

# A Process Model of Consumer Cultivation: The Role of Television Is a Function of the Type of Judgment

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Bring up the issue of media effects in any group and it is likely to unleash a torrent of opinions. Virtually everyone has their own theory. This is true regardless of whether the group is composed of academics, business folks, or members of the PTA. Moreover, people tend to hold their theories with pretty high confidence and are often willing to vociferously defend their positions. But why is this so? Perhaps one reason is experience. Everyone, regardless of their profession or hobby, has extensive experience with both the independent and dependent variables. That is, (virtually) everyone watches television (most watch it a lot), listens to the radio, or reads magazines and newspapers. Likewise, everyone makes countless judgments on a daily basis: developing beliefs, forming or reinforcing attitudes, updating personal values, constructing perceptions. A second reason may be that consistent empirical evidence of media effects has been remarkably difficult to pin down. Although the body of evidence is mounting to support the notion that the media have a moderate if not a strong effect on individual judgments (e.g., see Comstock, this volume), there seems to be just enough confounding or conflicting data to call these findings into question and keep alive the debate as to whether the media's influence is that substantial at all.

We would like to suggest a third reason as to why there seems to be little consensus on whether media effects are either prevalent or strong, a reason that may directly relate to the previous two: a lack of understanding of the processes that underlie media effects. With respect to lay opinions about the existence and strength

of media effects, the link between media exposure and individual judgments may not be clear because the processes that are involved in these relations are not clear. Most people are unaware of the underlying causes of their thoughts, feelings, and behaviors, much of which occurs relatively unconsciously (Bargh, 1997; Erdelyi & Zizak, this volume). Despite this, most people cling to the notion that their decisions are willful and for the most part conscious. Consequently, the lack of awareness of the effects of a potential input, such as media consumption, on people's judgments may contribute to their disbelief in the efficacy of media effects.

The lack of understanding of the processes underlying media effects has also hampered academic research. This is especially true for research on the effects of television viewing, particularly for research that has attempted to test cultivation theory (Gerbner & Gross, 1976; for reviews, see Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002; Shanahan & Morgan, 1999). Just as everyday conversations regarding media effects can be intense, so can academic debates on the same issue. Indeed, these debates on media effects in general and cultivation effects in particular have spawned almost a cottage industry of replies and rejoinders in the premier academic journals (for a review, see Shanahan & Morgan, 1999). For almost every effect reported (or so it seems), an alternative explanation or a reanalysis of the data has been forthcoming. But as we have argued elsewhere (Burroughs, Shrum, & Rindfleisch, 2002; Shrum, 1995, 2002), an understanding of the processes that underlie media effects has the potential to reconcile conflicting findings and interpretations. That is, a process focus would suggest that conditions may exist that either facilitate or inhibit particular media effects, and the presence or absence of these conditions across studies may contribute to these inconsistent findings.

In this chapter, we focus on a particular media effect (the cultivation effect) and attempt to articulate a process model that can account for a variety of effects within the cultivation paradigm. In keeping with the theme of the book, we look at some of the unintended persuasion effects that may occur through the consumption of entertainment media, such as television. In the course of developing a model to explain these effects, we look specifically at the role of television programming in the shaping of product perceptions and the desire for these products, suggesting that television at the least has an influence on primary (product category) demand if not selective (brand) demand.

## **A PROCESS MODEL OF CULTIVATION EFFECTS**

### **Cultivation Theory**

Cultivation theory is a broad theory that relates media content with particular outcomes. The theory has two components. The first is that the content of television programs—whether they be “fiction,” such as soap operas, or “fact,” such as

news—presents a systematic distortion of reality.<sup>1</sup> That is, the world as it is portrayed on television differs in important and sometimes dramatic ways from how the real world is constituted. For example, the world of television tends to be more affluent (O'Guinn & Shrum, 1997), more violent (Gerbner, Gross, Morgan, & Signorielli, 1980), more maritally unfaithful (Lichter, Lichter, & Rothman, 1994), and more populated with doctors, lawyers, and police officers (DeFleur, 1964; Head, 1954; Lichter et al., 1994; Smythe, 1954) than the real world. The second component is that frequent exposure to these distorted images results in their internalization: The more people watch television, the more they develop values, attitudes, beliefs, and perceptions that are consistent with the world as it is portrayed on television. The internalization of the television message may result in the learning of television "facts": TV viewing has been shown to be positively correlated with estimates of the number of doctors, lawyers, and police officers in the real world (Shrum, 1996, 2001), the prevalence of violence (Gerbner et al., 1980; Shrum, Wyer, & O'Guinn, 1998), and the prevalence of ownership of expensive products (O'Guinn & Shrum, 1997; Shrum, 2001). In addition, internalization can take the form of learning the "lessons" of television: Heavy television viewing has been shown to be associated with greater anxiety and fearfulness (Bryant, Carveth, & Brown, 1981), greater faith in doctors (Volgy & Schwarz, 1980), greater pessimism about marriage (Shrum, 1999b), and greater interpersonal mistrust (Gerbner et al., 1980; Shrum, 1999b).

