

TELEVISION AND HUMAN BEHAVIOR

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The average child or adult in this country watches television for three or more hours a day. The television set in the average home is on for seven hours a day. Although there are not always people in front of it, it is there when people enter the room. Many people walk into their houses and turn on a television, leaving it on until going to bed or leaving again.

Children begin watching television earlier than almost any other media or educational activity. By one year of age, children are watching and paying attention to television. They understand something about what is going on. They talk to Big Bird, laugh at appropriate moments and name things they see. Busy parents have told me they put their babies in front of television sets in order to calm or entertain them. In a study conducted at Harvard, six-month-old babies became fussy when the television picture went out of focus or when the sound became distorted.

Television is for many people in this country the major source of news. More people get their news from television than from newspapers or magazines. It is perhaps more important that people believe television news more than print media. Somehow having a moving picture gives them a feeling of veracity they do not get through written versions, although we all know the truth can be distorted by both selecting and editing video footage.

Television is a major source of social knowledge, particularly for adolescents. They consciously look to the glamorous, beautiful, young, "swinging" people on television as models for how to behave--what to do when on a date, at a party or in other social situations. For many teenagers, those models are much more appealing than their rather dumpy, middle-aged, mundane parents and other people they know. In short, television is a pervasive part of our information environment, entertainment, leisure time activities and, for some of us, information about the social world.

When I tell people I do research on television and children, they often say something like: "Well, what have you found out? Is television good or bad?" Of course, there is no simple answer to that question; there are potentially good and bad effects of television. For the purposes of public policy, we often focus on the negative effects because they are newsworthy. There is currently a furor about music videos and lyrics in popular songs which are sexual, obscene, satanic or otherwise offensive. Such issues are news, and they should be; citizens should be concerned about their media environment. However, for purposes of public policy, it may be more productive in the long run to concentrate on the positive--on what television can do that is beneficial for children and adults and how public policy can promote such beneficial uses.

Negative Effects of Television

A case in point is the history of research about effects of television violence. Violence on television has been a social issue almost since television began. The first official government concern about television violence occurred in 1952 in hearings by Senator Kefauver's committee on the causes of delinquency. Since then, there have been periodic hearings on both sides of Congress, reports from regulatory agencies and statements by government officials. In 1968 the Commission on the Causes and Prevention of Violence was appointed, largely in response to abundant domestic violence--urban riots and radical antiwar activities.

Social scientists were "brought into the act" because that Commission devoted a large portion of its report to television news broadcasts and entertainment as possible contributors to violence. The Commission concluded there was insufficient information about the effects of television violence on people's behavior. As a result, the Congress directed the National Institute of Mental Health to establish a research program on the effects of television violence on social behavior. NIMH did so, and that research was in turn used by the Surgeon General's Committee on Television and Social Behavior to write its report, which was issued in 1972. The following is a brief sample of the variety of social science research that led to the conclusion by that Committee that television violence had a causal effect on aggressive behavior.

In laboratory studies, children who saw films of dolls being beaten imitated that kind of aggression. Similarly, adults who were shown violent films increased their aggressive behavior. Laboratory studies are precise, but we do not know how much their findings generalize real world settings. Field surveys demonstrated that the amount of violent television viewed in natural situations was correlated with aggressive behavior. Longitudinal studies followed children or adolescents over time and, in some cases, demonstrated the cumulative effects of exposure to television violence. There is an enormous amount of psychological and social science research on this topic. Most people agree with the conclusions in the Surgeon General's Committee report that there is a causal relation between viewing violence and aggression. That statement was immediately followed by several qualifiers--for some children, under some conditions and so on. Obviously, television violence does not affect everybody all of the time, but there is an overall effect of television violence on aggression in the society at large. That conclusion was reaffirmed in 1982 by an NIMH committee report reviewing the more recent literature.

Social science research is an important contributor to the debate about television violence, but there are differences of opinion about its interpretation. The research is flawed and will probably never be perfect because of inherent limits to the methods and knowledge base available in the social sciences. In this domain, the limits have probably been reached. There is a good body of research that is reasonably consistent. The issue really is what should be done with that information.

