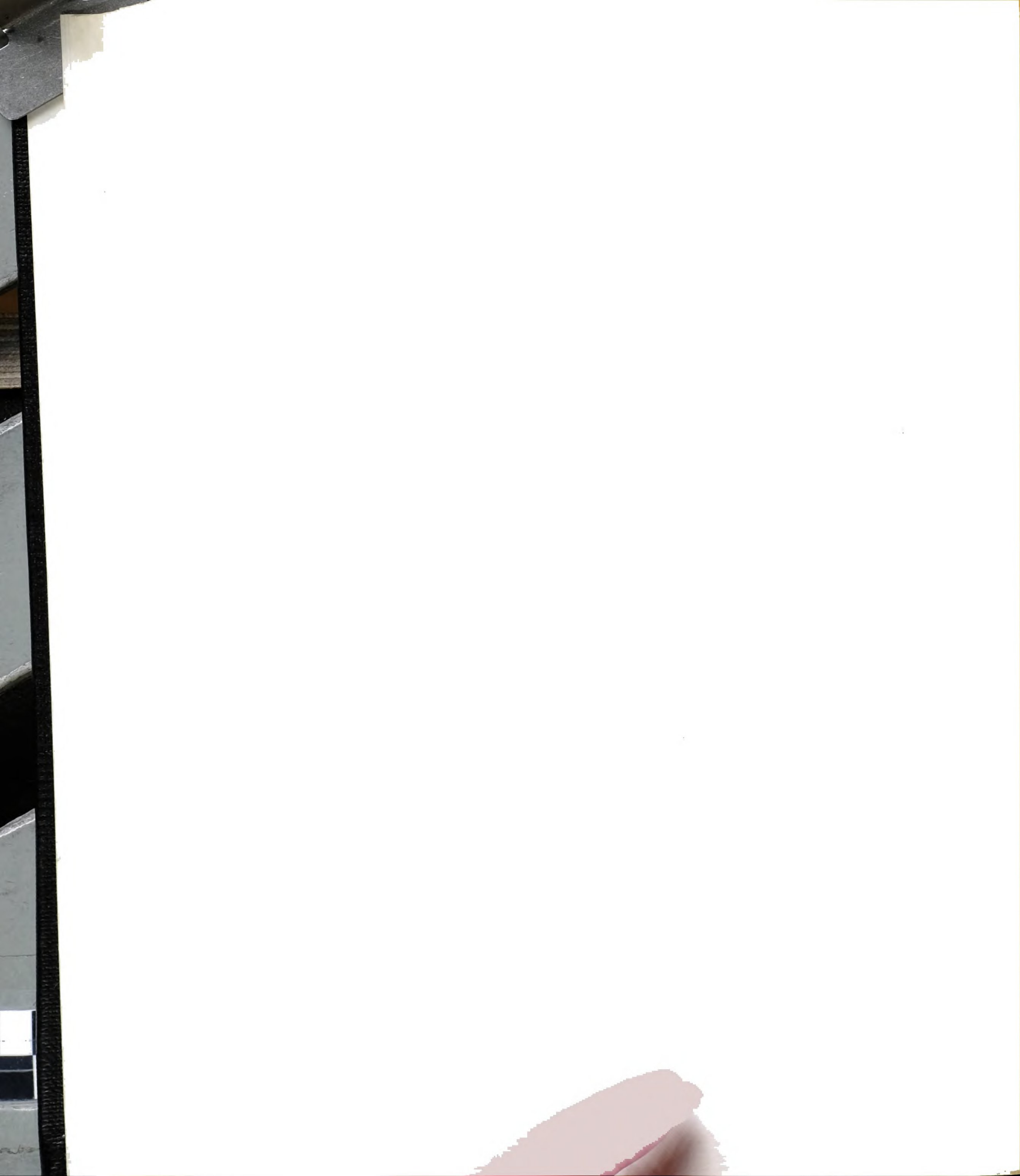
CHAPTER V

SUMMARY AND DISCUSSION

Summary

The present research attempts to explore the potential of television as a source for incidental learning of various topics for children. Following DeFleur and DeFleur (1967), this study focuses upon: (1) the relative contribution of television as a learning source for children's occupational knowledge; (2) the relationship between the child's knowledge of television contact occupations and his media exposure habits; and (3) the homogenization effect of television regarding children's knowledge of the world of work.

Two major dependent variables used in the present study are: (1) role knowledge; and (2) status knowledge. Role knowledge is defined as the degree of understanding about occupational roles expected from any holder of a given position, whereas status knowledge is defined as the degree of understanding about the status hierarchy of given occupations. Measures of the two dependent variables were obtained from the Occupations Test especially developed for the present study. This test consists of



three sets of six cartoon-like cards, portraying various occupations drawn from six levels of occupational prestige within each set. The three sets of occupations represent the three types of contact through which children may acquire information about occupational roles and their status rankings.

Type of contact with roles constitutes the independent variable. The three types of contact with roles are: (1) personal contact; (2) television; and (3) general culture. It was hypothesized that personal contact would be the most effective learning source for children's occupational knowledge, followed by television and then by general culture.

With respect to the relationship between occupational knowledge and media exposure habits, total amount of television viewing, amount of viewing adult TV fare, and amount of exposure to pictorial media were hypothesized to relate positively with the child's knowledge about television contact occupations respectively.

The extent to which TV portrayals of various occupations standardize the child's conceptions of the world of work was also investigated. It was hypothesized that children would be more consistent among themselves in rankings of television contact occupations than rankings of either personal contact or general culture occupations.

In addition to the main hypotheses stated above, the present study seeks to test several related hypotheses, proposed by DeFleur and DeFleur, concerning the relationships between occupational role knowledge and each of the age, sex, and social class variables. Stated generally, the DeFleur hypothesis is that older, male, and middle-class children know more about roles than younger, female, and lower-class children.

