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ABSTRACT

Recent literature on television and behavior is reviewed, synthesized, and assessed in this report, the first of two volumes. Questions of television's impact on viewer functioning are addressed for the general reader, for the purpose of elucidating research findings and their implications for public health and future research. The focus of this report is on public health generally, not just on children and adolescents. Issues discussed include cognitive and emotional aspects of television viewing, television and violence, television as it relates to socialization and viewer's conceptions of social reality, television's influences on physical and mental health, and television as an American institution. Literature reviews commissioned on specific topics from 24 researchers are integrated and assessed. A list of these papers and their authors is provided in appendix B. This volume and its companion offer an update and elaboration of information presented in the 1972 Surgeon General's Advisory Committee on Television and Behavior which assessed the effects of televised violence on children and youth and called for research on the relationship of television to the psychological growth and development of children. (LMM)

TELEVISION AND BEHAVIOR

Ten Years of Scientific Progress and Implications for the Eighties

Volume I

Summary Report

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

National Institute of Mental Health
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Foreword

This volume and its companion offer an update and elaboration of information presented in the 1972 Report of the Surgeon General's Advisory Committee on Television and Behavior. That report was based, in large part, on the findings of research projects commissioned and funded by the Federal Government to assess the effects of televised violence on children and youth. The Committee's report confirmed the pervasiveness of television within the United States but noted the conspicuous paucity of information about the relationship of television viewing to the psychological growth and development of children. In a strongly worded statement, the Committee called for the conduct of such research.

The past decade bears witness to the response of the scientific community to that call. Approximately 90 percent of all research publications on television's influences on behavior have appeared within the past 10 years—more than 2,500 titles. While a large number of the studies continued to focus on effects of the medium on aggression, many more dealt with television viewing and its influences on other aspects of development and behavior. This massive research effort, undertaken in this country and abroad, under the sponsorship of a wide variety of research and funding organizations, yielded an enormous amount of new and needed information, the significance of which was to an extent hindered by lack of synthesis and assessment.

In early 1979, a group of researchers in the field suggested to then Surgeon General Julius B. Richmond the growing need for collection, review, synthesis, and assessment of the new literature on television and behavior. The Surgeon General agreed that such an effort would provide opportunity to be more definitive regarding television's causal influences on violent and aggressive behaviors of viewers as well as to address an increasing number of questions about the medium's impact on viewers' functioning.

Because the National Institute of Mental Health had exercised lead responsibility within the Public Health Service for more than a decade for research in this area, the Institute was encouraged by the Surgeon General to undertake the project, and work began in late 1979. Dr. David Pearl, Chief, Behavioral Sciences Research Branch, Division of Extramural Research Programs, was assigned lead responsibility within NIMH for the review project. The reader is directed to the Preface of this volume for a detailed description of the process through which the review was managed and conducted.

Several decisions were made early that significantly influenced the nature of the present report. First, in recognition of the large body of existing research literature, it was decided that new studies would not be funded and conducted specifically for the report; rather, comprehensive and integrative reviews of the existing literature would be commissioned to present the state-of-the-art in coherent and unified form. Second, a decision was made to focus on a much broader spectrum of television and behavior than did the earlier report which had been restricted to the effects of televised violence on aggressive behavior among children and youth. Thus, the new report addresses such issues as cognitive and emotional aspects of television viewing; television as it relates to socialization and viewers' conceptions of social reality; television's influences on physical and mental health; and television as an American institution. Also, though

much of the research has been conducted with child and adolescent subjects, the new report is not limited to influences of the medium on this age group. Within this broadened context, the orientation of the report overall is to research and public health issues.

While the coverage of the report has been broadened substantially, certain topics, generally not included, should be noted. Television news and news reporting, political socialization, public affairs broadcasting, and television advertising either have been considered in detail elsewhere in recent years or were judged inappropriate for this project. Thus the progammatic focus of this review is on entertainment television—the kinds of programs watched by most of the audience, most of the time.

Television and Behavior: Ten Years of Scientific Progress and Implications for the Eighties (*Volumes I and II*) intends primarily to elucidate research findings and their implications for public health and future research. Though the subject is relevant to public policy issues, the present work makes no recommendations and does not issue specific prescriptions. We would anticipate, however, that persons bearing responsibility for policy and for television industry practices would be interested in the findings for use in decisionmaking. Also the report should be of substantial help to parents and others who seek to know of both the positive and adverse effects of the medium and of the ways in which they can influence them.

HERBERT PARDES, M.D.
Director
National Institute of Mental Health

Preface

Consultants on the development of this new report included child development researchers, behavioral scientists, mental health experts, and communication media specialists. The following were advisors:

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The consultant group played a key part in the entire process. They made recommendations on areas to be covered and on scientists to prepare reviews in those areas. They attended meetings to discuss issues and to consider draft papers that had been submitted. They commented on and prepared critiques of earlier versions of this summary report and synthesis. And they wrote introductory comments for the various sections of the report's accompanying volume containing detailed scientific literature review papers.

On the basis of early decisions, comprehensive, critical, and integrative scientific literature reviews were commissioned on specific topics from 24 of the most knowledgeable researchers available. A list of these papers and their authors is given in Appendix B. These reviews are being published in a companion volume, *Television and Behavior: Ten Years of Scientific Progress and Implications for the Eighties,* Volume II.

The present report, then, is largely an assessment and integration of the above reviews plus information based on staff-consultant deliberations and other materials deemed as pertinent by the update group. It is written in nontechnical language for

the general reader. Although it contains reference to relevant research papers, the reader interested in the technical and scientific content of the research must consult the reviews and their extensive reference lists in the companion volume.

Lorraine Bouthilet, Ph. D., formerly on the staff of the National Institute of Mental Health (NIMH), assisted in the writing and editing, and Joyce B. Lazar, currently Acting Director of the NIMH Research Advisory Group, assisted in the planning and conduct of the update and participated in the staff-consultant assessments of research.

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The Surgeon General's Scientific Advisory Committee Report–1972

Among the great inventions in the electronic age, television is one of the most beguiling. A sound-and-light show appealing to the prepotent senses of vision and hearing, it draws attention like a magnet. Infants as young as 6 months gaze at it; little children sit in front of it for hours at a time; and millions of elderly, sick, and institutionalized people keep contact with the outside world mainly through television. An integral part of everyday life, it helps to determine how people spend their time, what they learn, what they think and talk about; it influences their opinions and helps shape their behavior. Few other inventions have so completely enveloped an entire population. More Americans have television than have refrigerators or indoor plumbing.

It is no wonder, then, that students of human behavior have been attracted to television as a field of research, as a vast arena for the study of behavior in today's technological world. It is no less wonder that the American public is concerned about the effects of television on their lives and the lives of their children. Some people think it has a malignant influence; others praise it as a boon to society. Wanting to know about the effects of television, the public has turned to the scientific community for answers.

Spurred on by both curiosity and a need to find answers to practical questions, scientists have been busy during the past decade at many kinds of television research. Such research did not arise suddenly. Investigations into the effects of television began in the late 1940s, almost as soon as television began to appear in American homes, continued at a relatively slow pace in the 1950s, and accelerated in the 1960s.

In 1969, the increase in research on television began with a request by Senator John G. Pastore to the Secretary of the Department of Health, Education, and Welfare. As Chairman of the Senate Subcommittee on Communications of the Senate Commerce Committee, Senator Pastore wrote, "I am exceedingly troubled by the lack of any definitive information which would help resolve the question of whether there is a casual connection between televised crime and violence and antisocial behavior by individuals, especially children. . . ." The Senator asked the Secretary to direct the Surgeon General of the U.S. Public Health Service to appoint a committee to "conduct a study to establish scientifically what effects these kinds of programs have on children."

The Department swung rapidly into action. The Surgeon General directed the National Institute of Mental Health to take responsibility for the committee and to provide necessary staff. The Scientific Advisory Committee on Television and Social Behavior was appointed, and one million dollars were provided for new research. Scientists throughout the country submitted proposals; the most promising proposals received approval; and their authors were funded to conduct the research. The studies were completed within 2 years, unusual speed for the behavioral sciences. In December 1971, the committee sent its report to the Surgeon General. The report, entitled *Television and Growing Up: The Impact of Televised Violence,* summarized the state of knowledge at that time. It was accompanied by five technical volumes of reports in which the contributing scientists described their studies in detail.

The report confirmed the "pervasiveness of television in the United States," stating that almost everyone watched some television programs and that many people watched for many hours a day. The report pointed out that little was known about the reasons people view so much television or choose particular programs. The report also confirmed that there was a great deal of violence on television. On entertainment television during 1967 and 1968, there were about eight violent incidents per hour.

The report's major conclusion, often quoted, was: "Thus, there is a convergence of the fairly substantial experimental evidence for a *short-run* causation of aggression among some children by viewing violence on the screen and much less certain evidence from field studies that extensive violence viewing precedes some *long-run* manifestations of aggressive behavior. The convergence of the two types of evidence constitute some preliminary indication of a casual relationship, but a good deal of research remains to be done before one can have confidence in these conclusions."

The committee itself wrote that these tentative and limited conclusions were not entirely satisfactory but that they did represent much more knowledge than was available when the committee began its work.

Ten Years Later

During the 1970s, much of the necessary research was done, and—to anticipate findings that will be described later—it can be said that the evidence for a causal relationship between excessive violence viewing and aggression goes well beyond the preliminary level. Scientists in this decade have also broadened the research. They have been trying to find the many interrelated and intricate factors that operate in television programing and viewing—who watches television and why, what children see and hear on television, what people learn from television and how they learn it. Among other topics, they analyze television's effects on social life and values.

As a result of the Surgeon General's committee effort, a new generation of scientists was spawned. Some of the scientists who undertook research projects in the late 1960s are still working the field. Many of the younger people brought into the projects as assistants and associates developed a continuing interest and are now contributing their talents and efforts to television research. They include investigators from all the behavioral sciences, notably psychology, psychiatry, and sociology, as well as from public health and communications. They do their work in many settings, including universities and the television industry itself. Much of the research is supported by the government and private foundations, but many of the smaller projects have no major outside funding. During the past decade, at almost all conventions of behavioral scientists, there have been sessions on television research which has become an established specialty.

Although the number of scientists doing television research has increased, it is still small compared to the magnitude of the research problems. Many more investigators from all fields are needed if research is to find answers to the questions concerned citizens ask.

Because scientists from many fields have been at work, the studies have taken different approaches. Some, for example, concentrate on analyses of program content, others observe children before and after they have looked at violent programs, and still others observe children after they have looked at benign and prosocial programs. Many of the projects are done in the laboratory under strict experimental conditions; others are naturalistic field studies and observations. These two approaches complement one another. The laboratory studies tell whether or not something can happen, the possibility of occurrence. The field studies tell how commonly something does happen, the likelihood of occurrence. When both kinds of studies point in the same direction, their conclusions are mutually reinforcing.

The amount of television research increased significantly during the 1970s. This increase is documented in a bibliography published in 1980; the bibliography covers articles, books, and other materials in the field of research on television and youth published, primarily in English, between 1946 and 1980.[1] Up to 1970, there were about 300 titles, and from 1970 through 1980 there were another 2,500, of which more than two-thirds were published in 1975 or later. Put another way, 90 percent of all the publications appeared in the last 10 years. No one knows whether this acceleration will continue at such a rate, but television is so much a part of present-day human existence that the amount of research will undoubtedly increase and delve even more into all facets of the relationships between television and human behavior.

Much of the research on effects of television has been concerned with its impact on children. It is easier to gather data on young people, as most of them are in schools or other settings that make them accessible to the investigators. Also, it is more important to learn about television's influence on the growing child. It is essential to know what the many hours a day spent watching television are doing to them at a time when they are developing and learning about the world and the people around them. Children are an audience qualitatively different from adults, and they may be an audience more vulnerable to television's messages. It may also be significant that there is now a generation of young adults who have grown up with television and whose children are now second-generation television viewers. The effects on them probably are not the same

as on previous generations who were adults when they first became acquainted with television.

The Television Audience

The Surgeon General's committee asked who watches television, and its report replied, "almost everyone." That was true in the late 1960s and it is still true in the early 1980s. Some people watch occasionally, for special events or at certain times, but many Americans watch television everyday. Their viewing times range from an hour or two to many hours daily, and some even keep the set on all day long. One survey showed that for large numbers of people television ranks third among all activities (after sleep and work) in the number of hours devoted to it.

One could go on citing figures about the pervasiveness and ubiquity of television. It should be remembered, however, that these figures are estimates. If *TV Guide* states that 85 million people watched *Roots,* it does not mean that the roofs were snatched off all the houses and apartments in the United States and the people in front of television sets counted one by one. The figures are projections from small samples and are subject to all the errors—and the scientific accuracy—found in such projections.

Most of the audience figure estimates come from surveys. Surveys conducted by telephone are much in use now, although mail and door-to-door surveys are still used occasionally. Another technique is exemplified by the famous Nielsen ratings which derive from television use in about 1,200 homes where the set is hooked up to a computer indicating when the set is on and which channel it is turned to. Other procedures merely ask people if they look at television, how often, which programs, and so on. This kind of questioning is sometimes done by interviewers and sometimes through written questionnaires. People have also been asked to keep television logs or diaries of their viewing. In a few instances, ordinarily in conjunction with other studies, direct observations of families or other groups, such as children or institutionalized persons, have been made by visitors to the home or institution.

On the basis of these surveys and observations, quite a bit is known about who looks at television. Because many different methods have been used and compared, this information, as a whole, is probably accurate and reliable.

For research purposes, the audience is often categorized in terms of amount of viewing. Some scientists use simple terms like "heavy" and "light" viewers or "high" and "low" amount of viewing. In some situations, a person who looks at television more than 4 hours a day is called a "heavy" viewer. A "light" viewer might be defined as a person who views about an hour a day or less. Where to draw additional lines in between is sometimes a topic of scientific controversy. There are, of course, the "constant" viewers who watch television almost all their waking hours, and there are some confirmed "nonviewers." The definitions vary, depending on who is doing the research and on the purpose of the research.

Surveys confirm what most people already suspect—television appeals to all ages, though not equally. Babies look at it for rather brief intervals and, as they grow older, tend to look at it more and more. By age 2 or 3, some children spend large amounts of time before the set and apparently have some understanding of what is going on. The amount of viewing continues at a relatively high level, then drops off somewhat when children reach their teens. In young adulthood it increases again, especially for parents with young children. Viewing time tends to drop in the busy years of middle age, but later in life television again becomes a major attraction and may be watched for many hours a day. It is sometimes the principal recreation for elderly people.

Amount of viewing seems to vary with other characteristics of people. Minority groups tend to watch more than others, on the average, and women more than men. Some surveys show that people in lower socioeconomic groups view somewhat more than those in the middle class. People who watch a lot of television tend to be less educated than those who do not watch as much, yet among college students television is a favorite pastime. People in hospitals, prisons, and other institutions often look at television when they get the chance.

It appears that, although almost everyone watches television, those who do not have much else to do watch it most often. Many people, for example the elderly and the unemployed, use television to fill time, to do something instead of nothing. Some researchers have concluded that these are people who do not choose to watch specific programs; they are not really selective in what they look at. They watch by the clock, turning on the set at free times, no matter what is being shown. Television is a ritualized or habitual activity.

In general, the surveys indicate that the television audience has not changed appreciably during the past 10 years. Americans' viewing habits seem to have been established early in the history of television.

Doing Research on Television and Behavior

Like all scientists, behavioral scientists who study television, draw their conclusions from evidence they have gathered and organized to answer specific questions. The kind of evidence they collect depends on the aspect of television and behavior they are studying and on which stage in a rather long process they are concerned with. Some simple distinctions may help clarify the complexity of the overall process, which in turn explains why each researcher tries to simplify the problem by limiting a study to a small portion of the total process.

The heart of the process includes a television set showing a particular program and a person sitting in front of it watching and listening to the program. Supposedly, the researcher then tries to study the effect of the program on this viewer. But the effects of television cannot be understood in such simple terms. Because the program on television is sometimes *selected* by the viewer the researcher must also consider the role of the viewer in any possible causal relationships. Moreover, the typical audience often consists of a number of persons who must somehow agree on the program they will watch. They interact with one another about the program and about other things as well. All these social relationships in the immediate viewing situation have been called the "social context" of viewing and must be taken into account. The researcher may also want to look beyond the television presentation and its audience in the immediate social context to the longer term behavioral outcomes. Television's interrelations with the viewer's psychological processes may also be a focus of inquiry. In any case, the context in which behavior occurs is important.

Television presentations themselves became a prime target of research almost since television began. Virtually any topic on television which is suspected of having behavioral effects is likely to be examined. For example, there have been content analyses of the incidence of violent portrayals, depictions of minorities, prosocial acts, families, sexual references, people in various professions, and so forth. In many of these areas, research has not progressed beyond the analyses of the content. There are good reasons for this limitation; some of the suspected effects are very difficult to measure satisfactorily as, for example, the impact of sexually oriented programs. But in other areas, the research community has moved well along in examining the effects of television's content on the viewer.

Two different approaches have been followed in the study of television's influence on the behavior of the viewing audience. One group of researchers, grounded mostly in laboratory psychology, is conducting *experimental* studies in which an audience is temporarily brought together to view programs selected for research purposes. This approach leads to strong conclusions about the immediate impact on behavior that the researcher subsequently observes. As a rule, social context is eliminated from consideration by holding it constant within the experimental session so that it does not affect the results. A second group of researchers approached the study of television's uses and effects in natural *field* settings. Field studies attempt to take social context factors into account by measuring them and making their interactions with the television experience a part of what is studied. This approach usually takes the form of field surveys, which produce evidence of correlation between various factors but which are not scientifically as satisfactory as the controlled experiment in trying to isolate the specific effect of any single factor.

Two intermediate approaches have occasionally been used by researchers who hope to couple some of the precision of the experimental study with the greater generalizability and breadth of the field study. One is the *field experiment,* such as systematically exposing audiences to different television programs while they remain in their normal viewing situations at home. The other is the *panel study* in which the same individuals are interviewed, tested, or otherwise observed over time. The panel study examines natural variation over time (rather than at a specific time, as in the field survey) on the assumption that changes occur both in the person's exposure to television presentations and in a pattern of behavior that might be affected by those presentations.

Field experiments and panel studies are relatively rare in research on television and behavior. They tend to arouse controversy among scientists; there are those who prefer the greater certainty of cause-effect evidence provided by the laboratory experiment and those who seek greater generality in field research. Field experiments are practicable on only a narrow range of topics, and often the experimental procedures seem to effect more change in the person's life than just that which the person is shown on television. Panel studies run the risk of "contamination" of the person who is repeatedly interviewed on the same topic. Because the subjects in the research are interviewed or tested repeatedly, they may not represent the larger population that has not been asked the same questions.

Disagreement among researchers is often the product of disagreement about the kind of evidence that is required to draw a conclusion. Such evidence in turn grows out of the aspect of the overall process that they are attempting to study and the specific type of television presentation or behavior that is at stake. Some students of behavioral effects, for example, may find the research detailing various imbalances—overrepresentation or underrepresentation—in the demographic makeup of the total cast of characters on television to be of little import. They say that, because there is no evidence that there are socially deleterious behavioral outcomes associated with these television portrayals, the portrayals and imbalances can be shrugged off. On the other hand, some observers, including those in one of the offended demographic groups—minorities, women, the elderly, the disabled, and so on—may see the imbalances in content as sufficient grounds for action and reform, regardless of the demonstrability of the effects.

One task of developing a theory is to tie together the many areas of content analysis with the rather fewer areas where learning and other effects have been demonstrated experimentally or tested for their generality in field studies. For example, can a laboratory finding that young people imitate aggressive acts they have seen on television be extended either to social behavior in the real world or to the unmeasured impact on behavior of televised presentations of, say, prostitution or bigotry? As the total scope of research has broadened, some researchers have been willing to accept these generalizations.

While the research on television and behavior is by no means complete, it is expanding at an accelerating pace. New applications and versions of research methods are being used, and scientists can now draw conclusions more confidently than they could from the much more limited research of 10 years ago.

Highlights of Ten Years of Research

Television's Health-Promoting Possibilities

In its programs, television contains many messages about health, messages that may be important to promotion of health and prevention of illness. Television seems to be doing a rather poor job of helping its audience to attain better health or better understanding of health practices. This is, of course, not a goal of commercial television; nevertheless, incidental learning from television stories and portrayals may be contributing to lifestyles and habits that are not conducive to good health. Portrayal of mental illness on television is not frequent, but when it does appear, it is related to both violence and victimization; compared with "normal" characters, twice as many mentally ill characters on television are violent or are the victims of others' violence. Even though very few characters on television are ill, many more doctors are evident than are in real life. Much of television's content seems to foster poor nutrition, especially in commercials for sweets and snack foods. Children who watch a lot of television have poorer nutritional habits than children who do not watch as much. Alcohol consumption is common; it is condoned and is presented as a part of the social milieu. When people drive cars, which occurs often on television, they almost never wear seat belts. Correlational studies suggest that people's attitudes are influenced by these portrayals. One study, for example, indicated that television ranked second to physicians and dentists as a source of health information.

There has been almost no research on people in institutions, even though it is known that they often watch television. One study in a psychiatric setting found that staff believed television had a beneficial effect on patients, especially the chronic and elderly. Increased use of television for therapeutic purpose should be considered; for example, films and videotape have been used successfully to help people learn to cope with fears and phobias. An experimental study of emotionally disturbed children reported that, for some of the children, prosocial programs increased their altruistic behavior and decreased their aggressive behavior. More research is needed to explore the therapeutic potential of television.

With the pervasiveness of television viewing, it can be assumed that campaigns to promote better health would be effective. There have been campaigns on community mental health, against drug abuse and smoking, for seat-belt wearing, for dental health, and against cancer, venereal disease, and alcoholism. An example of a successful campaign to reduce risk of cardiovascular disease in California had programs in both English and Spanish and face-to-face instruction, in addition to the television messages, for some of the groups. After 2 years, communities exposed to the campaign, even without the personal instruction, had significantly reduced the likelihood of heart attack and stroke, while in a "control" community where there was no campaign risk levels remained high. Carefully planned and evaluated campaigns built on an under-

standing of the ways in which messages are conveyed and incorporated into people's lives hold great promise.

Cognitive and Emotional Functioning

Research on cognitive processes has asked such questions as: What are the factors involved in paying attention to television? What is remembered? How much is understood? The research shows that duration of paying attention is directly related to age. Infants watch sporadically; little children gradually pay more attention visually until, at about age 4, they look at television about 55 percent of the time, even when there are many other distractions in the room. Auditory cues are very important in attracting and holding attention. Up to the second and third grades, children cannot report much of what they see and hear on television, but they probably remember more than they can report, and memory improves with growing up. Young children remember specific scenes better than relationships, and they often do not understand plot or narrative. Making inferences and differentiating between central and peripheral content are difficult for young children, but these skills also improve with age. The changes may be partly developmental and partly the result of experience with television.

The "medium as the message" came to be studied again in the 1970s. Much of what children, and others, see on television is not only the content. They learn the meaning of television's forms and codes—its camera techniques, sound effects, and organization of programs. Some of the effects of television can be traced to its forms, such as fast or slow action, loud or soft music, camera angles, and so on. Some researchers suggest that fast action, loud music, and stimulating camera tricks may account for changes in behavior following televised violence.

Although television producers and viewers alike agree that television can arouse the emotions, there has been very little research on television's effects on emotional development and functioning. It is known that some people have strong emotional attachments to television characters and personalities and that children usually prefer characters most like themselves. Research on television and the emotions should be given a top priority.

Violence and Aggression

The report of the Surgeon General's committee states that there was a high level of violence on television in the 1960s. Although in the 1970s there was considerable controversy over definitions and measurement of violence, the amount of violence has not decreased. Violence on television seems to be cyclical, up a little one year, down a little the next, but the percentage of programs containing violence has remained essentially the same over the past decade.

Senator Pastore's question can be asked again: What is the effect of all this violence? After 10 more years of research, the consensus among most of the research community is that violence on television does lead to aggressive behavior by children and teenagers who watch the programs. This conclusion is based on laboratory experiments and on field studies. Not all children become aggressive, of course, but the correlations between violence and aggression are positive. In magnitude, television violence is as strongly correlated with aggressive behavior as any other behavioral variable that has been measured. The research question has moved from asking whether or not there is an effect to seeking explanations for the effect.

According to observational learning theory, when children observe television characters who behave violently, they learn to be violent or aggressive themselves. Observational learning from television has been demonstrated many times under strict laboratory conditions, and there is now research on when and how it occurs in real life. Television is also said to mold children's attitudes which later may be translated into behavior. Children who watch a lot of violence on television may come to accept violence as normal behavior.

Although a causal link between televised violence and aggressive behavior now seems obvious, a recent panel study by researchers at the National Broadcasting Company found no evidence for a long-term enduring relation between viewing violent television programs and aggressive behavior. Others doing television research will no doubt examine this new study to try to learn why it does not agree with many other findings.

Imaginative Play and Prosocial Behavior

Since children spend many hours watching the fantasy world of television it can be asked whether television enriches their imaginative capacities and whether it leads to a distortion of reality. Evidence thus far is that television does not provide material for imaginative play and that watching violent programs and cartoons is tied to aggressive behavior and to less imaginative play. Most young children do not know the difference between reality and fantasy on

television, and of course, they do not understand how television works or how the characters appear on the screen. Television, however can be used to enhance children's imaginative play if an adult watches with the child and interprets what is happening.

During the past 10 years research on television's influence on prosocial behavior has burgeoned. As a result evidence is persuasive—children can learn to be altruistic, friendly and self-controlled by looking at television programs depicting such behavior patterns. It appears that they also learn to be less aggressive.

Socialization and Conceptions of Social Reality

Most studies on socialization have been in the form of content analyses concerned with sex, race, occupation, age and consumer roles. There are more men than women on entertainment television; and the men on the average are older. The men are mostly strong and manly, the women usually passive and feminine. Both, according to some analysts are stereotyped but the women are even more stereotyped than the men. Lately there has been more sexual reference, more innuendo, and more seductive actions and dress. Both parents and behavioral scientists consider television to be an important sex educator not only in depictions specifically related to sex but in the relationships between men and women throughout all programs.

For a while, after organized protest removed degrading stereotyped portrayals from the air, there were almost no blacks to be seen on television. About 12 years ago, they emerged again, and now about 10 percent of television characters are black. There are not many Hispanics, Native Americans or Asian Americans.

Television characters usually have higher status jobs than average people in real life. A large proportion of them are professionals or managers, and relatively few are blue-collar workers.

The elderly are underrepresented on television, and, as with the younger adults, there are more old men than old women.

Research shows that consumer roles are learned from television. Children are taught to be avid consumers; they watch the commercials, they ask their parents to buy the products, and they use or consume the products. Not much research has been done with teenagers, but they seem to be more skeptical about advertisements.

In general, researchers seem to concur that television has become a major socializing agent of American children.

In addition to socialization, television influences how people think about the world around them or what is sometimes called their conceptions of "social reality." Studies have been carried out on the amount of fear and mistrust of other people, and on the prevalence of violence, sexism, family values, racial attitudes, illness in the population, criminal justice, and affluence. On the whole, it seems that television leads its viewers to have television-influenced attitudes. The studies on prevalence of violence and mistrust have consistent results: People who are heavy viewers of television are more apt to think the world is violent than are light viewers. They also trust other people less and believe that the world is a "mean and scary" place.

The Family and Interpersonal Relations

There are many television families—about 50 families can be seen weekly—and most of them resemble what people like to think of as the typical American family. The husbands tend to be companions to their wives and friends to their children; many of the wives stay home and take care of the house and children. Recently, however, on entertainment television there have been more divorces, more single-parent families, and more unmarried couples living together. In black families, there are more single parents and more conflict than in white families. The actual effects of these portrayals on family life have been the subject of practically no research.

Television, of course, takes place in the context of social relations, mainly in the family. Parents do not seem to restrict the amount of time their children spend in front of the television set, nor do they usually prevent them from looking at certain programs. They seldom discuss programs with their children except perhaps to make a few favorable comments now and then. Many families look at television together, which brings up the question of who decides what to look at. Usually the most powerful member of the family decides—father first, then mother, then older children. But, surprisingly often, parents defer to the wishes of their young children.

Television in American Society

Television seems to have brought about changes in society and its institutions. Television's effects on laws

and norms have been the subject of discussion, but no firm conclusions have been reached. Television, according to some observers, reinforces the status quo and contributes to a homogenization of society and a promotion of middle-class values. Television's ubiquity in bringing events—especially violent and spectacular events—throughout the world to millions of people may mean that television itself is a significant factor in determining the events. Television broadcasts of religious services bring religion to those who cannot get out, but they also may reduce attendance at churches and thus, opportunities for social interactions. Television has certainly changed leisure time activities. For many people, leisure time means just about the same as television time; their off-duty hours are spent mainly in front of the television set. Many of these effects of television, however, are still speculative and need further research to provide more accurate and reliable information.

Education and Learning About Television

Parents, teachers, and others blame television for low grades and low scores on scholastic aptitude tests, but causal relationships are complex, as in television and violence, and they need careful analysis. Among adults, television viewing and education are inversely related: the less schooling, the more television viewing. Although children with low IQs watch television more than others, it is not known if heavy viewing lowers IQ scores or if those with low IQ choose to watch more television. There have been no experimental studies on these questions. Research on television and educational achievement has mixed findings. Some studies found higher achievement with more television viewing, while others found lower, and still others found no relation. There seems to be a difference at different ages. At the lower grades, children who watch a moderate amount of television get higher reading scores than those who watch either a great deal or very little. But at the high school level (a time when heavy viewing tends to be less common), reading scores are inversely related to amount of viewing, with the better readers watching less television.

