Television and Persuasion: Effects of the Programs between the Ads

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ABSTRACT

This article examines the persuasive impact of television programs by reviewing cross-disciplinary research findings on television effects. Additionally, extensive discussion is given to articulating a model of the cognitive processes that underlie television program effects, and recent evidence is presented that supports this model. Discussion delineates the differences between this model and contemporary models of persuasion and argues that television consumption should be a topic of interest for marketing and consumer researchers as well as psychologists. © 1999 John Wiley & Sons, Inc.
lars to have their products seen and used within the context of film and television programs (Karrh, 1995).

But these effects are intended. The contention of this article is that the television programs have a number of unintended persuasive effects as well. These effects are wide-ranging and involve a variety of constructs, some of which may be of interest to marketers and some of which may be of interest to public policy makers. However, for the most part, marketing and consumer researchers have shown little interest in television programming, other than how it relates to advertising (e.g., program context effects on embedded ads, media buying issues related to target marketing). This is unfortunate for a number of reasons. For one, Americans consume a great deal of television; the average family watches over 7 hours per day, and the average individual watches over 4 hours per day (Nielsen, 1995), making television programming arguably one of the most heavily consumed “products” in the United States (Shrum, Wyer, & O’Guinn, 1998). Second, marketers make extensive use of television programs as vehicles for advertising. It seems only appropriate and responsible that marketers should be concerned with the effects of these vehicles. Third, the question of whether and how the consumption of television programming affects viewers is central to efforts to regulate the program content (in particular, sex and violence), and thus has public policy implications. Finally, understanding how television exerts its effect provides information on how persuasion may take place in naturally occurring situations. Such information is important in establishing the external validity of laboratory studies.

With these issues in mind, the goals for this article are twofold. First, the different types of persuasive effects that the programs exert are explicated, drawing on theory and research in psychology and mass communication that pertain to how television (program) consumption affects viewers’ social perceptions, values, attitudes, beliefs, and behaviors. Second, a process explanation for how these effects occur is provided by the introduction of a cognitive process model that can account for these effects and a review of evidence that supports this model.

THE CONTENT OF TELEVISION’S PERSUASIVE MESSAGE

Television programs are not inert. They do not exist in a vacuum, they are not neutral, and they are not passive. The messages that are developed for viewers’ entertainment are in fact designed to persuade; they are constructed to appeal to the largest possible audience and persuade potential viewers to tune in.

In the course of designing programs that are appealing to as large an audience as possible, the programs take on a number of consistent features. For example, in an effort to entertain and stimulate, they emphasize the dramatic at the expense of the mundane. The result is fre-
quent portrayals of crime and violence. In fact, content analyses of television programs consistently find that overt acts of crime or violence occur about five times in an average television hour, and about 75% of prime-time programs contain some form of violence. These figures have remained relatively stable over the last 25 years (Gerber, Morgan, & Signorielli, 1993; Signorielli, 1990). Moreover, the rate of portrayal of crime and violence on television programs is 10 times greater than the incidence of crime and violence in the real world (Gerber, Gross, Signorielli, & Morgan, 1986; Lichter, Lichter, & Rothman, 1994).

Television time is expensive, and viewers’ attention spans are often short, so television programs must tell their stories quickly and effectively. Plots must typically be simple and character development efficient. One efficient avenue for character development is context. The things people have and do tell us a great deal in a short amount of time, much shorter than could be accomplished through oral narration (O’Guinn & Shrum, 1997). For example, viewers know a television character is rich because he drives a Mercedes, lives in a mansion, or has a swimming pool. Viewers know a character is likely an employed professional if he is wearing a suit. They also know that a character is a housewife if she is cooking during the day or a prostitute if she is scantily clad. Moreover, such portrayals are often exaggerated to even further enhance the visual shorthand.