Data were collected from 170 fourth and sixth grade children in a typical medium-sized city, west of Tokyo. The selected children were administered the Occupations Test in a personal interview situation. In addition, they were asked to keep a diary of daily activities to obtain the data on their media exposure habits.

As a result, personal contact was found to be the most effective learning source for children's occupational role knowledge, followed by television and then by general culture. Regarding status knowledge, however, the hypothesis was not confirmed, with the findings opposite to the predicted direction. Role knowledge of television contact occupations was significantly and negatively related to amount of television viewing and exposure to pictorial media. The remaining hypothesized relationships between occupational knowledge and media exposure habits were not significant. No test of significance was performed concerning the homogenization effect of television upon the

child's knowledge of the world of work. It was noted, however, that there was some indication of the homogenization effect, particularly among children who were in the sixth grade, from upper-middle class families, and in the medium intelligence level.

The present findings for related hypotheses appeared to be similar to those obtained in the DeFleur study, although some differences exist on the sex and social class variables between the two studies (Table 29). It should be noted that significant differences were found between the means on role knowledge of television contact occupations for each of the grade, sex, and social class variables. An attempt to investigate the relationships between grade and amount of television viewing failed to produce any significant interaction effects on both role knowledge and status knowledge.

Discussion

The findings of the present research strongly support the DeFleur hypothesis regarding the relative effectiveness of television, as compared with other sources, as a learning source for children's occupational role knowledge. Although personal contact with roles constitutes the most effective source of occupational information, television appears to serve as a potent source,

much more effective than general culture, for the child's incidental learning of occupational roles (Table 5).

However, contrary to the hypothesis, the present study found a significant and negative correlation between role knowledge of television contact occupations and amount of television viewing (Table 18). Several reasons for this negative correlation can be posited. First, as already discussed in the previous chapter, amount of television viewing and amount of viewing adult TV fare among the present sample of children are relatively low. Since television contact occupations were selected from adult TV dramas only, the amount of viewing is then less likely to be related to role knowledge of television contact occupations. Second, one might riase a question concerning the validity and reliability of a diary method to obtain amount of television viewing.[15] The same question has to be addressed to the DeFleur approach which was based on parental reports. Third, in connection with the above, it seems that the degree of the child's preferences of adult TV fare rather than amount of television viewing is likely to determine the degree of role knowledge of television contact occupations. The product moment correlation between role knowledge of television contact occupations

[15]Schramm and others (1961) claim that the aided recall method is a better procedure than a diary or parental estimate for children.

and amount of viewing adult TV fare is negative, but not significant. Finally, according to the Himmelweit study (1958) and the Schramm study (1961), more intelligent children are likely to be less interested in television and make less use of it. The present research shows that brighter children spent less time watching television than duller children, but that they knew more about television contact occupations. Similarly, children from higher social class spent less time watching television but knew more about TV roles than lower class youngsters. The combined effects of these variables may have affected the present findings.

As to the homogenization effect of television, the present research did not seem to provide sufficient data to support the DeFleur hypothesis. Yet, the highest statistical values (i.e., coefficients of concordance) were found in the rankings of television contact occupations, as compared with those of personal contact and general culture occupations, among sixth grade, upper-middle class and average intelligence children, respectively (Tables 21 to 24). These findings seem to indicate some homogenization effects of television on some groups of children.

It is interesting to note that the lowest coefficient of concordance in the rankings of television contact occupations was found among fourth grade children.

Inspection of their score sheets revealed that it was they who ranked such occupations as "detective" and "guardsman" higher than "scholar" and "airline pilot." In an attempt to see why this should be so, all children sampled for the present study were asked to rank three sets of occupations again three months later. This time, "company president" was included in the set of television contact occupations, while "scholar" was placed in the set of general culture occupations. Surprisingly, the results were exactly the same as those obtained three months before.[16] It seems that the lowest coefficient of concordance due to such rankings of occupations may also be regarded as an indication of the homogenization effect.

Perhaps the most interesting findings of the present research in relation to the DeFleur study may be those dealing with the relationships between occupational role knowledge and each of the grade, sex, and social class variables. Despite the fact that a great deal of social and cultural differences exist between Japan and the United States, the present research shows similar findings to those obtained in the DeFleur study, when taking into account some of the non-significant differences which are

---

[16]The mean status-knowledge scores on personal contact, television, and general culture occupations were 6.5, 6.9, and 8.3 in the main survey. In the follow-up survey, they were 6.6, 6.9, and 8.2 respectively.

in the hypothesized directions. (See Tables 25 to 29.) It is interesting to note that as compared with the DeFleur findings, significant differences in the present study were found mainly on television contact occupations within each of the grade, sex, and social class variables.

It seems pertinent then to speculate as to why the findings of the two studies are different regarding role knowledge of television contact occupations.

The obvious answer is that as shown in Table 1, the world of televised portrayals of occupations is different between Japan and the United States. While Japanese programs appear to present a wide range of occupations, American programs concentrate on prestigious or glamorous occupations such as lawyer, entertainers, and medical doctors. Thus, differences in the frequency and extent of TV portrayals of occupations between the two countries are likely to affect children's knowledge about TV roles over a long period of time.

With respect to the sex difference in role knowledge, DeFleur and DeFleur (1967, p. 783) state:

> It can be suggested that it is precisely on these "general culture" occupations that the sex difference hypothesized are most likely to be apparent. That is, since boys and girls have equal access to "personal contact" (Set I) and "television contact" (Set II) occupations, it is in the remaining set where the pressures of sex-role socialization can be expected to be most evident.