In terms of educational aspiration, it appears that heavy viewers want high status job but do not intend to spend many years in school. For girls, there is even more potential for conflict between aspirations and plans; the girls who are heavy viewers usually want to get married, have children, and stay at home to take care of them, but at the same time they plan to remain in school and to have exciting careers.

Finally, one of the most significant developments of the decade is the rise of interest in television literacy, critical viewing skills, and intervention procedures. "Television literacy" is a way to counteract the possible deleterious effects of television and also to enhance its many benefits. Several curricula and television teaching guides have been prepared, containing lessons on all facets of television technology and programing—camera techniques, format, narratives, commercials, differences between reality and fantasy, television's effect on one's life, and so on. Use of these educational and intervention procedures has demonstrated that parents, children, and teachers can achieve much greater understanding of television and its effects, but whether this understanding changes their social behavior is not yet known.

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Chapter II

Television's Health-Promoting Possibilities

The Surgeon General's committee ended its 1971 report with a chapter, "The Unfinished Agenda," and a final statement pointing out that in the future it would be well "to consider and stimulate television's health-promoting possibilities." It is fitting that this update of the Surgeon General's committee report takes up where the earlier report left off and begin its review of scientific advances during the 1970s with a discussion of television's health-promoting possibilities.

Research on television and health covers several topics: One is concerned with the content of television programs and portrayals relevant to health, as well as the possible influences of television portrayals on health and health-related behavior. Another focuses on television campaigns planned to promote better health. A third emphasizes the use of television by persons in institutions and the ways in which television might be applied for therapeutic purposes.

In recent years advances in the biomedical and behavioral sciences have led to a shift in the prevalence of illnesses from the acute, often infectious diseases to the illnesses and conditions in which personal responsibility and way of life play a key role. *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* concluded that such illnesses and conditions account for about half the mortality rate in the United States. (1) The current emphasis on maintenance of good health and prevention of illness through behavior patterns and practices—for example, diet, exercise, drinking in moderation, cessation of smoking, prenatal and child care, use of seatbelts and other safety precautions—suggests that television with its pervasive presence and general learning effect can exert a significant impact on health beliefs and health-related behaviors throughout the country.

Health Portrayals

A review of television's health portrayals raises issues related to advertising of health products. In turn, this leads to consideration of the codes and standards of the National Association of Broadcasters, the networks, and many of the stations, all of which have sections on health and medicine. The NAB code has a long section related to health commercials. In advertisements of medical products and practices, the code discourages direct portrayals of illness and distress. It also discourages sweeping claims for products. Laboratory settings must be genuine and research results authentic. Appeals regarding health matters must not be directed primarily to children. Advertisements for hard liquor are not permitted, and those for beer and wine should be presented with discretion. Personal products should be shown in an inoffensive way. Disregard of normal safety precautions should be avoided.

In contrast to advertising, the codes for health portrayals in the dramatic content of entertainment programs are not stringent. The guidelines state that there should be responsible handling of violence and its consequences. Drug abuse should not be encouraged or shown as socially acceptable. Physical or mental afflictions should not be ridiculed. Smoking and drinking should be deemphasized. Professional advice, diagnosis, and treatment must all conform to the law and professional standards. In effect, the portrayals are governed chiefly by artistic judgments related to dramatic effects and entertainment value. These codes have no doubt been somewhat helpful and have probably prevented flagrant inaccuracies and abuses. But what do the content analyses show?

Early in the 1970's, all programs on a commercial network station in Detroit were monitored for 1 week for health-content analysis. (2) Presentations involving physical or mental illness, medical treatment, physicians or dentists, smoking, or health in general were logged and evaluated for impact, appeal, and accuracy. The analysis revealed that health-related topics appeared in 7.2 percent of total broadcast time; most of them were on entertainment programs and commercials. There were few informational programs on

health issues. Only 30 percent of the health information was rated as useful. The remaining 70 percent was considered inaccurate, misleading, or both. Messages urging the use of pills and other remedies appeared 10 times as often as messages about drug use and abuse. Some of the brief public service messages were rated as informative and useful; including those on heart disease, smoking, and crisis centers. But information about most major health problems such as cancer, stroke, accidents, hepatitis, maternal death, hunger and malnutrition, venereal disease, mental health, sex education, child care, lead poisoning, and family planning was virtually nonexistent. Television, according to this survey, was falling far short of its potential in offering health information.

In the late 1970s, a study for an Institute of Medicine conference on "Health Promotion and the Media" analyzed health portrayals in 10 prime time shows and two soap operas for 4 days. (*3*) Of the 40 prime time shows, there were 28 with at least one health incident. On the basis of this analysis, the following generalizations were made: "Patients" on television receive intensive physical health care from "health professionals." Health professionals show concern for the emotional well-being of their patients. Specific health information is given in small and infrequent doses, and is often obscured by comedy in the evening shows and by romantic interludes in the afternoon soap operas. More information is provided about infrequent and unfamiliar health problems than about common and widespread ones. Even when a health issue constitutes the basis for an episode, little specific health information is presented. It appears that on entertainment television there has not been much improvement in the past 10 years in dissemination of health information.

Other content analyses of health portrayals on entertainment programs and commercials provide additional information about television's depictions of physical illness and injury, mental illness, diet and nutrition, smoking, and alcohol consumption. (*4*) They also document the prominence of health professionals in the world of fictional television.

Physical Illness, Impairment, and Injury

Both prime time and children's weekend television are dominated by action, power, and danger. There is an average of 5 violent acts per hour on prime time and 18 acts per hour on children's weekend programs. But pain and suffering rarely follow all this violence, nor is medical help usually evident. Content analyses of adult programs have shown that only about 7 percent of the major characters have injuries or illnesses requiring medical treatment. Although children's programs are more violent, only about 3 percent of the characters received treatment. Illness and injury strike television characters—heroes and villains, men and women, and other groups—about equally.

Prime time characters hardly ever have impairments; in fact, almost none even wears glasses. Only 2 percent of major characters are physically handicapped, and those who are handicapped are often old and unfavorably presented. Physically handicapped characters rarely appear on children's television.

Injuries or death from industrial and automobile accidents do not occur often on prime time television—despite all the risky driving, cars flying through the air, and fires and explosions. It should be noted that automobile accidents in real life are a leading cause of deaths for young adults. Automobiles and trucks are common on television, but seatbelts are seldom seen, and their use is never modeled.

Mental Illness

On television today, 17 percent of prime time programs have a portrayal or theme of mental illness. (*5*) About 3 percent of the major characters have some sort of mental illness, and, in the late evening programs, the percentage doubles. The mentally ill are likely to be either violent characters or to be victims. Of prime time characters, 73 percent of the mentally ill are portrayed as violent, as compared with 40 percent of the "normal" characters; and 81 percent of the mentally ill are victims compared with 44 percent of the "normals." Of the normal characters, 10 percent are killers, and 5 percent are killed. But of the mentally ill characters, 23 percent are killers, and 23 percent are killed. Although 24 percent of all female characters are violent, of the mentally ill females, 71 percent are violent. Mental illness for a woman character makes her as violent as the "normal" men.

The mentally ill are most often found in the occupations of clerks, salespersons, manual laborers, criminals, and scientists. The least mentally ill occupations are managers, policemen, farmers, and ministers.

Diet and Nutrition

Eating and drinking are frequent on entertainment programs. One analysis showed that eating or drinking

occurs about 10 times per hour and that 75 percent of all dramatic characters eat and drink or talk about doing so. (6) But this activity is usually not relaxed, and the food is not nutritionally balanced. Grabbing a snack occurs just about as frequently as all regular meals combined. About 5 percent of the time the snack is fruit, and the rest of the time it is some type of "snack food." Alcohol is the favorite beverage, and coffee and tea come next. About one-third of the drinking depicted on prime time television is alcohol or coffee. (7) The kinds of drinks consumed are inversely related to the kinds used in real life; alcohol is drunk twice as frequently as coffee or tea, 14 times as frequently as soft drinks, and 15 times as frequently as water.

In a study comparing the content of commercials and the 10 top-rated prime time programs, most of the references to drinking—particularly alcohol—and sweets were found to be on the entertainment programs, not on the commercials. (8)

The average child sees about 22,000 commercials a year of which about 5,000 are for food products and half of these are for high-calorie, high-sugar, low-nutrition products. (9) One study found that 67 percent of commercials on Saturday morning and on general children's programs were for sweets and snacks. (10) Another study of commercials found that 70 percent of food advertisements were for foods high in fats, cholesterol, sugar, and salt. (11) Only 3 percent were for fruits and vegetables.

Obesity, a health problem for many Americans, is not often seen on television. In a 1979 survey of television's characters, fewer than 6 percent of the men and 2 percent of the women were fat. (12) Overweight men are more likely to be on food commercials, particularly for junk foods. In another survey, 12 percent of the characters were overweight, but no obese characters were children, teenagers, or young adults. (13) Of the black characters, 16 percent were obese; of Asian American characters, 80 percent were overweight. So despite all the consumption of sweets and snacks, most of the characters do not gain weight. The import of these depictions of overweight characters is not clear, but it is safe to say that they are not realistic.

Smoking

Smoking is not common on contemporary television, although it still can be seen often in reruns of old movies. According to a recent analysis (14) of the major characters today, only 11 percent of the men and 2 percent of the women are smokers. Situation comedies have little smoking, crime and adventure shows more, and dramatic programs the most, but even in these programs only 13 percent of the men and 4 percent of the women smoke. A recent analysis counted only 11 instances of smoking in 40 hours of the top-rated programs. (15)

Drinking Alcohol

Use of alcohol, on the contrary, is common. A 1975 report states that alcohol was shown or mentioned in 80 percent of prime time programs. (16) In a 1980 study, alcohol was present in 12 of the 15 most popular programs. (17) One estimate is that, conservatively, a child during an average day's viewing would see 10 episodes involving drinking, adding up to about 3,000 times a year. (18) And this is not just casual drinking. In 40 percent of prime time programs, it is heavy drinking—five or more drinks—and an additional 18 percent of the programs depict chronic drinkers. (19) One study found that 6 percent of all television characters are drinkers. (20) A study of just prime time characters found that 39 percent of the men and 32 percent of the women do the drinking. (21) The drinkers are not the villains or the bit players; they are the good, steady likable characters. (22)

The consequences of drinking as shown on television appear to be slight. Drinking may result in strained relationships, harm to self or others, embarrassment, hangovers, and loss of jobs—but only rarely. (23) Although one-third of the characters are drinkers, according to one study, only 1 percent have a drinking problem or are alcoholics. (24) The circumstances for most drinking are happy, sociable, and fun without indications of possible risks. Alcohol is most often used by the leading male characters, and the drinking is frequently done in the home. Hospitality, celebrations, enjoyment, and stress reduction are the usual antecedent conditions. (25)

The Daytime Serial

Health portrayals are so frequent on daytime serials that they deserve special mention. Illness and health are among the most important problems on soap operas. About half of all the characters are involved in some kind of health-related occurrences, according to a 1977 survey. (26) The problems include psychiatric disorders, heart attacks, pregnancies, automobile accidents, attempted homicides and suicides, and infectious diseases, in that order. Heart attacks, car acci-

dents, and homicides are the main killers. Women are more apt to die, especially of a heart attack, than the men, but the men are sick and injured more often. Half the pregnancies result in miscarriages and 16 percent in the death of the pregnant woman. Women are more often mentally ill than men in the daytime serial.

As in other television programs, there are many more health professionals on soap operas than in real life, and the doctors and other professionals are likely to be men. (*27*) The women doctors have usually sacrificed happiness for a career. Most of the action in soap operas consists of talk, with health as a frequent topic of conversation. Much of the talk about health is in the form of medical advice. (*28*)

Television Doctors

There are many more professional people on television than one meets in real life, and the doctors and nurses outrank all the other professionals. Only law enforcement and criminal characters appear more often. On prime time a viewer sees about 12 doctors and 6 nurses every week. (*29*) On the other hand, there are almost no medical personnel on children's programs. About 90 percent of the doctors are white men, young or middle-age. The nurses are usually young, white women. The doctors are good characters: successful, peaceful, fair, sociable, and warm. And they are depicted as more personable and smarter than the nurses.

Doctors on television symbolize power and dominance. They give the orders and rarely receive them. They also are ethical, kind, and willing to take risks to help their patients. One study noted that 61 percent of the doctors' work is done on house calls or in the field. (*30*) Doctors almost never are shown in their homes or with their families.

Television's Influences on Health

Relatively little research has examined television's influences on health. One type of study is concerned with the effects on children of food commercials. A first question is whether the children respond to the advertisements. All indications are that they do. Ninety percent of young children who saw a cereal commercial wanted to eat that cereal as compared with 66 percent of those who had not seen it. (*31*) In a group of fourth to seventh graders, 49 percent of those who had often seen an advertisement for a candybar said that they ate the bar "a lot," compared with 32 percent of the less frequent viewers. (*32*)

There have been a few experimental studies of the effects of commercials on actual eating behavior. In one of the studies, two groups of children were assessed, a group of 4-year-olds and a group of 9-year-olds, with an equal number of boys and girls in each group. (*33*) The children looked at television cartoons and commercials selected from actual programs. Some of the commercials were for nutritious items, some for nonnutritious items. The children were then tested on their selection and eating of various foods, some of them nutritious such as cheese, fruit, carrots, milk, and orange juice, and some of them nonnutritious such as snacks, cookies, and artificial and carbonated drinks. After they had looked at the commercials for nonnutritious foods, both the 4-year-old boys and the 9-year-old boys chose the nonnutritious foods and drinks significantly more often than the other foods and drinks. But the girls did not, nor did the advertisement for the nutritious foods lead to eating more of them. There is no apparent explanation for the difference between the boys and the girls but an explanation for the ineffectiveness of the commercials for nutritious foods is simply that they were less exciting and appealing than those for snacks and similar items.

That television can be influential in effecting choices is shown by another study. (*34*) Children 5- to 8-years-old in a summer camp saw television programs and commercials for fruits or candies. When they could choose their snacks from a group of fruits and candies, the children who had seen the fruit commercials consistently picked the fruit more often than the candy. Another experiment by the same investigators studied the effects of commercials on the way children think about foods, specifically what kinds of foods "pop" into their heads when they think about asking for, or eating, a snack. As predicted, after they had seen fruit commercials, they thought more often about asking for the fruits.

Another study measured the relation between amount of viewing and nutrition. (*35*) Fourth and sixth graders who watched more television had less knowledge about nutrition, and the nutritional value of their diets varied inversely with the amount of viewing.

From a variety of other kinds of studies, evidence suggests that unhealthy attitudes may accompany reliance on television for health information. In one study the respondents were asked to name two or three main sources of health information. (*36*) "Television programs" were named by 31 percent of the respondents; only doctors and dentists, at 45 percent, were named more often. Those who said television programs versus those who did not had a distinctive pro-

file of responses. They were more likely to be categorized as "complacent" (versus "concerned") about their health; to hold "old" (versus "new") health values; to be "nonexercisers"; and to be "poorly informed" (versus "well-informed" or "somewhat well-informed") in terms of health information.

Another survey indicated television as an important source of health information. (*37*) The source of their information about family planning was surveyed in about 600 teenagers in two midwestern cities. Of the total number of relevant information items these teenagers had, 24 percent had been learned from television, far more than from any other source. In a similar analysis, it was found that 45 percent of the youngsters could recall at least one specific family-planning message they had obtained from television. (*38*)

The act of watching television per se may be related to health habits. The relaxed circumstances of most viewing offers an occasion for resting, eating, smoking, and drinking. A study of teenagers found that on the average 83 percent "usually eat" while looking at television. (*39*) The percentage of those who eat while viewing increases during the years of adolescence from 74 percent in the sixth grade to 91 percent in the tenth grade.

Differences in attitudes about doctors is related to amount of television viewing. Young children who are heavy television viewers are more likely than light viewers to have images of doctors and other medical professionals that are similar to the doctors they see on television. (*40*) For adults, heavy viewers, especially those who watch the "doctor shows," have more confidence in doctors than do light viewers. (*41*)

In general, those who watch more television are more likely than others to be complacent about their health and what they eat and drink; they are more likely to smoke but not more likely to drink alcoholic beverages. They also derive less satisfaction from good health than do those who spend less time watching television. (*42*)

Health Campaigns

To this point the emphasis has been on health-related material in entertainment programs and commercials. In the entertainment programs the content is, of course, determined by dramatic and story considerations and in the commercials by need to sell a product. In neither case is health a primary consideration, and any learning about health is incidental. Health campaigns are different. In a campaign, there is a deliberate effort to convey a particular message about health and to persuade the audience to heed that message.

There is some debate about the effectiveness of campaigns to change attitudes and behavior. Some communication researchers still believe that most campaigns are ineffective; others believe that, with careful planning, a campaign can achieve the desired results. (*43*) Several campaigns have been conducted over the past few years. They have covered community mental health, drug abuse, smoking, seatbelt wearing, dental health, cancer, venereal disease, and alcoholism. (*44*) Most of the results are encouraging.

Three television campaigns can be singled out.

Feeling Good was an educational television series on health. (*45*) Aimed at adults, it contained eleven 1-hour programs and thirteen half-hour programs. There was strong evidence of change in such behavior as eating more fruit, performing breast self-examination, having an eye examination, encouraging someone to have a Pap test, and sending for health information offered on television. The main lesson learned from this experiment is that it is difficult but not impossible for a television series to have an impact on health knowledge and behavior. In addition, the series, probably because it was on public television, did not attract viewership from the low-income population. The producer-experimenters think now that the hour-long format was too long and that the songs, humor, and emotional appeals, using characters like those on *Sesame Street*, were probably not very effective with adults. They surmise that straightforward informational presentations are more appropriate for conveying health materials to adults.

In Finland, a campaign on smoking cessation and prevention of heart disease combined television with other educational efforts, such as training of personnel and making environmental changes. (*46*) The program was made up of 7 televised counseling sessions with 10 smokers who were trying to quit. Preventing relapse was emphasized. It was estimated that about 100,000 adults participated, and about 10,000 stopped smoking for at least 6 months when the followup survey was taken. This campaign made good use of behavioral science theory by providing the television audience with adult models and having a social support system to encourage behavioral change.

A third campaign is the Stanford Heart Disease Three Community Study. (*47*) This program, begun in 1970 by an interdisciplinary group of biomedical and behavioral researchers has explored the possibility that cardiovascular risk can be reduced by community education via the mass media. Two communities received intensive mass media campaigns in English and

Spanish. One of them also had face-to-face instruction for a small group of persons considered to be at high risk. A third community served as a control. Before the campaign began and again 1 and 2 years later, people from the communities were examined for cardiovascular problems. How much they knew about cardiovascular disease and what, if anything, they were doing about it also were ascertained. In addition, physiological measures such as blood pressure, weight, and plasma cholesterol were taken. After 1 year, the estimated risk of heart attack and stroke was reduced in the community receiving both the personal instruction and the televised programs. But by the end of the 2nd year, the community receiving only the television program had reduced the risk by the same amount as the other community. Risk in the control community, however, had increased. The results clearly show that mass media campaigns can be effective, but additional research is needed on how to increase effectiveness even more. For example, ways to reduce smoking and to increase physical exercise need to be devised. Another important part of this campaign was that it was bicultural. The programs in Spanish were not merely translations of the English programs but were designed in all ways for the Spanish-speaking community and culture. This campaign used television to teach specific behavioral skills, and the evidence is that the program worked.

At the Institute of Medicine conference referred to earlier, the conferees formulated a list of questions to be considered when planning a health campaign: (*48*)

- What is the message to be conveyed, and who shall develop it?
- Who is the target audience, and who selects it?
- What is known about how the media can be most effective in reaching the target audience?
- How can health-damaging material in entertainment programing and advertising be counteracted?
- How can access to the media be assured for health-promoting messages and programing?

This conference is just one of many indications of the rising interest in the use of television for enhancing health. There are promising directions for increasing the effectiveness of health campaigns and for increasing the amount of accurate information on health-related topics. Several new long-term demonstrations projects have been funded by the National Institutes of Health, and most of them have explored new uses of television as a conveyer of public health information. There seems to be general agreement that, if the campaigns are carefully planned and evaluated, taking into account what is known from the behavioral sciences, television has a great untapped potential for encouraging voluntary changes in behavior to promote better health in the population at large. It also seems likely that this mass audience can be reached with high effectiveness and relatively low cost.

Television for Therapeutic Purposes

The health campaigns just discussed were planned to reach a mass audience of television viewers. But television can also be used to reach smaller audiences and viewers with certain characteristics. Some of these viewers may have health problems of various kinds which targeted programs on television can help to alleviate. This kind of special programing will become increasingly possible with the further development of multichannel cable television and the outreach to remote places that satellite television will provide.

Persons in Institutions

Persons in hospitals, prisons, and other institutions comprise an important segment of the television audience. Typically these people are unable to get out in the world and engage in common everyday activities. Television thus becomes a significant part of their lives, and they often look at it for many hours a day. The very fact that they are institutionalized means that they have characteristics that are different from those of viewers in the usual home environment. Not only is the setting different from the home, but there are reasons for the viewer being in such a setting.

Three studies of boys in residential schools have been among the few studies of institutional viewing. (*49*) Two of them were concerned with the effects of violence, but they were more interested in the fact that the boys were in a controlled environment than the fact that they were in an institution. The third study was interested in institutionalized juvenile delinquents and how violence in films affected those with a history of aggressive behavior. Although the study concluded that "predispositional factors" did not influence aggressive reactions, in one part of the study when the boys were exposed to films only once, those who were initially more aggressive were more affected.

A somewhat different type of study compared selections of television programs by prisoners who had been overtly aggressive with choices of unaggressive prisoners and choices of a group of vocational students. (*50*) The assaultive prisoners did not choose violent films any more frequently than the other two groups.

Mental Patients in Psychiatric Settings

A detailed examination of television viewing by mentally ill patients was made in a survey of 18 New York State psychiatric centers. (*51*) Replies to questionnaires completed by the directors and ward personnel concurred in the opinion that viewing had a favorable effect on the patients and perhaps even a slight therapeutic potential. Television viewing was pervasive, but, according to the staff, there were differences among patients. Television seemed to be more beneficial for the chronic and elderly patients than for the acutely ill or adolescent patients.

The same study obtained television-viewing information from a treatment facility for emotionally disturbed children. Children diagnosed as disturbed watched television for about 3½ hours a day, but autistic children for only about an hour a day. Staff at this facility also believed that television had a beneficial effect. Almost all the children imitated some of the behavior they saw on television including aggressive acts. Many of them copied the "superheroes." When watching television, about a third of the children became bored or restless; about a third were more relaxed; some became agitated; and some talked back to the set.

In an extended study of emotionally disturbed children the same investigators found that the inpatients watched television for 21.6 hours a week on the average and the outpatients watched 31.8 hours a week. (*52*) Although about 75 percent of both the inpatients and outpatients reported that they saw actions on television which they would like to imitate, a much larger percentage of inpatients than of outpatients actually tried to carry out these behaviors. About one-third of both groups said that they had dreams about the programs, and about half of these children said that the dreams were frightening. Yet about 80 percent of both groups thought television viewing was a pleasant experience.

In a totally different kind of study schizophrenic patients were found to incorporate material from television programs into their paintings and other art productions. (*53*)

Old-Age Settings and Nursing Homes

Few studies have been reported on the viewing habits of elderly people in institutions or on the effects of such viewing. Compared with older viewers living at home, those in residential homes spend many more hours watching television, according to one study. (*54*) Older people as is well known, become more and more dependent on television for information and entertainment. A survey of the hospitalized elderly showed that most of them preferred news and public affairs programs; the Lawrence Welk Show was liked most of all. (*55*) Other surveys confirm these findings. (*56*)

In addition to the news and information provided to the elderly by television, it is possible that special programs for them could have therapeutic benefits.

Hospitals

Although there seem to be no systematic studies of television use in general hospitals, a visit to a hospital can show how much it is watched. In an informal survey of a large hospital in North Carolina, staff reported that almost all the patients looked at television. (*57*) Some patients watch for many hours at a time, and some patients seem to fall asleep more easily when the set is on. The television set is like a constant hospital companion or visitor.

A few attempts have been made to examine television viewing of hospitalized children. (*58*) Pediatricians in a large California hospital were worried about the patterns of viewing among young patients and therefore started to provide special closed circuit cable television for them. Results of this work are not yet available, but the project is a good example of an effort to modify television viewing so as to meet the broad therapeutic goals of the hospital.

Coping With Fears

The use of films to help children and adults cope with fears and overcome phobias was initiated several years ago. In one study, 3- to 5-year-old children were rated on their willingness to play with a cocker spaniel. (*59*) Then, for 8 days, some of the children saw several brief films in which children played with dogs. The other children saw a Disney movie. The children were again observed with real dogs. Those children who had seen the films about dogs and who earlier had been afraid to play with the spaniel were no longer afraid of it. The reduction in fear was not limited to the kinds of dogs seen on the films, and the reduction lasted for at least 4 weeks when retesting was done.

Eliminating severe dread of snakes was undertaken in another research with adolescents and adults. (*60*) Those who watched a film showing people, including

children, handling a large king snake became much less fearful—to the extent of actually holding a snake in their hands. A similar study with 8- and 9-year-old children had the same results.

Other studies have been done in a therapeutic setting. Children being prepared for surgery were shown a film depicting many of the experiences they would probably encounter. (*61*) The children who saw the film were markedly less anxious both before and after the surgery than the children who had not seen it. Other films and "video desensitization" have been used to help children overcome shyness, students reduce their fear of taking tests, dental patients become less afraid of treatment, and women overcome sexual dysfunction. (*62*) Such films and videotapes help persons learn to cope with fears and other problems, and they therefore have definite therapeutic potentials.

An Experimental Study of Therapeutic Uses of Television

Will prosocial television programing help youngsters in a psychiatric facility to improve their social behavior and attitudes? A study designed to find the answer to this question is described here in some detail because it is one of the first of its kind. (*63*)

The youngsters came from three wards of boys and one ward of girls. They ranged in age from 8 to 18, with an average age of 14; the average IQ was 87.8; and they had been in the facility for an average of 1 year. The diagnoses were 44.4 percent unsocialized aggressive reaction, 20.3 percent schizophrenic, 15.5 percent adjustment reaction of childhood, and the remainder diagnosed as organic brain syndrome, retarded, or anxiety reaction.

Before the research began, a survey had shown that these youngsters' usual television diet contained quite a bit of violence, typical of ordinary television content. Therefore, a special prosocial television diet was constructed, and the effects of this diet were compared with the usual viewing of the youngsters. Because these youngsters' attention span and intellectual abilities were lower than normal youngsters, there was a 10-minute adult-led discussion for some of the youngsters after both types of programs. There were, then, four groups of youngsters for the study: One group saw the usual programs with their incorporated violence, one saw prosocial programs, one saw the usual violent programs followed by discussion, and one saw prosocial programs followed by discussion.

The programs were selected from a videotape library of previously broadcast commercial programs. Each half-hour program was rated by content analysis for its prosocial or aggressive content. The programs were situation comedies, cartoons, and drama with prosocial themes on the benefits of helping others, cooperating with teachers, and meeting problems of stealing and playing practical jokes. For the violent set of programs, child-care workers kept records of which programs the children watched; they included seven cartoon and three situation comedies.

The discussion, led by a senior research associate, focused on the prosocial and antisocial themes and behavior in the show, particularly on the motivations for and consequences of the behavior, and on evaluation of how the characters handled the situations. The leaders encouraged the youngsters to talk about similar situations they may have faced, how they felt, and what happened afterward. An effort was made to reinforce the prosocial and to discourage the antisocial behavior.

The youngsters saw the 10 programs for 2 weeks on consecutive weekday evenings immediately after dinner. For 1 week before and 1 week after the television programs, their behavior was observed and rated for three kinds of prosocial behavior—altruism, affection, and appropriate interaction—and four kinds of aggressive behavior—physical, verbal, symbolic, and object aggression.

What were the results? Generally, youngsters who saw the prosocial programs increased their altruistic behavior, and those who saw the other programs were less altruistic. The discussion decreased altruism for the youngsters with low IQ, however, but for children with a high IQ, altruism increased both with and without discussion. The youngsters who were more physically aggressive before the programs became much more altruistic after seeing the prosocial programs and much less altruistic after seeing the aggressive programs. The prosocial programs with and without discussion had a somewhat unexpected effect on verbal aggression and object aggression; the prosocial diet followed by discussion increased both verbal and object aggression, but without the discussion the amount of verbal aggression decreased, and there was no effect on object aggression. For symbolic aggression the youngsters who were more aggressive at the outset became less aggressive following the prosocial programs. Thus, there was some variation in results, depending on the specific characteristics of the children and on whether or not there was a discussion.

The results of this investigation suggest that television can be used to facilitate positive changes in social

behavior of institutionalized behaviorally disturbed children. Moreover, this finding and findings from other research suggest that television viewing can be made a more supportive part of the structured environment of institutionalized individuals. What is needed is a better understanding of how television is now used and how television might be modified to increase its positive effects.