Despite that 1972 conclusion, there are no posted warnings on our television screens: "Caution. This product may be dangerous to your health." There were no visible changes in public or governmental policy nor in the content of broadcast television. Content analyses show the amount of violence has changed little since 1967. It fluctuates, but there has been no fundamental change.

Why was there no public action and no legislation? First, nobody could agree on what to regulate. After the Surgeon General's Committee report was issued, NIMH held meetings of experts on content analysis to try to devise a system for monitoring the amount of violence on television in order to generate some national statistics. After meeting over two years, they could not agree on a definition of violence! More broadly, members of a pluralistic society do not agree on what should be restricted on television.

Another reason there was no change is the strong commitment in this country to the freedom guaranteed by the First Amendment. When you begin proposing restrictions on what is to be broadcast on television, you are immediately faced with First Amendment questions, which are difficult to resolve. For these, and other reasons, public policy options for regulating the negative effects of television are distinctly limited.

Psychology and social science may have made some other contributions that have more impact on our television environment, particularly television for children. About ten years ago, Ron Milausky, Vice President for Research at NBC, said he would like to know whether it is action or violence that holds the child audience. The first priority of commercial television is to maximize the audience; programming decisions are based on audience size. Most producers do not want to broadcast harmful content to children, but they are not willing to take the risk of deleting it if they might lose their audience.

My colleagues and I decided to do some research to try to answer Milausky's questions. Many cartoon forms are appealing to young children; rapid movement, audiovisual gimmicks and sound effects hold children's attention. These are independent of violent content. We designed some studies in which children watched cartoons with high rates of these features; some had violent actions by the characters, and others had very little violence. Another set of cartoons had low rates of those interesting features; again, some had violent actions and some did not. In a series of laboratory studies, pairs of children were observed in a room with some toys and a television set--a setting designed to simulate a home environment to some degree. Observers coded how much time the children spent looking at the various programs as opposed to playing with each other or playing with toys. Violence per se was not very important for holding children's interest; rapid action, sound effects and the like were much more important for holding their attention. They watched those features when people were doing nonviolent things as well as violent things.

Such research may have an impact on commercial programs if the networks and the producers decide they can make cartoons with less violence without losing their audience. Whether they have attempted to do so is not clear, but as I flipped through the television channels yesterday afternoon in my hotel room, I stumbled across one of the most popular programs for young children, He-Man. He-Man is a standard super hero who can lift tall buildings, save people, perform wonderful feats of strength and do all kinds of magical things. Nevertheless, if you look closely at He-Man, you will not find very much violence. There is not much hitting, squashing, choking, banging and other violent actions that characterize similar super hero programs. In fact, the series contains attempts to convey positive messages. For example, in one episode He-Man defended a deaf-mute man who was being persecuted because his inability to communicate made him seem strange. The theme was handicapped people should not be treated badly because they are different from other

people. This program is one example of a commercial effort that is a little different and benefits from psychological research.

Positive Effects of Television

I first became involved in television research when the research program for the Surgeon General's Committee was organized. My colleagues and I decided we were not only interested in whether television violence would affect aggression, but in whether television could teach children positive forms of social behavior. If children could learn aggression from television, could they learn healthy behavior--cooperation, sympathy for other people or persistence with something difficult? There are innumerable types of behavior that television can show to children, who then might imitate them.

The television program we chose for study was Mr. Rogers' Neighborhood because it is well planned on the basis of sophisticated psychological theory. In fact, Rogers himself has a master's degree in psychology, and one of his major consultants was Margaret McFarland, an eminent child psychoanalytic psychologist who worked with Erik Erikson early on. The content of the program is based on what we know about young children's understanding of their world; for example, it assures them not to worry about going down the bathtub drain when the water goes out. It stresses helping, sharing, sympathy, understanding feelings, persistence and the worth of each individual. The program is geared very intelligently to the needs of children.