According to the NHK survey, boys on the average spend significantly more time watching television than do girls. Even in the present study, amount of viewing is positively related to sex (r=.14), although not significant. Thus, Japanese boys seem to have more access to television contact occupations and know more about TV roles than girls.

Television viewing is generally considered to be a family activity. This is particularly true in Japan, where all family members sit around the kotatsu (specially designed foot warmer for local homes) and watch television. Perhaps, upper-middle class children may have a better opportunity to interact with parents than lower class youngsters, asking about the characteristics and consequences of various occupational roles portrayed on TV. Since social class is indexed in terms of the occupational prestige and educational level of the male head of the household in the present study, such parent-child interactions may have affected the social class differences.

Interestingly enough, those children who know more about television contact occupations showed the highest consistency among themselves in ranking of television contact occupations. Inspection of the intercorrelation between role knowledge and status knowledge scores reveals that there is a significant high correlation (r=.24) between the two scores on television contact occupations,

while no significant correlations exist on personal contact and general culture occupations. This may be regarded as a clear indication of the homogenization effect of television.

What of the validity and reliability of the Occupations Test? There are several problems to be resolved in order to increase the validity and reliability of the test. First, as DeFleur and DeFleur (1967, p. 780) admit: "The control over learning sources achieved by this technique was not absolute. . . ." This is particularly true in the selection procedures of television contact occupations. Since very few lower levels of occupations are portrayed on television, at least in Japan, it is extremely difficult to select those occupations. In the present research, selection of lower levels of television contact occupations was done simply because of necessity. In addition, since so many varieties of occupations are portrayed on television, it is impossible to eliminate the influence of television on some personal contact and general culture occupations. It might be better to exclude the lower levels of occupations from the Occupations Test and to compare the child's knowledge of frequently portrayed occupations with that of personal contact and general culture occupations at similar levels of occupational prestige. The question remains, of course, as to whether the Occupations Test of that kind has social significance as well as

theoretical import. However, such a move may also make it easier to develop an alternate form for a reliability check. It is almost impossible to develop an equivalent form under the present procedures.

Secondly, the assessment of status knowledge sought in the present study needs to be modified. In addition to counting "correct" or "near correct" placements of occupations, some systematic method should be incorporated into the administration of the Occupations Test to check whether the subject has responded accurately. The House Test developed by DeFleur (1966) may be one approach. Perhaps the assessment of children's role knowledge and status knowledge should be done on separate occasion, so that sufficient time can be provided for the measurement of each knowledge.[17] Such a procedure is costly, but it may certainly increase the validity of the Occupations Test.

Implications for Research

There has been little systematic research to determine the extent to which television affects the child's knowledge of serious topics. The problem seems to lie in the question of how to measure the influence of television

[17] Interviewers indicated that they had a difficult time administering the Occupations Test to fourth grade children because of the lengthy interviewing required for the assessment of role knowledge.

on the incidental learning process. The technique demonstrated by the Occupations Test may lead to further development of similar tests, possibly dealing with the child's knowledge of unfamiliar topics to which television, as compared with other sources, is more likely to contribute. Such an effect study has been typically conducted by the paper-pencil test.[18] It seems that the present technique is most effective in such a comparative analysis.

The problem of the "homogenization" effect requires further investigation. In the present analysis, rankings of television contact occupations were used to speculate upon the homogenization effect in terms of the coefficient of concordance. If television truly affects the child's conceptions of the world of work, it seems reasonable to assume that role knowledge of television contact occupations may be influenced by TV content as well. Then, the homogeneity of variance may be computed within each set of the occupations to see that variances are homogeneous (Walker and Lev, 1953, p. 192).

In connection with the homogenization effect, it has been frequently noted that televised portrayals of occupations are somewhat stereotyped (Himmelweit and others, 1958). In what ways can television contribute to alter

---

[18] See, for example: Yoda (1964) and Gerson (1966).

such stereotypes? Is it necessary to produce special programs on the world of work to counter present trends? Is it necessary to produce all programs, taking into account a balanced picture of the world of work? These are practical questions, and yet, they suggest need for systematic research.

Finally and most important of all, having learned that television constitutes a potent learning source for children's occupational knowledge, the next step is to investigate the extent to which TV affects their occupational interests and occupational choices in the future. Does the child's knowledge of the world of work affect his occupational interest or occupational choice? Through continued viewing of lawyers or medical doctors, will the child be motivated to become such professionals? These questions should be investigated in tracing the same children over a long period of time through the use of experimental and clinical methods.

BIBLIOGRAPHY

BIBLIOGRAPHY

Bailyn, Lotte (1959), "Mass Media and Children: A Study of Exposure Habits and Cognitive Effects," Psychological Monograph, Vol. 73, pp. 1-48.

Bandura, Albert, Dorothea Ross, and Sheila A. Ross (1961), "Transmission of Aggression through Imitation of Aggressive Models," Journal of Abnormal and Social Psychology, Vol. 63, pp. 575-582.

Bandura, Albert, Dorothea Ross, and Sheila A. Ross (1963), "Imitation of Film Mediated Aggressive Models," Journal of Abnormal and Social Psychology, Vol. 66, pp. 3-11.

Bandura, Albert, and Richard H. Walters (1963), Social Learning and Personality Development, New York: Holt Rinehart & Winston, Inc.

Berkowitz, Leonard (1964a), "Violence in the Mass Media," in Paris-Stanford Studies in Communication 1962, Stanford, California: Institute for Communication Research, Stanford University, pp. 107-137.

Berkowitz, Leonard (1964b), "The Effects of Observing Violence," Scientific American, Vol. 210, No. 2, pp. 35-41.

Broom, Leonard and Philip Selznick (1968), Sociology, New York: Harper and Row.

Carter, Richard F. (1962), "On Reactions to Mass Media Content," Audio Visual Communication Review, Vol. 10, pp. 210-213.