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Chapter III

Cognitive and Emotional Functioning

A major advance in the research approaches to television in the 1970s was the recognition that the medium must be understood in relation to cognitive and emotional functioning of the viewers. Psychologists and other behavioral scientists are beginning to address these issues. Of significance here is a change in psychology since the 1960s when the stimulus-response models of learning began to give way to a broader gauged cognitive orientation.

Psychologists now think human beings play an active and selective role in how they approach each new environment. There is greater emphasis on the fact that individuals bring to the environment preestablished schema or "preparatory plans" based on previous experience as well as fantasized anticipations about what may be expected in a situation. These schema are built up by many previous interactions with the environment. Some of the schema are more complex, integrated and organized, and differentiated than others.

The schema stored and organized in the brain are, in part, dependent on the developmental stage of an individual's life. Children have been exposed to far less information than adults. They also lack certain kinds of organizing and interpretive skills. When they are very young, children take longer to grasp some kinds of concepts. Indeed, there are ideas that they cannot make sense of at all before they have reached a certain age. Research on television viewing and on reading makes clear that children not only have limitations in vocabulary that impede learning the skills and materials that are presented, but also lack the integrative capacity to put together some kinds of information into meaningful groupings that are obvious to older children and adults.

Another contribution of cognitive psychology is the recognition that each person brings to a new situation a complex set of plans, private images, and anticipations. This is one of the ways in which people manage to avoid being bombarded and overwhelmed by the tremendous range of stimulation in the world around them. These plans or images not only are specific to situations but also involve strategies of search and selection related to the kind of information or the kind of emotional setting anticipated.

Here a close tie between information processing and emotional development is apparent. When the strategies for processing information and the specific anticipations work out well, people generally experience positive emotions—joy, a smiling response, and a general sense of well-being. If, however, the anticipatory images and plans are inadequate, people may experience negative emotions.

Reflective thought is another characteristic of cognitive processes. There probably are few "blank" periods in ongoing thought. Reflection and even daydreams may play an important role in how people organize and set up new plans and anticipations for future behavior. To what extent does the sheer proliferation of information on television interfere with this reflective thought? The rapid form of presentation characterizing American television in which novelty piles upon novelty in short sequences may well be counterproductive for organized and effective learning sequences. The young child who has not yet developed strategies for tuning out irrelevancies may be especially vulnerable in this respect; even programs that seek to be informative as well as entertaining may miss the mark because they allow too little time for reflection.

The question of pacing and of structural properties of the medium go beyond cognitive processing. Investigators have become increasingly aware of the close tie between cognition and emotion. Extremely rapid-paced material, presenting novelty along with high levels of sound and fast movement, may generate surprise and confusion in a viewer whose anticipatory strategies or well-established schema are not yet prepared for coping with this material. Foreigners, for example, who are accustomed to a much slower pace of television say that they are almost physically pained when they first watch American commercial television.

These concepts from psychological and behavioral science theory have been applied and tested in much recent research on television. In this way, the research has not only provided new information about television's effects, but it also has added to basic knowledge about human behavior. This broad field of television and its relations to cognitive and emotional functioning encompass many diverse topics: cognitive processing, effects of the forms and codes of television technology, physiological arousal in television viewing, and emotional development and functioning. What follows is a brief summary of these research endeavors.

Cognitive Processing

Research on cognitive processing has examined how an audience perceives, remembers, and comprehends what is seen and heard on television. Because this kind of research is relatively recent, there have been only about 75 articles and books published on it since 1970, and they deal almost exclusively with children.

Paying Attention to Television

A little girl sits in front of the television set looking at it intently. The question is "why?" What is attracting her attention? What features of the stimuli on the screen have so enraptured her? And is there anything about the little girl herself that explains her behavior?

To try to find the answer, investigators have watched children unobtrusively, usually through a one-way mirror, when they are in a playroom with a television set on. The room ordinarily contains toys and games that might distract the children. It has taken considerable ingenuity to devise techniques that accurately measure and count the times a child is looking at the screen and that simultaneously keep a record of what is on the screen when the child is looking. But it has been done, and the results have been informative chartings of children's attention to television as a function of the attributes of television presentation, age, and individual differences. *(1)*

Not much is known about the auditory effects that attract and hold attention, mainly because auditory attention is difficult to measure. Experimenters can reliably and unobtrusively record when a child is looking at the television set, but it is difficult to measure whether or not a child is listening. One way is to test children on what they learned and understood when the sound was on but they were not looking at the set. It has been shown that children remember what is said on the children's program *Mister Rogers,* even when they are not looking at it. Another way to measure auditory attention is to observe what children are talking about when the set is on. If they are not talking about things related to the show, they are probably not listening, and even if they are looking at the set, they are probably just "monitoring" what is going on and not actively processing the information. If their attention is pulled toward the set when here are certain sounds, it can be assumed that the children have been listening.*(2)*

One principle used to explain attention to television is called "attentional inertia." This states that "the longer people look at the television screen, the greater the probability that they will continue to look." Attentional inertia appears in children as young as a year old as well as in older children and adults. Not looking at television is also related to inertia; the longer the little girl directs her attention elsewhere, the less likely she is to turn her attention to the screen. Inertia, of course, does not override either the viewer's personal characteristics or the features of the program that recruit and hold attention.*(3)*

Duration of looking at the television set is directly related to age. Six-month-old infants gaze at the set, but only sporadically. When children are a year old, they watch about 12 percent of the time that the set is on. Between ages 2 and 3 comes a dramatic jump in viewing, from 25 to 45 percent of the time. Parents confirm these laboratory findings by saying that, at about 2½ years, their children begin to watch a great deal of television. By age 4, children are watching about 55 percent of the time, often even in a playroom with toys, games, and other distractions. It is important to note that these percentages are group averages and that not all children watch the same amount. The reasons for the differences are not known, though one study did find that they were not related to intelligence or personality, as measured by standard tests. *(4)*

Children also are attracted to television by specific features of the programs, not by just what they see and hear in general. They more often look, and continue to look, at such features as women characters, activity or movement, and camera cuts, and not to look when there are extended zooms and pans, animals, and still pictures. Auditory cues turn out to be more important than expected; women's and children's voices, auditory changes, peculiar voices, sound effects, laughing, and applause all attract and hold attention, but male voices do not. The association of visual features with certain auditory features seems to be a powerful force in at-

tracting attention. Young children apparently quickly learn which sounds are related to which sights, so that what may seem to be peripheral background sound actually may be an attention-getter; "chase" music means a "chase" scene, and chase scenes are exciting and worth looking at. (*5*)

The apparent reliance of children on the association between sight and sound indicates that children are selecting what they look at in terms of the "comprehensibility of the content." On the basis of what they have learned by watching television, they know that certain sights and sounds accompany certain striking, interesting, and informative actions. This idea has been tested in a clever experiment. (*6*) The researchers mixed up the sound and visual tracks of a *Sesame Street* program. On one presentation the content was normal; on another presentation the visual content was scrambled but not the auditory; on another the visual track was normal, but the auditory track was played backward; and in yet another, Greek was substituted for English. When the auditory track was changed, children attended much less to the screen than when the visual track was changed or when the program was normal. The conclusion was that even young children are not captured only by perceptually salient cues when content is incomprehensible. They are psychologically active and selective, shifting their attention according to the sense and meaning of what they see and hear. (7)

Comprehension

After the television set has the child's attention, what happens? Do children understand what is going on? Several studies have investigated comprehension—the encoding, retention, and retrieval of information—in a wide variety of shows. Differences in comprehension are particularly pertinent to dramatic programs when at least three cognitive tasks must be brought to bear: selective attention to the events, orderly organization of events, and inferences about information given implicitly. The findings of the past decade confirm that there is substantial variation in comprehension, depending on age, general experience, and knowledge of the television medium.

Studies of retention show that children do not remember much of what they see and hear on television. Even 8-year-olds retain only a small proportion of the actions, events, and settings of a program. But memory improves with age. As children grow older, they remember more of all types of programs—children's programs, general audience and dramatic shows, public affairs "spots," and commercials. This improvement applies both to central, essential content and to peripheral, incidental, and nonessential content. Second and third graders recall only about 65 percent of the content essential to a narrative, but by the eighth grade children typically recall over 90 percent. Even in programs designed for children, such as *Sesame Street*, retention by preschool and kindergarten children is rather low. (*8*)

The reasons for poor retention by younger children are complex. It may stem from poor selection and encoding of the relevant material; perhaps very young children see television as an amorphous mass and do not yet know how to pick out the significant parts and figuratively "make a note" of them to remember. Poor retention of the content cannot be accounted for by either forgetting or by interference by other material. When programs were interrupted and children asked about what they had just viewed, they remembered no better than when they were asked some time later. (*9*)

Another explanation for increase in retention with age is that, as children grow older, there is a development shift from interest in the highly salient perceptual features of television to the more meaningful content. This shift has been related to general cognitive development and to the children's growing experience with television. (*10*)

"Segmentation skills" also may be important. Children seem to develop the ability to "chunk" the information in television content. While some segmentation is imposed by changes in settings or by camera tricks, the viewer also must segment the television's stream of events into discrete units. There is not much research on segmentation, though one study did find that older children "chunked" programs into larger units encompassing several scenes, while young children divided the program into smaller pieces, often less than a single scene. (*11*) Young children remember discrete scenes and events better than the relations between the scenes. Flexibility in chunking seems to be a characteristic of mature perception. Older children and adults probably divide programs into smaller segments for the fine details and into larger segments for the overall program.

To comprehend television it is necessary to go beyond the information given, to make inferences about what is only implied by the events. If a plot is to be coherently perceived, "temporal integration" is required. An extensive series of studies examined age differences in making inferences. (*12*) First, content analyses were done, noting the program's structure and interrelationships as well as the explicit and implicit content. Tests of recognition memory were used to measure the children's inferences and their knowledge

of explicit actions from which inferences had to be drawn. It was found that spontaneous inference making improves with age but that the proportion of correct "inference answers" was lower at all ages than the "explicit event answers." The older children made separate scenes coherent by inferring implicit relationships; this age difference seems to be partially explained by more experience with television but also by a qualitative developmental change in ability to do abstract logical reasoning.

Knowing that children do not comprehend much of what is happening on some television programs, investigators have tried to find ways of improving their understanding. One study found that telling kindergarten children what was happening by "labeling" the actions improved their retention (*13*) With third and fourth graders as well as kindergarteners, an adult's describing the nature of the events and their relationships also resulted in better understanding. (*14*) But another study found that merely restating the plot was not helpful; it was important to point out the implicit content and relationships. Telling children to "try hard to remember as much as possible" did not lead to improvement. (*15*)

Up to now the emphasis has been on what children do not understand. It is also important to analyze what they do understand and why. Recent research has focused on the relation of what children understand to what they already know about the world around them. When young children describe a television show, they typically put it in terms of their own knowledge. As they get older, they begin to describe events peculiar to the show that they may not be familiar with in their own lives. An example is a study in which black and white children from both lower- and middle-class families were shown programs with either middle-class white characters or with lower-class black characters. (*16*) The white and black lower-class children in the second grade understood the actions from the program with lower-class characters; and the middle-class children, black and white, better understood the middle-class characters. In the fifth and eighth grades, all children understood both programs equally well, apparently because by that time they had more social knowledge.

Three Factors in Processing Content

Three factors are necessary to understand television content: knowledge of story exposition forms, general knowledge about situations and events, also called "world knowledge," and knowledge of the forms and conventions of television.

Research in cognitive psychology has examined story forms—how stories and narratives are constructed and understood. In this research on prose stories it has been shown that young children do not seem to understand the structure, or remember much about a story, probably because they begin with an interpretation of the characters' intentions and points of view that is different from an adult's interpretation. Research suggests that these findings may apply to television narrative as well. (*17*)

"World knowledge" and how it enters into comprehension of television has not been studied much, but it would appear that such knowledge is significant. An obvious example is knowledge of the language. Other psychological research and theories explain the role of accumulated knowledge and its relation to perception and comprehension in terms of "schemata" or "scripts" that a person uses to organize information. This line of research and theory may be applicable to studies of how people understand television content. (*18*)

Knowledge of the forms and convention of television is important for understanding it. Just as printed material is arranged in sentences, paragraphs, and chapters, so television narratives have their own conventional structures. Camera angles, music, visual techniques—all carry in them a great deal of information about the story. A recent study compared children's understanding of a picture-book story with their understanding of a televised version. (*19*) Children who read the book remembered more of the story and also drew more on their own experiences in making inferences, while the television viewers relied on the actual visual presentation.

These three factors underscore once again the active nature of the viewing process. Although young children are active and discriminating in their viewing, they still lack the necessary skills for "mature" viewing that develop as they grow older. This fact is not always recognized by those who decide what goes on the television screen or by others who are caretakers of today's television-watching children. To put it in blunt terms, children do not see and hear and understand the same things on a television show that adults see, hear, and understand.

These findings have important implications for the ways in which children come to like or dislike television characters and often model their own behavior after them. For example, when children understand the relations between aggressive actions on a program and the antisocial motives and consequences, they do not like the aggressive characters. (*20*) Comprehension

is, of course, only one factor in explaining television's effects. Nevertheless, children's and adult's understanding of television programs—plot, sequence of events, motives of the characters, consequences of actions—must be considered when studying the effects of television on behavior.

Forms and Codes of Television

The 1970s witnessed a revival of interest in the forms and codes of television technology and how they are related to television's effects on behavior. "Forms and codes" mean the technical characteristics of the medium, a two-dimensional stimulus on a screen or cathode-ray tube presenting a stream of visual and auditory images, lifelike but still far removed from real life. In studying television's forms and codes (also sometimes called its conventions), investigators move away from an emphasis on content and examine the technology of television as it relates to behavior. (*21*) ("Codes" in this context should be distinguished from the term "code" as used to refer to the rules and guidelines developed by the industry to govern the acceptability of programs and commercials.)

The impetus for research on forms and codes can be traced to three main concerns. One is related to developmental theory and how television affects children's mental processing and skills. Another stems from attempts to produce television programs attractive to children, programs that they will understand and remember. A third reason is some people's belief that television's effects may be, at least in part, the results of television's forms, not only of its content. An example is the effect of violence. Perhaps fast action, unusual camera effects, and loud noises are just as responsible for later behavioral effects as violent content per se. Or perhaps the slow leisurely pace of some programs is more important than the content in fostering prosocial behavior.

The form, not the content, of television is unique. Television is a visual medium in which a stream of constantly changing images are generated by various techniques—camera cuts, pans across scene, zooms in and out, and so on—that are not found in ordinary perception. Television is also a verbal medium, and, although the verbal and linguistic codes of television are not unique, the way television uses them to convey content is unique.

One question often raised is whether form and content can really be distinguished. The answer is "of course not," any more than grammar and meaning in verbal language can. Nevertheless, it is useful to define them independently, and in research it is possible to focus experiments on one or the other.

Representational Codes

The representational conventions of television are verbal and nonverbal. Because children start looking at television when they are very young, one might assume that television's codes are simple. Actually, television is a medium that viewers can process at different levels of complexity. Young children probably process television at a simpler level than older children. The codes range from literal audiovisual depictions to complex abstract and arbitrary symbols. Thus, the child's task is not an easy one. The change from an infant's sensory-motor awareness of alternations in patterns of visual and verbal stimuli to the literate viewing skills of elementary school children involves a major qualitative advance, accompanied by growth in perceptual and cognitive skills.

The simplest representations are literal visual and auditory pictures of something in the real world, for example, a car moving along a highway. To process this information, children probably depend on the same perceptual and cognitive skills they use in processing information in the real world. But, even with seemingly simple television programs, there may be unusual camera angles, lighting, or distances that are beyond the perceptual skills of the very young child. At the next level are the forms and conventions that do not have real-world counterparts. Some of them are analogs of real-world experiences or similar to them. For example, a "zoom in," in which the object in front of the camera seems to get larger and more focused, is similar to moving closer to something in real life. But some effects, for example slow motion, do not appear in the real world, and children—and others who are unfamiliar with television—must learn what they mean.

Once they are learned, these media conventions can be used by people in their own thinking. For example, children may learn to analyze a complex stimulus into its smaller parts by watching the camera zoom in and out. The forms can take on meaning, sometimes as a result of associations seen on television. In commercials, toys for boys are often advertised with fast music and loud noises, while girls' toys have "fades" and soft music. Children may begin to think in terms of these conventions. (*22*)

The next level of complexity involves symbols not unique to the medium. They can be linguistic or nonlinguistic (a red stoplight is an example of a nonlinguistic symbol). Language can, of course, encode

forms at both the first and second levels, as when dialog is used to describe what is happening, for example, someone saying, "the car is moving down the highway," or when a "fade" is accompanied by the words, "Once upon a time long, long ago * * *" This helps children to understand the message and to learn the codes.(*23*)

To understand these production conventions or codes of television, it is useful to construct taxonomies or classifications and then to describe how they are used in television productions. One attempt at classification was an analysis based on information theory.(*24*) "Entropy" or "form complexity" was defined operationally by the number of different scenes in a show, number of characters, number of times the scene and characters appeared, and the "unpredictability" with which each might next appear. The investigators coded adult programs and demonstrated that their formal features clustered into two major factors: "dynamism," the rate of change in scenes and characters, and "unfamiliarity," the number of different scenes and characters. The investigators found that form complexity was related to violent programs.

Another group analyzed the formal features of children's programs to ascertain which features occurred together, which features appeared in animated and in live programs, and how the features differed as a function of audience or production goals.(*25*) They found that action (physical activity of characters), variability of scenes (number of different scenes), and tempo (rate of scene and character change) were grouped with visual special effects, rapid cuts, loud music, and sound effects. This cluster of features was labeled "perceptually salient." Commercial programs are filled with perceptually salient forms which may have important implications for the developing child.

Television features are different at different times. Saturday morning cartoons are high in action, variability, and tempo. Weekday educational shows have some of these features, but they are lower than the Saturday morning shows; they also make use of dialog, particularly between children, and provide opportunities for reflection. Level of action in educational programs is mostly moderate, a level that may be especially suitable for communicating information to young children.

The findings can also be looked at in terms of "media literacy." (*26*) The Saturday morning cartoons with their high levels of action may be teaching children more about the forms of television than about content. The children may be paying more attention to how the message is conveyed than to what is conveyed. This observation is the opposite of the usual assumption about what children see and hear on television.

Linguistic Codes

Studies of linguistic codes are important for two reasons. Knowing about these codes and how they interact with other communication is vital to understanding how children process televised information. Analysis of the codes also may show how they are adjusted to different levels of children's linguistic competence and therefore how they may be important in language acquisition.

A study analyzed 25 categories of linguistic coding in six programs: Three were cartoons with varying levels of dialog; *Fat Albert* with a high level of dialog, *Bugs Bunny* with a low level, and *Road Runner* with no dialog. The fourth program was a situation comedy; and the other two programs were educational programs differing in format and age of target audience, *Mister Rogers' Neighborhood* for preschool children and *The Electric Company* for elementary school children. (*27*) The linguistic descriptors were communication flow, language structure, and meaning or content. *Mister Rogers' Neighborhood* had a moderate amount of dialog, did not use novel words, used literal words, had some use of stressed single words, and had a moderate amount of focusing on certain words or phrases. *The Electric Company* used the most dialog of the six shows and also focused on selected words and phrases, stressed single words, and used novel words and nonliteral meanings. Both of these programs had techniques that help children to understand language. *The Electric Company,* for older children, probably kept the children's interest by being more complex. The shows with little or no dialog had fast action, many special effects, and music—all features that attract and hold attention of young children. This analysis demonstrates that the linguistic as well as the production codes are adjusted to draw attention to and clarify the language itself. The situation comedy, on the contrary, did not seem to be planned for the linguistic skills of an audience of children.

Influence of Television Forms on Attention

Children's responses to television are influenced not only by the program's content but also by how the information is "packaged." Several studies found that television forms are important in attracting and hold-

ing visual attention. (28) Contrary to what might be expected, conventional visual "effects," such as cuts, zooms, and pans, do not do much to attract attention, although special visual techniques do have some influence. Lots of action and physical activity draw and maintain attention. Changes in scene, characters, themes, and sounds are very effective in getting attention but not in keeping it, once the child is looking. Sound is particularly important—lively music, nonspeech vocalizations, sound effects, children's voices, peculiar voices, and frequent change of speakers. Young children lose attention when there are long complex speeches, long zooms, men's voices, and real—in contrast to cartoon—animal sounds. The finding that sound is important in visual attention is a clue to showing how complicated the whole matter of paying attention really is.

The hypothesis that the high level of action on violent programs is attracting children's attention was experimentally tested. (29) The study used three different kinds of programs: one high in both violence and action, one high in action and low in violence, and one low in both action and violence. (A program high in violence and low in action could not be found.) Results showed that preschoolers' attention was a function of the action, not the violence; the children paid as much attention to the show with high action without violence as when it was accompanied by violence and paid less attention to the show with low action.

Form and content have also been studied in relation to the popularity ratings of the shows. (30) The Saturday morning programs with highest ratings for preschool children had both high action and violent content. But a statistical analysis demonstrated that the violent content and action were independent, and both led to popularity. For children age 6 to 11, the variability and tempo of the programs led to the highest popularity ratings. In a similar analysis of adult adventure programs on prime time, the various characteristics of the show revealed that violence was not significant to the ratings. (31)

The research described up to now has shown which formal features influence children's attention to television. But psychologists and other investigators want to go farther by asking *how* these features exert their influence. First, the "perceptual salience" of a stimulus is a determinant of attention. Characteristics of salience are the simulus' intensity, movement, contrast, change, novelty, unexpectedness, and incongruity. Investigators in this field have hypothesized that perceptual salience is important in determining the attention of children as well as of adults who are not familiar with television. The theory is based on research findings in child development, indicating that, as children get older, they move from "exploration" to "search" in obtaining information. (32) In the "exploration" stage, children respond to the most salient features of their environments, and they respond in short, discontinuous, and impulsive bursts to whatever is perceptually dominant at any time. Applied to television viewing, the hypothesis is that, for the youngest and least experienced viewers, television viewing consists of absorbing the perceptually salient parts of a program as entertainment in its own right. The very young child is essentially a passive consumer of audiovisual thrills.

"Exploration" is succeeded by "search" in which the child is seeking effects, is active not passive, and is trying to obtain information from perceived events. (33) This progression from exploration to search is believed to be partially a function of growth and maturation, but it also is related to experience with television. Older children, therefore—especially those who have grown up with television—are more interested in the content of programs and use the forms more as "syntactic markers" or cues to help them organize and integrate the information in the programs. Another investigator has proposed that the emotional component of perceptual salience is important in marshaling children's attention. (34)

A different line of research suggests that attention is linked to the comprehensibility of the programs and that the formal features, like animation or children's voices, are signals to the children that the program is designed for them. (35) From their experience with television, children learn to interpret these signals. An experiment supports this notion. (36) Of a group of children looking at *Sesame Street*, some were in a playroom with many toys and other distractions, while the others were in a room with few or no distractions. Children in the room without distractions spent more time watching television but their comprehension was no better. Of those children in the room with many distractions, those who attended more comprehended more. The interpretation was that comprehension—in other words, understanding what was going on—guided attention rather than the other way around.

Although this research shows that young children are actively processing the content of television, it does not establish the formal features as unimportant. For one thing, in most of these studies the perceptual salience was high; it could be asked whether attention would be held if the salience were low.

Influence of Television Forms on Comprehension

Television's codes influence comprehension in several ways. They must be interpreted, whether they are specific or unique to television or are general codes, such as language. These codes also interact with content in ways that may enhance or obstruct understanding.

The representational codes of television package the information in such a way that it must be interpreted. The relation between television's form and a person's mental processes can be quite specific. Indeed, some of the forms may represent certain mental skills or operations. (37) Zooming in and out literally illustrates how parts are related to the whole. Or camera cuts that jump from one view of an object to another are similar to the mental operation of taking various perspectives or points of view. There seem to be two ways and two levels of difficulty in which production codes can relate to mental processes. One supplants the skill; the camera performs the operation for the viewer as when, with a zoom-in, a complicated scene is isolated into smaller parts. The other way is for the television codes to "call upon" the viewer's own skills, as in a cut to a close-up, where the viewer probably knows how to relate parts to wholes.

Research indicates that understanding and use of media codes increase with age. (*38*) Television's codes also may cultivate the mental skills to which they relate. Experienced television viewers begin to think in terms of zooms and cuts, for example.

How the language codes of television affect comprehensibility has not been studied, but it can be assumed that both children and adults interpret these codes in essentially the same way they interpret language in everyday life. One difference between linguistic codes and media-specific codes is that the viewers can speak the language.

A study examined what children talk about in relation to the amount of dialog on a show. (*39*) Two groups of children, one in preschool and one in the third grade, watched four different shows, one with no dialog, two with moderate amounts, and one with a large amount. They watched in pairs and could play if they wished. The children made most comments when they were watching the program with no dialog, and this happened more with the third graders than with the preschoolers. Wtih the no-dialog show, the children gave more descriptions of actions and events, more emotional comments such as "I like this," more questions about content, and more comments about the program's themes. There was almost no direct imitation. A lesser amount of talking took place during the show with the greatest amount of dialog, but here the children often talked about topics not relevant to the show.

Verbal language can be used to mediate or direct attention, comprehension, and recall. Several experiments have shown that comprehension and memory are increased if a person on television or a person watching with the children "labels" or describes what is happening. (*40*)

Most television shows tell a story with some material relevant to the plot and some irrelevant. Experiments on understanding stories have found that third grade children do not understand much of the plot, fifth graders do better, and eighth graders do almost as well as adults. (*41*) Young children remember more irrelevant material, have difficulty integrating events separated in time, and are unskilled at inferring implicit relationships. These changes with age may depend on cognitive development, but they may also depend on television's forms. Children usually understand material presented visually better than they understand verbal presentations without visual cues. Programs high in perceptual salience may lead to better comprehension because children attend to them more closely. An experiment has confirmed these statements. (*42*) A television story was analyzed into four elements: central or peripheral content and low or high perceptual salience. The children remembered the central content better when it appeared with highly salient forms. Kindergarten children, moreover, benefited more than third and fourth graders.

Separating the effects of form and content is no easy research task, but the findings could be of great value to both commercial and educational television. The implications of this research on forms is that if, as seems likely, future generations of Americans will do much of their information processing via interactive electronic audiovisual displays and receive most of the entertainment and much of the education via television, then the development of "media literacy" will become as important as the development of reading skills.

The results of the studies on forms and codes have led some to the view that the effects of violent and prosocial programs are as explainable by their forms as they are by their content—the rapid action and noise associated with violence and the slow leisurely pace with prosocial programs. Learning through imitation of observed actions is a widely held explanation of the influence of program content. But the emotional and physiological arousal engendered in the viewer

can also be invoked to explain television form or code effects.

Arousal

Research on the arousal effects of television is recent and still relatively sparse, but as a result of new theories and concepts and of better techniques of measurements, it is beginning to accelerate.

Arousal has been measured in various ways, partly dependent on the theoretical stance of the investigators. Some investigators state that arousal originates in the reticular activating system in the brain. Others focus on the autonomic nervous system as the source of arousal and the emotions. Usually of course, there is a high degree of correlation in the activity in the reticular and the autonomic systems. A distinction has been drawn between "cortical arousal" and "autonomic arousal" which is useful in considering the effects of television. Cortical arousal is involved in attention, perception, alertness, and vigilance, while autonomic arousal is related to affect and the emotions. Cortical arousal is usually measured in terms of action of brain waves, specifically the blocking of alpha waves, recorded on the encephalogram. Autonomic arousal is measured by blood pressure, heart rate, changes in skin temperature, and skin conductance.

Television as the Unwinder

Everyday life is stressful for many people. At the end of the day millions of people turn to television as their major leisure activity. Is this done because television provides relief from stress and tension? From neuropsychological research, it is known that a person who is tense, upset, and uptight is in a high state of arousal. Thinking, ruminating, worrying over the arousal-causing events of the day can maintain this high arousal. Disruption of the rumination by a distracting stimulus such as television should reduce arousal and bring relief. (*43*)

One line of research emphasizes this "intervention potential" of television, in other words, the capacity of television to get a person involved, absorbed, and interested in it and, in this way, reduce arousal. (*44*) But if the content of the program is similar to the thought and ruminations of the viewer, it will not have a calming effect. This has been demonstrated in an experiment in which annoyed and upset adults, exposed to violent programs, showed no reduction in level of arousal—although arousal was not heightened—while those exposed to neutral, nonviolent materials showed lowered arousal levels as well as reduced aggressiveness. (*45*) In another experiment, the materials presented to the subjects were a monotonous stimulus, nature film, comedy show, program with a nonaggressive sport, quiz show, and programs with highly aggressive actions. (*46*) The data leave no doubt that the dissipation of arousal was proportional to the interventional capacity of the material, as long as it was not related to the annoyance. The results also showed that the violence-laden program, though absorbing to the subjects who were not annoyed, did not reduce arousal but had the same effect as the monotonous program. Additional findings indicate, too, that greatly arousing content, for example, erotica, intense athletic contests, thrillers and horror shows, and disturbing news reports will probably not reduce arousal, even though they distract people from their problems. But unusually pleasant content does reduce arousal. (*47*)

It might well be asked why people turn to television for relaxation when it has so many exciting and violent programs. The answer is found in some recent research showing that acutely aroused people seek shows, perhaps intuitively or perhaps on the basis of past experience—that do not perpetuate their arousal state. (*48*) For example, frustrated and insulted adults do not choose to watch comedy with insulting and belittling jokes.