Research on aspects of the cultivation effect has been a contentious area. Although studies supporting cultivation theory are not in short supply, there have been a number of critiques of cultivation, including critiques of theory, method, analysis, and interpretation (cf. Hirsch, 1980; Hughes, 1980; Newcomb, 1978). These critiques, though having some validity, have been dealt with at length elsewhere (Gerbner, Gross, Morgan, & Signorielli, 1994; Morgan & Shanahan, 1996; Shanahan & Morgan, 1999; Van den Bulck, 2003). Suffice it to say that the critiques revolve around trade-offs in the measurement of the independent variable, television viewing, and consequent issues of causal direction. Gerbner and colleagues (Gerbner et al., 2002) take the position that measurement of television viewing best captures their concept of cultivation. More specifically, it better approximates

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<sup>1</sup>We put *fact* and *fiction* in quotes to signify that, like the topic of the book, the lines between what is fact and fiction is quite blurry. On the one hand, soap operas are clearly fictional in the technical sense, but they also hold some grain of truth, or at least ring true to some degree. On the other hand, news programs presumably present factual information, yet content analyses consistently show that news presentations can be significantly distorted, for example emphasizing dramatic crimes such as murder and other violence and tending to show African Americans and Latinos as criminals more often than base rates would suggest is representative (Dixon & Linz, 2000). In the middle is reality TV, which shows heavily edited but nevertheless actual footage of such things as crime and police response. But just as with the editing process for news, selective editing tends to portray certain races or classes of people (e.g., Black and Hispanic characters) as criminal suspects more often than as police officers, whereas the opposite is true for white characters (Oliver, 1994).

a pattern of viewing over years because television, in their view, tends to be a fairly habitual process, and thus measurement of viewing provides more validity than does a brief exposure to a particular stimulus (e.g., a program segment, an entire program, or even a series of programs) under experimental conditions. Others point out that the resulting correlational data leave causality ambiguous. Indeed, most of the critiques of cultivation revolve around third-variable or reverse causality explanations (Hirsch, 1980; Hughes, 1980; Zillmann, 1980). Experiments have been used to address these causal issues (for a review, see Ogles, 1987). However, experiments can be criticized because they may provide only a short exposure to particular television or film content, which may not fully capture the long-term nature of cultivation.

Two important (and somewhat interrelated) reasons for the contentious debate regarding the reliability and validity of the cultivation effect are that the effects have been, for the most part, small ones, and the effects have not always consistently obtained. Moreover, when they have obtained, implementation of certain statistical controls (e.g., demographics, activities outside the home, population size) has been shown to reduce the cultivation effect to nonsignificance in some instances (cf. Hirsch, 1980; Hughes, 1980). Indeed, meta-analyses of studies investigating the cultivation effect find an overall correlation coefficient of about .09, and this relation tends to vary slightly, but not significantly, across various demographic and situational variables (Morgan & Shanahan, 1996). The issues of small effect size and lack of reliability make cultivation effects particularly vulnerable to claims that the noted effects are spurious. That is, some other unmeasured variable may easily account for the entire relation between television viewing and judgments when the effects sizes are small.

The issue of small effect sizes has been addressed through a variety of arguments. First, small effect sizes, if real, are not trivial. As Gerbner et al. (2002) note, there are many instances in which a very small shift on some variable (e.g., global warming, voting behavior) has important consequences. Variables such as violence and aggression likely fall into this category as well (Bushman & Anderson, 2001). Second, and more pertinent to the focus of this chapter, small main effects may simply be masking larger effects within certain groups. This notion formed the basis of Gerbner et al.'s (1980) refinements to cultivation theory that introduced the concepts of mainstreaming and resonance, which postulated that direct experience variables may moderate the cultivation effect (see also Shrum & Bischak, 2001). This notion also forms the basis of our focus on psychological processes: Variables that affect the judgment processes may also moderate the cultivation effect.

### **Psychological Processes and Cultivation**

The debate over measurement and causality long predates the issues raised within the context of cultivation theory, and it seems unlikely that it will be resolved anytime soon. We tend to agree with both sides—measurement of television viewing

best captures the effects of viewing over time, but the resulting correlational data are always open to alternative explanations. However, as we have argued elsewhere (Shrum, 1995, 1999c, 2002), there may be a method to retain the traditional practice of measuring television viewing yet bolster the confidence one has that the data can speak to the issue of causality. This method involves the development of a psychological process model of cultivation effects. The logic is that if a process model of cultivation effects could be developed and validated—one that specifies testable propositions and lays out a set of mediators and moderators of the relation between television viewing and judgments—then we can be much more confident that the observed relations represent true rather than spurious effects (Hawkins & Pingree, 1990; Shrum, 2002). For example, a testable model should provide a series or set of conditions under which a particular effect does or does not hold. The power of this model, then, is in the pattern of results that is produced across studies. Thus, even though a particular study may have alternative explanations that cannot be completely addressed, these alternative explanations would have to address the entire pattern of results to effectively refute the findings.