In reading the preceding paragraph, readers might consider the examples to be stereotypical and the gender references to be sexist. They are, but to make a point: So are television portrayals. A stereotype is a convenient data reduction technique. As long as viewers are sufficiently acquainted with the stereotype, an abundance of information about the character or situation can be conveyed almost instantly. But as with most stereotypes, the characterizations are seldom neutral. Some are positive (hero) and some are negative (criminal). Moreover, the attributes or characteristics of the stereotypes are not random. Problems arise when the pairing of particular stereotypes (e.g., criminal, hero, successful, powerless) with particular attributes (e.g., race, class, age, gender) becomes systematic. In fact, content analyses of television programs point to this very problem. For example, Hispanic and African-American television characters are about 50% less likely to hold “upper status occupations” than white characters (Lichter, Lichter, Rothman, & Amundson, 1987). Few portrayals of interactions between African Americans and Whites show personal friendliness or mutual respect (Weigel, Loomis, & Soja, 1980). Hispanic characters are portrayed as criminals twice as often as white characters (Lichter et al., 1987). In the world of television, men are portrayed as more powerful and successful than women, and women’s occupations are less central than those of men; almost 40% of female characters (compared to 18% of male characters) do not have discernable occupations. Women on tele-

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vision are more likely than men to be victims of crime; they are also typically younger and more attractive than men (Signorielli, 1989). The elderly are greatly underestimated in the television world relative to their real-world representations (Robinson & Skill, 1995), and when they do appear in television programs they are more likely than any other age group to be treated with disrespect (Gerbner, Gross, Signorielli, & Morgan, 1980). These are just a small subset of examples that demonstrate how television may reinforce society's stereotypes of particular groups.

Television programs also want to keep people positive. This does not mean that all programs are intended to leave people happy and upbeat; the incidence of crime and violence on television suggests otherwise. However, there are some systematic techniques that television writers and producers use to stay with a reasonably positive theme. For example, the good guy (not girl) always wins and criminals are generally punished eventually, reinforcing viewers' desire for a belief in a just world (Zillmann, 1994). Disease and sickness are not common, but when they do occur they are often portrayed within the context of a triumph of the human spirit. The same goes for poverty, except when it is used to convey a deficiency in the human spirit. Howard Beale, Paddy Chaykesky's character in Network, perhaps put it best:

Don't come to television for the truth. TV's a goddamned amusement park. We'll tell you the good guys always win. We'll tell you nobody ever gets cancer at Archie Bunker's house. We'll tell you any shit you want to hear.

But what is the significance of these discrepancies between real life and the way life is portrayed on television? As with ads, can't viewers distinguish between fact (e.g., news, documentaries) and fiction (e.g., soap operas, action/adventure, even cartoons) and thus take these differences into account when making everyday judgments? In fact, research suggests that viewers either cannot or do not make these distinctions.

TELEVISION EFFECTS RESEARCH

Television and Aggressive Behavior

Both experimental and correlational studies suggest that the viewing of television programming, with its high content of crime and violence, can influence behavior, particularly aggression. Experiments by Bandura and colleagues have found that exposing children to television or film violence can result in an imitation of this behavior in free-play situations. These experiments showed that aggressive behavior could also be elicited when children viewed real-life aggression, films of ag-
gression, and even aggressive cartoon characters (Bandura, 1978; Bandura, Ross, & Ross, 1965; see also Meyer, 1972). Other experiments suggest that the viewing of media violence can have a desensitizing effect. Studies by Drabman and Thomas (1974; Thomas, Horton, Lippscott, & Drabman, 1977) found that children who had viewed violent material took longer to seek help from an adult to stop a fight they thought was in progress; Cline, Croft, and Courrier (1973) found that very heavy television viewers were less aroused by television violence than very light viewers. Moreover, meta-analyses have also consistently supported the link between media violence and aggressive behavior (Wood, Wong, & Chachere, 1991).

Television and Cognition

Within the last 25 years, research on television effects has taken a more cognitive approach. Rather than focusing on direct links between television viewing and behavior, this research has investigated how the distortions of reality that are characteristic of television may influence social perceptions, attitudes, and beliefs. This research received its impetus from the work of George Gerbner and his colleagues, who have developed and tested a theory of television effects, which they term cultivation theory. Cultivation theory posits that because television portrayals systematically distort reality, long-term viewing of these distortions is likely to have an effect on viewers, and more so for those who view relatively more television. That is, as people view television over the long term, they come to “cultivate” the television point of view. Consequently, the more people watch television, the more they think the real world is like the world as it is portrayed on television (Gerbner et al., 1986).

Quite a bit of evidence has accumulated that supports this contention. For example, heavy television viewing has been linked to greater perceptions of the prevalence of violent crime (Gerbner et al., 1980; Hawkins, Pingree, & Adler, 1987; Shrum, 1996, 1997a; Shrum & O’Guinn, 1993); greater perceptions of personal crime risk (Shrum & Darmanin, 1997); and greater perceptions of the prevalence of prostitution, alcoholism, and drug abuse (Shrum & O’Guinn, 1995). Other studies have found that heavy television viewing is related to a greater faith in doctors (Volgy & Schwartz, 1980), greater interpersonal mistrust (Gerbner et al., 1977), a heightened perception of the prevalence of divorce (Carver & Alexander, 1985; Shrum, 1996), and a negative view of the quality of life (Morgan, 1984).