Television for Excitement

Television can be very arousing and foster intense emotional reactions. Suspenseful drama, for example, produces great excitement in both children and adults. (*49*) Even comedy, which can be soothing, is highly arousing if is creates true hilarity. (*50*) Sports programs, of course, elevate level of arousal. (*51*) And the one kind of content that consistently produces the highest arousal in both men and women is explicit erotica. (*52*) The only kind of program that does not seem to increase arousal is the nature film, which actually lowers arousal. (*53*)

Little is known about arousal effects except in entertainment programs. It can be assumed that many news broadcasts—wars, disasters, plane crashes, state of the economy, political controversy—do result in arousal. One piece of research seems relevant here, namely, the findings that violent acts presumed to be fiction were less arousing than those that viewers thought were real. (*54*)

Who is most likely to be aroused by television? It appears that viewers who are already relaxed or who

are exhausted or bored will have the strongest arousal reactions. It is these people who probably find television most exciting, and who seek out the stimulating programs.

A theory that seems to be useful in explaining television's effects is the so-called two-factor theory of emotion. (*55*) This theory brings in cognitive processes to explain the "kind" of emotion that people say they have experienced; people attribute their excitatory reaction to the stimuli immediately present in the environment. The intensity of their emotion is determined by the magnitude of the excitation. Dependent on their cognitive appraisal of events on the television screen, viewers will be annoyed, angry, furious, sad, apprehensive, fearful, scared, terrified, satisfied, jubilant, joyous, repulsed, disgusted, or amused, etc.

Nonspecificity of Arousal and Its Consequences

Another notion related to arousal has to do with the transfer of excitation. (*56*) According to this theory, people who are still aroused from something that happened previously, and who are then confronted with a situation that causes them to respond emotionally, will experience excitement more intensely than they would without the presence of residual arousal from the earlier arousing experiences. The emotion need not be the same. Arousal left over from fear may intensify anger, or arousal from sex may intensify fear, or arousal from sex may intensify sadness, and so on. The person is not, of course, aware of this residual arousal. This theory has been supported in several experiments. (*57*)

These transfer effects of arousal can also occur after exposure to television. Aggressive behavior has been shown to be the result of, or at least correlated with, violent scenes on television. These effects conceivably could be the result of the arousal or excitatory features of the violent scenes, rather than the violence as such. In an investigation of this possibility, adult males were first provoked, and then, after seeing a neutral, aggressive, or erotic film, they had an opportunity to retaliate against the person who had provoked them. (*58*) A pretest had shown that the neutral film was indeed neutral, the aggressive film was somewhat arousing, and the erotic film was very arousing. As predicted by the excitation-transfer theory, the erotic film—the one that was most arousing—produced the most retaliation, the aggressive film next, and the neutral film least. Other research extended these findings to females, mixed-sex situations, arousal effects of humor, and residual arousal as a promotor of helpgiving. (*59*)

Residual arousal does not necessarily lead to antisocial behavior, such as hostile or aggressive acts. Antisocial acts must be motivated if they are to be enhanced by arousal. (*60*) Prosocial behavior, if appropriately motivated, is just as likely to occur as antisocial behavior. (*61*)

Residual arousal can also increase emotional reactions to television while a program is in progress. Increased arousal intensifies enjoyment of rock music, for example. (*62*) And regardless of the situation that produces the arousal, appreciation of humor is increased by residual arousal. (*63*) Comedians all like a warmed-up audience. The same is true of dramatic programs. If arousal becomes very high in suspenseful dramas, the pleasure and enjoyment at the eventual resolution are augmented.

These ideas have far-reaching implications for television programs. Sex and violence are known inducers of arousal, and television producers and broadcasters have claimed that, without them, television could become dull and flat. Because highly charged and exciting drama attracts large audiences, violence and sex will almost certainly continue to be shown on television. And, if there is a reduction in the amount of violence, there may be a greater resort to sex in programing—and vice versa.

The Habituation Issue

According to some observers, during the 1970s, depictions of aggressive and sexual behavior became increasingly "graphic," especially in feature movies shown in theaters. It is almost as though the audiences had become callous and, to give them excitement, the films had to be made more and more powerful in their arousal effects. Initially strong excitatory reactions grew weak or vanished entirely with repeated exposure to stimuli of a certain kind. This is known as "habituation."

The possibility of habituation to sex and violence has significant social consequences. For one, it makes pointless the search for stronger and stronger arousers. But more important is its potential impact on real-life behavior. If people become inured to violence from seeing much of it, they may be less likely to respond to real violence by, for example, helping the victim. There is some evidence that violent television does lead to increased tolerance for violence. (*64*) Children who saw a violent film were more tolerant of aggression among their schoolmates. But, because arousal was not measured, it is not known if arousal was involved. In another study, boys age 5 - 14, some

of whom were heavy viewers and some light viewers, saw a violent movie. (65) The heavy viewers were less aroused, as shown by measures of automatic nervous system activity, thus indicating that they were desensitized.

Habituation to sexual stimuli is also possible, as shown in experiments in which adult male subjects heavily exposed to erotica became less responsive both autonomically and sexually than the control subjects. (66) "Spontaneous recovery" did take place; after 8 weeks, responsiveness had increased again to the level before the experiment began.

Cortical Arousal

Although cortical arousal has not been the subject of television research, the concept is important in connection with recent opinions about educational television. Some investigators have taken issue with the fast pace of much educational television, saying that the rapid-fire action stunts imagination and creative thinking. (67) There is no time, they say, for rehearsal or reflection, both of which are important for cognitive-affective development. In contrast to these views, other recent investigations suggest that the fast-paced programs foster better attention and thus may lead to superior information acquisition; the fast pace may have greater impact on cortical arousal and vigilance. (68) The need for research on this significant issue is obvious.

Emotional Development and Functioning

The study of emotional or affective development, including mood, temperament, motivation, and traits, generally has been neglected during the past decade throughout the field of child and human development. (69) This neglect also characterizes research on television insofar as emotion and affect are concerned. What little work has been done can be described briefly under the following topics: recognition of emotions, empathy, emotional responses, emotional reactions to characters, personal states, and television use.

Ability to recognize emotions felt by others helps people to understand what is going on in social life and presumably also to understand television content. Young children recognize only a few of the emotions shown by television characters; in one investigation it was found that they recognize only happiness, anger, sadness, and fear and not the more "complicated" emotions. (70) In these studies, the situational, nonverbal, and verbal cues were coordinated in a single message about the character's emotion. For example, a boy, given a toy, smiles and says he is happy. All signs point to "happiness." In real life and in dramatic situations the signs or cues, however, may not be congruent. There have been no studies of these kinds of situations and events, although they are found on television. When adults meet incongruous situations, they usually give precedence to situational rather than behavioral cues. Research on this problem needs to be done with children. Some television programs try to teach children to recognize their emotions and the emotions of others; *Mister Rogers' Neighborhood* describes children's feelings and the situations when they might arise and discusses what to do about them, *Inside/Out* does the same at the elementary school level. Effects have not been evaluated, except informally.

Empathy, defined as feeling the same emotion a character feels (or in real life the same emotion someone else feels), has not been investigated in television research. One somewhat relevant study can be cited. (71) When adolescent boys with arrest records took part in a "little theater group" in which they played a succession of roles in a drama and later watched a videotape of the performance, their re-arrest records were less than those of a control group. One possible explanation was that they gained information about the feelings of the characters they played—in other words, they learned about empathy.

The emotions most often aroused by television apparently are interest-excitement, joy, surprise, distress, and fear. Studies have shown that children indeed are aroused by films and television. (72) Young children are aroused by action and danger, but not by love and romance; older children respond to love and romance themes. Children have been asked how they feel about television programs. In one study, preschoolers said they were frightened by monsters who appeared to muppets at night. (73) In another study, they were frightened by actions in a Western series. (74).

Looking at television may not only arouse immediate emotions, but continual viewing may lead to a more generalized response. A recent study compared the effects of *Mister Rogers' Neighborhood, Sesame Street,* and a "neutral" film on preschoolers' positive emotions. (75). Children who were rated low in imagination had an increase in positive emotions such as happiness, affection, etc., except after seeing the neutral film. In another study, preschoolers who

watched *Mister Rogers' Neighborhood* gave more positive reinforcement, defined as praise, approval, sympathy, smiling, laughing, and so on. (*76*) Negative emotions, such as fear, can also be aroused.

In general, the evidence, although there is not much, is consistent and clear in showing that television can and does arouse emotions. This arousal is found in all ages, ranging from young, unsophisticated children to more sophisticated, even jaded, teenagers, to highly sophisticated adults. The emotion is evident during viewing, immediately after, and sometimes for a long time after viewing.

Emotional attachments to television characters and personalities are often observed. Children, and some adults, come to love certain characters and hate others. Little research, however, has been done on this topic. In one project, a German investigator found that college students and 14- and 15-year-olds developed strong affective reactions to television characters, and these effects continued for some time. (*77*) And a few studies have shown that children prefer some characters over others. (*78*) Usually they prefer the characters most like themselves in terms of age, sex, ethnicity, and interests.

Finally, the study of television's emotional inductions might profit from the "uses and gratification approach" (*79*) which assumes that viewers choose television programs that satisfy their needs, and, presumably, emotional states accompany these needs. The approach has been criticized on many grounds, but it is worth exploring. One method has been to give people a list of possible needs that television in general, or specific programs, might fulfill for them. Several relevant studies have been done with children and adolescents. (*80*) When children are asked why they look at television, their answers suggest that television provides certain gratifications, such as learning, relaxation, escape, social interaction, arousal, passing time and habit.

Child's social relations also may be explored through the "uses and gratification approach." For example, children with poorer social relations have been found to watch more television; this has been interpreted to mean that television may fulfill a need to assuage loneliness. (*81*)

While more study of television's role in emotional development and functioning is needed, available findings on recognition of emotions and on empathy have implications for those concerned with children's understanding of television. Children's limited recognition of emotions and feelings of empathy should be taken into account by those who produce television shows and who supervise children's viewing.

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Chapter IV

Violence and Aggression

Public interest and concern have long focused on the issue of violence on television. Attention to that issue began in the 1950s and has remained there ever since. Although the field of television and human behavior has gone far beyond the study of violence, many researchers are still committed to finding an answer to the question about the effects of televised violence on the viewer.

One reason for this continued commitment is that, despite all the research that has been done both for the report of the Surgeon General's advisory committee and since then, the conclusions are not completely unequivocal. While much of the research shows a causal relationship between televised violence and aggressive behavior, proponents of the "no effects" position, while in diminished number, continue to argue their case.

Violence in Television Content

The first congressional hearing on television programing took place in 1952, when the House Committee on Interstate and Foreign Commerce investigated television entertainment to ascertain if it was excessively violent and sexually provocative and if it had pernicious effects. Over the next 12 years, the Senate Committee on the Judiciary held many more hearings; because data were so scarce and sparse, the hearings were lengthy, acrimonious, and widely publicized. Television as a cause of delinquent behavior became the focus of inquiry. The Congressmen were critical of the industry, and the broadcasters were defensive.

During the period from 1952 to 1967, analyses of programs found a great deal of violence on them. One analysis in 1954 reported an average of 11 threats or acts of violence per hour. (*1*) Later analysis confirmed that violence on television was increasing and that it was increasing more rapidly on programs with large numbers of children in the audience. (*2*)

Two governmental commissions looked into the problem of television violence in the late 1960s. One was the National Commission on the Causes and Prevention of Violence, which issued a report in 1969 summarizing available information about the prevalence of violence on television and the evidence for its effects; data from laboratory experiments, it concluded, demonstrated that viewing violent programs increases the likelihood of a viewer to behave violently. (*3*) The other commission was the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. In 1972, the committee issued a report stating that the convergence of evidence from both laboratory and field studies suggested that viewing violent television programs contributes to aggressive behavior. (*4*)

Content analyses in 1967, 1968, and 1969 showed that the frequency of violent acts remained about the same as in previous years except for a decrease in fatalities; cartoons were more violent than prime time programs; the networks differed somewhat in the amount of violence they broadcast; two-thirds of the leading characters were violent; retribution by violence was common; and most of the male roles were violent. (*5*)

These years of intensive scrutiny not only saw the beginnings of an annual content analysis of television programs, but they also were the time when many other studies of television violence and other kinds of research were started. In addition, the events of the period led to a series of arguments and controversies that are not yet resolved.

The two major governmental inquiries made the problem of television violence more visible to both scientists and the public. They also increased acceptance of the notion that violence on television leads to aggressive behavior by viewers. The most important aftermath of the two commission reports was the controversy among scientists, on the one hand, and the

unexpected apathy on the part of the public, on the other. (6)

Much of the controversy among the scientists revolved around the cautious conclusions of the Surgeon General's Committee. (7) This caution seemed to lead to different interpretations of the research results, with some readers—including newspaper writers and television critics—reporting that television had no effect on aggressive behavior and others that it did have an effect. In general, behavioral scientists felt that the committee had been too cautious and conservative. Some people blamed the tentative and somewhat ambiguous phraseology of the report on the makeup of the committee; the television industry had been asked to name members to the committee, and the industry had veto power over those who were being considered for appointment. The other scientific controversy has centered on the usefulness, legitimacy, and pertinence of monitoring television violence.

During this period, the public was not much interested in television violence for reasons not discernible, although a few citizens' groups, such as Action for Children's Television, were beginning to gather strength.

The year 1975 brought a several new developments. Congress again became concerned with violence on television and also with obscenity and sexual provocativeness and prevailed upon the Federal Communications Commission (FCC) to do something. The FCC Commissioners worked with the networks to establish the "family viewing hours" in the early evening. This arrangement was challenged in the courts by writers and producers who argued that it violated the First Amendment and infringed on their right of trade. The judge ruled in their favor, but the networks continued the family hour on an informal basis.

During this time also, a number of citizen groups raised protests against various broadcasting practices. The American Medical Association adopted a resolution asking broadcasters to reduce the amount of violence because it was a threat to the social health of the country; the National Parent-Teachers Association held public forums throughout the country and began monitoring television content; and the National Citizens Committee for Broadcasting linked advertisers with violent content. (8)

A subcommittee of the House Committee on Interstate and Foreign Commerce held several hearings in cities throughout the country. Their report, published in 1977, indicated dissatisfaction with the situation, but it did not place blame on the broadcasters nor ask for any action. (9)

Information on trends in violence depends, of course, on the definitions of violence and on the analytic procedures used. Nonetheless, all analyses agree that the evening hours after 9 p.m. contain more violence than other hours on television. (10) Beginning with the 1975–76 season, however, there was some increase in the early evening hours and some decrease in the later hours, although the later hours remained the most violent. There was a slight overall increase in violence between 1976 and 1977 and the slight decrease between 1977 and 1978. In 1979, it was about the same as in 1978. Over the past 10 years, there also has been more violence on children's weekend programs than on prime time television.

It appears, then, that the violence on television that began back in the 1950s has continued. There have been a few changes and fluctuations, but, in general, television, despite the concerns of Congressmen and citizens' groups, remains a violent form of entertainment.

Effects of Televised Violence

The discussion about the effects of televised violence needs to be evaluated not only in the light of existing evidence but also in terms of how that evidence is to be assessed. Most of the researchers look at the totality of evidence and conclude, as did the Surgeon General's advisory committee, that the convergence of findings supports the conclusion of a causal relationship between televised violence and later aggressive behavior. The evidence now is drawn from a large body of literature. Adherents to this convergence approach agree that the conclusions reached in the Surgeon General's program have been significantly strengthened by more recent research. Not only has the evidence been augmented, but the processes by which the aggressive behavior is produced have been further examined.

In the past 10 years, several important field studies have found that televised violence results in aggressive behavior. Here are some examples;

A study funded by the Columbia Broadcasting System reported that teenage boys in London, according to their own accounts of their activities, were more likely to engage in "serious violence" after exposed to television violence. (11)

Two independent studies by the same investigators followed 3- and 4-year-old children over a year's time and correlated their television viewing at home with the various types of behavior they showed during free-play periods at daycare centers. (12) In each study there were consistent associations between heavy tele-

vision viewing of violent programs and unwarranted aggressive behavior in their free play. It was concluded that, for these preschool children, watching violence on television was a cause of heightened aggressiveness.

In a 5-year study of 732 children, several kinds of aggression—conflict with parents, fighting, and delinquency—were all positively correlated with the total amount of television viewing, not just viewing of violent programs. (*13*)

Two additional studies were able to compare aggressiveness in children before and after their communities had television. (*14*) In one study there was a significant increase in both verbal and physical aggression following the introduction of television. In the other study, after the introduction of television, aggressiveness increased in those children who looked at it a great deal.

Another long-term study currently has been collecting extensive data on children in several countries. (*15*) Results are available for grade-school children in the United States, Finland, and Poland. In all three countries, a positive relationship was found between television violence and aggression in both boys and girls. In previous studies by these investigators, the relationship was found only for boys. The sheer amount of television viewing, regardless of the kind of program, was the best predictor of aggression.

Two other field studies reported similar results with different groups of children. One on teenagers found that those who perceived a program as violent or who thought that violence is an acceptable way to achieve a goal were more violent than the others. (*16*) The other study reported that the positive correlations between violence and aggression in English school children were just about the same as in American school children. (*17*)

In contrast, in a large scale study sponsored by the National Broadcasting Company a group of researchers reached a different conclusion. (*18*) In this technically sophisticated panel study, data were collected on several hundred elementary school boys and girls and teenage high school boys. For the elementary school children, measurements of aggression were taken six times during a 3-year period, and for the high school boys the measurements were taken five times. The elementary school children gave "peer nominations" of aggression, and the teenagers gave "self reports." Both the elementary school children and the teenagers reported on which television programs they watched, and, for purposes of the analyses, the investigators picked those programs that could be classified as violent. The results showed that for the measures of violence on television and aggressive behavior taken at the same time, there were small but positive correlations. This is consistent with other cross-sectional survey results. But, when the measurements taken at different times were compared, no relationship was found. These investigators wanted to learn whether the short-term effects of television would accumulate over time and produce stable patterns of aggressive behavior in the real world. They found: the study did not provide evidence that television violence was causally implicated in the development of aggressive behavior patterns in children and adolescents over the time periods studied.

But according to many researchers, the evidence accumulated in the 1970s seems overwhelming that televised violence and aggression are positively correlated in children. The issue now is what processes produce the relation. Four such processes have been suggested; observational learning, attitude changes, physiological arousal, and justification processes.

Observational Learning

Proponents of the observational learning theory hold that children learn to behave aggressively from the violence they see on television in the same way they learn cognitive and social skills from watching their parents, siblings, peers, teachers, and others. (*19*) Laboratory studies have demonstrated many times that children imitate aggressive behavior immediately after they have seen it on film or television, but there are still questions about the role of observational learning in field studies. What do the data show? A longitudinal study published in 1977 gave the first substantial evidence that observational learning is the most plausible explanation for the positive relation between televised violence and aggressive behaviors. (*20*) Several other observational and field studies agree with these results. (*21*) Although these studies can be criticized on methodological grounds—and, indeed, the "clean" outcomes of laboratory experiments are rarely found in field studies—they nevertheless are important supports for the learning of behaviors from the observations of models.

Researchers have also analyzed specific issues related to observational learning. (*22*) In the first place, if children see someone rewarded for doing certain things, more likely they also will perform these acts. Thus, if children see a television character rewarded for aggressive behavior, they will probably imitate that behavior. If the actor is punished, the children are less apt to imitate the aggressive behavior. These vicarious

reinforcements—either reward or punishment—can influence the behavior's occurrence. The persistence of the behavior, however, seems to be related to the children's own reinforcement, in other words, if the children themselves are rewarded or punished.

Observational learning may be related to age. (*23*) Some investigators say that, by the time children reach their teens, behavior may no longer be affected significantly by observational learning. Young children, however, who do not see the relation between the aggression and the motives for it, may be more prone to imitate the aggressive behavior. Children start to imitate what they see on television when they are very young, some as early as 2-years-old.

Identification with the actor or actress whose behavior is being imitated is also thought to be important, but the evidence is not clear-cut. (*24*) For example, it has been shown that both boys and girls are more likely to imitate male than female characters, and the males are the more aggressive. Girls who are aggressive may, it is true, identify more with the men characters. When children were asked to try to think in the same way as an aggressive character, they become more aggressive. (*25*) It appears that there are no simple relations between observational learning and identification.

Another approach had been to tie the observational learning to specific cues on the programs, even apparently irrelevant cues. (*26*) A tragic case from real life is the incident of a gang who burned a woman to death after a similar event occurred on a television show. In both the show and the real incident, the person was carrying a red gasoline can.

If these ideas about observational learning are analyzed in cognitive-processing terms, it can be hypothesized that children encode what they see and hear and then store it in their memories. To be encoded, the behavior must be salient or noticeable, and, to be retrieved in future behavior, it must be rehearsed with the same cues as those in the first observation present. If a child rehearses aggressive acts by daydreaming about them or uses them in make-believe play, the probability is increased that these acts will occur. There is some evidence that aggressive fantasies are related to aggressive acts. (*27*)

These hypotheses are relevant to another theory, namely, disinhibition. In disinhibition theory, it is assumed that children and others are inhibited by training and experience from being aggressive. But if they see a lot of violence on television, they lose their inhibitions—they are disinhibited. This is an interesting idea, but some theorists say that cognitive-processing theory does not need to call upon disinhibition functions to explain observational learning, even though disinhibition probably occurs. Rather, if children see a great deal of aggressive behavior on television, they will store and retrieve that behavior for future action.

Attitude Change

Watching television influences people's attitudes. The more television children watch, the more accepting they are of aggressive behavior. (*28*) It has been shown that persons who often watch television tend to be more suspicious and distrustful of others, and they also think there is more violence in the world than do those who do not watch much television. (*29*)

Attitudes in psychological theory are "attributions, rules, and explanations" that people gradually learn from observations of behavior. Therefore, it can be assumed that, if someone watches a lot of television, attitudes will be built up on the basis of what is seen, and the attitudes will, in turn, have an effect on behavior. A clever experiment showed how the television movie *Roots* changed attitudes and subsequent behavior. (*30*) Unruly behavior of white and black high school students was recorded before, during, and after the show was broadcast. During the week that *Roots* was shown, the black students were more unruly, as measured by after-school detentions. This change was interpreted to mean that the black students had a change in attitudes toward obedience after watching *Roots*.

Looking at violent scenes for even a very brief time makes young children more willing to accept aggressive behavior of other children. This acceptance of aggression makes it likely that the children will themselves be more aggressive. (*31*)

Other studies have shown that children's attitudes are changed if adults discuss the program. (*32*) In an experimental study, one group of children who regularly watched violent programs were shown excerpts from violent shows and then took part in sessions about the unreality of television violence and wrote essays about it (*33*) The other group who also watched many violent programs were shown nonviolent excerpts, followed by a discussion of the content. The group who saw the violent television and then took part in the sessions on unreality were much less aggressive than the other group.

Arousal Processes

Processes involving physiological arousal are thought to have three possible consequences. One is desensitization For example boys who regularly looked

at violent programs showed less physiological arousal when they looked at new violent programs. (*34*) Another possibility is that merely the increase of general arousal level will boost aggressiveness. (*35*) A third alternative suggests that people seek an optimal level of arousal; aggressive behavior is arousing, and the persons who are desensitized may act aggressively to raise their levels of arousal. (*36*) Then, once the desired level is reached, aggression will continue, because the behavior most likely to be continued is the behavior readily retrievable from memory. All these theories need more empirical verification.

Justification Processes

In the justification theory, it is assumed that people who are already aggressive like to look at violent television programs because they can then justify their own behavior, even if only to themselves. (*37*) They can believe that they are acting like a favorite television hero. In this theory, watching televised violence is a result, rather than a cause, of aggressive behavior. So little research has been done on this theory that it cannot be evaluated.

Catharsis Theory

Contrary to these four theories is the catharsis theory, which predicts that aggression will be reduced after watching violence on television. Supposedly through catharsis, the need or desire to be aggressive is dissipated by looking at violence on television. Since practically all the evidence points to an increase in aggressive behavior, rather than a decrease, the theory is contradicted by the data.

In general, it appears that observational learning and attitude changes are the most likely explanations of television's effects on aggressive behavior.

Methodological Issues in Research on Violence and Aggression

Another aspect of the entire question about violence and aggression must be examined: What is meant by "violence" on television? Objective and reliable measures of violence are necessary before inferences can be made about its relationship to aggressive behavior. How these measures have been made and what has been revealed are to be found in an examination of the content analyses of televised violence. Such measurements have themselves been the source of considerable controversy.

Violence is assessed primarily by use of two procedures: content analysis and ratings. In a content analysis, the first step is to design the recording instrument. The trained coders observe the television programs and code them in accordance with predetermined criteria, with the aim of measuring violence as precisely and consistently as possible.

In the rating procedures, the raters are given lists of television programs and asked to rate them in terms of violence. The raters may be television critics, television researchers, or "ordinary people"; children have sometimes been used as raters. Sometimes definitions of violence are given to the raters, but many investigators believe that definitions are not necessary.

The longest and most extensive content analysis of television programs is the Cultural Indicators Project at the University of Pennsylvania's Annenberg School of Communications. (*38*) The project consists of two parts: One part is the "message system analysis," which is an annual content analysis of 1 week of prime time and weekend daytime dramatic programs. The second part is "cultivation analysis," which is a means of determining conceptions of social reality that television viewing may cultivate in various groups of viewers.

Definitions of Violence

Violence seems to be something everybody feels they can recognize when they see it, yet it is difficult to define unambiguously. Many different definitions are now in use, and there is much disagreement about them.

The Cultural Indicators Project defines violence as:

> the overt expression of physical force (with or without a weapon, against self or other) compelling action against one's will on pain of being hurt or killed, or actually hurting or killing. (*39*)

The Columbia Broadcasting System's monitoring project defines violence as:

> the use of physical force against persons or animals, or the articulated, explicit threat of physical force to compel particular behavior on the part of that person. (*40*)

The Parent-Teachers Association is concerned with gratuitous violence, which they define as:

violence to maintain interest, violence not necessary for plot development, glorified violence. (*41*)

Other definitions are:

physical acts or the threat of physical acts by humans designed to inflict physical injury to persons or damage to property.

acts involving the use of force, threats of force, or intent of force against others. (*42*)

how much fighting, shouting, yelling, or killing there is in a show. (*43*)

Most of the definitions involve physical force, including hurting or killing. Some definitions include psychological violence and violence against property; others do not. Some include comic violence, accidents, and acts of nature, such as floods and earthquakes. The rationale for including "acts of nature" is, according to those who include them, that they are analyzing entertainment and dramatic programs in which the writers and producers have deliberately put in violent "natural" events. Obviously, the reported amount of violence in a program will depend on the definition.

Unitization of Violence

Another problem is found in deciding how to isolate specific acts of violence. In other words, if one wishes to count the number of violent actions, it is necessary to know when a violent action starts and stops.

The Cultural Indicators Project states a violent action is a scene confined to the same participants. Any change in the characters is a new action.

The CBS monitoring project defines a single violent action as:

One sustained dramatically continuous event involving violence, with essentially the same group of participants and with no major interruption in continuity. (*44*)

As with the definitions of violence, the different unitizations produce different results. For example, CBS finds less violence in programs than does the Cultural Indicators Project.

An Index of Violence

The Cultural Indicators Project has developed an Index of Violence that combines several violence-related measures into a single score. (*45*) The Index is composed of three sets of data: the prevalence, rate, and role of violence. "Prevalence" is the percentage of programs in a particular sample containing any violence at all. "Rate" is the frequency of violent action. "Role" is the portrayal of characters as "violents" (committing violence) or as victims (subjected to violence). These three measures are combined into a formula that yields the Index of Violence. There has been controversy about this Index, but its users maintain that although it is arbitrary—as is true of all indices—it is useful to illustrate trends and to facilitate comparisons.

In conclusion, the interesting characteristics of violence on television are its overall stability and regularity, despite fluctuations by networks, genre, and time. The percentage of programs containing violence has remained about the same since 1967, although the number of violent acts per program has increased. Children's shows are violent in a cyclical way, up one year and down the next.

The amount of violence on television, according to some researchers, will almost certainly remain about the same as it has been, and they do not call for its total elimination. The concern is more with the kinds of violence, who commits violence, and who is victimized, because these portrayals may be critical mechanisms of social control.

The cultivation analysis aspects of the Cultural Indicators Project has a basic thesis that the more time viewers spend watching television, the more they will conceive the world to be similar to television portrayals. Thus, as stated in the discussion of attitude change, people who view a great deal of television—and who consequently see a great deal of violence—are more likely to view the world as a mean and scary place. These heavy viewers also exhibit more fear, mistrust, and apprehension than do light viewers. Because there are more victims than there are aggressors, this finding may ultimately be of more significance than the direct relationship between televised violence and aggression.

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Chapter V

Imagination, Creativity, and Prosocial Behavior

Considering how much time most American children devote to the fantasy world of television, one might expect behavioral scientists to be interested in television's effects on imagination. Indeed, research on imagination and imaginative play and on reality-fantasy distinctions increased markedly during the past few years. Another significant advance in television research during the 1970s was a shift from a concentration on violence and antisocial behavior to a concern with television's potential for fostering prosocial behavior.

