

COMMUNICATION EFFECTS OF NONINTERACTIVE MEDIA: LEARNING IN OUT-OF-SCHOOL CONTEXTS

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3.1 INTRODUCTION

Most of the chapters included in this collection focus specifically on the role of media in formal learning contexts, learning that occurs in the classroom in an institutional setting dedicated to learning. The emphasis is on specific media applications with specific content to assess learning outcomes linked to a formal curriculum. By contrast, the purpose of this chapter is to review research on the role of media, in particular, mass media, and learning outside the classroom, outside the formal learning environment. It focuses on the way in which media contribute to learning when no teacher is present and the media presentation is not linked to a formal, institutional curriculum with explicitly measurable goals.

Research on media and learning outside the classroom dates back to early studies of the introduction of mass media. As each new medium—film, radio, television, computer—was adopted into the home setting, a new generation of research investigations examined the role of the medium and its potential as a teacher. In addition to questions of how a new dominant mass medium would alter people's use of time and attention, one of the central research questions was how and to what extent audiences would learn from the new media system. Over time,

these questions broadened beyond media content to explore the manner in which audiences interpreted media messages and the social context in which that interpretation takes place. This chapter focuses on these unique perspectives in a review of communication and media research on learning.

Classic studies of the introduction of both film and television illustrate the broad-based questions regarding media and learning posed in relation to a new medium. In the case of film, the Payne Fund studies in the 1930s represented the first large-scale attempt to investigate the media's role in influencing people's beliefs and attitudes about society, other people, and themselves. Investigators (Cressey, 1934; Holaday & Stoddard, 1933; Peterson & Thurstone, 1933; Shuttleworth & May, 1933) examined three types of learning that have become dominant in studies of media and learning: (1) knowledge acquisition or the reception and retention of specific information; (2) behavioral performance, defined as the imitation or repetition of actions performed by others in media portrayals; and (3) socialization or general knowledge, referring to attitudes about the world fostered by repeated exposure to mass media content. Researchers found evidence in support of the medium's influence on learning on all three counts. In addition, the studies suggested that learning from film could go well beyond the specific content and the intended messages. According to Cressey (1934),

... when a child or youth goes to the movies, he acquires from the experience much more than entertainment. General information concerning realms of life of which the individual does not have other knowledge, specific information and suggestions concerning fields of immediate personal interest, techniques of crime, methods of avoiding detection, and of escape from the law, as well as countless techniques for gaining special favors and for interesting the opposite sex in oneself are among the educational contributions of entertainment films. (p. 506)

Compared to traditional classroom teaching, Cressey asserted, films offered an irresistible—and oppositional—new source of knowledge, especially for young people.

Early studies of the introduction of television adopted similar broad-based approaches and reached similar conclusions regarding the role of the new medium in shaping individuals' responses to, that is, helping them learn about, the world around them. The first rigorous exploration of television's effects on children (Himmelweit, Oppenheim, & Vince, 1959) set the stage for an examination of television's unintended effects on learning. Part of the study focused on the extent to which children's outlooks were colored by television: How were their attitudes affected? How were they socialized? Based on comparisons of viewers and nonviewers, the researchers found significant differences in attitudes, goals, and interests.

At about the same time Schramm, Lyle, and Parker (1961) initiated the first major examination of television's effects on children in North America in a series of 11 studies. This research emphasized how children learn from television. Based on their findings, the researchers proposed the concept of "incidental learning." "By this we mean that learning takes place when a viewer goes to television for entertainment and stores up certain items of information without seeking them" (Schramm et al., 1961, p. 75). They consistently found that learning in response to television programs took place whether or not the content was intended to be educational.

This concept of incidental learning has become a central issue in subsequent studies of media and learning. Some investigators have focused their studies on learning that resulted from programs or material designed as an *intentional* effort to teach about a particular subject matter or issue, while others were intrigued by the extent to which audience members absorbed aspects of the content or message that were *unintended* by the creators. As Schramm (1977) noted in his later work, "Students learn from *any* medium, in school or out, whether they intend to or not, whether it is intended or not that they should learn (as millions of parents will testify), providing that the content of the medium leads them to pay attention to it" (p. 267).