We showed episodes of Mr. Rogers to children in a nursery school setting and observed their behavior. They showed increases in cooperation with one another--being helpful, staying with something that was difficult to do longer than they had before and so on. That study demonstrated that television could convey "prosocial" behavior as well as aggression to children.

More recently, the potential of television for teaching language has been studied. There is some reason to think that television may interfere with literacy in the sense of reading print media. People read less when they watch a lot of television. Children sometimes learn to read more slowly when television is available; but spoken language is another story. It is an important part of television; young children's interest in television depends on whether they can understand and make sense of the narration and dialogue.

Mabel Rice, a colleague of mine whose interest is language development, has been conducting some studies recently to convince her peers in the language development area that television can be an important source of language; not all of them believe it. She has identified the ways in which language can be presented on television in order for children to understand it. In a recent investigation, children's cartoons, originally produced without any narration or dialogue, were modified by adding two narrations. One narration contained several words which young children do not normally know, like altruism, artisan and jubilant. Three- to five-year-old children heard these words in the context of the narration of the story. A second narration contained familiar words. Children who heard the unfamiliar words learned their meanings just from having heard them in a television program. Sesame Street teaches Spanish vocabulary quite successfully. Recently I heard my thirteen-year-old daughter talking on the telephone to a friend. (The telephone is her favorite communications medium, as it is for most teenagers.) She said to her friend,

"I believe your telephone is having temporary technical difficulties."
Television does influence language development!

Those are two very brief examples of how we have begun to take advantage of television's potential to educate and to contribute to children's knowledge. Probably the greatest success story in that effort thus far is Sesame Street. It reaches approximately 85% of the three- to five-year-old children in the country--a remarkable accomplishment. It is well loved by children and certainly does a good job of teaching them. However, society has done relatively little to exploit the potential of television to benefit children. Currently there are very few educational children's programs in production, particularly for children beyond the preschool years. We recently collected some longitudinal data following children's home viewing over two years. Viewing of educational programming dropped precipitously by age seven--about an hour a week on the average, probably because there is nothing to watch after children outgrow Sesame Street, or there is not enough. The most successful and the longest lasting educational program on commercial television was Captain Kangaroo, and it, of course, is now gone. Our use of television for beneficial ends is minimal; we could be doing a great deal more.

Let me suggest some implications of these remarks for public policy. One reason why we have so little programming designed for educational purposes, especially for children, is the broadcasting system in this country is largely run for profit by commercial interests. Broadcasting systems around the world are organized according to three different models. One is like ours, commercial under private ownership for profit. Another is direct state ownership, which exists not only in many totalitarian countries but in many democratic countries, such as those in western Europe. A third model, exemplified by the BBC, is a private corporation that gets most of its funds through the government, usually from special taxes on television sets. Those who own television sets pay a monthly fee for the privilege of having them and receiving television broadcasts. Public broadcasting in this country conforms partially to that model, but in recent years it has become less dependent on government funding and more on donations and private sources of funding. Around the world, noncommercial broadcasting is more likely to provide educational/informational programs, both for children and adults, than commercial broadcasting outlets do. Different criteria are used to make programming decisions when stations are not bound to getting the largest audiences for their advertising market.

Commercial broadcasters are not evil, but the commercial broadcasting system that guides program decisions is not likely to produce a lot of educational programming. Some network people try very hard to encourage good programs, but it is difficult to exercise that option.

If the commercial system will not produce change, the public and our representatives should be searching for creative policy options to promote good television for our children. Government intervention does not necessarily imply restriction and regulation. Another means by which government can promote new kinds of television is direct funding. Many of the programs for children that now exist were made with federal or state government funds. Sesame Street started with a large amount of federal funding; after it succeeded, it gradually became independent of government money. It is not popular to talk about spending money in Washington, but sometimes things which are important cost money.