In the remainder of this chapter, we discuss our efforts in developing such a model. We first provide a brief overview of the model that has been developed to date and then offer an extension of this model. In doing so, we discuss some recent data that support key portions of this extension.

## HEURISTIC PROCESSING MODEL OF CULTIVATION EFFECTS

The heuristic processing model of cultivation effects (Shrum, 1996, 1999c, 2002; Shrum et al., 1998) represents an initial attempt at developing a model of the mental processes that underlies cultivation effects. Figure 10.1 provides a flow diagram of the model. A more detailed account of the components of this model can be found in the literature just cited. For our purposes, we simply want to highlight certain features of the model, particularly with respect to the assumptions, general propositions, and limitations.

### Assumptions of the Model

**Types of Cultivation Judgments.** To understand both the contribution and the limitations of the model, it is necessary to understand that a variety of dependent variables (judgments) have been used to test for cultivation effects. Hawkins and Pingree (1982) first noted that the types of judgments used to test for cultivation effects could conveniently be categorized into two groups: demographic and value-system measures. These measures have also been termed first-order and second-order measures, respectively (Gerbner, Gross, Morgan, & Signorielli, 1986). *Demographic* or *first-order measures* pertain to those that relate to the facts of television and the social world—those aspects of the television world that can

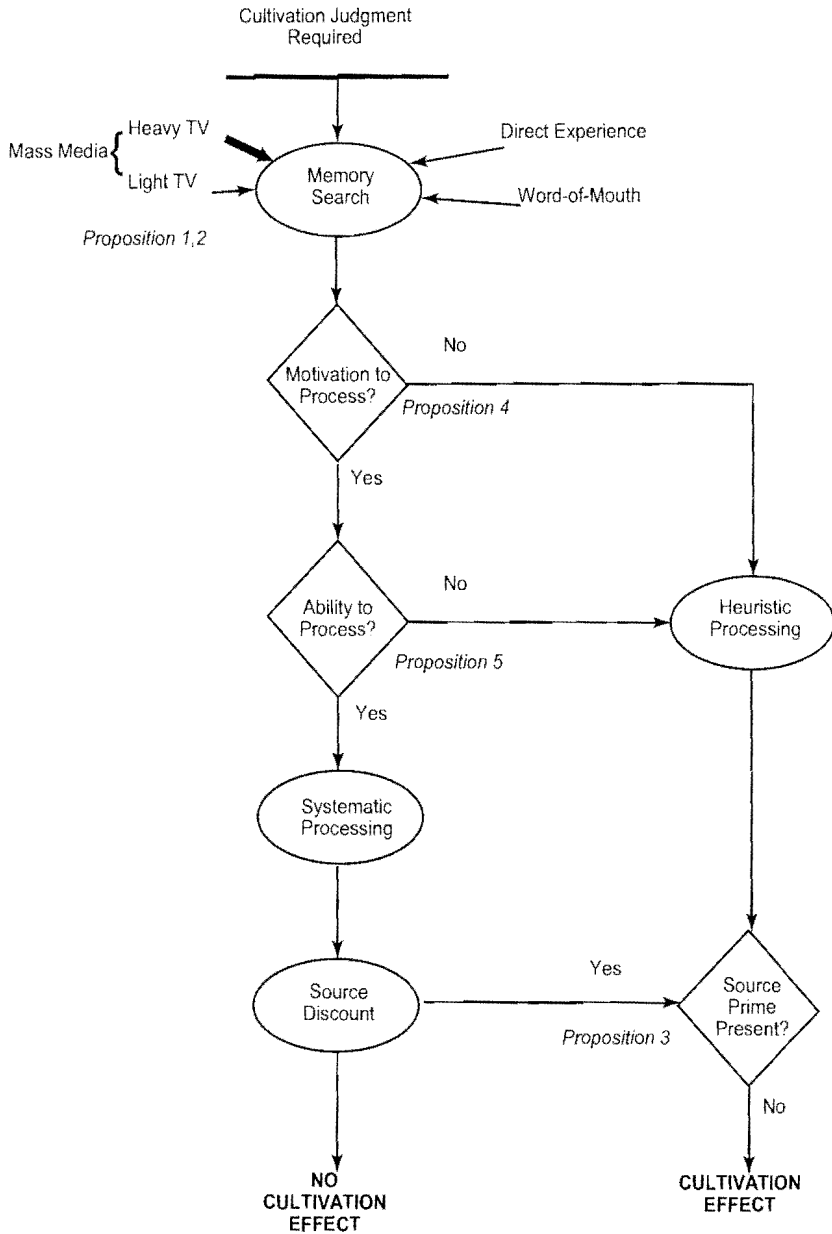


FIG. 10.1 Flow diagram of the heuristic processing model of cultivation effects. Circles represent mental processes. The thicker arrow from Heavy TV to Memory Search indicates a greater contribution to the search process. From *Media Effects: Advances in Theory and Research* (2nd ed., p. 87), by J. Bryant & D. Zillmann (Eds.), Mahwah, NJ: Lawrence Erlbaum Associates. Reprinted with permission.