This notion of intended and unintended learning effects of media was anticipated in early discussions of education and learning in the writings of John Dewey. Dewey anticipated many of the issues that would later arise in communication research as investigators struggled to conceptualize, define, measure, and analyze learning that occurs in relation to media experiences. He devoted an early section of *Democracy and Education* (1916) to a discussion of "Education and Communication." In this discussion, he noted the significance of the role of communication in shaping individuals' understanding of the world around them as follows:

Society not only continues to exist *by* transmission, *by* communication, but it may fairly be said to exist *in* transmission, *in* communication.

There is more than a verbal tie between the words common, community, and communication. Men live in a community in virtue of the things which they have in common; and communication is the way in which they come to possess things in common. What they must have in common in order to form a community or society are aims, beliefs, aspirations, knowledge—a common understanding—like-mindedness as the sociologists say. (p. 4)

Later Dewey stated, "Not only is social life identical with communication, but all communication (and hence all genuine social life) is educative. To be a recipient of a communication is to have an enlarged and changed experience" (p. 5). That is, communication messages influence individuals' understanding of the world around them; they are changed or influenced by the messages.

Thus, for Dewey, one result of communication is to reflect *common understandings*; communication serves to educate individuals in this way, to help them understand the world around them, according to these shared views. The knowledge and understanding that they learn through this function of communication provide the foundation for the maintenance of society. Another function of communication in society, according to Dewey, is to *alter* individuals' understandings of the world; their perceptions of and knowledge about the world around them are influenced and shaped by the messages to which they are exposed.

Communication theorist James Carey (1989) expanded on Dewey's notions regarding both the social integration function of communication (communication as creating common understanding) and the change agent function of communication (communication as altering understandings) to propose two alternative conceptualizations of communication, the *transmission* view and the *ritual* view. The transmission view adopts the notion that "communication is a process whereby messages are transmitted and distributed in space for the control of distance and people" (Carey, 1989, p. 15). According to Carey, the transmission view of communication has long dominated U.S. scholarship on the role of media effects in general and learning from media in particular. However, the ritual view of communication "is directed not toward the extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs" (Carey, 1989, p. 18).

Because the ritual view of communication focuses on content that represents shared beliefs and common understandings, such content is not typically the focus of the message designer or producer. These messages are typically unintended because they are viewed by message designers as a reflection of shared attitudes, beliefs, and behaviors and not as a central purpose or goal of the communication.

By contrast, messages designed with the intention of altering responses are examples of the transmission view of communication. There is a specific intent and goal to the message: To change the audience member's view or understanding in a particular way. Research in this tradition focuses on the effects of messages intended to manipulate or alter audience attitudes, beliefs, and behaviors. Examples of such messages are conceived and designed by their creators as *intentional* efforts to influence audience responses.

These two contrasting conceptualizations of communication serve as a framework for organizing the first section of this chapter, which reports on research on media and learning as it relates to a focus on the *content* and intent of the message and its subsequent influence on learning. For the most part, these studies examine the effectiveness of media in delivering intentional messages with specific goals. However, we also discuss examples of research that propose some unintentional effects of media messages on audience members.

3.2 MEDIA AND LEARNING: CONTENT EFFECTS

The earliest models in the study of media and audiences were based on technical conceptions of message transmission. They developed in direct response to the advent of mass communication technologies that revolutionized the scale and speed of communication. The original intent was to assess the effects that the new and ubiquitous media systems had on their audience members and on society. From the beginning research was highly influenced by mass media's potential to distribute singular messages from a central point in space to millions of individuals in a one-way flow of information.