Other proposals are currently under discussion. Senator Heinz proposed corporate tax incentives for donations to good television programming. Representative Wirth's committee is discussing a children's educational television bill. It would require stations to set aside a minimum amount of time for children's educational programming. This bill has two advantages. It prescribes what type of programs should be added, not what should be prohibited, and forces all stations to share the risk of innovative programs without losing a competitive advantage to those who rely on re-runs of Woody Woodpecker.

Questions and Answers

Q. Are there differences between viewers' reactions or time preferences in the various geographical areas of the country or in rural versus urban areas?

A. There are some. Partly they are an artificial result of the fact that in the Midwest all the network programming is an hour earlier than it is on the east and west coasts. As far as what people watch, I do not know of any very striking differences to the extent they can get the same kind of programming. Some rural areas have had cable for a long time because television could not be obtained in any other way. In smaller isolated places without cable, selection is rather limited.

Q. What's the impact of cable television on the nature of children's programs?

A. That is a good question. One of the things the Federal Communications Commission said in a report on children's television a few years ago was they thought cable would create targeted audience channels, including channels for children, that did not have to attract a mass audience. There is one children's television cable network, Nickelodeon, and it is circulated widely. It is owned by Warner Cable, I believe, in Columbus. It has been losing money and has considered adding advertising. Other than that, what cable does in our area is bring more independent stations in so we get cartoons all morning and afternoon as well as weekends.

Q. I know you have focused your examples on PBS children's programming, which has had a lot of success, but we know from ratings that basically kids are watching the same things as the adults at night. Is there any research going on to ascertain whether there are indeed any positive aspects which are being taught in network prime time programs?

A. There was, but I do not know of any recent content analysis. In the 1970s some were done on prosocial content of ordinary television, and there is a lot of it! For example, The Cosby Show has a lot of positive social behavior, and there are a number of other family programs on now that I find at least as rich in portraying human relationships.

Q. Do you have any comments on advertising directed towards children?

A. There has been a lot of research on that, and what we know is very young children do not understand anything about advertising. They do not see the ads as being something different from the programs, partly because they do

not have very much understanding of the difference between selling and entertainment. The data show that as kids get into the early elementary school years (ages six, seven and eight), they come to discriminate ads and gradually begin to know the purpose of them. In fact, it is fun to watch children in that age, not just with ads but with programs that use special effects. They begin to relish trying to figure out what the gimmick is and how distortions are created. By the time children are ten or eleven, they have a pretty good grasp of what ads are all about, but that does not mean they are immune to them. Adults are not immune to advertising. The millions and millions of dollars invested in advertising tell us some people think they are effective for all ages, and I am sure they are.

Q. My brother, between the ages of 6 and 10, was fascinated by commercials.

A. Some researchers have followed children and parents around the grocery store and recorded what the children said. They confirm that children recall advertised products. Many people report that very young children are attracted to ads. Two-year-olds may sit in the living room not paying attention to the news or some program completely beyond them, but when the ads come on suddenly turn toward the television set. Often young children sing jingles about getting the grey out of the collars or whatever.

Q. Maybe that is the way children's educational programs should be structured.

A. That is exactly how Sesame Street was designed. Advertising forms were deliberately used. For example, "This program was brought to you by the letter I and the number 2."

Q. I know you are opposed to shows preceded by warnings. However, what do you think the actual effect would be on children who watched such shows?

A. I am not opposed to warnings, but I think they are not a politically realistic option. Secondly, I do not think they would do a lot of good. For instance, R ratings just make children want to see a movie. Some parents are already alerted to monitoring what their children are watching on television, but it is a difficult task. It might make some of us feel better, but I am not sure it would change any patterns. One possible effect might occur if it posed a threat to the networks. They might work a little bit harder to make programs that would avoid that warning. A more positive policy might be to encourage especially good programs. The National Education Association gives awards for programs considered valuable for educational purposes. Such labels can be incentives for producers to make good programs and for parents and children to watch them.

Q. In the last few years there have been several media curricula developed. Would you comment on the value of those programs and perhaps offer some advice regarding funding for those kinds of programs?