Imagination and Creativity

Little children spend much time playing make-believe games. They act out "dramas" with their toys and dolls, and many of them have make-believe playmates. Psychologists and others who work in the field of child development believe that such imaginative play has several adaptive benefits. (*1*) Make-believe play can help children to develop a larger vocabulary, learn to sequence and order events, delay impulses and foster concentration, develop empathy by role taking, rehearse occupational roles and other roles in society and develop imagery skills. Recent observations also suggest that imaginative play makes children feel better, as shown by their smiles, laughter, and singing. (*2*)

Children find ideas for make-believe play in everything around them, and increasingly from television. Although some communication researchers say that a main function of television is to provide children with "fantasy materials" others believe that children turn to it for more than escapism and fantasy. (*3*) From television children learn how to behave, how to dress, and how to speak. They also glean a great deal of general information about the world, including information they can use in their make-believe play. Relevant research questions are: Does television enrich a child's imaginative capacities with materials and ideas for make-believe play? Does television lead to confusion about reality and fantasy? Can intervention by adults evoke changes in make-believe play or stimulate it?

Enrichment

Several questions come to mind when considering whether or not children who watch television are actively rehearsing the scenes they see. One might speculate that highly imaginative children withdraw occasionally to "play out" or reflect on what they have seen. Some children look at television with intense concentration. Do highly imaginative children view with less intensity than those who are not very imaginative?

A recent longitudinal study of preschool children was interested in learning what combination of factors would best produce imaginativeness of play. (*4*) It found that the brighter older boys who scored high on an interview concerned with imaginative predisposition and who watched more situation comedies than action-adventure shows were the most imaginative. Imagination, in other words, was related to intelligence, age, sex, and—most relevant here—to the kind of television programs they looked at.

Another question is what relation television has to imaginary playmates. But first, one might ask how many children have such playmates. An answer, based on one survey of middle-class parents, is that 65 percent of preschool children had a make-believe friend. (*5*) The significance of having make-believe playmates is considerable; evidence is that children who have such a friend play happily in nursery school, are cooperative with friends and adults, use language more extensively than other children, and watch less television. (*6*)

Boys with imaginary playmates who watched few action-adventure shows were less aggressive in nursery

school. (7) Also, when the boys chose television characters as imaginary friends, they picked the male superheroes. Girls also often chose male characters but sometimes picked the Bionic Woman, Wonder Woman, and other female characters as fantasy friends.

Another question often raised is whether television affects creativity. A study of gifted children in the fourth, fifth, and sixth grades showed that watching cartoons decreased creativity scores on a standard test. (8) Somewhat surprisingly, educational television also had a slightly depressing effect on creativity. This kind of study needs to be replicated before any firm conclusions can be drawn.

Interesting data on this question are derived from a comparative study in Canada which investigated television influences on children in three towns (one called Notel) with no television, one (Unitel) with one channel, and a third (Multitel) with four channels. (9) Two years after television was introduced to Notel, its children's verbal fluency scores on standardized tests decreased significantly, and the investigators concluded that television apparently had a negative impact on the children's verbal fluency creativeness.

The relation of television to reading habits and imagination also has been examined in third, fourth, and fifth graders. (10) Imaginative behavior was found correlated with a higher IQ and with looking at fewer fantasy-violent programs. Children who watched more of the fantasy-violent programs did not read as much as the others; perhaps television offers the same kind of excitement as adventure books, fairy tales, and other popular children's books. Another finding was that children who looked at a lot of cartoons were rated low in "enthusiasm" by their teachers. These data suggest that television has a "displacement effect"—television may replace activities, such as reading, that are known to stimulate imagination and "world knowledge."

In another study, sixth and seventh graders were assigned to either print, audiotape, or videotape conditions. (11) Results showed that there were differences in the capacities of each medium to stimulate or inhibit creative thinking. Children who watched the videotape solved problems on the basis only of facts and concepts on the tape, indicating that their creative thinking was inhibited. Those who listened to the audiotape or who read the material gave more "stimulus-free and transformational ideas."

A somewhat similar study compared children's comprehension of a story when either it was read to them or they saw it on television. (12) The children, ages about 7 to 12, who saw the televised version remembered more of the story actions, gave shorter estimates of elapsed time in the story and of distances traveled by characters, and relied more on visual content. The children who listened to the story recalled more of the vocabulary and based their inferences on the content of the story, general knowledge, and their own experiences; they also asked more questions and made more comments.

Another study did a content analysis of the creative components of *Mister Rogers' Neighborhood* and *Sesame Street* and found that they had similar patterns for divergent thinking, evaluation (categorization), and transformations. (13) Mothers reported on how much their children watched the two shows. The 3-year-old children were tested on four tasks taken from *Sesame Street* to learn if they showed signs of creativity. Girls did better than boys on verbal tasks, and boys did better on manipulative tasks. There was no relationship between amount of viewing and flexibility ratings.

Styles of children's fantasies were examined in another study. (14) The investigators classified the fantasies into three types: "fanciful"—daydreams about fairy tales and implausible events; "active"—daydreams about heroes, intellectual pursuits, and achievements; and "aggressive-negative"—daydreams of killing, fighting, being hurt. Girls seldom had aggressive-negative fantasies, but girls who had active fantasies about heroes and heroines winning games and achieving things were the most aggressive children. But the most aggressive boys did daydream about aggression. Data from another study support these findings: (15) Children whose play themes reflected specific television references to cartoons, superheroes, and action-detective shows were more likely to be aggressive. The research clearly showed that boys with the least inner imagination, as measured by an inkblot test, who watched television with large amounts of violence were most likely to be aggressive in school.

Extending these studies to children from lower socioeconomic families, research has shown that aggressive behavior and anger at school had a "persistent link" with looking at action-adventure and news shows and at *Sesame Street*. (16) The findings were particularly characteristic of nonwhite boys with low IQs. Additional testing linked aggression in school with lack of persistence a high level of motor activity, and watching action-adventure shows, but not with IQ or race. These preschool children were watching television about 3–4 hours every day, and some of them as much as 5–6 hours a day. In addition, the studies showed that positive affect, imagination, cooperation, and leadership are related and that, by 3 or 4 years of age, children show quite a bit of consistency in

their play behavior and television-viewing styles, indicating that personality and social interaction tendencies are already fairly well established by these ages.

The research showing that personality and social interaction tendencies are quite well established by age 3 or 4 is similar to findings from an ongoing study of ego and cognitive development. (*17*) Data from this highly regarded longitudinal investigation indicate that there are two fundamental dimensions of personality: ego control and ego resiliency. Ego control is the effectiveness of the child's control over impulses and wishes. Ego resiliency is the flexibility with which the controls are shown in different and changing circumstances. There are large individual differences between children in these two dimensions by the time they are about 3-years-old. These two personality dimensions have been found to be related to television viewing. Children at age 3 were rated on ego control and ego resiliency. Then, 4 years later when they were 7 years old the same children were asked to name their favorite television shows. Programs about families were preferred by two groups of children: the girls and the children who had been rated as ego resilient and undercontrolling when they were 3 years old. Aggressive television programs, on the other hand, were preferred by the boys and by the children who were nonresilient and undercontrolling at age 3. Children who were nonresilient at age 3 also preferred cartoons. It has been suggested that television programs have a different "pull," depending on the personality characteristics of the child, and that the nonresilient undercontrolling children who like the violent and aggressive programs are precisely the children who are most likely to be influenced by them.

Cartoons, Fantasy, and Aggression

Cartoons are often regarded as "harmless" fantasy by adults, but the research findings disagree—at least in part. Children in preschool who often watched cartoons with a great deal of violence were the most aggressive. (*18*) However, older boys age 12 to 17, who viewed violent cartoons did not show violent behavior. (*19*) Another study found that boys who viewed aggressive cartoons did not share as much as the girls, suggesting that aggressive cartoons may influence behavior other than aggression. (*20*) In yet another study, first graders looked at an aggressive cartoon, a football-game film, and a "neutral" film; those who saw the cartoon were more hostile afterward. (*21*)

Do children perceive cartoons as violent or as comic and nonviolent? One investigator classified cartoons as either true-to-life and violent (as in *Dick Tracy*) or as fantasy-violent and comic (as in the *Pink Panther*). (*22*) Fifth and sixth graders who saw the cartoons judged that the comic violence was not acceptable but that the "authentic" violence was more acceptable or the right thing to do. These results seem to show that the children did think that the cartoons were violent, and they also differentiated between the kinds of violence.

Reality and Fantasy

Psychologists have found that, by age 7, children begin to think logically. (*23*) By that age, they can be expected to be able to differentiate between reality and fantasy and to understand camera techniques that enhance fantasy on television.

A study assessed the different effects of "fantasy violence" and a "newsreel" portrayal of violence. (*24*) Children, ranging in age from 9 to 11 years old and from both middle- and lower-income groups, were shown films of a riot and in one case told that it was real, in another that it was "make-believe." After seeing the film, the children were given an opportunity to be aggressive against the experimenter. Those who saw the "fantasy" version were less aggressive. Unfortunately, there have been no further studies on the effects of labeling the content of television shows as real or fantasy.

In another series of studies, children played more constructively after seeing a "stylistically aggressive" film in which the victim was seen at a distance than they did after seeing a realistically violent program. (*25*) The 5-year-old children had more difficulty than the older children in deciding what was true or real on film. The 5-year-olds, when asked to tell the story of what they had seen, embellished their stories with their own ideas, added people and objects not in the film, and had a hard time telling when the story ended. Of 30 young children, 14 of them thought a person on television had spoken directly to them and 6 of the children answered back.

Preadolescent children were able to identify cartoons as make-believe and news programs as real, but they had difficulty deciding about situation comedies. (*26*) All of them knew the difference between their own make-believe play and real situations. These children preferred make-believe television and related it to their own play. They did not think that a violent cartoon was really "violent" because it was

make-believe, and they distinguished between "funny" and "serious" violence.

Another study, however, reported that preschool and primary school children accepted as real what they saw on television. (*27*) Crime and detective stories were more disturbing because they were closer to real life than Westerns, for example.

In still another study, the investigator was interested in the fantasy-reality distinction in televised violence. (*28*) Middle-class fifth graders and kindergarten children looked at a violent television incident. Some of them were told it was real, others that it was make-believe, others received no information about it, and a fourth group did not see the program. In the experimental room, the children individually operated a small panel with "help" and "hurt" buttons on it. They were told that they could help or hurt a child in the next room by pressing one of the buttons. Boys were much more aggressive than girls. They also were most aggressive when they had seen the violent incident they thought was real or when they had seen no program at all. No explanation is offered for the high violence when the children had seen no television. They were least aggressive when they had seen the programs labeled as make-believe. The girls, on the other hand, were least aggressive when they had seen the "real" violence and when they had not seen a television program. The investigator explained the difference between boys and girls by a "socializing hypothesis." For boys, it was suggested, real aggression is tolerated more by their parents and friends, and if they play at make-believe aggression with dolls, they would be called "sissies."

The effect of television's technology on children's ability to distinguish between reality and fantasy has been studied. (*29*) Children in the first, third, and sixth grades were interviewed about their understanding of reality and fantasy and about television techniques. The older children, as might be expected, had a better grasp of reality and fantasy. Amount of viewing did not seem to influence the reality-fantasy distinction, but knowledge of television as a medium seemed to be important.

Children's understanding of television characters was the subject of another investigation. (*30*) Children in kindergarten through fourth grade sorted a group of television characters into those that were human, animated cartoon characters, or puppets and were asked to explain how they differed. Kindergarteners had trouble discriminating between the three kinds of characters. They also did not understand how television works, making such comments as the characters "got into the television set because they are smaller than us" or "they're lowered down on a rope." Many of the older children, although they could distinguish between the characters, did not know how cartoon characters are made and animated. These results were confirmed in another study of young children, many of whom had difficulty explaining how characters got into the television set. (*31*) Some said they entered through the "plug in the wall."

When asked to distinguish between popular television characters, children in the third, fifth, and seventh grades stressed such characteristics as humor, strength, attractiveness, and activity. (*32*) When they were asked how much like a real person the character was, the children rarely used the "real-unreal" dimension to differentiate characters. Several studies have revealed that young children have difficulty discriminating what is real on television. (*33*) And even older children may have problems with realistic characters, such as the Fonz, often confusing characters' real names with the parts they play on television.

Although there is some evidence that young children's imaginativeness and the stories they use in spontaneous play are enhanced by television materials, the predominant evidence suggests that heavy viewing is associated with lower imagination and less creativity. There is reason to believe, moreover, that under conditions of unsupervised heavy viewing, children may not learn the necessary distinctions between "realism" and "fantasy" in stories and may become confused by magical effects, believing them to be possible in real life.

Prosocial Behavior

Research on television's influence on prosocial behavior burgeoned into one of the most significant developments in the decade after the report of the Surgeon General's committee. The term "prosocial" is used here to specify that which is socially desirable and which in some ways benefits another person or society. For convenience, prosocial behavior can be divided into three types: altruism, friendly behavior, and self-control.

Altruism

Studies on altruism agree that children who watch altruistic behavior on television become more altruistic themselves. For example, boys and girls age 6 to 9 watched 5-minute videotapes in which a character played a game and won gift certificates and then do-

nated, or on one set of tapes did not donate, the certificates to charity. Children who saw the generous behavior gave away more of the certificates they won in a similar game. In this experiment and in others, modeling of altruistic behavior was clearly demonstrated in the laboratory. (*34*) But the laboratory is not like the typical television-watching situation.

Another study used a commercial television program, *Lassie*. (*35*) It involved an episode in which Lassie's master risks his life by hanging over the edge of a mineshaft to rescue Lassie's puppy; it also had a Lassie episode without prosocial behavior and a "neutral" film. After watching one of the programs, 5-year-old children played a game in which they could earn points toward a prize. While they were playing, they could help puppies in distress by pressing a "help" button, but doing so interfered with earning points. For children who saw prosocial Lassie program, the average time of pressing the "help" button was 93 seconds, compared with 52 and 38 seconds for those watching the other programs. The laboratory experiments using a commercial program were therefore supported by this research.

Other studies have been done in nursery schools and other schools. In one study, the observed behavior of nursery school children was first classified as "aggressive," "prosocial," or "self-controlled." (*36*) Then the children were divided into three groups, each seeing a different type of television show. One group watched aggressive cartoons such as *Batman* and *Superman*; another saw "neutral" films of children working on a farm; and the third saw *Mister Rogers' Neighborhood*, a television series stressing cooperation, sharing, sympathy, affection, and friendship. During 4 weeks of these television diets, the children's behavior was recorded by observers who did not know about the research and were "blind" as to which programs the children were seeing. The results showed that the programs did have some effect. The children who were more aggressive than the average became even more aggressive after watching the cartoons. After watching the prosocial programs, children from lower socioeconomic families became more prosocial. But the effects were short-lived; they did not appear in a retest 2 weeks later.

In a later study by the same investigators, nursery school children were assigned to five groups. (*37*) One group saw "neutral" programs about nature and other topics which had nothing interpersonal. The other four groups saw four programs from *Mister Rogers' Neighborhood* arranged to form a dramatic sequence in which a little girl was afraid that she would be replaced by a fancy new visitor, and her friends tried to understand her feelings and help her. When children who saw the prosocial program were asked questions such as "How do friends show they like you?" they answered with more ways of showing affection than the children who saw the neutral shows. This was true in situations like those in *Mister Rogers' Neighborhood* as well as others. The effect had generalized. Another interesting finding was that, if children saw the prosocial program and also were given direct training by role playing, they were more helpful than if they received only the training or saw only the prosocial programs. Another study confirmed these latter findings. (*38*) It demonstrated that merely looking at prosocial television for 8 weeks did not change the behavior of poor urban children, but, if they also acted out plays from *Mister Rogers'*, they became much more prosocial.

Sesame Street was the children's television diet in another study. (*39*) The programs had special inserts concerned with children cooperating to achieve various goals, as, for example, two boys learning that they could put toys in a box only if one held the lid and the other put in the toys. The children were given three tests: In one, they could pick out a picture showing children cooperating; in another, they had to cooperate in an actual situation, as, for example, they were told to paint a picture, but one child had the paint and the other the brush. The third "test" was free play. The prosocial *Sesame Street* programs influenced both knowledge about cooperative behavior, as shown by picking the prosocial picture, and behavior in the actual situation, but it had no effect in free play. In another study, however, children who watched *Mister Rogers* were more cooperative at play as compared to their previous behavior. (*40*)

A study done in Australia also assessed the comparative influence of role playing and televised prosocial programs in facilitating altruism. (*41*) Kindergarten children saw actual television programs, such as *Lassie, I Love Lucy, The Brady Bunch,* and *Father Knows Best*, some of which were judged to be high in prosocial content and others neutral. Boys who saw the prosocial programs were later more helpful, and both boys and girls were more cooperative. In the prosocial television programs, the main characters had shown concern for another person, but the specific episode was not like the situation in the kindergarten. Yet the children apparently generalized from the television program to their own behavior. Role-playing behavior in this study was even more influential than the television viewing in increasing helpful and cooperative behavior. This latter finding on role-playing's efficacy does not, of course, detract from the signifi-

cance of television's effects, but it does demonstrate the importance of other influences.

As with much television research, most of the studies on prosocial behavior have been done with children. One study, (*42*) however, assessed the effects of five different television diets on adult men. Participants were 183 married couples who volunteered as subjects. The five television diets were: high in prosocial or "helpful" content, high in violent or "hurtful" content, mixed, i.e., both prosocial and violent content, light entertainment content, and unedited neutral content. The husbands watched one of the types of programs on a local cable television network for 7 consecutive nights. The wives were observers who reported on the husbands' "helpful" or "hurtful" behavior, such as "took son for a walk while I rested" or "lost temper while driving car." The results indicated that the programs had no effect on helpful behavior, but the husbands who watched the prosocial programs showed the least hurtful behavior. Television also had an effect on mood, with those watching the violent programs showing an increase in irritability and hostility and those watching the prosocial program showing a decrease.

Friendly Behavior

All the studies of friendly behavior described here were carried out with nursery school children. A group of children watched an adult on television being affectionate toward a little stuffed clown. (*43*) When the children later played with toys, including the clown, they were more likely to show the same affectionate behavior as the adult on television than children who had not seen the television segment.

In another study, the investigators wanted to learn if prosocial television would increase children's friendliness toward children from minority groups. (*44*) After they watched *Sesame Street* with special inserts of nonwhite children, a group of 3 to 5-year-old children preferred to play with nonwhite children. Children who had not seen the inserts did not show these preferences. The children, all English Canadian, also preferred to play with a French Canadian boy after seeing a French Canadian boy on television.

Another potentially important finding comes from a study on nursery school children who tended to stay by themselves rather than play with their schoolmates. (*45*) One group of these isolated children was shown several scenes of nursery school children playing together and being rewarded for it. A female narrator described what was happening. The results were dramatic. Children who saw the televised scenes increased the number of their interactions with others from an average of 2 per day to an average of 12 per day. At the end of the school year, they were still interacting with other children; the effects were durable over time.

In a study of mentally retarded children, one group saw a child beating a large inflatable doll while another saw a child playing in a friendly way with the doll. (*46*) Later observations found that the aggressive film led to slightly more aggressive behavior and the friendly film to slightly less aggressive behavior.

In still another investigation, preschool children were observed and their behavior recorded into one of three categories: (*47*) (1) positive reinforcement (giving praise, approval, sympathy, and reassurance, affectionate contact such as holding hands, hugging, kissing, and tangible reinforcement such as prizes and tokens); (2) punishment (verbal criticism and rejection, negative greetings, hitting, biting, kicking); and (3) social contact (any physical or verbal contact between children or a child and adult). They then watched 15 minutes either of *Sesame Street* or *Mister Rogers' Neighborhood* for 4 consecutive days. Compared with the way they behaved before the programs, children who saw *Mister Rogers' Neighborhood* significantly increased the amount of positive reinforcement and social contact. Watching *Sesame Street* increased prosocial behavior only for those children who had low scores before they saw the program.

Self-Control

A group of kindergarten boys were told not to play with certain attractive toys. (*48*) They were then divided into three smaller groups; one saw a film in which a child played with toys he had been forbidden to play with and was "rewarded" by his mother; another saw a film with the boy playing with the toys and then "punished" for playing with them; and the third group did not see a film. When left alone in a room with the toys, the boys who saw the child rewarded for playing with them had a harder time resisting temptation than the other boys. But seeing the film in which a boy was "punished" made it easier to resist.

In a related experiment 8- and 9-year-old girls were told the rules of a game by which they could win some money. (*49*) Some of the girls then saw a film in which a girl of the same age broke the rules, and some of them saw a girl abiding by the rules. Results were as expected; the girls who saw cheating on film cheated twice as much as the other girls.

Similar results were obtained in an experiment with 7- and 8-year-old boys who were forbidden to play with a particularly appealing toy. (*50*) After seeing a film in which a boy did not play with the toy, the boys on the average delayed playing with it for 8 minutes. The boys who saw the film character playing with the toy only delayed for 3 minutes. A month later, the boys were still influenced by the film.

Related studies deal with delay of gratification. One in New Zealand asked children if they would like to have a monetary reward immediately or a larger reward after a week. (*51*) Later they watched a television program in which a woman delayed her gratification and explained why she had done so. The children who saw the program were more apt to delay the reward in real life.

In the study previously described in the discussion of altruism, in which a prosocial program, two aggressive cartoons, and a neutral film were shown to nursery school children, their self-control behavior in free play was recorded. (*52*) The aggressive cartoons decreased obedience, but the prosocial program increased it. The aggressive cartoons decreased tolerance for delay. The prosocial program increased persistence at tasks. These changes persisted for at least 2 weeks when the children were retested.

The clear and simple message derived from the research on prosocial behavior is that children learn from watching television and what they learn depends on what they watch. The programs they see on television change their behavior. If they look at violent or aggressive programs, they tend to become more aggressive and disobedient. But if they look at prosocial programs, they will more likely become more generous, friendly, and self-controlled. Television can have beneficial effects; it is a potential force for good.

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Chapter VI

Socialization and Conceptions of Social Reality

People have to learn how to behave in different social situations and how to learn various social roles. They become socialized. During the first few years of life, children learn an incredible amount about living in the world with other people. Much of this learning comes from watching their parents and other adults, their brothers, sisters, friends, and later their teachers. Today's children also watch the characters who appear on television. The question is: Does television contribute to their socialization and to their learning of social roles?

Many of the studies of socialization are based on content analyses. As a result, detailed information is now available on the "demography" of television's fictional characters—their age, sex, race, occupation, socioeconomic status, and so on. In recent years, research has been trying to learn about the effects of these television portrayals on sex, age, race, and occupational and consumer roles.

"Social reality" is a term used to refer to the way a person thinks about the world, the person's cognitive system or frame of reference. It has been assumed that television has an effect on people's conceptions of the world around them. If television does indeed influence how people think and feel about the world, it could have far-reaching implications for culture and society. The accumulated evidence from research over the past decade seems to support the proposition that television, in some instances, does affect the "world view" of those who watch a great deal. In addition to demonstrating television's effects, recent analysis has turned to the question of how the construction of social reality occurs.

Sex-Role Socialization

Sex and gender roles on television have been studied extensively since the 1950s, with a large amount of work taking place in the 1970s. All content analyses agree that the men characters greatly outnumber the women; the ratio is about 3 to 1 (*1*) In the early 1970s, the ratio was even higher in favor of men in leading roles, but at the end of the decade there was an increase in number of women. The number of men and women varies with the kind of program: Situation comedies, family dramas, and soap operas have about the same number of men and women, but in action-adventure shows the men outnumber the women by a ratio of 5 to 1 and in the Saturday morning cartoons the ratio is 4 to 1. (*2*)

The analyses have looked at age, race, and occupation as related to sex roles. (*3*) Men characters on the average are older than the women. Most of the women are in their twenties or early thirties, and the men are about 10 years older. Black men appear far more often than black women; Hispanic men greatly outnumber Hispanic women (but the total number of Hispanic characters is very small). On television, the world of work is almost entirely the world of men. The number of women characters who do not have jobs has been set at 64 to 70 percent. Over 90 percent of the lawyers, ministers, storeowners, and doctors are men. The women are usually secretaries, nurses, entertainers, teachers, and journalists. There have been many more television men in law-related jobs, though a recent analysis shows an upward trend for women characters. Women are underrepresented as lawbreakers and overrepresented as victims. Men have a greater variety of jobs. On Saturday morning, for example, an analysis found men, in 42 different jobs, women in only 9 different jobs. (*4*) Another study showed that twice as many women as men are in low-prestige jobs. (*5*) In a few of the new programs begun in the late 1970s, women do have difficult and daring jobs. These women are usually single, sophisticated, often divorced, and their work is glamorous and dangerous. Some observers say, however, that these new roles are not

really so different from past roles because the women still usually depend on men, they are more emotional than men, and there is more concern for their safety. (6)

In interactions between men and women on television, the men ordinarily are more dominant. (7) Men give the orders, and their orders are more likely to be followed, except in situation comedies and family dramas. Typically, men issue their orders on "masculine" activities, such as business, law, and government. Women give orders on both masculine and femine topics, but mainly on neutral ones. Women are more passive and less involved in problem solving. They ask for more psychological support and usually get it. Making plans differs between the sexes; men make most of the plans for themselves and others, and more of the plans made by men are successful.

According to a study on personal characteristics, the men on television are rational, ambitious, smart, competitive, powerful, stable, dominant, violent, and tolerant, while the women are sensitive, romantic, attractive, happy, warm, sociable, peaceful, fair, submissive, and timid. (8) Other studies show that women on television are more concerned with family, romance, and social relationships but are less competent than men. (9) Men are more interested in their professions and businesses. Various studies have compared the usual activities of televised men and women. (10) Entertaining, preparing food, and doing housework were all done by women; business phone calls, drinking and smoking, using firearms, and engaging in athletics characterized the men. Women often depend on men to solve their problems for them. If a man and woman on television have similar personalities or perform similar tasks, they are apt to have a relationship involving conflict and violence. (11)

On television, for men the emphasis is on strength, performance, and skill; for women, it is on attractiveness and desirability. Women characters are more likely than the men to use their bodies seductively, according to a survey of sexual behavior on prime time television. (12) Many of the plots and stories require erotically enticing costumes on the women, and the camera often focuses on particular parts of their bodies. Women are often treated as sex objects. But men also are sex objects, especially in the action-adventure stories where they must constantly be tough and strong. Like latter-day gladiators, they repeatedly prove their physical prowess.

Intimacy is rarely portrayed, and almost never does it appear on action-adventure shows. The characters seem to lead thrilling, rewarding, professional lives, but somewhat austere private lives without physical or verbal tenderness. (13) Most "close relationships" on television seem to be between partners who work together. (14) If displays of affection occur, they are usually in situation comedies.

Explicit erotic activity has not appeared on television—at least not yet—but there was an increase in flirtatious behavior and sexual innuendo in the 1970s. (15) On television, most sexual references, either verbal or implied by the action, are to extramarital sex; this occurs five times as often as references to sexual activity between married couples. References to intercourse with prostitutes is next in frequency. A total of about 70 percent of references to sexual activity are to extramarital sex or to prostitution. Sex is commonly linked with violence. On dramatic and action shows, discussions of sex are often in the context of rape or other sex crimes. Erotic relationships are seldom seen as warm, loving, or stable.

Marriage and family are not important to television's men. One study found that for 46 percent of the men it was not possible to tell whether or not they were married, in contrast to 11 percent of the women. (16) In another study, family life and romance were rated as important to 60 percent of the women and 40 percent of the men. (17) When husbands and "heroes" on Saturday morning shows were compared, the husbands came out not only as fat and quarrelsome but also as less intelligent, logical, and helpful than the heroes. (18)

On television, marriage and family belong to the women. (19) Most of the women are married. If they are single, divorced, or widowed, they are almost always looking for a husband. Few of the married women have outside jobs, but even in her home the woman does not have much authority. A character who is a successful working woman uusally has problems with lover, husband, or children. Most women characters do not gain financial stability or social standing by earning it; they have it through marriage or family background.

Men, on the other hand, do not have much home life on television. Jobs come first, family life second. (20) Less than 20 percent of interactions of men are concerned with marital or family relationships. If they are married, however, men seem to have more successful marriages than the women. Men are less likely to be divorced. The television message to the viewer is that for women marriage is all consuming, but for men it is secondary.

These content analyses show that on television male and female sexuality is characterized by a double standard and by stereotyped definitions of masculine and feminine traits and roles. Television portrays a

situation in which affection and intimacy are viewed as inappropriate to the real world. Sex is often seen as a dirty joke or an exciting and dangerous activity that frequently leads to trouble. While both male and female roles are stereotyped, there is more stereotyping in the female roles. Some of this difference may be attributed to the smaller number of female characters; if there were more females on television, the writers and producers could give them more varied characteristics.

Research on television effects of sex-role socialization has been concerned mainly with sex-role stereotyping. In other words, does the viewer select roles for men and women that are like the stereotypes seen on television? The answer is "yes." One study asked 3- to 6-year-old children to indicate whether a man or woman would be in a certain occupation and found that the children who watched a great deal of television gave the more stereotyped answers. (*21*) Another study, in which youngsters were asked to say whether certain activities were more likely to be done by a man or a woman, also resulted in more sex-stereotyped replies from the heavy viewers. (*22*) The same investigator asked children whether a character in a story would be a man or a woman, and again, the heavy viewers gave the stereotyped answers.