The components of the models stemmed from Lasswell's (1948) question of "Who says what to whom with what effect?" Some of the earliest theoretical work in mass communication was done in conjunction with the development of electronic mass media and was grounded in information theory. This approach examined both the process of how information is transmitted from the sender to the receiver and the factors that influence the extent to which communication between individuals proceeds in the intended fashion. As telephone, radio, and television technologies advanced, researchers looked for scientific means of efficiently delivering messages from one person to another. The goal was for the person receiving the message to receive only the verbal or electronic signals intentionally sent by another person. These theories were based on the 19th century ideas about the transfer of energy (Trenholm, 1986). Such scientific theories held that research phenomena could be broken into component parts governed by universal laws that permitted prediction of future events. In short, the technical perspective on communication held that objects (for example, messages,

their senders, and receivers) followed laws of cause and effect.

One of the most popular examples of the technical perspective was the mathematical model of Shannon and Weaver (1949), developed during their work for Bell Laboratories (see Fig. 3.1).

This linear, one-way transmission model adopted an engineering focus which treated information as a mathematical constant, a fixed element of communication. Once a message source converted an intended meaning into electronic signals, this signal was fed by a sender through a channel to a receiver that converted the signal into comprehensible content for the receiver of the message. Any interference in the literal transfer of the message (for example, from electronic static or uncertainty on the part of either party) constituted "noise" that worked against the predictability of communication. To the extent that noise could be kept to a minimum, the effect of a message on the destination could be predicted based on the source's intent.

This transmission paradigm viewed communication as a linear process composed of several components: source, message, channel, receiver, information, redundancy, entropy, and fidelity. Many of these concepts have remained fundamental concepts of communication theory since Shannon and Weaver's original work. Because of the emphasis on the transmission of the source's intended message, attention was focused on the design of the message and the extent to which the message's intent was reflected in outcomes or effects on the receiver. The greater the degree of similarity between the intention of the source and the outcome or effect at the receiver end, the more "successful" the communication was considered to be. If the intended effect did not occur, a breakdown in communication was assumed. The concept of feedback was added later to gauge the success of each message. This notion was derived from learning theory, which provided for the teacher's "checks" on students' comprehension and learning (Heath & Bryant, 1992).

The channel in this perspective was linked to several other terms, including the signal, the channel's information capacity, and its rate of transmission. The technical capabilities of media were fundamental questions of information theory. The ability of senders and receivers to encode and decode mental intentions into/from various kinds of signals (verbal, print, or electronic) were paramount to successful communication. Each of these concepts emphasized the technical capabilities of media and the message source.

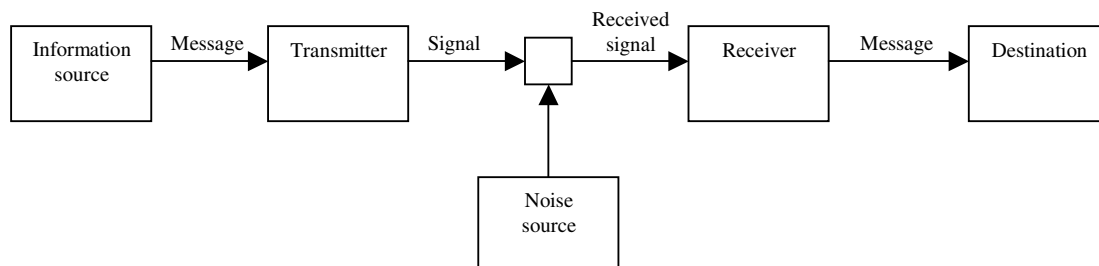


FIGURE 3.1. Shannon and Weaver's "mathematical model" of a one-way, linear transmission of messages. (From Shannon & Weaver, *The Mathematical Theory of Communication*, Urbana, IL, University of Illinois Press, 1949, p. 98. Copyright 1949 by the Board of Trustees of the University of Illinois. Used with permission of the University of Illinois Press.)

Two additional components critical within this perspective are *redundancy* and *entropy*. Redundancy refers to the amount of information that must be repeated to overcome noise in the process and achieve the desired effect. Entropy, on the other hand, is a measure of randomness. It refers to the degree of choice one has in constructing messages. If a communication system is highly organized, the message source has little freedom in choosing the symbols that successfully communicate with others. Hence, the systems would have low entropy and could require a great deal of redundancy to overcome noise. A careful balance between redundancy and entropy must be maintained in order to communicate successfully.