DeFleur, Melvin L. (1964), "Occupational Roles Presented on Television," Public Opinion Quarterly, Vol. 28, pp. 57-74.

DeFleur, Lois B. (1966), "Assessing Occupational Knowledge in Young Children," Sociological Inquiry, Vol. 36, pp. 98-115.

DeFleur, Melvin L., and Lois B. DeFleur (1967), "The Relative Contribution of Television As a Learning Source for Children's Occupational Knowledge," American Sociological Review, Vol. 32, pp. 777-789.

Emery, F. E., and David Martin (1957), Psychological Effects of the Western Film:, Melbourne: Department of Audio-Visual Aids, University of Melbourne.

Furu, Takeo (1962), Television and Children's Life, NHK Radio and Television Culture Research Institute.

Gaer, Eleanor P. (1961), "Identification with Television Characters," A paper presented to the Council on Communication Research Media Analysis Session, Annual Convention of the Association for Education in Journalism, Ann Arbor, Michigan, August.

Gerson, Walter M. (1966), "Mass Media Socialization Behavior, Negro-White Differences," Social Forces, Vol. 45, pp. 40-50.

Hall, Calvin S., and Gardner Lindsay (1957), Theories of Personality, New York: John Wiley & Sons, Inc.

Himmelweit, Hilde T., A. N. Oppenheim, and Pamela Vince (1958), Television and Child, London: The Oxford University Press.

Inkeles, Alex, and Peter H. Rossi (1956), "National Comparisons of Occupational Prestige," American Journal of Sociology, Vol. 61, pp. 329-339.

Klapper, Joseph T. (1960), The Effects of Mass Communication, New York: The Free Press.

Krugman, Herbert E., and Eugene L. Hartley (1970), "Passive Learning from Television," Public Opinion Quarterly, Vol. 34, pp. 184-190.

Lazowick, Lionel M. (1955), "On the Nature of Identification," Journal of Abnormal and Social Psychology, Vol. 51, pp. 175-183.

Maccoby, Eleanor E. (1963), "The Effects of Television on Children," in Wilbur Schramm (ed.), The Science of Human Communication, New York: The Basic Books, pp. 116-127.

Maccoby, Eleanor E. (1954), "Why Do Children Watch Television?," Public Opinion Quarterly, Vol. 18, pp. 239-244.

Maccoby, Eleanor E., and William Cody Wilson (1957), "Identification and Observational Learning from Film," Journal of Abnormal and Social Psychology, Vol. 55, pp. 76-87.

Maccoby, Eleanor E., William Cody Wilson, and R. V. Burton (1958), "Differential Movie-Viewing Behavior of Male and Female Viewers," Journal of Personality, Vol. 26, pp. 259-267.

McNemar, Quinn (1962), Psychological Statistics, New York: John Wiley & Sons, Inc.

Nishihira, Shigeki (1964), "Evaluation of 98 Occupations below Prime Minister," JIYU, Vol. 6, No. 11, pp. 120-127.

Program Research Department of NHK (1967), "A Study of Locality in Japan: The Second Year Report," Monthly Bulletin of the Radio and Television Culture Research Institute, Vol. 17, No. 7, pp. 12-27.

Program Research Department of NHK (1969), "The Child's Life and Television: Part 1; Report No. 1," Monthly Bulletin of the Radio and Television Culture Research Institute, Vol. 19, No. 4, pp. 1-57.

Program Research Department of NHK (1970), "The Child's Life and Television: Part 2; Report No. 1," Monthly Bulletin of the Radio and Television Culture Research Institute, Vol. 20, No. 9, pp. 15-39.

Riley, Matilda W., and John W. Riley (1951), "A Sociological Approach to Communication Research," Public Opinion Quarterly, Vol. 15, pp. 445-460.

Scheffé, Henry (1959), The Analysis of Variance, New York: John Wiley & Sons, Inc.

Schramm, Wilber (ed.) (1964), The Effects of Television on Children and Adolescents, Paris: UNESCO.

Schramm, Wilber, Jack Lyle, and Edwin B. Parker (1961), Television in the Lives of Our Children, Stanford: University Press.

Siegel, Alberta E. (1958), "The Influence of Violence in the Mass Media upon Children's Role Expectations," Child Development, Vol. 29, pp. 35-56.

Siegel, Sidney (1956), Non-Parametric Statistics, New York: McGraw-Hill.

Walker, Helen M., and Joseph Lev (1965), Statistical Inference, New York: Hold Rinehart & Winston.

Yoda, Arata (ed.) (1964), The Effects of Television on Children, Tokyo: University of Tokyo Press.

Zojonc, Robert B. (1954), "Some Effects of the 'Space' Serials," Public Opinion Quarterly, Vol. 18, pp. 367-374.

APPENDIX A

Status Rankings of 98 Occupations

APPENDIX A

Status Rankings of 98 Occupations*

Rank	Occupation	Score
1	Prime Minister	94
2	President of the University of Tokyo	92
3	Chief Justice of the Supreme Court	90
4	Speaker of the House of Representatives	89
5	Minister of a government department	89
6	Nuclear physicist	87
7	Physicist	86
7	Medical director of a large hospital	86
9	Judge	86
10	Prefectural governor	83
11	University professor	83
12	President of a large company	82
13	Economist	82
14	Member of the House of Representatives	82
15	Cancer specialist	82
16	Botanist	78
17	Medical doctor	77
18	Eye specialist	71
19	Captain of an ocean liner	70
19	Aircraft pilot	70
21	Electronics engineer	69
22	Composer	68
23	Head coach of a professional baseball team	67
24	Civil engineer	67
25	Industrial engineer	67
26	Movie director	67
26	Section head of a large company	67
28	Newspaper serial writer	66
29	Section head of a national government office	65
30	President of a large labor union	64
31	TV announcer	64

*Adapted from Nishihira (1964, p. 121).