But television can have the opposite effect, as shown in a study in which children did learn counterstereotyped roles from some programs. (*23*) Five television characters were chosen; all were in nontypical occupational roles for women—two police officers, a park ranger, a television producer, and a school principal. The children who correctly identified the character and her occupation were compared with those who could not make the identification. The children who could identify them said that the occupation was appropriate for a woman. The exception was the role of the producer whose job did not seem to be understood by the children.

Children have been asked which television characters they prefer and which characters "you would like to be when you grow up." Boys pick more total characters than girls, and they always pick men. Girls sometimes pick women characters, but they too often pick the men. When asked the reasons for their choices, boys usually say it is physical aggressiveness, while girls say it is physical attractiveness. (*24*)

In general, televisions' effects seem to be that heavy viewing perpetuates sex stereotyping, that counterstereotypes presented in programs are accepted by children, and that males are seen as more desirable role models.

Finally, in recent years, entertainment television as a socializing force in the lives of children has become conspicuous in the area of sex education. Four characteristics of television make such education likely: Most programs watched by children are intended for adults; children have little experience to contradict or balance what they see on television; television is remarkably realistic; and television gives constant messages about sexuality.

A report on family life and sexual learning found that, of the 1,400 mothers and fathers who were interviewed, over 50 percent thought that their children learned more about sex from television than from any other source except themselves. (*25*) Mothers and fathers who were heavy viewers—between 27 to 35 hours a week—were most likely to give this opinion. Yet, most of the parents did not think that television is accurate or reliable in conveying knowledge about sex. A higher proportion of the heavy viewers, however, did think it is accurate.

For families in which there was heavy television viewing, the parents were not apt to talk about sexuality with their children. But these parents also believed that sexuality should not be discussed outside the family. Although television does not deliberately intend to educate children about sexuality, its characteristic and consistent messages, together with a typical lack of sexual discussion between parents and children, mean that entertainment television has become an important sex educator. (*26*)

Age-Role Socialization

Those who watch television most are young children and the elderly. Ironically, it is these ages that are seen the least on entertainment television. (*27*) According to one analysis, only 10 percent of television characters are under 19, but in census figures this age group accounts for one-third of the population. (*28*) At the other end of the spectrum, only a little over 2 percent of television characters are age 65 or over, but there are about 11 percent in real life, and the percentage is growing. Another analysis gives about the same percentages; (*29*) about 4 percent of characters are in the preteens; about 8 percent are teenagers; about one-third are age 20 to 34; about one-third are age 35 to 49; about 16 percent are in their fifties and early sixties; and about 3 percent are over 65.

In addition to counting the number of characters in various age groups, studies have noted the kinds of roles they play, programs in which they appear, and

sex, race, and socioeconomic status in relation to age. (*30*) Young characters under 20 tend to appear in regular recurring roles, while older characters appear about equally in regular and in guest roles. On Saturday morning shows and in family dramas there are many characters under 20, but, as might be expected, there are few young people on the police-detective shows. On crime shows, most of the characters are about 35 to 49 years old.

Almost half the women are between 20 and 34, and only a fourth of the men are in that age bracket. (*31*) The reverse is true for the age group 35 to 49. About 20 percent of the male characters and about 10 percent of the female characters are over 50. Elderly characters over age 65 are almost always men. (*32*)

Black characters are more likely than white characters to be portrayed as young, 38 percent of blacks versus 18 percent of whites in 1978. When white and black characters are in the same show, the blacks are younger. Blacks are also consistently underrepresented in the portrayal of older characters. (*33*)

As television characters become older, they attain a higher level job and higher socioeconomic status. (*34*) Few of the elderly are in service worker positions or in the lower social classes, and contrary to what might be expected, they are not depicted as poor. Older characters do not appear in any particular type of show. They are dispersed in small numbers over the whole range of prime time television. Saturday morning programs and family dramas, the kinds of programs most often watched by children, have a high count of characters under age 20 and few old people.

Content analyses of the portrayals of older people do not present a favorable picture. Old men are often cast in comic roles. One study done in 1974 is often cited; (*35*) it claimed that old people on television are ugly, toothless, sexless, senile, confused, and helpless. An analysis in 1979 found the elderly to be comical, treated with disrespect, and shown as stubborn, eccentric, and foolish. (*36*) In a fictional world where portrayals are generally favorable and most endings happy, less than half the old men and a smaller number of old women are seen as successful, happy, and good. When old people are characters on prime time programs, they often are either the villains or the victims. Men are the "good guys" when they are young and "bad guys" when they are old. If an old man fails, it appears that he does so because he is evil, but an old woman fails because she is old.

Despite all these unfavorable portrayals, there are a few bright spots. (*37*) The elderly are rarely depicted as lonely, and they sometimes are portrayed as useful. Older men are relatively often seen as successful and held in high esteem by others. An important exception to the dismal picture of aging women is found in soap operas where an older woman is likely to be attractive, independent, sought after for advice, and employed in an important position.

One surprise in the content analyses is that old people are rather often shown engaging in moderate to high physical activity, such as energetic dancing, riding a motorcycle, or alluding to a vigorous sex life. (*38*) But these "reversed stereotypes" may do more harm than good for the image of the elderly, it is said, because they usually are interpreted as comical and inappropriate.

In addition to analyzing program content, researchers have surveyed the television-viewing habits of older people. Everyone agrees that television is very important in the lives of older people. Surveys going back to the early 1960s show that, when old people are asked to tell about their daily activities, the most frequently named activity is television. (*39*) In 1976, the average number of viewing hours per week for persons over age 50 was 35 hours. (*40*) This intensive viewing is found for all old people, whether they are living at home or in an institution, in the inner city or the suburbs, and regardless of their socioeconomic status. As with other adults, most of their viewing takes place in the late afternoon and evening, but their "prime time" is about an hour earlier than for younger adults. (*41*)

All studies show that the elderly prefer news, documentaries, and public affairs programs. (*42*) Older people, it is obvious, are turning to television for more than mere entertainment. Television provides them information about the world; it becomes a substitute for the many sources of information formerly available in the community or on the job. Next in order of popularity are variety shows, musicals, and travel films. (*43*) It is no surprise that Lawrence Welk emerges as a special favorite, along with some of the other well-known "personalities," such as Bob Hope. The few programs with older characters in them are also particularly well liked by elderly viewers. Daytime soap operas provide a real contribution to the viewing pleasure of older people. (*44*)

Because the elderly often watch television no matter what is on and even when they do not like the programs, some gerontologists say that they may become too dependent on it. (*45*) But other experts on aging believe that television has many benefits. Television permits older people to stay involved with the world and to know what is going on outside their often restricted environments. Failing eyesight may make reading difficult, and hearing impairment may prevent listening to the radio, but television with its simul-

taneous presentation of visual and auditory stimuli may be more accessible than other media to the elderly. (*46*)

On both informational and entertainment programs, the elderly make many "friends" and have a large coterie of fictional companions. (*47*) Television personalities come to be loved by some elderly persons as attractive, safe, and nonthreatening friends. With its organized time schedules for programs and regularity of appearances by performers, television can give some structure and order to the otherwise empty and unstructured days of many old people. One report suggests that the reason some elderly people look at television is simply to "kill time"; it gives them something to do—something easy and often interesting—rather than sit all day doing nothing. (*48*)

What is the effect of television on the aging population and attitudes about the elderly? There has thus far been little research on the impact of television on the values and behavior of older people. One study has shown that negative opinions about aging are more likely to be held by the young and the old, rather than the middle aged; and it is, of course, the young and the old who watch the most television. (*49*) In contrast to this study, however, several studies have found that, as people grow older, their attitudes toward the elderly on television become more favorable. (*50*) Another survey reported that many viewers are dissatisfied with portrayals of old people on television. (*51*) Attitudes toward the elderly are reported to be related to the type of programing; viewers who looked at many fantasy-type programs perceived the elderly on television as "hindrances to society," but those who watched realistic programs held the opposite opinions. (*52*) Several studies agree that heavy viewing leads to inaccurate beliefs about old people, such as a belief that the number of old people is declining or that people are less healthy and do not live as long as they used to, or that old people are not open-minded and adaptable and not good at getting things done.

Probably the major fault in television with respect to aging is that it does not accurately portray real life in either the numbers of old people or in presentations of their attributes. According to the National Council on the Aging, television is the channel through which elimination of stereotypes about aging must occur. Finally, it is noteworthy that in the late 1970s the Committee on Aging of the House of Representatives held hearings on age stereotyping in the media. (*53*) And a recent review of prime time programs found that the number of older characters on television has increased and that television seems more willing to confront issues on aging as subject matter. (*54*)

Race-Role Socialization

For many Americans, television is a prime source of information about Black, Hispanic, Asian, and Native Americans. There have been several content analyses of programs depicting Blacks on television, but almost none of Hispanic, Asian, or native Americans except for frequency counts.

In the 1950's there were only a few black characters on television, all of whom were classic comic stereotypes, like *Amos and Andy* and *Beulah*. These programs were canceled as a result of organized protests. For the next 12 years, there were essentially no black characters on television, but then a few began to appear. By 1968, the proportion of black characters rose to about 10 percent, and it has remained at about that level ever since. (*55*) There are far fewer Hispanics, for example, only about 1.5 percent in 1975–77. During 1970–76, the percentage of Asian Americans was 2.5, and of native Americans it was less than half of 1 percent. For all minorities combined, there were about 12 percent in the period 1969–78, with a high of 18 percent in 1975. (*56*)

Black and Hispanic characters are both cast mainly in situation comedies. (*57*) About 41 percent of all black characters appear in only six shows. The same kind of clustering occurs with Hispanic characters; 50 percent are in just four shows. Blacks are less likely than whites to have a job, and if they are working, more likely to have a low prestige job. (*58*) Most Hispanic characters work in unskilled and semiskilled jobs Many of them are cast either as comic characters or in law-breaking and law-enforcing roles.

A few studies have looked at what black characters do on television. Blacks dominate whites in situation comedies, but the reverse is true on crime shows. (*59*) On series with all black characters, the blacks have more personal and family problems and a lower social status than on series with both black and white characters. In the shows with both black and white characters, there was no difference between blacks and whites in giving orders or giving and receiving advice. (*60*)

Both black children and black adults are more likely than whites to watch programs with black characters in them. Black children usually pick white television characters as their favorites and as their models to imitate, but, unlike white children, they also choose some black characters. Compared with white children, the black children believe there are more black characters on television. (*61*) Black children also have more positive perceptions of black characters in terms of their activity, strength, and beauty than they have

of white characters; moveover, they think the portrayals of blacks are realistic. In general, research has shown that black children exposed to a white-dominated medium do not develop destructive self-images. (62)

One line of research has studied the self-image of minority group children who have watched programs such as *Sesame Street, Carrascolendas,* and *Villa Alegre*. All three of these public television shows have had a favorable effect on cultural pride, self-confidence, and interpersonal cooperativeness of minority children. (63).

Another line of research has investigated the impact of minority characters on the perceptions and attitudes of white children. Many white children throughout the country are dependent on television for their information about minorities. White children having the least direct experience with blacks said that television gave them information about the physical appearance, speech, and dress of blacks. (64) These children also had positive racial attitudes. Studies of *Sesame Street* give evidence of its favorable effect on racial attitudes. In one study, children who looked at *Sesame Street* for more than 2 years had more positive attitudes toward other races than children who had not been exposed to the program. (65)

Only a small amount of research has tested the effects of commercial programs. For example, in a study of adults it was found that with *All in the Family* and its many racial slurs, the impact on racial attitudes was directly related to the prejudices already held by the viewers. (66) In another study of *All in the Family*, the results showed that children did not seem to be influenced by the character's prejudices. (67) Finally, a different kind of program, the miniseries *Roots*, was demonstrated to have a positive impact on racial attitudes. (68)

Occupational Role Socialization

The two main concerns of those who have investigated portrayals of occupations on television are the overrepresentation of high prestige jobs and of the "cops and robbers."

Fully one-third of television's "labor force" is in professional and managerial positions, about three times the number in real life. (69) In an analysis of soap operas, it was found that 62 percent of the women and 89 percent of the men were in the top three occupations categories, in contrast with 19 percent and 30 percent respectively in the actual labor force. (70) At the other end of the scale, a similar discrepancy exists for low status jobs. About 81 percent of women in real life hold low status jobs, but only 38 percent of television characters have these menial positions. (71) For men the gap is even greater with 12 percent on television and 63 percent in the labor force. Only two occupations rank about the same on television as in the census figures: female clerical workers and farmers. (72)

The range of different kinds of jobs on television is much narrower than in real life. (73) For white male characters, 30 percent are in just five different jobs, and for black characters, 50 percent are in only five kinds of jobs. For women, the job situation is even more homogeneous.

Concerning "cops and robbers"—actually all law-enforcement and law-breaking characters—there are many more law-related jobs in television's world of work than in the actual labor force, including not only the police, but also detectives, lawyers, judges, matrons, and wardens. (74) More of television's criminals are white than is indicated by FBI crime statistics. These criminals also are older on the average than real criminals.

What is the effect on viewers' perceptions of occupations as a result of this information coming from television? Since children ordinarily have rather limited knowledge about many occupations, it might be assumed that they obtain quite a bit of information about jobs from television. Research has borne out this assumption. When children were asked open-ended questions about various occupations, the responses were consistent with the depictions of the occupations on television. (75)

A field study in two cities was able to compare responses to two shows with characters in different occupations. (76) The *Andy Griffith Show* had a barber and a sheriff, and *That Girl* had an actress and a magazine writer. Viewers and nonviewers, frequent and infrequent viewers, and current and noncurrent viewers among fourth, fifth, and sixth graders were compared. All three successful role models—the barber, sheriff, and magazine writer—favorably influenced the children's evaluations and perceptions of the rewards and physical requirements of the job. Neither frequency nor recency had an effect; apparently beliefs about occupations are retained for a long time.

Consumer Role Socialization

In the study of television's effects on consumer roles, a small amount of work has been done on entertainment programs, game shows, and public service mes-

sages, but most of it has dealt with advertisements. And most of the research has been done with children.

Young children say they enjoy advertisements, especially if they are humorous and entertaining. (*76*) Older children have mixed feelings about them, and adults often say that what they like least about television is the commercials. Acceptance of the truthfulness of advertisements also varies with age. (*77*) Young children usually believe the claims, but, by the time they are about 10 years old, about three-fourths of them have become more skeptical. Children's trust is related to the product being advertised. They are more distrustful of claims made about toys with which they are familiar than they are about medical or nutritional products. Children who are heavy viewers are more likely to believe advertisements than are light viewers.

Research has examined the effect of television on children's desire to have a product, requests that parents purchase it, and patterns of consumption. When black elementary school children were asked where they learned about a favorite toy, television was most often mentioned as a source of information. (*78*) Children told to list what they wanted for Christmas also named television as the most frequent source. (*79*) About a third of kindergarten children and more than half of third and sixth graders said that they heard about toys and snack foods on television. (*80*) Mothers of young children also cited television as their prime source of product information. (*81*)

When children were asked if they would like to have the things they saw advertised on television, two-thirds of the kindergarteners and half of the third and sixth graders answered, "yes." (*82*) For a group of children 5 to 12 years old, there was a high positive correlation between viewing commercials and liking frequently advertised foods. (*83*) Many of the children who saw an advertisement for a toy said that they would rather play with the toy than with a friend, and, in fact, they would rather play with a not-so-nice friend if he or she owned the toy than with a nice friend. (*84*)

Children not only say they want television-advertised products, but they urge their parents to buy them. (*85*) Children from 3 to 12 years old were asked how often they tried to have their parents buy an advertised toy, and 28 percent replied, "a lot," while 55 percent said, "sometimes." In a laboratory study, children were observed as they looked at television including the commercials. (*86*) When they later went to the supermarket, the children who had paid more attention to the commercials made more requests to buy the advertised products. Another study used a projective assessment technique. (*87*) Children were asked to finish a story in which a child saw advertisements for toys, food, and clothing. Ninety percent of the children said that the child in the story felt like asking for the products. Only three-fifths, however, said that the child would actually ask the parents to buy it.

The next question of course is whether or not children use or consume the product after they have it. All evidence is that they do. In a group of fourth to seventh graders, 49 percent of heavy viewers of a candy-bar advertisement ate the bar "a lot" versus 32 percent of the light viewers. (*88*)

A significant finding, especially for young children, is that they often take advertisements literally. When two cartoon characters, Fred Flintstone and Barney Rubble, said a cereal was "chocolately enough to make you smile," two-thirds of the children said a reason they wanted the cereal was the chocolate taste, three-fifths because it would make them smile, and over half because Fred and Barney liked it. (*89*) In another advertisement, wild vegetation was depicted as edible, and the children viewing it believed that they could eat a similar appearing but toxic plant. (*90*) After seeing a cereal advertisement with a circus strongman lifting a heavy weight, children thought that eating the cereal would make them strong. (*91*) Many children have great faith in the characters they see on television; they believe that Fred Flintstone and Barney and all their other television "friends" know what children should eat.

The impact of advertising on teenagers has been studied primarily by questionnaires. In most studies, total amount of viewing, rather than specific exposure to commercials, is measured, which means, of course, that the results show overall effects of television, not just the effects of commercials. In general, teenagers' awareness of brands and brand slogans does not seem to be related to the amount of television they watch. But a study, in which actual viewing of alcohol advertisements was measured, found that the teenagers did become aware of the brands, symbols, and content of the commercials. (*92*) In addition, according to other studies, teenagers who are heavy viewers tend to think that people need and use highly advertised products. (*93*)

Watching television is correlated to a small degree with "general materialism," defined as an attitude emphasizing the importance of material possessions and money as a means to personal satisfaction and social progress. (*94*) Buying and using the product are also somewhat related to seeing the advertisements. (*95*) These findings suggest that advertising does have some impact on the attitudes and behavior of teenagers, but it is not great. With adults, however, advertising is thought to have a strong influence on their knowledge

of brand names and advertising claims. (*96*) Buying the product or service is, of course, the whole point; advertisements apparently do bring in more sales, sometimes to a high degree but often only to a small degree. (*97*)

Game shows with money and other prizes display explicit consumer behavior. The ecstasy of the winners and the studio audience's appreciative applause probably engender desires for consumer goods among the viewers. The upper-class lifestyles of characters in many dramas and situation comedies may have the same effect. Future research should move beyond advertising to explore the impact of television's information and entertainment messages on consumer behavior.

Conceptions of Violence and Mistrust

Televised violence and its contribution to viewers' conceptions of social reality have been the concern of much research. For example, beliefs about the prevalence of violence in American life have been correlated with amount of television viewing. People are asked questions such as "What are your chances of being involved in some kind of violence?" "How many males work in law enforcement and crime detection?" "Does most fatal violence occur between strangers?" The answers that could be inferred from watching television are then compared with actual statistics from crime surveys and the census. The percentage of heavy viewers of television giving a television-biased answer minus the percentage of light viewers giving a television-biased answer has been called the "cultivation differential." Television, it is said, has "cultivated" the television-biased answers. Beginning in 1972, study after study in the United States has found a "cultivation differential" for prevalence of violence; people who look at a great deal of television tend to believe that there is more violence in the real world than do those who do not look at much television. (*98*) A possible disconfirmation comes from a study in England, but the discrepancy between the American and the English research may perhaps be explained by the fact that English television is much less violent than that in America and that heavy television viewers in England actually see less violence than do American light viewers. (*99*)

Exposure to televised violence, has also been found to lead to mistrust, fearfulness of walking alone at night, a desire to have protective weapons, and alienation. (*100*)

Experimental studies have investigated changes in social reality. In one such project, undergraduate students were randomly assigned for 6 weeks to one of three television diets: light viewing; heavy viewing of programs with violence ending in justice; and heavy viewing with violence ending in injustice. (*101*) By the end of 6 weeks, both groups of heavy viewers became more anxious and fearful. But there was a difference between those who saw the "just" endings and those who saw the "unjust" endings. The viewers of the programs ending in justice later chose to watch more violent television, and the viewers who saw the injustice later chose to watch fewer action-adventure programs. This finding suggests that there may be some kind of reciprocal effect in which television contributes to the formation of an attitude and then that attitude fosters looking at certain kinds of programs.

Processes and Conditions

The next question is "How does this 'cultivation effect' occur?" Or, more specifically, the questions are "Under what conditions does construction of social reality occur?" and "What are the psychological processes involved?"

The information-processing abilities of an individual may be important in construction of social reality. For example, ability to infer patterns from discrete events might be required for television programs to have an effect. Then perhaps viewer intelligence would be related to cultivation effects. Another approach might be based on the notion that children have less well-developed processing abilities than adults and therefore television's influences on them would be stronger. Young children's tendency to remember incidental information in programs might also suggest that they would be more influenced in constructions of social reality.

Viewers' attitudes toward television and how critically and attentively they view it may be significant in determining cultivation effects. Perhaps television has more impact on viewers who are inactive and passive. A relevant study here is one with soap opera fans who were attending a "soap opera convention." (*102*) They were compared with a random sample of women. The soap opera fans, who could be presumed to be involved and active viewers, were less influenced in their thinking by the soap operas than the other women.

Viewers' experience, including that with other media, friends, and family, as well as their already established beliefs may interact in some way with con-

structions of social reality. Three possible effects have been hypothesized. One is "confirmation" (or "resonance"), as when television's content is confirmed or validated by the real world. (*103*) A second is disconfirmation, which happens if information and experience in the world come from powerful or relied-on sources, and the messages from television then lose their effect and are disconfirmed. Third, there may be a "mainstreaming" effect: Heavy viewers from different social and cultural groups may share common concepts of social reality. (*104*)

The social groups around an individual could make a difference in television's effects. Two studies are relevant. In one of them, the investigator classified children according to whether their peer groups were cohesive or not cohesive. (*105*) A cohesive group was defined as one in which all the children nominated one another reciprocally as friends. The children were tested on their attitudes toward sex and gender, occupational aspirations, and interpersonal mistrust. Those in the cohesive group were less influenced by television. These findings suggest that the increased social interaction in groups provides alternate information which may counteract television's message.

Differences in the cultivation effect are related to family's patterns of watching television. In one study, families were described according to their tendency to restrict amount of viewing, the parents' perception of the usefulness or reality of television, conflict over television, and independence, or lack of restriction, in viewing. (*106*) In families that restricted use of television and in which there was little conflict, the children showed no cultivation effect for interpersonal mistrust but did show an effect for prevalence of violence. The students who could select programs as they pleased also had a higher prevalence-of-violence effect.

Finally, the specific programs watched may be related to construction of social reality. Viewing crime-adventure shows has been related both to attitudes about prevalence of violence and interpersonal mistrust, while viewing cartoons only to prevalence of violence. (*107*)

In summary, there is reasonably good evidence that television does contribute to viewers' conceptions of social reality, especially when they are related to violence and to feelings of mistrust. There also is evidence that television may contribute to attitudes about sex, age, and family structure. (*108*) Television may be only one of many influences playing a part in the shaping of social reality, but it has come to play a role that is generally regarded as significant.

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Chapter VII

The Family and Interpersonal Relations

Family gatherings by the fireplace or at the dinner table now seem to have given way to gatherings in front of the television set. Television comes directly into the home, and most viewing takes place in the home. Indeed, the famous Neilsen ratings are based on a sample consisting of "families." Researchers have long been interested in the social nature of television viewing and have recognized that television's uses and effects are influenced by interpersonal relationships. The report of the Surgeon General's committee in 1972 recommended that television be studied "in the context of * * * the home environment." Although television research continued to investigate the family and interpersonal relations during the 1970s, unfortunately relatively little was accomplished compared with other areas of research. Nonetheless, some detailed analyses of portrayals of families were conducted as well as a few studies of television's effects on family life and social interactions.

Television's Families

Portrayal of family life has been on television from the beginning. Many of the 218 fictional families appearing since 1946 are known and loved by millions of Americans. The Hansens, the Rileys, the Nelsons, the Andersons, the Cleavers, the Ricardos and the Mertzes, the Kramdens and the Nortons, the Bunkers and the Stivics, the Waltons, the Jeffersons, and the Bradfords, to name only a few, have become a part of American collective history and culture.

About 40–50 families are on the air every week on prime time and Saturday morning television. (*1*) About one-third of these families consist of two parents with children or a single parent with children, and about one-fifth are married couples with no children. The others are various family groupings—cousins, aunts and uncles, in-laws, and so on. Half the marriages are first marriages, one-fourth of the characters have never married, and one-tenth are widows or widowers. Divorce is increasing. In these family series, there is an equal distribution of sexes, unlike television in general where there are many more men.

Television's fictional relationships usually concentrate on immediate family members—wife, mother, daughter, sister, and their counterparts in male roles. (*2*) Members of the extended family, in contrast, are not commonly presented. What do family members do together? (*3*) Husbands are usually a companion to their wives and a friend, teacher, and guide to their children; they manage the family finances. The wives want children, help them in ways similar to the husbands, and share in decisionmaking. Of the topics of conversation, more than 90 percent are about personality, health, deviant behavior, domestic concerns, and jobs. Male and female family members initiate conversation about equally. Husband-wife interactions are more frequent than parent-child. Parents are likely to interact with children of the same sex as themselves.

In black families, 10 of 19 are single-parent families, twice the number of single-parent white families, but divorce rate and family size are the same as in white families. (*4*) Almost all black families are made up of immediate family members; black families do not seem to have cousins, in-laws, nieces and nephews, and other extended family. There are more black mothers than fathers, but more black brothers than sisters. Interaction among black families is different from that of white families. In the black families, 60 percent of the interactions are between males; the son is the most active member of the family. There is more conflict in black families, centered predominantly on the wife; one-third of the wives' actions involved "going against" their husbands. There is also more conflict in sibling relationships.

A systematic analysis of programing for three television seasons focused on the directions and modes of

family interaction. (5) The directions were "going away" as in evasion, "going against" as in attacking, and "going toward" as in giving support or information. In 90 percent of all interactions, the direction of family members was "going toward" someone—offering information, seeking information, giving directions and so on. Parents were most likely to give directions and support. "Going away" occurred less than 1 percent of the time. "Going against" ranged from 10 to 15 percent in the three seasons. Most conflict was between spouses or a pair of siblings that included a brother.

How television portrays social class family lifestyles has been the concern of one project which collected extensive historical and qualitative data on 218 "family series." (6) These were defined as prime time network shows in which the main characters are members of a family and in which most of the interactions are among family members at home. Most of them (86 percent) were half-hour situation comedies like *I Love Lucy*, but some were family dramas like *The Waltons* (6 percent), family-comedy-dramas like *Eight is Enough* (1.8 percent), serials like *Dallas* (1.4 percent), adventure series like *Lassie* (3.2 percent), and cartoons like *The Flintstones* (.9 percent).

All the families were categorized according to social class as indicated by the occupation of the head of the household. The main distinction was between manual and mental labor or between working and middle class.

The content analysis showed that television families are much more likely to be in the middle class than in the working class. In fact in almost half of them, the heads of households are classified as professionals and about a fourth as managers. With working-class or blue-collar workers, the opposite is true; only 19 percent of television families are in the working class.

Many of television's families are glamorous and successful, much more so than in real life. They seldom have problems of making ends meet; most of them seem to be quite successful economically. Many have servants, usually a maid. Unlike real life, there are relatively few working wives.

The families have stayed just about the same for the past 32 years, but recently there were a few changes. The most striking change was a drop in number of middle-class families and a corresponding rise during the 1970s in the number of self-employed and working-class families.

These analyses led to the discernment of two recurring themes over the years in the working-class families: One theme is the father as dumb and bumbling, and the other is the emergence in the 1970s of a dominant upward-mobility theme. The investigators believe that these two themes serve to weaken the dignity and legitimacy of working-class family lifestyle by both emphasis and omission. They perceive that the "inept father" theme results in a working-class family being regarded only as comical. Although the upward-mobility theme typically appears in working-class families that are depicted with dignity, the strong drive to achieve middle-class status by many of the characters tells the audience that the working class is something to escape from rather than a life that has many desirable features.

Middle-class families are usually different. The husband is intelligent, strong, and mature, but the wife is often something of a giddy fool. In many middle-class families, however, both parents are "superpeople"—heroes—who are able to deal effectively with any problem, always rational and wise. But another change during the 1970s was the decline of the working-class husband and father as the buffoon and the rise in middle-class families of many more silly, laughable characters.

These investigators speculate on possible effects of the portrayals. These suggest that working-class children may be left with the impression that their fathers are laughing stock to the rest of the world. Similarly, even though the upward mobility in so many working-class families may at first seem to provide positive models, actually this emphasis may suggest that no one should want to stay in the working class but instead should be striving to move out of it. Furthermore, this upward mobility implies that it is easy to attain success and to move almost without effort into the middle class; television does not show how many strains accompany such "rising" in the world. The idealized middle-class family may also present unattainable goals for television viewers and thus lead them to question the adequacy of their own families. Much more research, however, needs to be done to test the validity of these ideas.

Television's Effects on the Family and Social Relations

It has been hypothesized that viewers learn family roles and how to solve family problems by watching television families. Another assumption is that television may be changing attitudes about how parents and siblings should behave. Other assumptions are that portrayals of family members provide information about communication between family members and that children may question their own value and self-

worth as a result of their underrepresentation on evening programs.

Despite these hypotheses and assumptions, the effects of television portrayals on family life and role socialization have been the subject of only a little research. One of the few studies is a major survey of over 600 children in the fourth, sixth, and eighth grades in urban areas of both California and Michigan. (*7*) Preliminary results are: Watching family dramas like *The Waltons* and/or shows with small children in them was related to a belief that real-life families are cooperative and helpful; but watching shows with broken families and/or with teenagers in them led to beliefs that families are antagonistic, verbally aggressive, and punitive.