In the case of mass communication systems, the elements of the transmission paradigm have additional characteristics (McQuail, 1983). The sender, for example, is often a professional communicator or organization, and messages are often standardized products requiring a great deal of effort to produce, carrying with them an exchange value (for example, television air time that is sold as a product to advertisers). The relationship of sender to receiver is impersonal and non-interactive. A key feature here, of course, is that traditional notions of mass communication envision a single message source communicating to a vast audience with great immediacy. This audience is a heterogeneous, unorganized collection of individuals who share certain demographic or psychological characteristics with subgroups of their fellow audience members.

The technical perspective of communication, including information theory and the mathematical model of Shannon and Weaver (1949), focused attention on the channel of communication. Signal capacity of a given medium, the ability to reduce noise in message transmissions, and increased efficiency or fidelity of transmissions were important concepts for researchers of communication technologies. The use of multiple channels of communication (for example, verbal and visual) also received a great deal of attention. Three major assumptions characterize communication research in this tradition (Trenholm, 1986). First, it assumes that the components of communication execute their functions in a linear, sequential fashion. Second, consequently, events occur as a series of causes and effects, actions and reactions. The source's message is transmitted to a receiver, who either displays or deviates from the intended effect of the source's original intent. Third, the whole of the communication process, from this engineering perspective, can be viewed as a sum of the components and their function. By understanding how each element receives and/or transmits a signal, the researcher may understand how communication works.

These assumptions have important consequences for most research conducted using a transmission model (Fisher, 1978). A number of established bodies of research trace their origins to the transmission paradigm. Summaries of research traditions whose roots are grounded in this tradition follow.

3.2.1 Persuasion Studies

One of the most prolific and systematic research orientations examining the influence of message content on audience members is research on persuasion. Early programmatic research began with investigations of the *Why We Fight* films in the

American Soldier studies, a series of studies designed to examine the effectiveness of film as a vehicle for indoctrination (Hovland, Lumsdaine, & Sheffield, 1949). Researchers were interested in the ability of media messages to provide factual information about the war, to change attitudes of new recruits towards war, and to motivate the recruits to fight. Learning was conceptualized as knowledge acquisition and attitude change.

The American Soldier studies adopted a learning theory approach and laid the foundation for future research on the role of mediated messages in shaping attitudes and behaviors. The body of work examining the persuasion process is extensive and spans more than five decades. Researchers initially adopted a single-variable approach to the study of the effectiveness of the message in changing attitudes including the design of the message (e.g., one-sided vs. two-sided arguments), the character of the message source (e.g., credible, sincere, trustworthy), and the use of emotional appeals (e.g., fear) in the message.

Over time, researchers have concluded that the single-variable approach, focused on the content of the message itself, has proven inadequate to explain the complexity of attitude change and persuasion. The number of relationships between mediating and intervening variables made traditional approaches theoretically unwieldy. They have turned, instead, to a process orientation. Current research focuses on the complex cognitive processes involved in attitude change (Eagly, 1992), and includes McGuire's (1973) information-processing approach, Petty and Cacioppo's (1986) elaboration likelihood model, as well as Chaiken, Liberman, and Eagly's (1989) heuristic-systematic model. The general approach to the study of persuasion and attitude change today examines multiple variables within a process orientation rather than focusing predominantly on the direct impact of message content on audience members. In addition, researchers seek to understand audience characteristics more thoroughly in creating intentional, targeted messages.

A subset of studies related to persuasion research is research on communication campaigns including product advertising, social marketing (e.g., health campaigns), and political campaigns. Research on the effectiveness of such campaigns has relied heavily on models and approaches from persuasion studies and reflects similar directions in terms of addressing process issues and a more detailed understanding of audience. This focus on audience is reflected in recent efforts in social marketing using a new approach referred to as the entertainment-education strategy.