Status Rankings of 98 Occupations (Continued)

Rank	Occupations	Score
32	Mining engineer	64
33	Section head of a company	63
34	Section head of a municipal government office	61
34	Elementary school teacher	61
36	Captain of a fishing boat	59
37	Priest of a Buddhist temple	57
38	Actor	56
39	Modern thermal generating station technician	54
40	Owner of a service station	52
41	National government office clerk	52
42	Policeman	52
43	Large company office clerk	51
44	Inn owner	51
45	Bullet train engineer	51
45	Thermal generating station mechanic	51
47	Chief carpenter	51
48	Office clerk	50
49	Steam train engineer	49
50	Airline clerk	49
51	Electric train engineer	49
52	Car salesman	48
52	Retail storekeeper	48
54	Tokyo station employee	48
54	Spinning company clerk	48
56	Bell captain	47
57	Whaleboat harpoonist	47
58	Cabinet maker	46
58	Barber shop owner	46
60	Barber	46
60	Self-defense Air Force member	46
62	Self-defense Army member	46
63	Auto mechanic	44
64	Train station employee	44
65	Carpenter	44
66	Independent farmer	43
67	Grocery storekeeper	43
67	Farm head	43
69	Automobile driver	42
70	Department store sales clerk	41
71	Heir to a farm	41
72	Mail truck driver	40
73	Spinner of a large company	39
74	Lathe turner	38
75	Store clerk	38
76	Train porter	38

Status Rankings of 98 Occupations (Continued)

Rank	Occupations	Score
77	Spinner	37
78	Macaroni-maker	37
78	Insurance salesman	37
80	Garbage truck driver	37
81	Grocery store clerk	37
82	Printer	36
83	Bookstore clerk	36
83	Variety store clerk	36
85	Inn manager	36
86	Fisherman	36
87	Service station attendant	36
88	Fruit-vegetable store keeper	34
89	Baker	34
90	Noodle-maker	33
91	Gold miner	31
92	Farm laborer	30
93	Highway construction worker	28
94	Porter	28
95	Road construction worker	26
96	Door-to-door salesman	26
97	Coal miner	25
97	Charcoal burner	25