A. They differ to some extent. They are usually grouped under the term media literacy, and they teach all sorts of things: how to discriminate and understand advertising, the economic basis of television and how to detect some of the special effects. It is amazing how sophisticated kids are about the way television is made. Programs describing how The Empire Strikes Back was made and how special effects were achieved are fascinating

to many eight- and nine-year-old children who become quite knowledgeable about television production. There is no doubt that elementary school kids can learn a lot from media literacy programs and probably become more intelligent viewers. If nothing else, they learn to think a little bit about what they watch on television, to avoid mindless viewing. The appropriate place to fund media literacy training may be in the public schools at the local and state levels. For about five years public schools in Lawrence have had a media literacy program, which deals not only with understanding television but with teaching kids production techniques.

- Q. It seems to me that the future does not look too good in both the commercial networks and PBS for this kind of positive programming. A book appeared, I think maybe last year, analyzing the modern history of PBS and the kind of material they are carrying. The original mandate of educational material does not seem to have been met. The analysis shows they are loaded down with old movies, reruns, etc. You just said there are only two children's programs.
- A. Those are the ones currently in production. There are reruns of others.
- Q. It seems to me that most of it is not very positive. Is that correct?
- A. Well, I think your characterization of PBS is true, but PBS looks a whole lot better when you compare it to other stations because most of the informational children's programming available is on PBS right now.
- Q. Well, it was mandated to be educational, so it should be better.
- A. Yes, it should be. Part of the problem, I think, is there simply is not anything else to broadcast. Everywhere in the country, from roughly 3:30 to 6:00 P.M., Sesame Street, Mr. Rogers' Neighborhood, Electric Company and 3-2-1 Contact are broadcast on PBS. Public stations also must devote time to adult programs. But I think you are right. It is not very encouraging for the future because there has been a big decline from the 1970s to the 1980s in efforts to do positive programming for kids and probably, to some extent, in informational programming for adults.
- Q. I just learned something I would like to share with everybody else here. Sesame Street sends their programs to 12 different countries. I wonder if these countries do not have things we could get from them in some way or another. Is there any kind of exchange, or is there anything that is good that comes in from the BBC, France or other countries? Is that a possibility--that other countries could bring us information?
- A. I think that is an excellent idea. The BBC does have some very good children's programming. They have a program called Playschool, which has been a long running, popular show in Britain. To my knowledge it has never been broadcast in the U.S. Unfortunately, with other countries there are problems of translation. In fact, Sesame Street does not just send off American Sesame Street to these other countries. There are production groups in other countries that make their own versions of Sesame Street. They use some combination of materials produced in the United States and locally produced material designed for that particular culture. It is not just exporting; it is an effort to develop culturally different kinds of programs depending on the needs of the people in that country.

- Q. Do you think our expectations are too high for television? Granted it is a good tool to communicate good or bad influences, but a child cannot learn everything through just watching. I think sometimes parents expect their children will get good programming from television which will take the place of having to communicate with people.
- A. Those are two questions. Do we expect too much, and is it going to displace something? Obviously, there are other ways children need to learn, and they need to relate to people around them. If there were more good programs, I do not know if parents would stick their kids in front of a set more often. It seems to me more likely the kids would just be seeing something better than they do some of the time. But obviously there is a limit to how much television by itself should or could do. Parents used to complain occasionally that their children spent too much time reading. There are likely to be problems associated with concentrating all of one's time on any activity. However, television is an amazingly cost effective way to educate people. Topeka is a city of 100,000 people. During the last money raising drive for the local public television station, it was stated that it costs that station \$20,000 a year to subscribe to Sesame Street. That amount of money is probably not enough to pay one good preschool teacher, and yet that money buys three hours a day of educational broadcasting, which reaches many of the children of Topeka as well as those from a surrounding area with a population of another 100,000.
- Q. What are possible long-term effects on children who start with a heavy dose of good instructional programming and then have to go to school and books?
- A. That is an important question, and it is one a few people have tried to study. An early follow-up of Sesame Street viewers showed that heavy viewers of Sesame Street adapted better to school than children who were not. Sesame Street did not interfere with children's ability to settle into school; instead it seemed to help them, probably because they already knew something about what they were expected to know in school. Nobody has been able to demonstrate the kind of effect you are talking about, but I suspect it may be there. For example, college students now seem to expect an audiovisual event or a change of pace about every 10 or 15 minutes in a lecture. That did not used to be true. I have been teaching college students for 20 years, and I do not think I have become more boring! Instead, their time frame may have changed.
- Q. I am concerned about advertisements on television which describe to children wonderful books which can be checked out from their local libraries. I wonder what the effect is on children if they go to the library, check the book out, read it and find it disappointing because it did not live up to the television description. I often wonder what happens when the kid gets the book, and it just sits there.
- A. Studies show library use goes up dramatically after these advertisements.
- Q. The books are checked out, but we do not know if they are read.
- A. That is true!
- Q. Is it true print and video media teach different things? Would it be better to use both in schools instead of being afraid of too much video?