In addition to concerns about the specific effects of television portrayals of families, there has been interest in the general effects of television on family life and interactions.

Families spend about half their waking hours at home watching television. This means that television has influenced family behavior, even if only in bringing members together in front of the set. Also, since many areas of family functioning are not established by any of the norms of society but are developed within the families themselves, it is possible that families will accept the behavior they see on television as legitimate and perhaps as behavior to be emulated.

Television viewing is often done with other members of the family. Neilsen data from 1975 indicate that 70 percent of prime time viewing is by an adult together with a child. (*8*) The number of television sets in the home affects this pattern; in multiset households, 43 percent of viewing was between siblings, and 33 percent was by husband and wife watching together. (*9*)

Television seems to have changed the ways in which family interaction occurs. (*10*) When the set is on, there is less conversation and less interaction. The data also suggest that there is more privatization of experience; the family may gather around the set, but they remain isolated in their attention to it. With multiple sets in many homes this separation is increased for both children and adults.

Families must decide what to look at when more than one person wants to watch television. (*11*) In general, the norms of society prevail when these decisions are made: Male "wins" over female, older children over younger, and father over mother and children. But television has brought one interesting change. In a surprisingly large number of instances, parents defer to the wishes of their children. Children thus often have emerged as arbiters of what the family will view; they have become family decisionmakers.

Program selection is partly dependent on other members of the family who are watching. In a study of about 200 junior and senior high school students, a relationship was found between the presence of others and the type of program viewed. (*12*) Brothers and sisters were often present for humorous shows, and parents were more likely to be present for aggressive and "real" shows, for example, news programs. It is not known whether children adapt their viewing to who is present or whether they seek certain companions for certain shows.

Parents, it is agreed, seem to worry about the amount of violence and sex on television but not about the amount of time their children look at television. One reason often given for lack of concern about amount of viewing is that parents, unaware of how much of the time their children are watching, underestimate the amount of violence they see. There also is evidence that mothers may not recognize how much their children respond to television content. (*13*) Children, according to their own accounts, perceive more violence than their mothers do, and mothers underreport how frightened their children are after watching scary programs. (*14*)

Parents do not exert much control over television viewing in most families. (*15*) By the time children are in senior high school, there is essentially no guidance. Among sixth graders, 39 percent reported that their families had some rules about television, but only 18 percent of tenth graders said that they were restricted by any rules about amount of viewing. Even less common is guidance on whether or not children are allowed to watch specific programs. In one study, children age 6 to 12 said their parents controlled the amount of time they looked at television but did not tell them what, or what not, to look at. (*16*) In another study, in response to a question about guidance, 85 percent of both mothers and their children age 9 to 14 replied, "none." (*17*)

Parental comments to children about shows seem to be more frequent when the children are older. (*18*) Examples of the kinds of comments ordinarily made are: "Real life is less simple than TV," or "there are better ways to solve problems than violence," or "real life is not like that."

In an observational study, children 3 to 5 years old were brought with their mothers and fathers to a laboratory furnished as a living room. (*19*) They were observed while the television set was on and during a "family playtime" while the set was off. When looking at television, the children talked less, were less active, and less oriented toward their parent, as might be expected. An unexpected finding was that

there was more touching between the child and parent during television viewing.

A study with black or Spanish-surnamed preschool children and their parents was designed to learn if television would facilitate interaction between parent and child. (20) In one group, the interaction focused on a toy seen on television; in another, it focused on anything except television; and in a third group, the parents were encouraged not to talk with their children. Results showed that television increased the interaction of the parents but not of the children, although the children did show less egocentric speech.

The influence of different family communication patterns on television viewing also has been studied. (21) Family communication patterns were classified in two types: "socio-oriented" families who emphasize harmony and agreement in interpersonal relations, and "concept-oriented" families who emphasize dissent and free expression of opinion. One study found that children from socio-oriented families adopted their families' viewing habits. (22) Another study found that the socio-oriented families watched more television and used it to reach interpersonal objectives. (23) For concept-oriented families, television was not a useful social resource, but they did use it to transmit values for exercising authority. In a survey of heads of households with children between 2 and 15 years old, the family communication patterns were related to television use. (24) Concept-oriented families had rules concerning the content of programs to be watched, and both types of families used television for social control. High socio-oriented families and low concept-oriented families—both protective—were highest in social control.

As indicated in the discussion of the effects of television commercials, many studies confirm that children's behavior is shaped by advertising, but it is not known if this consumer behavior has a positive or negative effect on interpersonal relations between mother and child or among members of a family. In one study in which a projective test was used to measure responses to advertising, when children described what might happen if a parent did not buy the product, their response showed that television advertising could lead to family conflict. (25) Another study comparing children's choices of an advertised toy with other socially desirable alternatives found that children who saw the advertisement chose to play with the toy rather than with a friend, thus suggesting that television commercials may be influencing interpersonal relations. (26)

That parents can help their children to understand television advertisements and to use skills beyond those usually found at their stage of cognitive development has been show through observation of nine families. (27) Parents, it has also been shown, can be induced to use guidance. In one study, after television guides were mailed to parents for 6 weeks, the children reported they were receiving more comments about the programs they watched. (28)

Television and tension in the family were the subjects of another study in which two possible outcomes were proposed: (29) One was that the noise of television would aggrevate tension, and the other was that television viewing would be used to avoid tense interactions and expressions of anger. A sample of 64 persons were interviewed or filled out a questionnaire asking for example, "Is anyone you live with too critical or faultfinding?" and "Are you often moody?" Results showed a positive relation between television time and family tension which was interpreted as supporting the hypothesis that television is used to cope with tense family situations.

Other favorable functions of television have also been suggested. One group of researchers believes that television helps promote the accessibility of family members to others in the family and also allows teenagers to "legitimize" daydreaming while seemingly watching television. (30) Another investigator has constructed an elaborate classification system of the positive functions of television viewing as a social resource in the family. (31) The social uses of television are divided into the structural uses (use as background "noise" or to regulate time and activity) and relational uses (facilitating communication, social learning, etc.). This system may be valuable in future research.

As is evident, much of the research on families has consisted of content analyses. Most investigators in this field believe that television families almost certainly influence viewers' thinking about real-life families. Television characters can shape ideas and attitudes about families, and suggest what husbands and wives are supposed to do and how parents should interact with their children. It has been proposed, however, that future content analyses should examine more of the latent content of television and its more subtle messages and also give more attention to communication and interpersonal behavior.

More research is needed on families with different patterns of communication; typologies developed in the sociological research on marriage and the family might be applicable. There also is a conspicuous neglect of research on the influence of siblings and peers.

Much of the research on familial (and other interpersonal) influences on television use can be faulted because of too much focus on parental control of a child's viewing time. Such research seems to assume

that the "parent molds the child," but recent work in child development shows how much impact even very young children can have on their parents' behavior. The finding that parents let their children select television programs for them is a case in point.

From the methodological point of view, one of the problems with studies on the family and social relations is that most television research still operates on the basis of the two-variable model. It continues to ask, "Is there an effect on television?" Instead it should ask, "Under what conditions is an effect most likely?" To investigate interpersonal effects, researchers need to use the family or peer group as the unit of analysis and to investigate the processes associated with television use.

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Chapter VIII

Television in American Society

The impact of television on American society has attracted the interest of behavioral and social scientists for the past 30 years. To understand the effects of television, they say, it is necessary to understand the structure of American television, how decisions are made in the industry, how and why the content is created, who determines the nature of the content, and what is the role of the audience in the process.

The United States has 1,021 television stations of which 753 are privately owned commercial businesses. The other 268 are public or educational television stations supported by public appropriations and private contributions. About 95 percent of the audience's viewing time is spent watching commercial television. American television is essentially synonymous with commercial television.

Because commercial stations must be profitable to stay in business and because they achieve their revenue through advertising, they must amass an audience—or a market—for their advertisers. Entertainment programs draw the largest audience. Although commercial stations broadcast other kinds of programs—news, public affairs, documentaries, education—entertainment programs are as a whole the most popular. American television at its heart is entertainment television.

The Federal Communications Commission (FCC), established by the Federal Communications Act of 1934, issues licenses to broadcasters and thus sanctions the structure of American television. A broadcasting station must operate in the public interest if it is to be granted a license. This requires a "reasonable" amount of news and community-oriented programing. While the FCC can revoke a license if a broadcaster does not adhere to this requirement, licenses have been revoked only rarely. The FCC is constrained both by the language of its authorizing statute and by the free press guaranty of the First Amendment from interfering in programing. Although the FCC probably could do more to influence the content of programs, such action would almost certainly be tested in the courts, and the FCC has shown little interest in instigating such tests.

Certain Federal government policies have some influence on what appears on television. One is the "fairness doctrine" stipulating that, if they cover controversial public issues, broadcasters should include various points of view; and the other is the "equal time" provision which states that broadcasters must give equal access to political candidates. The Federal Trade Commission, under its authority to protect the public from deceptive or misleading claims by advertisers, can have an effect on commercial stations by its rulings against advertisers. The Federal judicial system has played a role in structuring television, especially in conection with antitrust actions. An example is a Justice Department suit in 1972 that resulted in the networks divesting themselves of program production. In this era of renewed emphasis on the States and municipalities, it is worth noting that neither the States nor the cities now play any role at all in licensing or regulating the television industry.

The Federal government, then, does have potentially profound power over television, and the industry must do its business in the shadow of this power. But the government has not chosen to move in the direction of specific controls or mandates. The American television industry is remarkably free to create its own programs and to broadcast what it wishes.

Commercial television is dominated by the three networks—the American Broadcasting Company, the Columbia Broadcasting System, and the National Broadcasting Company. In fact, to echo a phrase used before, commercial television is almost synonymous with network television. The television industry has "codes" to which the programs are expected to conform, and the networks have standards departments that apply the codes in making decisions about the acceptability of particular programs. Actually, however, the most important arbiter of broadcasting is competition for

the audience. As a matter of fact, it has been said that the true function of American television is not to entertain or to educate but to provide a audience for advertisers. The networks have the final decisions on what programs to broadcast, but they also must persuade local stations that they can provide them with programs that will draw large audiences. In this connection, it might be mentioned that television programs in many other countries are determined by what is judged as the public interest, not just by their popularity and market value.

The Production of Prime Time Television

Television and its programs do not just happen. They are planned products of a huge, wealthy, and highly competitive commercial enterprise. The television industry—its stations, networks, production companies, actors, writers—is responsible for selecting, creating, and distributing the programs. What follows will focus primarily on dramatic programs—the episodic series, the movies made for television, and the mini-series—in other words, the most popular kinds of programs. (*1*)

Dramatic programs produced specifically for television have filled most of television's time since about 1967. With the advent of cable and pay television and of video discs and tapes, the television movie is rapidly gaining in importance. In the 1970s, however, the episodic programs or series, usually appearing for a half hour or an hour per week, were the most popular. (*2*) A series has a central theme running throughout, but each program is a self-contained "chapter." This means that a viewer can watch one show or a few shows which can be seen in any sequence. The format is ideal for broadcasting and especially for rebroadcasting or syndication.

The past 10 years have seen several changes in television drama. (*3*) The action-adventure-police series decreased (except on reruns), and the situation comedies grew in popularity. Topics previously considered taboo emerged: unmarried couples living together, more divorces, divorced women raising children, and more single career women. Politically controversial dramatic programs, such as *Roots*, became acceptable. Other changes will undoubtedly take place in the future; the situation comedy will probably begin to lose ground, and the movies, the miniseries, and the series with a soap opera format, like *Dallas*, may become more prevalent.

Mass communications are organized activities. The work is done by groups of people arranged in a bureaucratic form of organization. Most bureaucracies are hierarchical, with the decisionmaking power vested in a few individuals at the top of the bureaucratic pyramid. But the American broadcasting industry is somewhat complicated by the fact that several different organized bureaucracies—the local stations, the production companies, and the various unions—are involved in the creation and broadcasting of the programs.

The content of television is not determined by those who broadcast the programs but by the producers. (*4*) Yet the producers must provide material that will be bought by the networks, and the networks must please the local stations. The three networks finance most of the productions, and the final decisions are made by a few network officials who are far removed from the details of the creative production process. The networks are involved all along the way in the planning and production process. As a first step, the producer presents a story idea to a network executive. If the decision is favorable, the producer goes ahead with the script. But even if the script is finished and bought by the network, there is no guarantee that it will be used for a program. The network can abort a project at any time. Or the network can ask for a rewrite either by the same writer or by someone else. The script, if all goes well, is then used as a basis for a program—a pilot film, a series, a miniseries, a movie.

The network leases the program for two showings. Rights to sell to other markets remain by law with the producer not with the network. But the large audiences commanded by the networks are the major determinants of success in making later sales, so that the producers are dependent on the networks not only for the first showings but for later showing as well.

Although the networks dominate television, alternatives are on the horizon. In 1977, a cooperative called Operation Prime Time was formed by a group of stations. (*5*) This group is beginning to finance the production of more and more programs. Movies sold directly to cable and pay television broadcasters may also challange the networks during the next several years.

In 1980, there were 20 television producers, with 9 of them doing most of the production. (*6*) The producers fall into two groups: first, the independent producers, and second, the large production companies, which also make movies, phonograph records, video discs and tapes. The large companies all operate in much the same way. They have an executive producer who is responsible for several programs and on-line producers who are in charge of day-to-day work on a program. In the independent companies, some of the on-

line producers also function as executive producers primarily as a means of maintaining control. After a program has been "purchased" by a network, the producers have quite a bit of power. They hire the cast—except perhaps the stars, the directors, and the writers. They handle the story development and cut and edit the film or tape. They carry out many of the same tasks as the directors of feature movies. In fact, it can be said that the feature movie is a director's medium and television is a producer's medium.

Actors, especially the stars, have become more powerful in recent years. (7) Often they constitute the main attraction of a program, rather than the story-plot or the direction. Through their union activities, the actors can stop production and in other ways influence the industry. Nevertheless, for most individual actors, power is ephemeral. The most famous movie stars and personalities could probably exert more power than they do, but few of them appear on regular television shows. And even the wealthiest stars need to turn to others for financial support if they wish to start production companies.

Of all the people working in television, the writers are most like the stereotype of the "creative artists"—the novelists, poets, or painters—but also have the least power and little responsibility. Writers often see themselves as artists or educators. (8) Some of them try to work didactic messages into their scripts, and many of them claim that they would prefer to write drama for the theater or other kinds of fiction. Aside from writing the dialog and devising the situations, most television writers do not believe their work is very creative. Their work is routinely subject to rewriting, and their scripts can be changed by practically anyone in the production process.

The Public's Attitude Toward Television

How does the audience fit into this whole power structure? (9) How much power and responsibility does it really have? The answers are equivocal, and the topic is controversial. Some people, mainly the broadcasters, assert that the audience is all-powerful in determining the content of television shows. The shows are planned and produced solely to please the audience and to obtain the largest audience possible. At the other extreme are those who maintain that people in the audience have little or no power. They are not consulted when the programs are planned. Only after a program is on the air can an audience react to it. They really are passive and helpless, docilely consuming whatever is presented to them. And some observers, of course, take a middle stance; the audience, they say, has a certain amount of influence, mainly indirect, on what they can watch on television.

Two important points need to be made: One is that there are many different audiences, not merely one large monolithic mass. Also not to be overlooked are the "pressure groups" which during the 1970s were active in advocating many kinds of changes in television content and whose impact on dramatic programs may be more substantial than people realize. These groups have, at various times, included the American Medical Association, the Parent-Teachers Association, the National Organization for Women, and Action for Children's Television, among many others.

Notwithstanding arguments about who controls television, the public's evaluation of television is predominantly favorable. (10) This evaluation can be attributed to the "cybernetic effectiveness" of the television system and its use of feedback through audience ratings. If a program is not liked, it is stopped. If television loses favor with the public, changes are made until the favor is restored.

Some aspects of television arouse the audience's hostility. Many of the visually exciting events have been called disturbing, offensive, or irritating. About half the adult audience thinks that some television programs are unsuitable for children. (11) Violence is especially disliked. There is increasing concern about "moral issues," including bad language, sexual behavior, alcohol consumption, smoking, lying, exploitation of children, and so on. These criticisms have led to opposition by various groups such as the American Medical Association and the Parent-Teachers Association. (12) The opposition extends to objectionable advertising and also to the advertisers who are pinpointed as sponsoring undesirable programs. (13)

Even though the public seems to be generally satisfied with television, there are enough signs of dissatisfaction to suggest that changes may be forthcoming.

Television's Effects on American Social Institutions

The pervasive presence of television throughout American life has had an impact on some of the basic social institutions throughout the culture and way of life. These include laws and norms, public security, citizenship, religion, and leisure.

Most of the research on television's effects on laws and norms has taken place in the context of studies of

violence, aggression, and other antisocial behavior. That violence on television is correlated with aggressive behavior is now well documented in both laboratory and field studies. (*14*) Specific programs also have been followed by antisocial acts, as, for example, the spate of bomb threats coming closely after the television play, *Doomsday Flight*. (*15*) Such findings are said to show that television may contribute to disruption of the social order.

Another of television's effects on societal norms, it has been claimed, is to reinforce the status quo. (*16*) Television portrayals, especially those in violent drama, assign roles of authority, power, success, and failure in a way that matches real-life social hierarchies, and thus they perpetuate power, on the one hand, and subservience, on the other. Furthermore, it has been argued that television contributes to a homogenization of society and to an assimilation of middle-class values throughout the population. (*17*) Television certainly has become a shared experience for people from all walks of life. But how potent a force it actually is in maintaining or changing the country's laws and norms remains to be explored through additional research and analysis.

The effects of television on public security have been illustrated in terms of its attention-getting power and by the impact of dramatically vivid coverage of an event on subsequent events. For example, it is said that the television broadcasts in color of the shooting of an unarmed prisoner by a South Viet Nam general may have mobilized opposition to the war. (*18*) Another example is the apparently serial nature of terrorist and other violent events, in which one event seems to lead to another. Assassination attempts are a frightening case in point. Perhaps the ubiquity and prominence of television coverage are an explanation. Political and other demonstrations seek television coverage to be sure "the whole world is watching!" This coverage not only reports the events but is important in shaping them. These attempts to gain television coverage on behalf of a cause or goal may culminate in actions that directly affect public security. All these examples raise many questions about television's ethics and policies, and they may be the subject of debate during the next several years.

Television is now a primary source of news for most Americans, many of whom rank television as the most useful, credible, and relied upon of all the media. (*19*) Beginning in 1970, newspaper circulation began to fall in relation to numbers in the population. Whether or not this drop can be blamed on television is uncertain, but it is plausible that more people are now depending on television, especially those who have grown up with it. In addition, many people who get their news from television are those who previously got no news at all. Television has brought them into the cultural mainstream. Therefore, through its power as a conveyer of news, television can be viewed as molding the beliefs and actions of the country's citizens.

Television has obviously reshaped American politics and changed the behavior of politicians and of political campaigning. (*20*) The evidence thus far, however, suggests that it has little, if any, effect on voters' choices, though it may help to sharpen or reinforce the choices. (*21*) Television, over the next several years, may well become the dominant force in American news and politics, and then it will be faced, even more than now, with the challenge of how to present information and issues rather than only the drama and personalities of politics.

Behavioral scientists have done almost no research on television's effects on religious behavior. There is some evidence that television has reduced the time viewers spend on conventional religion, but that is about all. (*22*) About 13 million adults watch the religious services broadcast on television on Sunday mornings. Perhaps some of the audience cannot get out to attend a regular church service, perhaps some prefer services on television, and some undoubtedly attend church at a different hour than they watch religious services on television.

Some observers of the television scene have offered theories and opinions relevant to television's impact on religion. (*23*) For example, it has been said that television itself has many of the characteristics of a religion. Its messages are often received without question, almost as an act of faith. It communicates values and interpretations of the world not only directly but implicitly in the kinds of programs and in the attributes of the television performers and portrayals. The prominence of television in the thought processes of many seriously mentally ill patients is one line of evidence that television is becoming like a religious institution. "Religiosity" is well known as a feature of schizophrenia, the most serious thought disorder. Delusions about characters on entertainment television are now found in the reported thoughts of many schizophrenic patients, just as delusions about religious figures have commonly been found in centuries past. A quasi-mystical link to entertainment figures seems now to be as common as the quasi-mystical link to religious figures often found among the seriously mentally ill.

Television has altered the ways Americans spend their leisure time, no doubt about it. Television ranks third behind sleep and work in the amount of time spent on it. (*24*) This devotion to television is not the

same in all segments of society. (25) People in lower socioeconomic strata, women, the elderly, and minority groups have been most influenced in their allocations of free time because they watch the most. Yet it is possible that the more affluent are affected also, mainly by being drawn away from other leisure activities.

Not only has television changed the ways in which Americans spend their time, but it has changed other leisure activities as well. It has drastically cut down on the general audience for movies; consequently to lure special audiences, movies now contain more extreme violence, horror, and explicit sex. (26) Television may have caused the demise of certain general magazines, like the *Saturday Evening Post, Collier's,* and *Look,* because funding for advertising was withdrawn and shifted to television. Sale of comic books was cut in half between 1950 and 1970. Publication of books of fiction, poetry, and drama decreased from 22 percent to 13 percent of the book publishing business, although the absolute numbers of books published increased. Library circulation of fiction decreased much more than nonfiction. And radio shifted dramatically from a national to a local medium.

Television's effects on sports, though it probably is considerable, is hard to pinpoint. Television may harm a sport by keeping people away from the stadium, but at the same time it may support it through fees paid by broadcasters to cover it. Television certainly has drawn attention to some sports, like tennis and soccer, and to many cultural events as well. It made football the most popular national sport and created a new national holiday with parties, celebrations, and all the trappings of a festive occasion—the day of the Super Bowl.

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Chapter IX

Education and Learning About Television

Interest in teaching about television has been a significant development of the 1970s. Many people have become concerned about the effects of television on the behavior of children and on their own lives. Some have reacted to these concerns by wishing to regulate the television industry and its programing. Contrarily, a constructive alternative to control and censorship, it has been said, is for the American public to acquire more sophistication about the medium of television—to achieve television literacy and critical viewing skills. The assumption is that greater understanding of the medium may mitigate its possible harmful effects and perhaps enhance its beneficial effects. In addition, it is now widely believed that over the next several years television will probably become more and more important in all educational systems, and consequently children, and adults as well, should learn to watch and to understand television in much the same way as they learn to read and to acquire other skills.

Another important and relevant area of research is the relation of television to other educational efforts, particularly traditional schooling. Specifically, this research asks the question: Does television have any effect on educational achievement and aspirations?

Educational Achievement

Movies, comic books, radio, even books—all have been accused, at times, of pernicious influences on the proper education of children. Television is the newest target. Some people, of course, believe that television is a reason for rejoicing, for it brings knowledge about the whole world into people's homes. Others are more neutral about it, saying that perhaps it has some benefits and advantages. But the most vocal group heaps many faults on television. Excessive viewing, for example, was named by 49 percent of respondents to a 1976 Gallup poll as the cause of poor quality of education. Among adults, those who look at television have, on the average, spent the fewest years in school. This often reported finding has been interpreted to mean that educational level "causes" the amount of viewing. But could the inference go the other way around? Does the amount of television one watches in childhood and adolescence contribute to educational accomplishment or its lack? Does it involve some complex interaction of ability, achievement, and aspirations?

Research findings, beginning in the 1950s, seem to agree that there is a negative association between amount of television viewing and mental ability or IQ; the more viewing, the lower the IQ. (*1*) The association is much stronger for boys than for girls. There also is a difference in the range of IQ scores related to heavy and light viewing. For light viewers, there is a wide range or variance, and for heavy viewers there is a narrow range of scores. Because the studies are correlational, it is not possible to say at this stage of the research whether those with lower IQs prefer to watch a great deal of television or whether being a heavy viewer leads to lower scores.

The research on relations of television to aptitudes or IQ is relatively straightforward, and the results are clear, especially when compared with the research on achievement where the issues are more complex and the results more doubtful. In the early research, a typical approach was to compare groups without access to television with groups that had it or to compare groups before and after they had television. One of these studies found higher grades after the introduction of television; another found no changes; another found that younger children with television had better vocabularies until about the sixth grade; and still another found slightly better grades among the nonviewers. (*2*)

Pre- and post-ownership reception studies outside the United States have provided the same mixed findings. In Japan, television was accompanied by a decline in time spent on homework and reading, particularly for fifth and seventh grade boys. (*3*) In Finland, essen-

tially no differences in vocabulary were found. (*4*) In Venezuela, language arts and mathematics were higher in high school students with television in the home. (*5*) In El Salvador reading skills went down when a family acquired a television set. (*6*) In the Canadian study, described previously, the researchers investigated what happened in three towns named, for research purposes, Notel, Unitel (one channel), and Multitel (several channels). (*7*) Before television came to Notel, the children in the second and third grades had higher reading scores than those in Unitel, who in turn were higher than the Multitel children. But 2 years after Notel had television, the higher scores for its second and third graders were gone.

Two recent studies also report relatively strong negative associations between viewing and achievement. One study compared sixth graders in homes with "constant" television (the set was almost always on in the afternoon and evening) with sixth graders from "nonconstant" homes. (*8*) Two-thirds of the children from the "constant" homes read below the fifth-grade level, and in the "nonconstant" homes, two-thirds read above the fifth-grade level. In the second study, young children showed a large negative correlation between amount of viewing before they started school and their scores on reading, arithmetic, and language tests in the first grade. (*9*)

Where extent of viewing is considered, almost all the research has found that older children beyond the fourth grade who watch television a great deal tend to have lower school achievement, especially in reading. (*10*) The correlations are not high, but the tendency is there. It has been proposed that a curvilinear relationship might account for the low correlations. Several large-scale, statewide assessment programs and other research support this possibility. (*11*) Among young students up to about the eighth grade, those who watch television about an hour or 2 a day get higher scores on reading than those who watch less television. But, then, reading scores begin to decline commensurate with increases of television-viewing times. A medium amount of television viewing thus is related to better reading scores than either a low or a high amount. But it should be emphasized that in pre- and early adolescence this relationship does not hold; for such children, scores are directly related to amount of viewing. Another important point about the relationship between low viewing habits and low reading scores in young children is that there are very few low-viewing children. Perhaps for these children, low reading scores merely reflect a general lack of interest in both television and school work.

These data seem straightforward, but the possibility of spurious results due to a failure to control for possible confounding effects of such factors as IQ or socioeconomic status must be considered. IQ seems the most important of such variables. When IQ has been controlled, reduced but still significant correlations are derived for such achievement aspects as reading and language usage. (*12*) But the influence of viewer intelligence on media effects may be even more complicated than suggested above. There appears to be considerable variability of effects between viewers of low, medium, or high IQs. Among students with high IQs, heavy viewing seems related to low achievement on reading comprehension, language usage and structure, and total achievement test scores. This is true for both boys and girls. But for girls only, the negative relation holds also for vocabulary and mathematical concepts and problems. In a related study, students with better educated parents were found to be low school achievers if they were heavy viewers. An unexplained finding is that girls with low IQs who were heavy viewers were better in reading comprehension and vocabulary.

Unlike many other areas of television research, there has been some research with adults which bears out the findings with high school students. (*13*) On tests of verbal intelligence, adults' scores were clearly related to amount of viewing—the more the viewing, the lower the scores. The relations, however, were not quite as large for nonwhites or for those with less education.

Television and Reading

Findings showing reading comprehension to be lower for students who look at a great deal of television have led to a detailed examination of the relationship between the amount of time spent on television viewing and the amount spent on reading. (*14*) A group of students were followed for 3 years. In the first year, as expected, the heavy viewers read less than the light viewers. But in the second year, the heavy viewers read somewhat more than the light viewers, and by the third year, the heavy viewers' reading increased even more. In the first year, the heavy viewers read, on the average, .75 hours a day, and the light viewers read .96 hours a day. By the third year, the same heavy viewers were reading 1.23 hours a day and the light viewers only .70 hours a day. Television, it appears, does exert a significant, positive, longitudinal influence on time spent reading.

But why? It may have to do with what is read. In the third year, students were asked to report the kinds

of materials they liked to read. For the total group, there seemed to be little relationship between viewing and reading preferences, but for students with a low IQ, the more they watched television, the more "types of things" they liked to read. Also, the heavy viewers liked love and family stories, teenage stories, and true stories about television and movie stars—the same kind of material that often appears on television. Light viewers, on the other hand, chose science fiction, mysteries, and nonfiction.

In a study of adults, there was no difference in viewing habits between those who read books and those who read periodicals, but those who did not read at all watched television much more than the other groups. (*15*).