There is other evidence that television portrayals may also influence perceptions of affluence and product ownership. O’Guinn and Shrum (1975) found that heavy viewers gave higher estimates than light viewers of the prevalence of such things as swimming pools, car telephones, and luxury automobiles. Weimann (1984)
found similar results in a study of Israeli viewers (living in Israel) of American television programs.

To be fair, however, cultivation theory and research is not without its critics. Most of the research has been correlational in nature and thus has been subjected to the standard criticisms of all correlational research, namely, that correlations do not establish causality. Critics have suggested that the correlations between television viewing and perceptions of crime may be spurious, due to correlations between some third variable and both television viewing and perceptions of crime. Such third variables might include direct experience (people who live in high-crime areas may have a greater fear of crime and also watch more television; Doob & Macdonald, 1979) and personality (those with an external locus of control may have more fear and also watch more television; Weber & Gunter, 1982).

Attempts to address these criticisms have typically taken the form of adding control variables (e.g., age, income, education, direct experience, personality, etc.) when assessing the relation between level of television viewing and the various cognitive measures. The results of such analyses have provided ammunition for those on both sides of the argument. Proponents of cultivation theory claim that analyses that control for these third variables still find a cultivation effect (Hawkins & Pingree, 1982; Morgan & Shanahan, 1996), whereas critics claim that the effects are almost always diminished in the presence of statistical controls to the extent that the cultivation effect either disappears or becomes so small as to be of little importance (Hirsch, 1980; McGuire, 1986).

These criticisms for the most part are confined to the testing of cultivation theory. However, the theory itself has also been criticized for other reasons, which have greatly hampered the development of cultivation theory and its acceptance by social scientists.

One of the most consistent criticisms of cultivation theory (and research) is that it provides no explanatory dynamic for the effect. Gerbner and colleagues, as well as other researchers, have for the most part concentrated their efforts on expanding the breadth of cultivation theory by demonstrating effects for different samples (e.g., children, elderly, college students), different countries or cultures (e.g., China, Argentina), and different dependent variables (e.g., crime, violence, occupational prevalence). However, little research has focused on increasing the depth of cultivation theory by providing information on the cognitive processes that underlie the effect. A number of researchers have argued that until such process explanations can be provided and empirically supported, cultivation theory will remain mired in an endless debate over validity (Hawkins & Pingree, 1990; Shrum, 1995). On the other hand, if the cognitive processes underlying cultivation effects can in fact be articulated, the powerful convergent validity that such evidence affords would enhance the scientific stature of the theory.

The following sections attempt to provide such a cognitive process
explanation for the effects of television viewing on social judgment. A model of cognitive processes underlying media effects is outlined, testable propositions implied by the model are derived, and research that supports this model is discussed.

A COGNITIVE PROCESS MODEL OF TELEVISION PROGRAM EFFECTS

The cognitive process model proposed here is a departure from most research on television effects in general and cultivation effects in particular. Previous research has treated cultivation effects either from a sociological perspective (Gerbner et al., 1986) or as direct learning effects (Hawkins et al., 1967; Potter, 1991). This model situates television program effects within the context of memory and judgment and the relation between the two.

The model may be broadly construed as one of heuristic processing. Heuristic processing is a limited mode of processing that requires little effort and uses few cognitive resources (Chaiken, 1987). Rather than making an exhaustive search of memory for information pertaining to a particular decision, people who use a heuristic processing strategy tend to invoke simple decision rules, or heuristics. Examples of such heuristics are "experts can be trusted," "attractive people are sociable," "consensus implies correctness," and so forth (Eagly & Chaiken, 1993). Because they are easy and require few cognitive resources, heuristics tend to be used when either the ability or motivation to process extensively is low, and are typically used to simplify difficult judgments (Sherman & Cotty, 1984). On the other hand, if the ability and/or motivation to process information is high, people may instead engage in systematic processing. This type of processing may be thought of as an extensive, comprehensive, and effortful mode of information processing in which people scrutinize a great deal of information in an effort to form a judgment (Chaiken, Liberman, & Eagly, 1989).