be objectively compared with the same aspects of the real world. Examples include asking respondents to estimate the percentage of Americans who are involved in a violent crime; the percentage of the American workforce that consists of lawyers, doctors, or police officers; the percentage of marriages that end in divorce; and so forth. *Value-system* or *second-order measures* pertain to the values, attitudes, and beliefs that might be cultivated from television content. Examples include asking respondents if they are afraid to walk alone at night, measuring their level of mistrust, their acceptance of violence, their belief that their spouse would be unfaithful, or their level of materialism.

What makes this distinction interesting is that, according to Hawkins and Pingree's (1982) review of the literature up to that point, the size and reliability of the cultivation effect tends to vary as a function of the type of judgments. The cultivation effect tends to be observed more strongly and more often for first-order (demographic) than for second-order (value-system) beliefs. There are at least two nonmutually exclusive explanations for this pattern of findings. One explanation is that only one type of judgment—judgments related to the prevalence of particular constructs that occur often on television—is influenced by television viewing. Judgments related to values and attitudes that might be developed from the lessons of television, however, are simply not affected by amount of viewing. A second explanation is that the judgments differ in terms of the processes involved in constructing them. This possibility implies at least two important things: Television may influence each of the two types of judgments in different ways, and different factors may mediate or moderate the relation between television viewing and the two types of judgments.

***Cultivation Judgments As Psychological Judgments.*** If one scrutinizes the types of judgments that have been classified as first- or second-order judgments in terms of how psychologists categorize them, it is apparent that they differ in fundamental ways. First-order judgments for the most part consist of judgments of probability or set size (Shrum, 1995). Examples include estimating risk (e.g., risk of crime) and estimating the number or percentage of instances in which a particular category (e.g., millionaire) occurs within a larger, superordinate category (e.g., Americans). Second-order judgments typically consist of attitude, value, or belief judgments. Examples include beliefs related to trust, the extent to which the world is a mean and violent place, and whether achievement is reflected in product ownership, just to name a few. Viewed this way, it is quite possible that first- and second-order judgments differ in terms of the way in which they are constructed. Moreover, decades of research in social and cognitive psychology have detailed the processes involved in constructing these judgments, which is useful in determining the role that certain types of inputs (e.g., television information) may play in this process.

## A Process Model of First-Order Cultivation Judgments

***How Are the Judgments Constructed?*** In attempting to construct a process model for cultivation effects, it seemed reasonable to start with first-order (set-size and probability) judgments, given that those are the types of judgments for which cultivation effects have tended to be more robust and consistent. So how are those types of judgments constructed? Research by Tversky and Kahneman (1973; see also Kahneman & Tversky, 1982) suggests that these types of judgments are often made through the application of particular heuristics, or rules of thumb. Specifically, judgments of set size and probability tend to be based on the application of the availability heuristic (Tversky & Kahneman, 1973) or the simulation heuristic (Kahneman & Tversky, 1982). In using the *availability heuristic*, people base their judgments of set size or probability on how easy a relevant example comes to mind: The easier it is to recall, the higher the estimate. Thus, people tend to estimate that words in the English language that start with the letter *K* occur more often than words that have *K* as the third letter (Tversky & Kahneman, 1973, Study 3), even though the opposite is in fact the case. This result is presumably because words tend to be organized in memory according to their first letter, and thus words that start with *K* are more easily recalled. Similarly, 80% of people tend to estimate that accidents account for more deaths than do strokes, even though strokes account for about 85% more deaths than do accidents (Lichtenstein, Slovic, Fischhoff, Layman, & Combs, 1978). Again, this is presumably because accidents are easier to recall or imagine than strokes.

When judging set size or probability, a relevant example may not be available in memory (i.e., present in memory) or, if available, not particularly accessible (i.e., not easily retrieved). Thus, the availability heuristic cannot be applied. In these instances, people may resort to basing their estimates on the ease with which a relevant example can be imagined. This is an example of the *simulation heuristic*. Supporting this notion, research has shown that when people are induced to imagine a particular event such as winning a contest (Gregory, Cialdini, & Carpenter, 1982) or contracting a disease (Sherman, Cialdini, Schwartzman, & Reynolds, 1985), they provide higher estimates of the probability that they will experience these events compared with people who are not induced to imagine such events, and these relations are mediated by ease of imagining (Sherman et al., 1985).