- A. That is an excellent point. Marshall McLuhan suggested 20 years ago that visual media give a different way of thinking. We tend to assume written words are the method of choice for all abstract, intellectually respectable kinds of thinking, but that is not necessarily true. Some graphic and spatial representation is much more efficient than words for representing some kinds of information. Moving pictures are even more efficient for representing many spatial relationships and processes, such as those used by engineers. As video tape recorders get cheaper and become more available, there will be a lot more of them in schools. Film strips and other audiovisual aids are now used very heavily, so there will be another market there for educational materials other than broadcast television.
- Q. What is the status of the demographics of educational television? Years ago people talked about how television could be so widely disseminated and so available that educational programming would reach all social classes and, therefore, would be a wonderful way of delivering education.
- A. It succeeds more with children than it does with adults. That is, if Sesame Street is reaching 85% of the kids in the country, it is certainly reaching kids throughout the whole spectrum of income and ethnic groups. In fact, we have some data collected in Topeka. (Topeka is a wonderful place to do research because it is representative of the country demographically, and nobody ever moves out of Topeka! So you never lose your people if you do longitudinal research.) We had a good spread of educational levels in this sample. There is no relationship between children's viewing of Sesame Street and parent education, income or other demographic variables. For adults, however, there is a bias in the direction of better educated people watching a lot more PBS programming.
- Q. You said television was an excellent way to teach prosocial skills. Doesn't that require defining which are desirable? Won't we disagree?
- A. Absolutely. When the producers of Sesame Street first started thinking about putting social information on the program, they interviewed a lot of people among different groups they hoped to reach about what positive social behavior to teach children and concluded there were only a few on which everybody agreed. So you are right; there are a lot of different opinions. My feeling about that is if we really want to have a reasonable set of values on television programs which are available, then we have to have diversity represented--a variety of styles of behaving, values and the like. We have not had as much diversity as we should, nor does it exist in network television. So my feeling is you do not say, "Here is the party line, and we are going to teach these things to kids." Instead you say, "Let us try to encourage programs which show a variety of people, values and behavior rather than the limited set presently available."
- Q. We know most kids are watching commercial networks. They are watching A Team and all that other stuff. Yet it seems that the focus of research, from what I am hearing, is on Sesame Street, Mr. Rogers' Neighborhood, etc. My three-year-old became bored with it very early, and now he is into the A Team show. My feeling is the best thing that might have happened in educational television in the last five years is The Cosby Show. The way the networks are, we will probably have six or seven clones of that soon.

A. I agree, but on Saturday morning last year we also had Pryor's Place, which I think was great. The last I heard, Richard Pryor said he was not going to make any more because it takes too much time, not because the program was not successful. The networks are dealing with really important issues. In the last year they have made a big point of trying to deal with child abuse and sexual abuse. They have made a number of short spots they think are effective, as well as longer programs trying to give kids information about sexual abuse, what to do if they are threatened with abuse and the like. Those efforts need encouragement; if you are running a multimillion dollar business and are going to lose a lot of money taking a risk, you are not likely to do it unless you have some backup.