In the context of social reality judgments typically used in cultivation studies, one particular heuristic that may be employed is the availa-

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1 The proposed model applies primarily to first-order cultivation judgments. First-order judgments are those that ask people to provide prevalence estimates of particular constructs (e.g., percent of people involved in a violent crime, percent of couples who get a divorce, percent of workers that are lawyers, etc.), as opposed to second-order judgments, which pertain to attitudes and beliefs (Hewitt & Engree, 1987). Because the model attempts to account for how television influences the judgment construction process, it is important that the judgments be constructed in real time rather than simply reflecting the retrieval of a prior judgment. Because it is extremely unlikely that people have first-order-type judgments available in memory, they are useful for investigating real-time judgments. The model could also apply to second-order judgments, but only to the extent that these judgments are also constructed in real time. Because no face valid, a priori assessment can be made as to whether the attitudes people provide would be constructed in real time or represent a prior judgment that was retrieved, the focus has necessarily been on first-order cultivation judgments.
bility heuristic (Tversky & Kahneman, 1973). This heuristic, or decision rule, posits that people infer the prevalence of a construct from the ease with which an example is retrieved (i.e., its accessibility from memory). That is, they infer that because something is easy to remember, it must occur frequently. Thus, applying the availability heuristic, when a judgment such as the prevalence of societal crime is required, people will attempt to construct an estimate by recalling examples of crime from memory and will base their estimate on the ease with which these examples are generated: The easier an example is recalled, the higher their estimate. Because television programs contain a large number of portrayals (examples) of crime, heavier viewers should be able to more easily recall examples of crime than light viewers and will consequently give higher estimates (a cultivation effect).

The general notion of heuristic processing and the particular application of the availability heuristic generate several testable propositions that address different aspects of the model. In the sections that follow, the propositions are stated and research bearing on each proposition is discussed. In addition, Figure 1 presents a flow diagram that indicates the processes that determine whether television information will be used in judgment construction, producing a cultivation effect. The stages of the diagram to which each proposition pertains is noted within the diagram.

**Proposition 1: Television Viewing Influences Accessibility.** The first proposition is that television viewing enhances the accessibility of relevant information in memory (shown in Figure 1 by the bold arrow for heavy television viewers). A number of factors may increase the accessibility of particular information (for a review, see Higgins & King, 1981). Those most relevant to television viewing include frequency and recency of activation of a construct (Wyer & Srull, 1989), vividness (Sherman, Cialdini, Schwartzman, & Reynolds, 1985), and distinctiveness (Higgins & King, 1981). Because television has been shown to systematically overrepresent particular constructs relative to their real-world representation (e.g., crime and violence, particular occupations, marital discord, and affluence; see Gerbner et al., 1980; Lichter et al., 1994), those who view more television should have activated and stored these constructs more frequently and recently than those who view relatively less television. Moreover, because of the dramatic nature of television and the exaggerated and stereotypical portrayals, the television information that is stored may be more vivid and distinctive, further contributing to its enhanced accessibility for heavy viewers.

If constructs overplayed on television are indeed more accessible for heavy viewers than light viewers, and people use the availability heuristic in constructing estimates of the prevalence of these constructs, then heavy viewers should give higher estimates than light viewers (a
Figure 1 Flow diagram of heuristic processing model of television program effects. Circles represent mental processes. The bold arrow from Heavy TV to Memory Search indicates a greater contribution to the search process.

cultivation effect). These hypotheses have been supported in a number of studies. Shrum and O’Guinn (1993) found that heavy viewers constructed their judgments faster than light viewers, suggesting that information was indeed more accessible from memory for the heavy viewers. These results have been replicated for a variety of dependent variables, different operationalizations of television viewing, and multiple control variables (cf. O’Guinn & Shrum, 1997; Shrum, 1996; Shrum, O’Guinn, Semenik, & Faber, 1991).
Proposition 2: Accessibility Mediates the Cultivation Effect. The ideal test of the availability heuristic is to show that the bias in accessibility created by the independent variable mediates the relation between that variable and the dependent measure (Manis, Shedler, Jonides, & Nelson, 1993). Thus, accessibility (inferred from speed of response) should mediate the cultivation effect. Shrum and O’Guinn (1993) provided some evidence of this relation by showing that controlling for speed of response reduced the cultivation effect to nonsignificance. Shrum (1996) provided a more stringent test by showing via path analysis that level of television viewing influenced speed of response, which in turn influenced the magnitude of the estimates. These relations hold in the presence of the direct relation between viewing and the estimates.