APPENDIX B

Score Sheet for Occupational Role Knowledge and Grading Procedures

職業知識テスト調査表

（職　業）＿＿＿＿＿＿＿＿＿＿

1. この○○○○（カードにある職業）の人を見たことがありますか。

(イ) はい ☐，　(ロ) いいえ ☐

（見たと答えたこどもに）どこで，または何でみましたか。

(イ) 家や学校の近所で ☐

(ロ) テレビの番組で ☐　｝（両方の場合は両方に×印をつける）

(ハ) その他 ＿＿＿＿＿＿　（特に詳しくは不要）

この人に会って，話したことがありますか。

(イ) はい ☐　(ロ) いいえ ☐

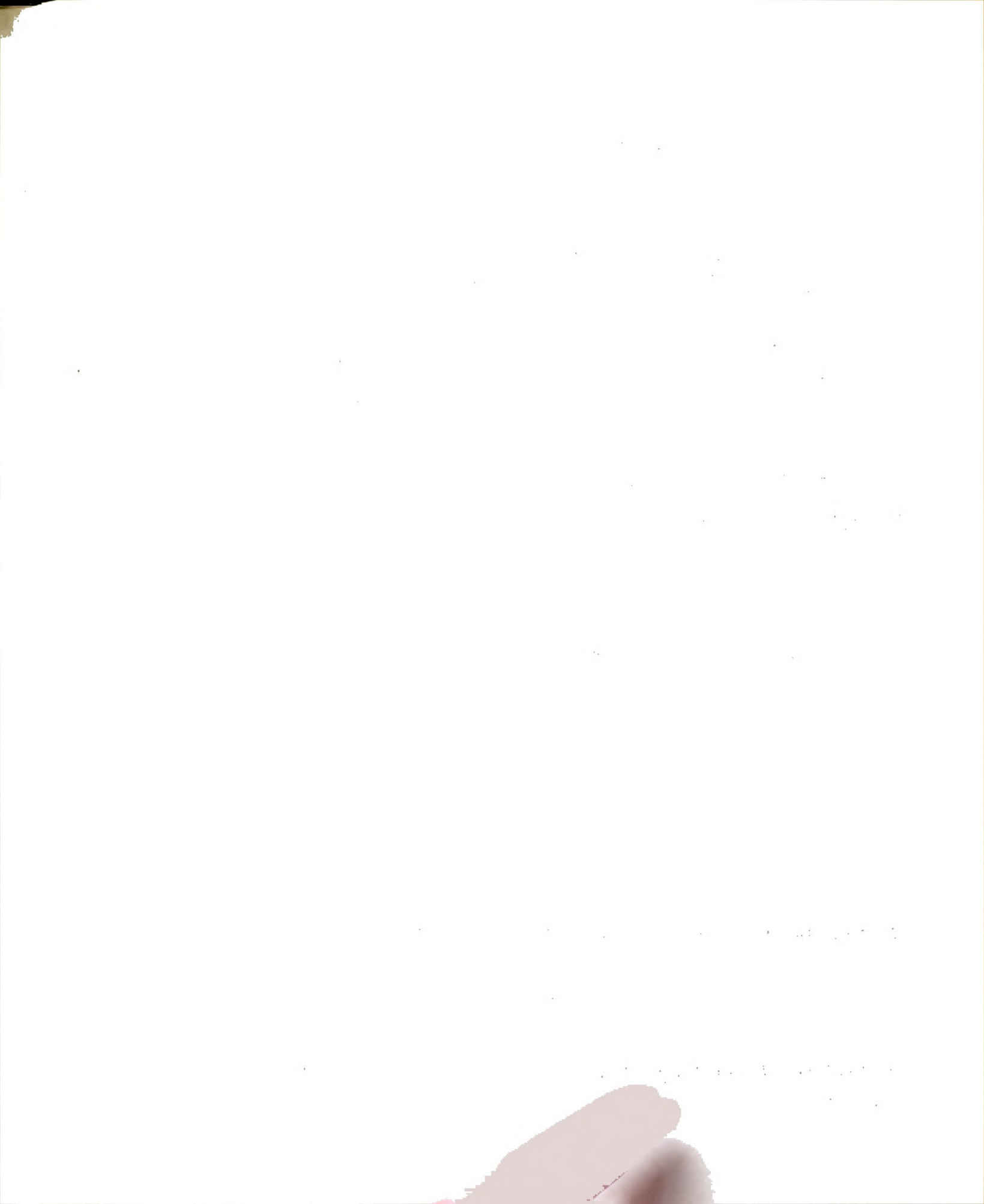
2. この人は，どんな仕事をする人ですか。

3. この人は，だれのために働いていますか。

4. この人は，どこで働いていますか。

5. この人は，仕事をするときに，どんな道具やものを使いますか。

6. この人は，この仕事につくためには，特別な準備（勉強や技能などの意味）をしなければなりませんか。



APPENDIX B

Score Sheet for Occupational Role Knowledge

_____ (occupation)

1. Have you ever seen this man (worker represented on a card)?

   (a) Yes _____ (b) No _____

   If the answer is "Yes", where or by what means did you see him?

   (a) Around home or school _____ check both if applicable

   (b) On television _____

   (c) Other (need not specify) _____

   Have you ever talked to this man?

   (a) Yes _____ (b) No _____

2. What kind of work does this man do?

3. Whom does he work for?

4. Where does he do his work?

5. What kinds of things does he use in his job?

6. Does he have to prepare in some special way to get this job?

転業知識テスト採点の基準

1. 仕事の種類

3点： その仕事に関して専門的知識をもった大人と同じくらい仕事を充分理解している。

2点： その仕事については基礎的な知識はあるが，そうくわしくは知らない。

1点： 限られた知識しかない。到底普通の大人の比ではないが，しかし断片的に知っている。

0点： まちがっている，あるいはわからない。

2. 誰かのために働いている

3点： 仕事上での他人との関係を専門的 知識をもった大人と同じくらい充分理解している。

2点： かなり知っているがそうくわしくはしらない。

1点： 限られた知識しかない。普通の大人の比ではないが，しかし断片的な知識がある。

0点： まちがっている，あるいはわからない。

3. 仕事の場所

3点： その仕事がどういうところで行われるかについてくわしく知っている。

2点： かなり知っている。すなわち普通の大人の程度。

1点： 限られた知識しかない。普通の大人の比ではないが，断片的に知っている。

0点： まちがっている，あるいはわからない。

4. 仕事で使われる道具

3点： その仕事をする際に使われる道具やものについて充分理解している。

2点： かなり理解している。

1点： 限られた知識しかない。

0点： まちがっている，あるいはわからない。

5. 仕事につくため前もって必要な条件

3点： その仕事につくために必要な訓練とか経験について充分理解している（見習とか学校教育，現場での訓練をも含む）。

2点： 基礎的知識はあるが，そうくわしくは知らない。

1点： 限られた知識しかない。普通の大人の比ではないが，断片的に知っている。

0点： まちがっている，あるいはわからない。

Explanation of Test Items and Grading Procedures

1. Kinds of Work (Role Requirements)

Score	Type of Response
3	Indicates a thorough grasp of role requirements--equivalent to a well-informed adult who understands the role very well.
2	Indicates a good grasp of role requirements--equivalent to an adult who has a basic grasp of the role activities but not extensive knowledge.
1	Indicates some limited knowledge of role requirements. No equivalent to average adult level but with some elements specified.
0	Incorrect information or no information.

Sum x 2 = Subscore for kinds of work

2. Work for Someone (Role Relationships)

Score	Type of Response
3	Indicates a thorough grasp of role relationships with others--equivalent to a well-informed adult who understands role relationships very well.
2	Indicates a good but not detailed grasp of role relationships--equivalent to an adult who has a basic grasp of how the role is related to other roles--not extensive knowledge.

1	Indicates some limited knowledge of role requirements. Not equivalent to average adult level but with some elements specified.
0	Incorrect information or no information.

Sum x 2 = Subscore for work for someone

3. Place of Work (Physical Environment)

Score	Type of Response
3	Indicates a detailed understanding of typical physical environment in which work takes place through knowledge.
2	Indicates a good grasp of work environment--equivalent to what an average modestly informed adult would know.
1	Indicates some limited knowledge of work environment--not equivalent to average adult level, but some elements present.
0	Incorrect information or no information.

Sum x 2 = Subscore for place of work

4. Things Used in Job (Cultural Artifacts, Tools, Symbols)

Score	Type of Response
3	Indicates a very thorough understanding of tools, cultural artifacts, symbols, etc., used in work.
2	Indicates a good grasp of tools, cultural artifacts, symbols, etc., used in work.
1	Indicates limited grasp of tools, cultural artifacts, symbols, etc., used in work.
0	Incorrect information or no information.

Sum = Subscore for things used in work.

5. Preparation for Job (Role Prerequisites)

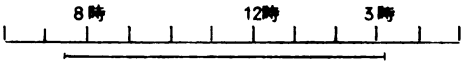
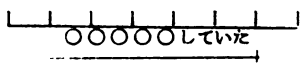
Score	Type of Response
3	Indicates thorough grasp of training and/or experience requirements for job (apprenticeship, on-the-job training, formal degrees, etc.)
2	Indicates good grasp of requirements--equivalent to adult who has basic grasp of prerequisite training and/or experience.
1	Indicates some limited knowledge of role prerequisites. Not equivalent to average adult level but some information given.
0	Incorrect information or no information.