Q. Have researchers looked at the impact of after school specials?

A. I do not know if they have looked at the impact of those, but those are often cited as good quality programs. I prefer the term planned programming to educational programming, because I think planned means that somebody has given some thought to what went into it. It does not have to be limited to school-related content.

Q. Lee Sechrest, who is a well known psychologist, once said if television had as profound an effect as some people claim, then human behavior would have improved radically across the last 30 to 40 years. He said that because, according to his measurement, perhaps 90% or 95% of the behavior on television is good behavior. Why is it, therefore, that human behavior in the real world does not seem to be reflecting this?

A. I am not so sure that it does not. Maybe one of the reasons it does not seem like it is we are so attuned to some of the negative effects because dramatic instances of them can be seen at times. It does not take very many instances in which somebody pours gasoline on somebody and sets that person on fire to generate social concern even though it is a rare event. That example occurred in four or five cases within a short period of time after a similar event was broadcast on television. We are aware of the deviations from good behavior because they are so dramatic. Probably all of us are fairly decent people most of the time.

Q. Have there been any studies that deal with how children differentiate between fictional programming and the news, for example? Kids watch much news, which has a lot of bad types of human behavior. In fact, the distribution of bad types of behavior is much more weighted as opposed to the good. Do the children see the news any differently than they see any other types of programming?

A. That is one of the \$64 questions which, strangely enough, we do not know very much about. We do know that, although children are exposed to news a lot, most young children do not show great interest in it. Children who are in the room while their parents are watching the news may once in a while kind of look over and seem to be interested, but it is unclear how much they really are paying attention to it. Until about the age of six, seven or eight, kids do not have a very good sense of the difference between fiction and reality. There is a kind of progression from early childhood to adolescence of differentiating what is real from what is not, given the fact that everything on television is coming over an electronic

device. In some sense, none of it is real, and there are layers on layers of reality when you begin to try to analyze it. Adolescents will, if you ask them what they think is real on television, give you an example of something that is a fictional program with very realistic people. They see "reality" in people who are plausible everyday types of people. Those people may be more real to them in some respects than some bizarre person in the news who has just shot six people. There is some evidence to suggest that when adults see violence on the news which is real violence, they are more likely to be affected by it than if it is fictional, but that does not mean that fictional violence has no effect on people.

- Q. My young child is especially fixated by news, and it seems to disturb him. He sees hostage situations, hijackings and other incidents of violence.
- A. I think that is certainly true. There is a period when kids begin to realize there is a difference between seeing that sort of thing on the news, which means it really did happen, and seeing it somewhere else. There was a lot of furor about The Day After when it was broadcast. Since The Day After was set in Lawrence, Kansas, we, in particular, were getting telephone calls from all over the country with comments like, "Should I let my child watch The Day After? What do you think is going to be the impact of The Day After? The schools are saying not to let your kids watch it if they are under the age of nine." I said, "Look, for the kids who are really young, it is just going to be another one of those things that happens all of the time on television." I thought it might have much more impact on the adults because of its realistic qualities, especially if they happened to live in Lawrence, Kansas. There is a point at which it dawns on kids that there is a difference, and then I think that sometimes it does have an impact on them. It varies a lot from child to child.
- Q. Some studies show kids, even at age two, can differentiate between animation and, for example, Hill Street Blues. They know there's a difference between Roadrunner being blown up and someone shooting somebody.
- A. Well, I do not know about age two. By age five, children know animation is not real, but we do not know what "not real" means to them. At a very primitive level, it seems to mean there are not real people performing on a stage somewhere. Somebody drew a picture or made a puppet, but there is not any real person inside the costume. That is the first level of children's understanding of reality. I asked a four-year-old child what an advertisement or commercial was. She looked at me and said, "Huh?" I then said, "Did you ever see Tony the Tiger?" She said, "Oh, yes, I like him. He wants me to eat Frosted Flakes." I asked her if he was real, and she said, "Yes." Of course, Tony the Tiger is a cartoon character. I think the categories real and unreal are not there for young children.