Proposition 3: Television Exemplars Are Not Discounted. The heuristic processing model assumes that the television-related, accessible exemplars that are retrieved in the process of constructing the prevalence estimates are considered relevant and should thus form the basis of the judgment (Herr, 1986; Herr, Kardes, & Kim, 1991; Higgins & Brendl, 1995). This is a critical assumption because it is not necessarily intuitive. The availability heuristic suggests that when people are attempting to construct estimates of, say, the percentage of people who are involved in a violent crime or the percentage of the work force that consists of lawyers, they will retrieve examples and infer frequency of occurrence from ease of retrieval. The accessibility bias created by television viewing implies that heavy viewers will have more examples stored in memory. However, these examples will be television examples, and it is reasonable to question whether people will use the ease with which they retrieve these examples as a cue to frequency or whether they will discount these examples and use information from other more veridical sources.

There are two conditions under which people may consider television information useful in constructing judgments about the real world. The first condition is that individuals are aware that the source of the exemplars they retrieve is television, but they still consider the exemplars to be relevant and would thus not discount the television-related information. This would occur if individuals perceived television information to reflect reality. The second condition is that individuals may not consider television portrayals to be veridical (how perceived reality), but they also may not ascertain the source of the examples recalled when they construct their judgments.

The research on the role of perceived reality of television programs in the cultivation process has yielded conflicting results. Some research has shown that higher levels on particular dimensions of perceived reality yield a stronger cultivation effect, but for other dimensions just the opposite has been noted (e.g., Hawkins & Pingree, 1981; Potter,
1986; Rubin, Perse, & Taylor, 1988). Other studies have found no effect of perceived reality on cultivation effects (Shrum, 1996; Shrum et al., 1998). However, although it is difficult to interpret the relation of perceived reality to cultivation effects, it is important to note that for the most part, people do not consider television to reflect reality. For example, in Potter’s (1986) study, the means for the various dimensions of perceived reality ranged from 3.63 to 3.93 on a 5-point scale, with higher scores indicating less perceived reality. Rubin et al. (1988) found very similar results, as did Shrum et al. (1995). In fact, in the latter study only 2 of 72 participants (Experiment 1) and 11 of 215 participants (Experiment 2) exhibited a perceived reality score to the positive (more perceived reality) side of the midpoint. These results suggest that individuals for the most part do not consider television to reflect reality and would likely not consider television information useful in constructing their judgments if they were aware of the information source.

However, a second condition under which television information may be considered useful is if source characteristics are not considered when making cultivation-type judgments. In other words, when one is constructing a judgment (e.g., the percentage of people involved in a violent crime), relevant exemplars are generated from memory, but the source of the information may not be considered. Thus, television information, although not considered by most people to be veridical and useful for decision-making, may in fact influence judgments because of people’s lack of awareness of source characteristics.

Such a process would be consistent with the low-involvement nature of heuristic processing. Source characteristics of the exemplars may over time become more difficult to retrieve than the exemplars themselves, as the sleeper effect suggests (see Pratkanis, Greenwald, Leippe, & Baumgardner, 1988). Thus, determining source characteristics should require effort on the part of the participant and this effort is more likely to be made under high- rather than low-involvement conditions. However, it is likely that the actual task of answering typical cultivation questions is a low-involvement one. Cultivation studies are usually conducted with the use of survey instruments; people (either students or the population in general) may be in a hurry to get the survey completed and likely find the questions difficult. Just as importantly, there is no sanction for wrong or inaccurate answers. The answers to the survey questions are invariably anonymous, so there are no incentives, either intrinsic or extrinsic, for giving a well-thought-out response. All of these conditions contribute to the likelihood that a heuristic processing strategy would be adopted.

Indirect evidence that television information is not discounted but indeed is used as a basis for judgment is provided by the reaction-time studies described previously. If television information is discounted and other examples retrieved, heavy viewers should take longer to construct their estimates because of greater discounting. However, a more direct
test of discounting was provided in two experiments by Shrum et al. (1998). In Experiment 1, source characteristics (i.e., television) were primed in two separate conditions. In the first condition, source was primed by simply collecting television viewing information prior to the social reality estimates (source prime). In the second condition, instructions prior to the social reality estimates informed participants that the topics of the questions they would be answering were often a part of television programs and may influence their estimates (relation prime). A control (no prime) condition had participants provide their social reality estimates prior to providing the television viewing information. Priming was expected to increase the salience of source characteristics and thus increase the likelihood of source discounting. As hypothesized, a cultivation effect was noted in the no-prime condition but the priming manipulations each eliminated the cultivation effect. A second experiment replicated this finding and ruled out an alternative explanation that the interaction effects between priming and television viewing were due to differential automatic adjustments between heavy and light viewers rather than source discounting.