***Relation to Media Consumption.*** The studies just noted, along with numerous others, clearly document that accessibility of relevant examples or ease of construction of a scenario influences estimates of set size and probability. Those with more accessible examples or greater ease of construction provide higher estimates. This has been shown to occur in both experimental studies and field studies. But what influences this accessibility? Clearly, in the experimental studies, accessibility is manipulated. But what of the field studies of Lichtenstein et al. (1978)? Why did people tend to greatly overestimate the number of deaths caused by accidents but greatly underestimate deaths caused by strokes? Lichtenstein et al. speculated



that accessibility is influenced by media coverage, suggesting that media publicity of such dramatic events as accidents and homicides increases accessibility of these examples relative to less dramatic and publicized causes of death such as strokes. This speculation was supported by a content analysis of newspaper articles showing just such differences in coverage (Combs & Slovic, 1979).

These studies suggest that media consumption may influence the accessibility of constructs that are commonly portrayed. It follows, then, that differences in media consumption (all other things being equal) may influence levels of accessibility of relevant constructs. If so, then for judgments of set size and probability, if the availability or simulation heuristic is used, then heavier media consumers should provide higher estimates of set size or probability than lighter media consumers. In fact, this is exactly what cultivation theory predicts.

***Constructing the Process Model.*** From this point, it is a fairly simple leap to the development and testing of a process model of cultivation. Such a model predicts that heavier television viewing will make relevant examples more accessible in memory than lighter viewing (Proposition 1) and that this enhanced accessibility will result in higher estimates, indicating a mediating role of accessibility (Proposition 2). Note, however, that the notion that television examples would be used in the construction of these judgments is not necessarily intuitive. When estimating the prevalence of lawyers or police officers in the workforce, it is unlikely that people would consciously use an example of a TV lawyer or police officer to construct this judgment. Thus, if such TV examples are indeed used in constructing real-world judgments, then people are likely unaware of the source of these examples (because they are made fairly quickly) and thus do not discount the television examples as an invalid source (Proposition 3). Finally, conditions that facilitate or inhibit the use of judgmental heuristics such as availability and simulation should correspondingly increase or decrease the cultivation effect. These conditions include motivation to process information, which should inhibit the cultivation effect (Proposition 4) and lack of ability to process information, which should facilitate the cultivation effect (Proposition 5). Approximately a dozen studies have validated and replicated each of these key propositions (for a review, see Shrum, 2002).

### **Addressing Second-Order Cultivation Judgments**

As noted elsewhere (Shrum, 1995, 2002), the psychological process model shown in Figure 10.1 is mute with respect to second-order judgments such as attitudes and values. This is unfortunate because, as Gerbner et al. (2002) have noted, it is the extrapolation or symbolic transformation of the television message into more general perspectives and ideologies that is perhaps more interesting and better captures the concept of cultivation theory than a focus on simple perceptions and beliefs that are captured by first-order measures. For this reason, it seems useful

to extend the process model to include second-order judgments such as attitudes and values.

In developing the model for first-order judgments, we first started with the question of how such judgments are made, working backward to understand how television information might influence these judgments. In applying this approach to second-order judgments, it quickly becomes apparent that first- and second-order judgments are made quite differently. For one, judgments of set size and probability are virtually always memory based (Hastie & Park, 1986). That is, when asked to form a judgment about the probability of being involved in a violent crime or the incidence of millionaires in the United States, people would not be likely to have such answers stored in memory. Rather, they would construct them by recalling relevant examples or scenarios. Thus, first-order judgments are likely constructed at the time the judgment is required (e.g., responding to a research query; playing *Trivial Pursuit*). For this reason, we would expect that memory for these examples would correlate with both the independent (TV viewing) and dependent (judgments) variables (Hastie & Park, 1986). In fact, that is what the studies have consistently shown (Busselle & Shrum, *in press*; Shrum, 1996). This process also implies that conditions operating at the time of judgment would be more likely to impact the TV-judgment relation than would conditions operating at the time of encoding or viewing. Consistent with this notion, judgment conditions such as time pressure (Shrum, 1999a), task involvement (Shrum, 2001), and source discounting (Shrum et al., 1998) have been shown to moderate the cultivation effect. Conversely, conditions or variables operating at the time of viewing (e.g., attention while viewing, intention to view, perceived reality of television, need for cognition) have been shown to have virtually no effect on either the magnitude of first-order judgments or memory for TV information (Busselle & Shrum, *in press*; O'Guinn & Shrum, 1997; Shrum, 1996, 2001; Shrum et al., 1998).

In contrast, the construction of values, attitudes, and beliefs is likely made in a different manner. It is of course possible that attitudes and beliefs could be constructed in a memory-based fashion. When asked to provide an attitude toward a particular object, people may attempt to recall relevant information (both cognitions and affect) and then construct their attitude in real time. This would likely occur when people do not have a readily accessible attitude or belief to provide when a request for attitude expression is made. If they did have an attitude or belief readily accessible, they would instead simply retrieve their prior constructed attitude or belief and report it (Hastie & Park, 1986; see also Carlston, 1980; Lichtenstein & Srull, 1985, 1987; Lingle & Ostrom, 1979).