Educational Aspiration

Although sociologists have long been interested in the factors that develop and maintain educational and career aspiration, little has been done on the role of the mass media. Many content analyses have shown, of course, that television greatly overrepresents skilled and professional workers. (*16*) A few studies have examined television as a source of information about jobs or the similarity between students' perceptions of occupations and the way they are portrayed on television. (*17*)

Television's treatment of education is ambiguous. It seems to idealize the process of education, yet denigrate the pursuit of scholarly activities. The emphasis on professionals may lead to high expectations and aspirations, and yet the rather condescending and comic portrayals of schools and teachers may have the opposite effect. A study of second to fifth graders showed that, while heavy viewers did not think it important to do well in school, they aspired to high status jobs. (*18*) In the 3-year study of students, referred to previously, it was found that heavy viewers both wanted and expected to spend fewer years in school. (*19*) The question is whether this is a reflection of the television content or merely of the amount of viewing; perhaps heavy viewing leads to a change of interests and to a lack of ambition. But the results do show that in the first year of the study early adolescents who watched more television aspired to lower status jobs and wanted to spend less time in school. After 2 years, the situation changed. For girls, heavy television viewing in the first year was related to higher educational and occupational aspirations in the third year. For boys, there was no relation, but this was a change from a negative relation in the first year. Another finding was that heavy viewers with a high IQ wanted more education than did light viewers with a high IQ. Television may be getting across the message to these intelligent students that more education is needed to qualify for the prestigious jobs shown on television. Yet, paradoxically, the students with high IQs who were heavy viewers also were low achievers.

Other interesting relationships emerged. (*20*) If parents do not take an active role in their children's television viewing, in other words, if they are not restrictive or do not use television as a means of providing information to their children, then the heavy viewers have higher educational goals. And conflicting goals seem to occur for students who are immersed in television programing and identify with it beyond the hours of exposure. Highly involved viewers desire both higher status jobs and fewer years in school.

For girls, television seems to have particularly conflicting consequences for school and careers. (*21*) Most of the girls who watch television a great deal think that women are happiest at home taking care of their children, and they want to get married, have children while they are young, and have several children. At the same time, these girls plan to continue with their schooling and have high ambitions for careers. A practical consequence is that heavy viewing among girls may lead to a variety of difficult situations with no easy solutions.

The primary finding in all this research is that not only the intensity but the direction of television's consequences for education—both achievement and aspiration—depends on many factors which may mediate, condition, enhance, diminish, or reverse the associations. In addition, the questions of how underlying processes of interaction with other social, family, and personal factors actually work are still open.

Learning About Television

The surge of interest in critical viewing skills stems from a desire by many groups, such as educators, parent-teacher associations, youth groups, psychologists, teachers, and other professionals, to make television viewing a positive and beneficial experience. Recognition of the importance of television as a part of a child's growing-up experience has led in recent years to the view that children need to learn something about how to watch television and how to understand it. Much as they are taught to appreciate literature, to read newspapers carefully, and so on, they need to be prepared to understand television as they view it in their homes. The field of critical television viewing

skills is essentially in its infancy, but it reflects the general trend toward setting the medium of television in its place as part of the overall system of cognitive and emotional development.

Television Curricula

A first step in planning an education program on television viewing is to construct lesson plans or curricula. Probably the most comprehensive statement on critical viewing skills was written in 1978 at the U.S. Office of Education as background for its sponsorship of four major projects to develop materials for students, parents, and teachers in order to assist them in using critical viewing skills. (*22*) Also in 1978, a conference sponsored by the National Institute of Education suggested that students be taught to select, understand, and retain useful television content, to critically evaluate "information" presented in television programs, and to appreciate the craft and construction of television programs. (*23*)

One investigator in this field believes that a curriculum to teach critical television can be focused on one of four underlying constructs: intervention, goal attainment, cultural understanding, and visual literacy. (*24*) Use of the "intervention" construct leads to a curriculum emphasizing that television does things to the viewer; students are taught production techniques, program formats, purposes of commercials, and so on, with the hope that they will apply this knowledge to their everyday viewing. The "goal attainment" construct first asks students why they look at television and encourages them to have productive objectives. An illustration is a curriculum written by the public television station WNET, with support from the Office of Education, that begins, "This curriculum will provide your students with the inner resources for making their own decisions about the television programs they watch." The "cultural understanding" construct encourages students to use and appreciate television as a form of esthetic expression. The "visual literacy" construct focuses on the need to understand the many messages in television programs and how television communicates these messages. This classification is appealing but in any actual curriculum the four constructs cannot be separated. They are all facets of a single though complex issue.

The objectives of a critical viewing curriculum have been stated in many ways. One list has 10 objectives: (*25*)

1. Understand the types of programs
2. Understand that programs are created
3. Understand the electronics of television
4. Learn what aspects of a program are real and how fantasy elements are created
5. Learn the purpose and types of commercials
6. Understand how television influences a person's feelings and ideas
7. Become aware of television as a source of information and the use of stereotypes on television
8. Understand the differences between violence portrayal on television and violence in life
9. Become more aware of personal viewing habits
10. Use television in a language arts framework

Another curriculum identified the following 6 objectives: (*26*)

1. Ability to describe own television-viewing habits
2. Ability to describe why a program is selected
3. Ability to identify the role of television in personal life amid the activities it competes with
4. Ability to describe the consequences of viewing and the other activities with which television competes
5. Ability to identify program-content characteristics
6. Ability to identify uses of different programs

These curricula have been based mainly on a priori editorial judgments.

Only one project has conducted research to identify the number and nature of viewing skills. (*27*) In its first phase, 80 teenagers and adults were interviewed about their viewing habits. Five personal dispositions serving as viewing skills were identified: explicit and spontaneous reasoning; readiness to compare television content to outside sources of information; readiness to refer to knowledge of the television industry; tendency to find television content fabricated and inaccurate; and less positive evaluations of television content. These skills were then verified by teaching facts about the production of entertainment programs and the television industry's economic system to kindergarten, second, and third grade children. It was found that, after the course, the children were more likely than others to judge that the elements of a television program were "pretend."

Some of the curricula on critical viewing skills have been tested and evaluated. In one study, the curriculum was made up of eight 40-minute lessons designed to teach information about television to third, fourth, and fifth grade children. (*28*) It was tried out on a group of middle-class children with an average IQ of 110 and a reading grade level of 5.6. This group looked at television about 15 hours a week on the

average. The lessons taught the children about different kinds of programs: to understand the difference between reality and fantasy, to understand special effects, to learn about commercials, to learn how television works, to understand how television influences ideas and feelings, to understand how television presents violence, and to encourage control of viewing habits. The teachers were trained to use the materials, and videotapes were produced highlighting various points made in the lessons. The results showed that the children learned a great deal about television, especially about special effects, commercials, and advertising. They understood how television characters "disappear," what techniques are used to make products seem better, who pays for the programs, and where to write concerning programs and commercials. They also learned to distinguish between real, realistic, and fantasy people and to understand that television violence is not real. Furthermore, at the end of the course, they could write imaginative scripts and commercials.

Another study constructed a test called the "Television Information Game." (*29*) After being taught "television receivership skills," students in the third, fourth, fifth, and sixth grades did much better on the test than before the course. Many of the scores, however, were not any higher than pretest scores of the next higher grade, thus suggesting that the results could be accounted for by maturation. These investigators maintain that neither provision of information nor mastery of information is sufficient; instruction must be keyed to developmental needs.

Role of Parents and Significant Others

Parents, teachers, and older brothers and sisters are probably most important in determining television programing effects on children. Early evidence of this importance was found in a first-year evaluation of *Sesame Street* in which it was shown that those children who learned more than others were watching at home where their mothers were viewing with them and talking about the show. (*30*) A few years later in a study in which mothers were encouraged to watch *Sesame Street* for 2 hours a week with their children, these children, particularly, the lower-class groups, developed more of the specific cognitive skills the programs were designed to teach. (*31*)

Parental control of the amount and kind of viewing also seems to be important. Parents today are more interested in television viewing and its effects than they were when television was first starting. A survey in the 1960s showed that mothers were relatively apathetic about their children's television viewing. (*32*) More recently there are indications of rising parental concern.

There are at least four areas in which parents can intervene and control television viewing: (*33*) (1) amount or number of hours of exposure, (2) supervision of viewing, such as deciding what kind of programs can be viewed, (3) parent and child viewing television together, and (4) parent-child interaction, that is, intrafamily activities other than watching television.

Several studies support the value of parental involvement. (*34*) One early research project found that an adult's comments affected the amount of later aggression shown by the child; if the adult made favorable comments about aggression, the child became more aggressive than if the adult made unfavorable comments.

In another study, one group of mothers interacted with their first grade children during routine television viewing; one group watched with their children but did not interact with them; and a third group did not watch television. (*35*) After 1 week, the children who watched television did better on social problem-solving tasks, and the group of children in which the mothers interacted with the children were best, gaining even higher scores. Not only parents but other adults can influence what young children learn and retain from television, as demonstrated in the study in which adults called attention to specific segments of *Mister Rogers' Neighborhood* and the children learned much more.

In still another study of adult mediation, preschool children were assigned to one of two groups. (*36*) In one group, pairs of children viewed an episode of *Adam-12* with a teacher who made neutral comments, such as "Let's watch a TV show." The other group watched with the same teacher, but this time she made explanatory comments about the program content such as, "That boy is in trouble. He is playing hookey and that is bad." The children who watched while the teacher made specific comments about the program showed a highly significant increase in the knowledge of details of the program, an increase in their knowledge of truancy—the theme of the episode—a decrease in erroneous knowledge about truancy, and an increase in positive attitudes. The results were still present a week later.

These studies were done with small numbers of children watching the television set. Comments and explanations about television while large groups of children are watching in a classroom are also effective. (*37*) Teachers can increase the educational effects of such programs as *The Electric Company* by helping their students understand them.

Recent research indicates that television itself can be used to encourage critical viewing skills. In a *Batman* program, inserts were made explaining that Batman is not real and that in real life it is illegal to hit and hurt people. (*38*) Children who watched the program with the inserts were less likely to be in favor of aggression to solve conflicts than were children who looked at the same program without inserts.

Two investigators in the field list six methods that parents can use to help their children attain critical viewing skills: (*39*)

1. Limited viewing. Parents can limit the amount of time children view television.
2. Content control. Parents can encourage or discourage viewing particular programs.
3. Purposeful viewing. This is the most difficult skill because it often demands changes in personal habits.
4. Direct mediation. Parents can provide explanatory comments.
5. Indirect mediation. Parents can model critical viewing skills by discussing programs with others in the presence of the child.
6. Springboard techniques. Parents can show children how television information can be applied to, and have implications for, many events in everyday life.

Other Adult Mediation and Modeling Techniques

Children's cognitive skills and fantasy activities have been improved through use of modeling techniques. (*40*) The adult model essentially teaches the children to play games that they can then use in their own playing and generalize to learning situations. One investigator believes that television should teach, by modeling, various ways of approaching a problem. (*41*) Television could be used to teach self-instruction, as for example, teaching impulsive children to develop self-control by first talking out loud to themselves and then covertly. (*42*) Another suggestion is that television might use split-screen techniques to teach such skills as conceptual thinking; while a character is solving a matching problem, such as sorting colors, on one side of the screen, the reasoning processes could be shown on the other. (*43*)

To determine if television could be used to enhance imagination, one project used modeling techniques. (*44*) Children were assigned to four groups: In one, they watched a model who taught make-believe games; in another, they watched *Mister Rogers' Neighborhood* with an adult who interpreted what was happening and directed their attention to certain events; in a third, they watched *Mister Rogers' Neighborhood* without the adult; and in the fourth group, they did not watch either the model or television. The children's imaginative ability was rated during free play and by two tests of imagination. The experiment lasted for 2 weeks and involved 10 sessions of training. Children who were taught by the model increased the most in imagination. The next largest increase was made by the children who saw the television show when the adult explained it. Those who saw only the television made slight gains, while the fourth group had a decrease in imagination.

Other investigators have found similar increases in imagination after children watched *Mister Rogers' Neighborhood,* and again teacher training and involvement led to the most consistent results.

At the Yale University Family Television Research and Consultation Center, there have been several projects to assess intervention techniques. In one study, parents of middle-class, preschool children were placed in one of four training groups: (*46*) for stimulation of imagination, for stimulation of cognitive skills, for imparting television information, and "no training." They attended four sessions during a year and received various supplementary training materials. The parents kept records of their children's television viewing for 2-week periods four times during the year; the children's behavior was rated eight times during the year. Results suggest that the parents' imaginative and cognitive training indeed did increase the children's spontaneous imaginative play.

The following year, the investigators conducted a somewhat similar study with lower-class preschool children. The object was to see if the use of ideas from television programs in lessons could increase children's imaginative, social, and cognitive skills. Television segments from educational shows were to exemplify and reinforce such concepts for the children. Thirty lessons were developed on imaginative, cognitive, and prosocial behavior and feelings, such as, sharing, taking turns, empathy, feelings of failure, and need for love. Teachers were trained to use the lesson plans and had ongoing inservice training. The children themselves were assigned to one of three groups: the first to receive the television lessons with teacher reinforcements, a second to receive television lessons only, and the third to receive only the standard nursery school curriculum. Half the parents in each group attended workshops in which they discussed the lessons, were told about the television research, were given guidelines for television viewing, and were encouraged to contribute to a news-

letter and to make TV Toy Kits for the children to use when they watched home television. Results disclosed that, when children received television plus teacher reinforcement, they showed a gain in imagination, interaction with peers, cooperation with peers, and leadership. They also were less aggressive in the classroom. The parents' attendance at the workshops seemed to be an especially important factor in these improvements.

In another study, a new television program was assessed to see if a format with both educational and entertainment components would lead to cognitive gains in nursery school children. (47) One group just watched the program, another watched the program and had a followup discussion with the teacher, and a third group merely saw a videotape of children's stories. The children who watched with a teacher and had a followup discussion made the most gains in concept knowledge.

There seems to be no doubt that television is significant throughout the educational process and that television literacy can be learned. It should be mentioned, however, that teaching critical skills is not a simple task, and great care must be used in teaching such skills. Several years ago, some educators thought they could accelerate the educational process by teaching "thinking skills" to young children. They did not succeed; these skills are developed within a maturational context, not just through educational efforts. Similarly, some of the projects designed to teach television viewing skills have had unexpected difficulties and have taken much longer than expected. Nevertheless, such investigations should lead to better methods of teaching people to become wiser and more efficient consumers of television information.

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Chapter X

Implications for the Eighties

It is now time to look at the total array of research on television and behavior in the 1970s and to discern the import and implications for the coming decade.

First, an impressive body of scientific knowledge has been accumulated since 1972, when the report of the Surgeon General's Advisory Committee was published. Some 3,000 reports, papers, and books have been published. The number of scientists engaged in research on television began to proliferate as a result of the report of the Surgeon General's committee, and the number has continued to grow. Yet, in relation to the magnitude of the research field and the many questions to which answers are urgently needed, the number of scientists involved in the study of television is still miniscule compared with other research specialists. If the momentum of research productivity achieved in the 1970s is to continue into the 1980s, the number will have to be increased.

When the Surgeon General's committee completed its report, the members believed that their task was not really finished. What had been a seemingly straightforward question of scientific evidence quickly developed extensive ramifications. While the original question on televised violence had been partially answered, the framework in which the question had been posed raised larger issues about television and behavior. Now, 10 years later, the committee's concern with these larger issues becomes even more urgent and timely.

The research findings of the past decade have reaffirmed the powerful influence of television on the viewers. Almost all the evidence testifies to television's role as a formidable educator whose effects are both pervasive and cumulative. Television can no longer be considered as a casual part of daily life, as an electronic toy. Research findings have long since destroyed the illusion that television is merely innocuous entertainment. While the learning it provides is mainly incidental rather than direct and formal, it is a significant part of the total acculturation process. Furthermore, indications are that future technological developments in programming, distribution, and television usage will probably increase television's potential influence on the viewer.

Extending over all other findings is the fact that television is so large a part of daily life. Within American society, television is now a universal phenomenon. About half the present population never knew a world without it. Television is, in short, an American institution. It has changed or influenced most other institutions, from the family to the functioning of the government.

In the 1980s, television will no doubt continue to be pervasive and ubiquitous in American life. Information about its role and its effects will be needed by all those who will help to shape television's future and to make decisions about it. Beside the general public, these groups include parents; professionals in fields like education and public health; organizations that represent special interests such as those of children, ethnic groups, mental health, and business; local, State, and Federal governmental agencies; the research community; and the television industry itself.

In contrast to previous research, the bulk of the current findings no longer focuses on specific cause-effect or input-output results. Television viewing is so entrenched in American daily life that it can only be regarded as a major socializing influence almost comparable to the family, the schools, the church, and other socializing institutions. Socialization can be thought of as the accumulation of the many specific learning experiences throughout one's life. It is not limited to the developing child, although children have an especially strong need to acquire knowledge and skills as they grow up. But at any age, a person represents the product of cumulative learning, and thinking and behavior are affected by a mixture of recent learning and of learning earlier in life. As people go through life-cycle transitions, the importance of television changes for them. Old people, for example, are more like very young people in their use of television than

they are like middle-age adults. Further studies of socialization and general learning from television need be continued with children and expanded to include the entire lifespan.

Health

With television a central feature of daily life, it is somewhat surprising that little attention has been given to its influences on physical and mental health. Television's portrayals of mentally ill persons as often being either violent or victimized is particularly unfortunate, because it may be contributing to the well-known stigma borne by those suffering from mental illness. The widespread consumption of alcoholic beverages on television, together with the fact that such consumption is presented as a pleasant aspect of social life with no deleterious consequences, may also be fostering attitudes and subsequent behavior that reinforce the use of alcohol by viewers. Similarly, the portrayals of snacks and other nonnutritious foods may be affecting eating habits, especially of children. Health portrayals on television thus are distorted frequently and have the possibility of unwittingly encouraging poor health. But the fact that very little smoking appears on television is noteworthy and perhaps an indication that television has been responsive to an important health problem. Other efforts to eliminate depictions detrimental to good health would not inhibit the dramatic impact of the programs and could have positive social consequences.

Another area, perhaps more difficult to implement, would be the possibility of programing for special populations, such as institutionalized individuals in psychiatric settings, in homes for the elderly, and in hospitals. This kind of programing offers an excellent opportunity for constructive change.

In the 1980s, it can be predicted that there will be increased use of television for health campaigns. Such campaigns should be very carefully planned and the more recent theories and practices of evaluation research applied to them. Campaigns can be a valuable resource to improve the Nation's health, but they require at least the talent and financial backing that go into making a good commercial.

There have been no attempts to assess in systematic studies the direct effect of television viewing on health. For example, the passivity of television viewing has not been studied in connection with physical fitness of children and adults. The relationship, if any, of the amount of physical exercise to the amount of viewing time is not known, nor is there any clue concerning whether early and continued heavy viewing establishes enduring patterns of passive, rather than active, participation in daily life. Eating behavior during television viewing could be significant. For example, eating junk foods while watching television is common, and it is possible that some adults link television viewing with drinking wine and beer. The cumulative effects of these conditioned eating and drinking patterns might have serious long-term effects.

Television as a stressor needs to be studied. At times, it can be stress reducing and at other times stress enhancing. The noise levels of television may operate as a chronic stressor for some persons. It is not known whether stress can be induced by the synergistic effect of television arousal and other psychosocial variables that may be operating.

There is a dearth of studies on the psychophysiological implications of television watching. Possible areas for research, to name only a few, include sleep and sleep disturbances, autonomic nervous system functioning, rigorous studies on brain lateralization, biological rhythms, and perhaps even on neurotransmitters, all as related to television. A practical question here is: Are there children suffering chronic fatigue from staying up late to look at television? The decade of the 1980's needs biomedical pioneers to begin this kind of important research.

The suggestion by the Surgeon General's committee that it would be well to explore television's health-promoting possibilities may at last be a major research direction.

Cognitive Processes

Several issues have emerged from the innovative research on cognitive processes in the 1970s, all with implications for continued research into the 1980s.

Children growing up with television must learn cognitive strategies for dealing with the medium. At very early ages, children already demonstrate active and selective viewing strategies, for example, watching animation, turning away from dialog they do not understand, turning back when music or sound effects suggest lively action or "pixillation" (animated activity). Age factors as well as properties of the medium interact to determine how children develop useful viewing strategies.

Television differs from real life by using structural symbols or codes that may be difficult to understand. A character who is remembering things from the past may fade out of view, and actual past scenes then show the character's memories. Children at young ages

may not recognize these "flashback" conventions and be confused. Conventions, such as split screens (screen divided into two parts with a different picture on each part), may not be understood, and magical effects, for example, superheroes leaping over buildings, may be taken literally. While children eventually learn television conventions and viewing strategies and incorporate some of them into more general thinking, there are suggestions that some forms of presentation are more effective than others in helping children to learn the television codes and also in enhancing general cognitive effectiveness.

Age differences are highly significant in television viewing. These differences, which themselves reflect differences in conceptual capacities (for example, the inability of preschoolers to engage in conversation), lead to sizable differences in how much sense children can make of stories on television. Structural factors, such as rapid shifts of scene, may lead young children to misunderstand the intended plots, to overemphasize the more obvious features of a story (for example, violence), and to be confused about causality. The fact that young children do not easily relate consequences to earlier actions makes the adult interpretation of the story quite different from that of the child. The contention is often made that children's programs, or adult programs watched by children, really are prosocial programs because the "bad guy" gets punished at the end. What is not recognized in this argument is the critical fact that young children simply do not see the relation between the punishment and the earlier antisocial behavior. This finding can be generalized to include a large number of other age-specific responses to, and attributes of, television viewing. The dilemma—and the challenge—raised by these research findings is that it is difficult to produce programs that simultaneously satisfy the needs and capabilities of a widely diverse audience.

Although there is some evidence that young children's imaginativeness and the stories they use in spontaneous play are enhanced by television materials, the predominant evidence suggests that heavy viewing is associated with lower imagination and less creativity. Under special circumstances with carefully designed programing and with adult mediation, children can increase their spontaneous playfulness, imagination, and enjoyment after television viewing. There is reason to believe, however, that under conditions of unsupervised viewing children may not learn necessary distinctions between "realism" and "fantasy" in stories.

More research is needed to explore ways of presenting material that will maximize not only attention but also comprehension and reflective thought. More research also needs to be done on effective learning. The research should address such questions as: What combinations of structure and content maximize interest, attention, and learning effectiveness of television for different age groups.

Emotional Development and Functioning

Children show a wide range of emotional reactions to television. The evidence suggests that moderately rapid pacing leads to arousal and enjoyment in children. For adolescents and young adults, a good balance of lively pace and some (but not too much) humor may enhance attention and comprehension. There is not yet adequate evidence to support some current beliefs that children have been led by lively television programing to be inattentive to verbal presentations and detailed material presented in the classroom. While children can learn to be more empathic and to express or understand emotions from television presentations with guidance from adults, the data on heavy viewing suggest that they tend to be less empathic or to show negative reactions, such as unhappy or fearful emotions.

The decade of the 1970s did not produce much research on the emotions and television. Increasing attention to this area is highly desirable in the 1980s.

Violence and Aggression

Recent research confirms the earlier findings of a causal relationship between viewing televised violence and later aggressive behavior. A distinction must be made, however, between groups and individuals. All the studies that support the causal relationships demonstrate group differences. None supports the case for particular individuals. As with most statistical analyses of complex phenomena, group trends do not predict individual or isolated events. This distinction does not, of course, minimize the significance of the findings, even though it delimits their applicability. Moreover, no single study unequivocally confirms the conclusion that televised violence leads to aggressive behavior. Similarly, no single study unequivocally refutes that conclusion. The scientific support for the causal relationship derives from the convergence of findings from many studies, the great majority of which demonstrate

a positive relationship between televised violence and later aggressive behavior.

During the 1970s, research on violence and aggression yielded interesting new information. Recent studies have extended the age range in which the relationship between televised violence and aggressive behavior can be demonstrated. Earlier research had been primarily with children from 8 to 13 years old. The evidence has now been extended to include preschoolers at one end of the age spectrum and older adolescents at the other. In addition, most of the earlier studies had indicated that boys, but not girls, were influenced by watching televised violence, while recent research in both the United States and other countries shows similar relationships in samples of girls as well as boys.

Despite some argument about how to measure the amount of television violence, the level of violence on commercial television has not markedly decreased since the Surgeon General's committee published its report. What this means for the 1980s is difficult to discern. If one extrapolates from the past 20 years, it can be predicted that violence on television will continue to be about the same. Yet there may be various social forces and groups that will work to bring about a diminution.

Research evidence accumulated during the past decade suggests that the viewer learns more than aggressive behavior from televised violence. The viewer learns to be a victim and to identify with victims. As a result, many heavy viewers may exhibit fear and apprehension, while other heavy viewers may be influenced toward aggressive behavior. Thus, the effects of televised violence may be even more extensive than suggested by earlier studies, and they may be exhibited in more subtle forms of behavior than aggression.

Although violence and aggression are no longer the central focus of television research, there is still a need to study them. More research is needed to distinguish how individual predisposition may interact with and influence the effects of television violence. These studies should include, for example, the relations of age, sex, race, socioeconomic status, and social setting to the effects of violence.

Prosocial Behavior and Socialization

Potentially, as research suggests, children (and to some degree adults) can learn constructive social behavior, for example, helpfulness, cooperation, friendliness, and imaginative play, from television viewing, especially if adults help them grasp the material or reinforce the program content. It is less certain whether these positive benefits are actually being achieved, since analyses of television content and form suggest that such potentially useful material is embedded in a complicated format and is viewed at home by children under circumstances not conducive to effective generalization. Additional research is required o determine the conditions under which prosocial behavior is most likely to be learned.

If almost everybody is learning from television, the question of television's influence needs to be rephrased in terms not only of what specific content is acquired but of what constraints or qualifications television imposes on people's learning capacities. Thus, television content reflecting certain stereotypes may limit or distort how people view women, ethnic groups, or the elderly, for example, and how people interpret the extent to which there are dangers that confront them in daily life.

There is a clear need to study family beliefs and styles as they may be influenced by heavy television viewing. And there has been little research on interpersonal relations as they have an effect on, and as they are influenced by, television.

Educational Achievement and Aspiration

The evidence now supports the opinion that heavy television viewing tends to displace time required to practice reading, writing, and other school-learning skills. These effects are particularly noticeable for children from middle socioeconomic levels who might in the past have spent more time in practicing reading. Television on the whole also seems to interfere with educational aspirations. The cultivation effects leading to increased cognitive skills and educational aspirations in heavy-viewing girls from lower socioeconomic levels are evident, suggesting that amount of viewing may influence social class or IQ groups differently. Unfortunately, studies examining the value of specific types of programing for reading interest and skill development have not been carried out.

The sheer attractivness of television may preempt other activities which were part of daily life, such as sports or hobbies, social activities like playing cards, and, for children, studying and homework activity. Thus the medium's pervasive attraction may also be interfering with certain social and cognitive skill developments formerly acquired through direct exchanges between people or through reading. In this

sense, television viewing may be influencing how people learn generally, not only from watching television.

Critical Viewing Skills

Recognition of the pervasiveness of television has led during the past decade to the beginnings of a new effort to teach children and others to understand the medium. Several school curricula have been constructed. Programs for elementary school children that include teacher-taught lessons, sometimes with videotape segments to enhance effectiveness, have been tested increasingly in the schools. Accumulating evidence suggests that such educational programs are welcomed by teachers and pupils and that the programs do produce changes in awareness of television production, special effects, the nature of commercials, the excesses of violence, and so on. Longer term effects of genuine critical viewing at home or of reduced viewing or more selective viewing have yet to be demonstrated. Teaching about television is considered by many television researchers to be one of the most significant practical developments of the 1970s, one that needs to be continued, expanded, and evaluated in the 1980s.

New Technologies

The report of the Surgeon General's committee predicted that new technologies would result in many changes in television programing and viewing. These changes were slow in coming, but it appears that they will be made in the 1980s. Cable television and videodiscs may gradually alter the content of entertainment television. They also may make it feasible to have different programing for various special populations. Interactive television is considered by many people to be a desirable advance because it will require greater effort and thus result in more effective learning.

Ten years ago, the report of the Surgeon General's committee led to significant increases in the research on television and behavior. This research also expanded in many directions from the original focus on the effects of televised violence. Now, 10 years after the appearance of that report, it is clear that research on television is still growing and expanding and that the research in the 1970s has opened new vistas and posed new questions. Compared with the 1970s, the decade of the 1980s should witness an even greater intensity of necessary research effort on television and behavior.

Appendix A

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Appendix B

State of Knowledge Papers and Contributors

Cognitive Processing and Television Viewing
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Forms and Codes of Television: Effects on Children's Attention, Comprehension and Social Behavior
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Television and the Developing Imagination of the Child
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Television Viewing and Arousal
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Television and Affective Development and Functioning
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Television and Educational Achievement and Aspiration
Drs. Michael Morgan and Larry Gross
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Television Literacy and Critical Television Viewing Skills
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Violence in Television Content: An Overview
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Television Violence and Aggressive Behavior
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Television and Aggression: A Longitudinal Panel Study
Drs. J. Ronald Milavsky, Ronald Kessler, Horst Stipp and W. S. Rubens
National Broadcasting Company
New York, New York 10020

Violence in Television Programs: Ten Years Later
Drs. Nancy Signiorelli, Larry Gross and Michael Morgan
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Television and Role Behaviors
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Television and Consumer Role Socialization
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Growing Old on Television and With Television
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Television and Sexual Learning in Childhood
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T.V. Influence on Social Reality and Conceptions of the World
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Television and Prosocial Behavior
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The Family as Portrayed on Television, 1946–1978
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Television, Family Influences and Consequences for Interpersonal Relations

Drs. Jack McLeod and Mary Anne Fitzpatrick, Carroll J. Glynn, and Susan F. Fallis
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Programing Health Portrayals in Television

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Mass Media Health Campaigns

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The Organization and Production of Prime Time Television

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