Proposition 4: Systematic Processing Will Reduce/Eliminate the Cultivation Effect. Heuristic processing tends to occur when people’s ability or motivation to process information is low. Both of these conditions may apply to the construction of social reality estimates: The questions are difficult, people may be in a hurry to complete the questionnaire, and no sanctions are present for inaccurate answers. Any of these conditions may cause people to employ heuristics and give little thought to the source of the information they use in constructing their judgments (Shrum, 1995, 1997b). On the other hand, changing the conditions should eliminate the cultivation effect. That is, if people are induced to process systematically, which is a more effortful processing mode typically used under conditions of high motivation, television information should have little effect on the social reality estimates. Under systematic processing conditions, people are more likely to scrutinize a great deal of individuating information, less likely to be influenced by accessibility, and more likely to discount nonveridical information (Chaiken et al., 1989).

A recent study supports this proposition. Shrum (1997a) manipulated the processing strategies that people used in constructing their social reality judgments. Some people were instructed to answer spontaneously, off the top of their heads, which induced them to process heuristically. Others were induced to process systematically with the use of an accuracy motivation manipulation: The data were collected from very small groups of participants; the participants were told that the experimenter would grade their answers in their presence; and the participants were told that they would have to justify their answers to the experimenter (Chaiken et al., 1989; Thompson, Roman, Moskowitz,
Chaiken, & Bargh, 1994). A control group received no processing manipulation. If people generally use heuristic processing strategies to construct their social reality judgments, then a cultivation effect should be noted in the heuristic and control conditions and the magnitude of the effects in the two conditions should not differ. On the other hand, the systematic condition should cause participants to more carefully attend to information they recall in the process of constructing their judgments and should therefore increase the likelihood that television information is discounted or ignored. Thus, no cultivation effects should be noted in the systematic condition and the effect should be less than the effects noted in the heuristic and control condition. This was in fact what was found, providing direct evidence that heuristic processing accounts for the cultivation effect.

Limitations of the Model: Other Heuristics

Even though the studies just reviewed provide support for the heuristic processing model of television program effects, the model as presented is limited in a number of ways. For example, much of the evidence in support of the model is derived from assumptions that people employ the availability heuristic when they are constructing their judgments. This is partly a function of the types of judgments that have been used in past research to measure perceptions of social reality (i.e., prevalence estimates, see Footnote 1). However, a narrow focus on these types of judgments and the availability heuristic mechanism is needlessly restrictive. The general heuristic processing model should allow for any number of heuristics to be employed, depending on the judgments required.

One example of an alternative to the availability heuristic is the simulation heuristic (Kahneman & Tversky, 1982). The simulation heuristic differs only slightly from the availability heuristic. The simulation heuristic suggests that people will infer prevalence or probability of occurrence of an event from the ease with which the event can be imagined. Evidence supporting this notion was provided by Sherman et al. (1985), who showed that subjects perceived themselves to be at a greater risk for a disease with easy to imagine symptoms than for a disease whose symptoms were difficult to imagine. Similarly, Gregory, Cialdini, and Carpenter (1982) found that people who were induced to imagine themselves experiencing a particular event subsequently came to believe more strongly than those not so induced that the events would happen to them in the future. Thus, in terms of cultivation-type judg-

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*The original conceptualization of the availability heuristic (Tversky & Kahneman, 1973) included two types of mental processes: the retrieval of specific examples and the construction of scenarios. The two processes have since come to be separated, with availability pertaining to the retrieval of specific instances and simulation pertaining to the construction of scenarios.*
ments, it seems likely that estimates of the prevalence of societal crime could be constructed not just by the retrieval of an actual example of societal crime, but also by the ease with which an example of societal crime can be imagined. Frequent viewing of such events on television would likely increase the ease with which a person could imagine a crime, and could thus produce a cultivation effect.