Sum = Subscore for preparation for job.

APPENDIX C

Description of Daily Activities and Record Form

行動カテゴリーについての説明表

1.	ねむっていた	(1) 夜ねむっていた時間をかく。 (2) ひるねをしていた時間はここには書かないで「17.とくになにもしていなかった」のところに書く。 (3) ねどこのなかでマンガを読んだり，テレビを見たりしていた時間はここには書かない。それぞれ「8.マンガを読んでいた」と「5.テレビを見ていた」のところに書く。
2.	ごはんをたべていた	学校で食べた給食の時間は書かなくてよい。
3.	学校で勉強や遊びやクラブ活動をしていた	学校へ行くために，家を出た時から，家に帰るまでの時間る1本の線で書く。 たとえば 
4.	勉強をしていた	(1) 自分の家や友だちの家や塾など，学校以外のところで勉強していた時間を書く。 (2) そろばんを習いにいっていた時間もここに書く。
5.	テレビを見ていた	テレビる見ながらほかのことをしていた人は両方に書く。たとえば，ごはんを食べながらテレビを見た人は「2.ごはんをたべていた」のところと「5.テレビを見ていた」のところの両方に線を書く。
6.	ラジオを聞いていた	ラジオを聞きながらほかのことをしていた人は両方に書く。（テレビの場合と同じ）
7.	ピアノ，おどり，絵，工作などをしていた	(1) 図画工作，さいほう，あみもの，習字，歌，ピアノ，おどり，プラモデル，げきのけいこ，などをしていた時間を書く。 (2) やっていた場所は自分の家でもよそでもよい。
8.	マンガを読んでいた	マンガの本やマンガ雑誌や付録のマンガ本などを読んでいた時間を書く。
9.	マンガ以外の本や新聞を読んでいた	マンガ以外の本や新聞を読んでいた時間を書く。勉強のための本、学習参考書を読んだ時間は，「4.勉強をしていた」のところに書く。
10.	家のなかで遊んだりスポーツをしていた	(1) 自分の家，友だちの家，しんせきの家のなかであそんでいた時間を書く。 (2) ピンポンなど家のなかでスポーツをしていた時間もここに書く。
11.	家のそとで遊んだりスポーツをしていた	(1) 家の前やそとであそんだ時間を書く。 (2) 家のそとでスポーツをしていた時間もここに書く。 (3) 野球をみていた場合のように，自分でやらないで見ていた場合は「16.そとへ遊びに出かけた」のところに書く。
12.	家の中でお手伝をしていた	ごはんのしたく，おそうじ，近所までのおつかい，子もり，るすばん，小鳥や犬や植物のせわをするなど家のなかでお手伝いをしていた時間を書く。
13.	家の外でお手伝をしていた	おつかいにいった，そとで家の仕事のてつだいをした。父をむかえにいったなど，そとでお手伝いをしていた時間を書く。
14.	家の中で自分の用事をしていた	(1) 顔をあらう，着物をきかえる，おふろにはいる，おやつを食べる，ふとんをしいたりたたむ，頭をかってもらうなど，自分の身のまわりのことをしていた時間を書く。 (2) 学校のしたくをする，自分の部屋をかたづけるなど自分の用事をしていた時間も書く。
15.	家の外で自分の用事をしていた	(1) 自分の買物にいった，本をかりにいったなど自分の用事でそとにいた時間を書く。 (2) おふろへいった，床屋へいったの2つは「14.家のなかで自分の用事をしていた」に書く。
16.	そとへ遊びにでかけた	ドライブやハイキングにいった，映画やてんらん会や音楽会にいった，野球やその他のスポーツをみにいったなど，そとへでかけた時間をかく。
17.	とくになにもしていなかった	ひるねをしていた，ブラブラしていた，人とおしゃべりをしていた，ぼんやりしていた，考えごとをしていた，などの時間る書く。
18.	その他（くわしく）	うえのどれにもはいらないことをここに書く。そしてそれがどんなことだったかを線のうえにくわしく書く。 たとえば 

APPENDIX C

Descriptions of Daily Activities

1	Sleeping	(1) Indicate hours spent on sleeping the night. (2) Do not enter the hours for a nap. Use Item 17, "Nothing in particular", for taking a nap. (3) Do not enter the hours spent on reading comic books or watching TV in bed. Use Item 5, "Watching TV", or Item 8, "Reading comic books," respectively.
2	Having meals	Do not include the hours having lunch at school.
3	Studying, playing, and engaging in extra curricular activities at school	Indicate on time line by drawing a line from the time you left home for school to the time you returned home. 8a.m. 12p.m. 3p.m. (example)
4	Studying	(1) Indicate hours spent on studying other than at school such as at home, friend's house, etc. (2) Include the hours spent on abacus lessons.
5	Watching TV	Use two items if you were doing something while watching TV; e.g. if you were watching TV while eating, use Item 2, "Having meals," and Item 5, "Watching TV."
6	Listening to radio	If you were doing something while listening to radio, use two different items. Refer to the above Item 5, "Watching TV."