But consider the types of attitudes and beliefs that are typically measured in cultivation research. These measures assess the extent to which people believe the world is a violent place, are afraid to walk alone at night, approve of violence by police, believe crime is the most important political issue, do not trust others, and so forth. These types of beliefs are commonly used in everyday life. Thus, they are likely to already exist for most people, having been formed long ago

and reinforced or updated on a consistent basis. This is even more so the case for constructs such as personal values. By definition, values are stable and enduring beliefs that everyone possesses and that serve as guides to behavior over the course of a lifetime (Rokeach, 1973). Thus, they are formed at a relatively early age and then changed (either made stronger or altered) as new information comes in. This process of constructing judgments on the basis of incoming information (as opposed to retrieved information) is what Hastie and Park (1986) term an online judgment.

If it is true that these types of judgments are formed in an online fashion, important implications are made for the role that television viewing might play in the formation of those judgments. In particular, it suggests that these types of judgments are likely made (developed, reinforced, or altered) during the viewing process. If so, it also implies that conditions operating during viewing may affect the influence of television information rather than conditions operating at the time the judgment is required by some external situation (e.g., being asked by a researcher). Note that this is essentially the opposite of the process involved with first-order (memory-based) cultivation judgments, which depend on recall at the time the judgment is required and thus should be affected by conditions present at that time rather than at the time of viewing.

***Supportive Evidence.*** The notion that second-order cultivation judgments might be influenced by conditions at the time of viewing is a proposition that was addressed in a recent study (Burroughs et al., 2002). In that study, we investigated the relation between television viewing and the consumer value of materialism. Materialism is commonly viewed as the value placed on the acquisition of material objects, such as expensive cars, homes, and clothes (Richins & Dawson, 1992). Because content analyses have consistently shown that the world portrayed on television tends to be more affluent and materialistic than the real world (Hirschman, 1988; Lichter et al., 1994; O'Guinn & Shrum, 1997), we expected that, consistent with cultivation theory, these materialistic messages would be internalized by viewers, resulting in higher levels of materialism for those who viewed relatively more television in general. However, we expected this positive relation between television viewing and materialism to be moderated by certain factors that might affect the processing of the message during viewing. These factors included the degree to which viewers tend to be attentive while viewing and the extent to which viewers tend to elaborate on the television message while viewing. We expected that those who pay more attention while viewing would be more persuaded by the television message than those who pay less attention, and we also expected that those who elaborate more on the message (those higher in need for cognition; Cacioppo & Petty, 1982) would also be more affected than those who elaborate less.

The results were as expected. We found that level of television viewing was related to materialism: The more people viewed television, the more materialistic they were. However, also as expected, this relation was moderated by the two

process variables. Specifically, the positive relation between television viewing and materialism was stronger for those who paid more attention to the program while viewing than for those who paid less attention and stronger for those higher in need for cognition than for those lower in need for cognition.

### **Implications for Model Development and Causality**

The moderating role of attention while viewing and need for cognition is consistent with our theorizing that the process of cultivation for second-order cultivation judgments tends to occur during viewing. The variables of attention and need for cognition were intended to capture processes that were taking place during the viewing process. As such, it is highly unlikely that such variables would moderate the cultivation effect if in fact the judgments were memory based, at least in the pattern we observed. This last phrase is an important qualifier. It is possible that greater elaboration and greater attention could indeed have an effect on the extent to which television information is used in a memory-based judgment. However, as has been shown in previous studies (Shrum, 2001; Shrum et al., 1998) the effect should be just the opposite of the one we observed: Greater attention and elaboration should lead to more source discounting (discounting the television information because it is not veridical) and thus reduce rather than inflate the cultivation effect.

The pattern of results we observed also has important implications for causality. As we noted earlier, correlational results are always open to alternative explanations of causal paths. However, the pattern of moderating effects that we observed are difficult to explain in reverse causality or third-variable terms. In particular, attention and elaboration are process variables that necessarily occur during rather than prior to viewing, making a reverse causality explanation untenable. And, although it is still possible that some third variable is driving the TV-materialism relation, that variable would also have to account for the two moderating effects we observed. Given that constraint, it is unclear what that third variable might be.

### **Limitations of the Study**

There is one important limitation to the results of Burroughs et al. (2002). That limitation pertains to the use of need for cognition as a surrogate measure of elaboration during viewing. It could certainly be argued that those higher in need for cognition would not enjoy such a cognitively easy task as television viewing. Moreover, if they did view, they might be more prone to counterarguing than support arguing. In fact, Burroughs et al. found that need for cognition was indeed negatively correlated with television viewing. However, we would argue that for those who are high in need for cognition who do decide to view frequently, a continual counterarguing of the television message would be a particularly miserable experience. Rather, we expect that those high in need for cognition who view frequently are the ones who enjoy watching television and thus would be more

likely to suspend disbelief and elaborate extensively than those high in need for cognition who are lighter viewers. Our pattern of results is consistent with that notion: It is the people who are both heavy viewers and high in need for cognition that exhibit the highest levels of materialism.