Another type of heuristic that may be pertinent to the relation between television viewing and judgments is the representativeness heuristic (Kahneman & Tversky, 1972). The use of the representativeness heuristic entails the matching of an event or outcome to some general prototype. The extent to which features of the event being judged resemble features of the prototype governs the judgment of probability of occurrence. Thus, judgments of the probability of a person committing (or being a victim of) a crime may be based on the extent to which the features of that person match a general prototype of a criminal (or victim). Note that television may influence such judgments in at least two ways. One type of influence is on the construction of the prototype. Heavy viewing of stereotypical portrayals (e.g., criminals, victims, heroes, minorities, professionals) is likely to influence the features of the prototype. The second type of influence is on the accessibility of the prototype: Heavy viewers should have more accessible prototypes than light viewers. Sherman and Corts (1984) suggest that for many judgments, either the heuristic of availability (use of exemplars) or representativeness (use of prototypes) may be applicable, and which one is employed may be a function of which is more accessible at the time of judgment—an exemplar or a prototype.

Finally, Kahneman and Miller’s (1986) norm theory suggests yet another way in which television viewing may influence judgments. Although not a heuristic per se, norm theory extends the processes underlying the availability and representativeness heuristics. Norm theory is built around the concept of exemplar models of memory representation and retrieval and posits that various elements or representations of a concept or event may be retrieved in parallel, and a general norm may be computed by summing over these representations. Moreover, the contribution of each element is weighted in proportion to its accessibility (probability of retrieval). Thus, as Kahneman and Miller (1986) note, “a manipulation that increases the probability of a given element being recruited by a probe will also increase the weight of that element in the norms” (p. 138).

As with the heuristics mentioned earlier, the application of norm theory pertains to certain types of judgments, in particular ones that involve judgments of normality or typicality. For example, a person may be required to react to a specific event (e.g., is a particular behavior appropriate?). According to norm theory, this judgment will be a function of the comparison between the event to be judged and the computed norm. The role that television information may play in this process is
that it may increase the weight of particular information in the com-
putation of the norm. Thus, a person's judgment of whether a violent
response to a particular act is appropriate may be influenced by the
increased weight given to television portrayals in the computation of
the norm.

In each of the cases in which alternative heuristics may be employed,
the general features of the model still apply. The commonality is that
television viewing increases the accessibility of certain information and
thus increases the probability that it will be used as a basis for judg-
ment. Clearly, future research would be useful in testing many of the
assumptions of the model by varying the types of judgments that are
elicited.

A second limitation of the heuristic processing model of television
program effects is that support for the model has come almost entirely
from only one laboratory. However, it is important to note that the use
of heuristics as an explanation for a variety of media effects is not new.
For example, with respect to studies directly or indirectly related to the
cultivation effect, Ogles and Hoffner (1987) suggest that their results
showing that males' exposure to media violence was positively related
to personal estimates of victimization may have been due to the in-
creased accessibility of violence-related information in memory, which
in turn resulted in higher percentage estimates. Similarly, Tamborini,
Zillmann, and Bryant (1984) explain their results, which found an ef-
fect of exposure to an injustice-depicting crime program on estimates of
fear and victimization, in terms of information accessibility and the
availability heuristic. Further, in a study of risk perception, Lichten-
stein, Slovic, Fischhoff, Layman, and Combs (1978) suggest that their
findings showing that people infer that death by accident is much more
likely to occur than death by stroke (the opposite is actually the case)
were due to the greater accessibility of exemplars of death by accident.
They further speculate that this enhanced accessibility was a result of
more frequent and vivid accounts of death by accident in newspapers
and television, and this speculation was supported from results of a
content analysis of newspaper articles (Combs & Slovic, 1979). Finally,
the general concepts of accessibility and priming have been used to ex-
plain the effect of media violence on aggression (Berkowitz, 1984) and
the effect of television news on public opinion (Iyengar, 1992).

Summary

In the previous sections, a general mental process model of how the
viewing of television programs may have a persuasive effect at the in-
dividual level was presented. The model is laid out as a set of testable
propositions, and research bearing on these propositions was reviewed.
This research, taken as a whole, suggests that television program effects
can indeed be explained in terms of particular psychological processes.
In fact, the findings suggest that the effects of television are the result of reasonably simple and straightforward applications of various heuristics. The implications of the various research findings pertaining to television’s persuasive effect are discussed in the concluding sections.