Descriptions of Daily Activities (Continued)

7	Playing piano, dancing, painting and hand-crafting	(1) Indicate hours spent on hand-crafting, painting, sewing, knitting, exercising calligraphy, singing, playing piano, dancing, play-acting and etc. (2) Anywhere that you spend doing the above is acceptable.
8	Reading comic books	Indicate hours spent on reading <u>any</u> comic books.
9	Reading newspapers or books other than comic books	Indicate hours spent on reading newspapers and other than comic books. Hours spent on textbooks or reference books should be included under Item 4, "Studying."
10	Playing inside	(1) Indicate hours spent on playing inside the house: e.g. own house, friend's, relatives. (2) Include indoor sports like table tennis, etc.
11	Playing outside	(1) Indicate hours spent on playing around the neighborhood. (2) Include the hours spent on doing some sports outside. (3) When not participating like watching baseball game, use Item 16, "Going out."
12	Helping indoors	Indicate hours spent on helping with indoor chores such as preparing for meals, cleaning the rooms, doing short errand, baby-sitting, looking after pets or plants, etc.
13	Helping outdoors	Indicate hours spent on any helping done outside the house.

Descriptions of Daily Activities (Continued)

14	Doing your own thing indoors	(1) Indicate hours spent on your own thing; e.g., washing face, changing clothes, taking a bath, having a snack, making bed, having hair cut. (2) Include the hours spent on getting ready for school or tidying your room.
15	Doing your own thing outdoors	Indicate hours spent outside on your own business; e.g., shopping for yourself, borrowing a book, etc.
16	Going out	Indicate hours spent going out for something; e.g., driving, hiking, movie-going, exhibitions, music concerts, etc.
17	Doing nothing in particular	Indicate hours spent on napping, hovering around, yapping, daydreaming, etc.
18	Others (specify)	Any activities that are not classified into any of the above items, specify on the line below by writing in detail. (example) _____ Any activity ( ) _____

生活の記録

＿＿＿＿＿学校＿年＿組　なまえ

男・女（○でかこむ）

きのう，5月＿日＿曜日にあなたがしたことをおもいだしてその時間を下の表に ——— のように線でかきなさい。先生のせつめいをよくきいて，かきかたをまちがえないようにやりなさい。

		あさ 5時	6時	7時	8時	9時	10時	11時	12時	ひる 1時	2時	3時	4時	5時	6時	ばん 7時	8時	9時	10時	11時	12時
1.	ねむっていた																				
2.	ごはんをたべていた																				
3.	学校で勉強や遊びやクラブ活動をしていた																				
4.	勉強をしていた																				
5.	テレビを見ていた																				
6.	ラジオをきいていた																				
7.	ピアノ，おどり，絵，工作などをしていた																				
8.	マンガを読んでいた																				
9.	マンガ以外の本や新聞を読んでいた																				
10.	家のなかで遊んだりスポーツをしていた																				
11.	家のそとで遊んだりスポーツをしていた																				
12.	家のなかでお手伝いをしていた																				
13.	家のそとでお手伝いをしていた																				
14.	家のなかで自分の用事をしていた																				
15.	家のそとで自分の用事をしていた																				
16.	そとへ遊びにでかけた																				
17.	とくになにもしていなかった																				
18.	その他（くわしくかく）																				

Record of Daily Activities

Name of School: _____ Grade: _____ Class: _____

Name: _____ Male/Female (Circle)

Recall what you did yesterday _____ _____ and fill in the hours spent on each by
Month Day

drawing a line indicating the duration.

Listen to the teacher carefully and do not make mistakes.

	Morning												Afternoon												Evening											
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
1. Sleeping																																				
2. Having meals																																				
3. Studying, playing and engaging in extra curricular activities at school																																				
4. Studying																																				
5. Watching TV																																				
6. Listening to radio																																				
7. Playing piano, dancing painting, and handcrafting																																				

Record of Daily Activities (Continued)

	Morning							Afternoon							Evening					
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
8. Reading comic books																				
9. Reading newspapers or books																				
10. Playing inside																				
11. Playing outside																				
12. Helping indoors																				
13. Helping outdoors																				
14. Doing your own thing indoors																				
15. Doing your own thing outdoors																				
16. Going out																				
17. Nothing in particular																				
18. Others (specify)																				

APPENDIX D

Mean Status-Knowledge Scores On Three Types of Contact Occupations by Grade, Sex, Social Class, and Intelligence

APPENDIX D

Table 1. Mean Status-Knowledge Scores On Three Types of Contact Occupations for Fourth and Sixth Grade Children.

	Grade	N	Personal Contact	Television	General Culture
Mean	4	90	6.1	6.1	8.0
	6	80	6.9	7.9	8.7
Standard Deviation	4	90	1.8	2.2	2.4
	6	80	2.7	2.5	2.5

Table 2. Mean Status-Knowledge Scores On Three Types of Contact Occupations for Male and Female Children.

	Sex	N	Personal Contact	Television	General Culture
Mean	Male	82	6.3	7.4	8.5
	Female	88	6.7	6.5	8.2
Standard Deviation	Male	82	2.2	2.5	2.5
	Female	88	2.4	2.5	2.5

Table 3. Mean Status-Knowledge Scores On Three Types of Contact Occupations for Children of Three Social Class Levels.

	Social Class Level	N	Personal Contact	Television	General Culture
Mean	Upper-middle	39	6.4	7.4	8.4
	Lower-middle	96	6.5	6.6	8.4
	Lower	35	6.5	7.1	8.0
Standard Deviation	Upper-middle	39	1.8	2.4	2.1
	Lower-middle	96	2.5	2.7	2.6
	Lower	35	2.5	2.1	2.6

Table 4. Mean Status-Knowledge Scores On Three Types of Contact Occupations for Children of Three Intelligence Levels.

	Intelligence Level	N	Personal Contact	Television	General Culture
Mean	High	49	6.8	7.4	8.3
	Middle	64	6.3	6.9	8.3
	Low	57	6.4	6.6	8.3
Standard Deviation	High	49	2.4	2.8	2.2
	Middle	64	1.9	2.4	2.4
	Low	57	2.5	2.4	2.8