## CONCLUSION

The arguments that we have presented in this chapter for the processes involved in the construction of second-order cultivation judgments are just that—arguments. Although we have discussed some empirical findings that support our reasoning, there is still quite a bit of work to do in terms of fleshing out the entire process. Ideally, one would end up with a process model for second-order judgments that is similar to the one shown in Figure 10.1 for first-order judgments, one that specifies testable propositions that address the processes that mediate and moderate the effect of television viewing on judgments. Doing so would provide a major step in establishing the causal impact that television viewing has on the gamut of human judgment and behavior.

## REFERENCES

- Bargh, J. A. (1997). The automaticity of everyday life. In R. S. Wyer (Ed.), *The automaticity of everyday life: Advances in social cognition* (Vol. 10, pp. 1–61). Mahwah, NJ: Lawrence Erlbaum Associates.
- Bryant, J., Carveth, R. A., & Brown, D. (1981). Television viewing and anxiety: An experimental investigation. *Journal of Communication, 31*(1), 106–119.
- Bryant, J., Zillmann, D. (Eds.). (2002). *Media effects: Advances in theory and research* (2nd ed., p. 87). Mahwah, NJ: Lawrence Erlbaum Associates.
- Burroughs, J. E., Shrum, L. J., & Rindfleisch, A. (2002). Does television viewing promote materialism? Cultivating American perceptions of the good life. In S. Broniarczyk & K. Nakamoto (Eds.), *Advances in consumer research* (Vol. 28, pp. 442–443). Provo, UT: Association for Consumer Research.
- Bushman, B. J., & Anderson, C. A. (2001). Media violence and the American public: Scientific facts versus media misinformation. *American Psychologist, 56*(6–7), 477–489.
- Busselle, R. W., & Shrum, L. J. (in press). Media exposure and the accessibility of social information. *Media Psychology*.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology, 42*, 116–131.
- Carlston, D. E. (1980). The recall and use of traits and events in social inference processes. *Journal of Experimental Social Psychology, 16*, 303–328.
- Combs, B., & Slocic, P. (1979). Newspaper coverage of causes of death. *Journalism Quarterly, 56*, 837–849.
- DeFleur, M. L. (1964). Occupational roles as portrayed on television. *Public Opinion Quarterly, 28*, 54–74.
- Dixon, T., & Linz, D. (2000). Overrepresentation and underrepresentation of African Americans and Latinos as lawbreakers on television news. *Journal of Communication, 50*, 131–154.

- Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. *Journal of Communication*, 26(2), 173-199.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1980). The "mainstreaming" of America: Violence profile no. 11. *Journal of Communication*, 30(3), 10-29.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1986). Living with television: The dynamics of the cultivation process. In J. Bryant & D. Zillmann (Eds.), *Perspectives on media effects* (pp. 17-40). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 17-41). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gerbner, G., Gross, L., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television: Cultivation processes. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (2nd ed., pp. 43-67). Mahwah, NJ: Lawrence Erlbaum Associates.
- Gregory, L. G., Cialdini, R. B., & Carpenter, K. M. (1982). Self-relevant scenarios as mediators of likelihood estimates and compliance: Does imagining make it so? *Journal of Personality and Social Psychology*, 43, 89-99.
- Hastie, R., & Park, B. (1986). The relationship between memory and judgment depends on whether the judgment task is memory-based or on-line. *Psychological Review*, 93, 258-268.
- Hawkins, R. P., & Pingree, S. (1982). Television's influence on constructions of social reality. In D. Pearl, L. Bouthilet, & J. Lazar (Eds.), *Television and behavior: Ten years of scientific progress and implications for the eighties* (Vol. 2, pp. 224-247). Washington, DC: Government Printing Office.
- Hawkins, R. B., & Pingree, S. (1990). Divergent psychological processes in constructing social reality from mass media content. In N. Signorielli & M. Morgan (Eds.), *Cultivation analysis: New directions in media effects research* (pp. 33-50). Newbury Park, CA: Sage.
- Head, S. W. (1954). Content analysis of television drama programs. *Quarterly of Film, Radio, and Television*, 9, 175-194.
- Hirsch, P. (1980). The scary world of the nonviewer and other anomalies: A reanalysis of Gerbner et al.'s findings on cultivation analysis. *Communication Research*, 7, 403-456.
- Hirschman, E. C. (1988). The ideology of consumption: A structural-syntactical analysis of "Dallas" and "Dynasty." *Journal of Consumer Research*, 15, 344-359.
- Hughes, M. (1980). The fruits of cultivation analysis: A reexamination of some effects of television watching. *Public Opinion Quarterly*, 44, 287-302.
- Kahneman, D., & Tversky, A. (1982). The simulation heuristic. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases*. New York: Cambridge University Press.
- Lichtenstein, M., & Srull, T. K. (1985). Conceptual and methodological issues in examining the relationship between consumer memory and judgment. In L. F. Alwitt & A. A. Mitchell (Eds.), *Psychological processes and advertising effects: Theory, research and application* (pp. 113-128). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lichtenstein, M., & Srull, T. K. (1987). Processing objectives as a determinant of the relationship between recall and judgment. *Journal of Experimental Social Psychology*, 23, 93-118.
- Lichtenstein, S., Slovic, P., Fischhoff, G., Layman, M., & Combs, B. (1978). Judged frequency of lethal events. *Journal of Experimental Psychology: Human Learning and Memory*, 6, 551-578.
- Lichter, S. R., Lichter, L. S., & Rothman, S. (1994). *Prime time: How TV portrays American culture*. Washington, DC: Regnery Publishing.
- Lingle, J. H., & Ostrom, T. M. (1979). Retrieval selectivity in memory-based impression judgments. *Journal of Personality and Social Psychology*, 37, 180-194.
- Morgan, M., & Shanahan, J. (1996). Two decades of cultivation research: An appraisal and meta-analysis. In B. R. Burleson (Ed.), *Communication yearbook 20* (pp. 1-45). Newbury Park, CA: Sage.