IMPLICATIONS FOR UNDERSTANDING PERSUASION

The general model proposed as an explanation for how television programs may act as a persuasive agent has a number of implications for the field of persuasion in general. The model differs from the more traditional models of persuasion in important ways. The two currently dominant models of persuasion are the elaboration likelihood model (ELM) (Petty & Cacioppo, 1986) and the heuristic/systematic model (Chaiken, 1987). Both of these models, which are similar in a number of respects, conceive of persuasion in terms of on-line processes. That is, the information that forms the basis of the persuasive message is processed and judgments are constructed after the message is read, but while the information used to form the judgment is still contained in working memory. On the other hand, the proposed model conceives of television’s persuasive effects in terms of memory-based judgments. The information from the persuasive communication (i.e., television programs) is retrieved from long-term memory along or in competition with information from other sources.

Thus, the fundamental difference between the persuasion models and the proposed model is whether the judgments are on-line or memory based. However, there are also a number of similarities. In fact, many of the elements of the persuasion models have been borrowed and adapted to fit into a model of television program effects. For example, the concepts of central/peripheral (Petty & Cacioppo, 1986) or heuristic/systematic (Chaiken, 1987) processing, which refer to how people process a persuasive communication in an on-line fashion, are applied to memory search and retrieval processes. When involvement is high, the model assumes that people will make an effort to scrutinize (i.e., recall and assess) as much information as possible, just as with the central or systematic processing route. On the other hand, when involvement is low, the model assumes that people will be likely to employ heuristics in their processing of retrieved information, similar to the peripheral or heuristic cues in the persuasion models. The only real difference is in the types of heuristics employed. Note that the examples of heuristics that Eagly and Chaiken (1986) suggest people may use (e.g., “consensus implies correctness,” “experts can be trusted”) refer to the ways people interpret information as it is presented, whereas the judgmental heuristics discussed by Kahneman, Slovic, and Tversky (1982) are a function of retrieval processes and inferences people make about these processes (e.g., “if an example is easy to recall, it must occur frequently”).

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IMPLICATIONS FOR MARKETING, CONSUMER BEHAVIOR, AND PUBLIC POLICY

The evidence for the heuristic processing model of television program effects has a number of implications for researchers in many disciplines. First, the studies suggest that heavy doses of television do in fact have at least some persuasive influence on what people think. Although this notion forms the basis of a great number of studies, the general model proposed here, as well as particular studies offered as support for the model, provide firm evidence implicating television viewing as the causal factor. This is not a trivial issue, given the criticism that prior television effects research has received, particularly with respect to issues of causality.

From a public policy perspective, the studies bolster the notion that frequent portrayals of negative circumstances or situations (e.g., crime, violence, marital discord) may affect social perceptions and attitudes, such that individuals become desensitized and begin to think that such situations are normal. This notion is also supported by experimental evidence that children are more likely to tolerate aggressive behavior in others after they have viewed television violence (Drabman & Thomas, 1974). Viewed in product terms, it appears that television consumption may have negative, antisocial effects.

The studies indicating that source priming and systematic processing can eliminate television effects on social perceptions suggest that intervention programs that educate people about media influence may be successful. Thus, proposals that education in media literacy be included in curricula are supported by the research presented here. Such media literacy programs would be particularly valuable for children, who often have a difficult time separating fantasy and reality and may form television-influenced attitudes and beliefs at a very early age.

It also seems possible that television could be put to a positive social use. If indeed the messages received from television are integrated into real-world perceptions, there is good reason to believe that television portrayals of positive circumstances and situations would yield tangible benefits. This supports the argument that television programs should attempt to provide a broader and more varied perspective by providing programs that are more integrated in terms of race, age, and social class. Presumably, such integration may help viewers adopt more positive attitudes toward particular groups when direct experience with these groups is lacking. In fact, it appears that to some extent network programmers are delivering on this issue: Programs about minorities (e.g., Fresh Prince of Bel Air, Full House, American Girl) and the working class (e.g., Grace Under Fire, Roseanne) are more common. However, the amount of violence on television has for the most part remained unchanged over the years (Gerbner, Morgan, & Signorielli, 1999).

The research discussed herein suggests that television programs are
much more than simple, inert mechanisms that deliver audiences to advertisers. The programs themselves are consumed, and this consumption has particular, and sometimes detrimental, persuasive effects. Thus, it seems natural that marketing and consumer researchers would be interested in this area of study, which has intrigued researchers in other disciplines since the introduction of television.

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