- Newcomb, H. (1978). Assessing the violence profiles of Gerbner and Gross: A humanistic critique and suggestion. *Communication Research*, 5, 264–282.
- Ogles, R. M. (1987). Cultivation analysis: Theory, methodology and current research on television-influenced constructions of social reality. *Mass Comm Review* 14(1, 2), 43–53.
- O'Guinn, T. C., & Shrum, L. J. (1997). The role of television in the construction of consumer reality. *Journal of Consumer Research*, 23, 278–294.
- Oliver, M. B. (1994). Portrayals of crime, race, and aggression in "reality based" police shows: A content analysis. *Journal of Broadcasting & Electronic Media*, 38, 179–192.
- Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19, 303–316.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Shanahan, J., & Morgan, M. (1999). *Television and its viewers: Cultivation theory and research*. New York: Cambridge University Press.
- Sherman, S. J., Cialdini, R. B., Schwartzman, D. F., & Reynolds, K. D. (1985). Imagining can heighten or lower the perceived likelihood of contracting a disease: The mediating effect of ease of imagery. *Personality and Social Psychology Bulletin*, 11, 118–127.
- Shrum, L. J. (1995). Assessing the social influence of television: A social cognition perspective on cultivation effects. *Communication Research*, 22, 402–429.
- Shrum, L. J. (1996). Psychological processes underlying cultivation effects: Further tests of construct accessibility. *Human Communication Research*, 22, 482–509.
- Shrum, L. J. (1999a). *The effect of data-collection methods on the cultivation effect: Implications for the heuristic processing model of cultivation effects*. Paper presented at the meeting of the International Communication Association, San Francisco, CA.
- Shrum, L. J. (1999b). The relationship of television viewing with attitude strength and extremity: Implications for the cultivation effect. *Media Psychology*, 1, 3–25.
- Shrum, L. J. (1999c). Television and persuasion: Effects of the programs between the ads. *Psychology & Marketing*, 16, 119–140.
- Shrum, L. J. (2001). Processing strategy moderates the cultivation effect. *Human Communication Research*, 27, 94–120.
- Shrum, L. J. (2002). Media consumption and perceptions of social reality: Effects and underlying processes. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (2nd ed., pp. 69–95). Mahwah, NJ: Lawrence Erlbaum Associates.
- Shrum, L. J., & Bischak, V. D. (2001). Mainstreaming, resonance, and impersonal impact: Testing moderators of the cultivation effect for estimates of crime risk. *Human Communication Research*, 27(2), 187–215.
- Shrum, L. J., Wyer, R. S., & O'Guinn, T. C. (1998). The effects of television consumption on social perceptions: The use of priming procedures to investigate psychological processes. *Journal of Consumer Research*, 24, 447–458.
- Smythe, D. W. (1954). Reality as presented by television. *Public Opinion Quarterly*, 18, 143–156.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5, 207–232.
- Van den Bulck, J. (2003). Is the mainstreaming effect of cultivation an artifact of regression to the mean? *Journal of Broadcasting & Electronic Media*, 47(2), 289–295.
- Volgy, T., & Schwarz, J. (1980). Television entertainment programming and sociopolitical attitudes. *Journalism Quarterly*, 57, 150–155.
- Zillmann, D. (1980). Anatomy of suspense. In P. H. Tannenbaum (Ed.), *The entertainment functions of television* (pp. 133–163). Hillsdale, NJ: Erlbaum.