The general purpose of entertainment-education programs is to contribute to social change, defined as the process in which an alteration occurs in the structure and function of a social system . . . Social change can happen at the level of the individual, community, an organization, or a society. Entertainment-education by itself sometimes brings about social change. And, under certain circumstances (in combination with other influences), entertainment-education creates a climate for social change. (Singhal & Rogers, 1999, p. xii)

This approach advocates embedding social action messages into traditional media formats (for example, soap operas) designed to change social attitudes and behaviors. For example, a series of studies in India examined the role of a popular

radio soap opera, *Tinka Tinka Sukh*, to promote gender equality, women's empowerment, small family size, family harmony, environmental conservation and HIV prevention (Singhal & Rogers, 1999). The entertainment-education approach has become very popular in a variety of cultural settings in promoting social change in public attitudes and behaviors. The standard approach used in these studies relies on social modeling by using popular characters in a dramatic entertainment format to model the desired attitudes and behaviors associated with the intended goals of the program.

In discussing the future of entertainment-education initiatives, Singhal and Rogers (1999) concluded that the success of such efforts will depend, to a large extent, on the use of theory-based message design, and moving from a production-centered approach to an audience-centered approach (Singhal & Rogers, 1999), requiring that researchers understand more about audience perspectives and needs in creating appropriate and effective messages.

3.2.2 Curriculum-Based Content Studies

Other chapters in this volume provide detailed examinations of technology-based curriculum interventions. However, one television series deserves special mention in this chapter, with its focus on learning from media outside of the formal school setting. This series, *Sesame Street*, was designed with a formal curriculum for in-home delivery. It has generated more research over the past several decades and in many different cultures than any other single television series.

From the outset, the program was carefully designed and produced to result in specific learning outcomes related to the program content. Message designers included early childhood curriculum experts. The general goal was to provide preschoolers, especially underprivileged preschoolers (Ball & Bogatz, 1970; Bogatz & Ball, 1971), with a jump start on preparation for school. Reviews of research on the effectiveness of the program suggest that it did, indeed, influence children's learning with many of the intended results (Mielke, 1994). However, studies also concluded that situational and interpersonal factors influenced learning outcomes. For example, Reiser and colleagues (Reiser, Tessmer, & Phelps, 1984; Reiser, Williamson, & Suzuki, 1988) reported that the presence of adults who co-viewed the program with children, asked them questions, and provided feedback on the content increased learning outcomes. The most recent review of the Children's Television Workshop research (Fisch & Truglio, 2001) underscores the limitations of the program as a universal educator. Its producers see televised instruction as a beginning to adult-child interaction that results in the greatest learning gains. Again, the general conclusion from the research suggested that the emphasis on learning from message content provides only one part of the explanation for how learning from media takes place.

3.2.3 Agenda-Setting Research

Agenda-setting research is an example of a research orientation that focuses on learning outcomes directly related to message content but with unintentional outcomes, according to

message designers. This established research tradition examines the relationship between the public's understanding of the relative importance of news issues and media coverage of those issues.

Agenda-setting research was inspired by the writings of Walter Lippmann (1922), who proposed that the news media created the "pictures in our heads," providing a view of the world beyond people's limited day-to-day experiences. The basic hypothesis in such research is that there is a positive relationship between media coverage of issues and what issues people regard as being important (McCombs & Shaw, 1972; Shaw & McCombs, 1977). Such research has routinely reported that individuals' rankings of the importance of daily news events reflect the level of importance (as measured by placement and amount of time or space allocated to it) attached to those news events by the news media. That is, when daily newspapers or broadcast news reports focus on specific news events, the message to the public is that those particular news events are the most significant events of the day and the ones on which their attention should be focused. The issue is, as one review concluded, that "There is evidence that the media are shaping people's views of the major problems facing society and that the problems emphasized in the media may not be the ones that are dominant in reality" (Severin & Tankard, 2001, p. 239).

Though this finding related to audience members' understanding of the significance of daily news events has been reported consistently, and researchers (McCombs & Shaw, 1977; Westley, 1978) have demonstrated that the direction of the influence is likely from the press to the audience, media practitioners argue that they perceive their role not as setting the public's news agenda but rather reflecting what they consider to be the most important issues of the day for their audience members.

Thus, the learning effect—identifying the most important issues of the day—reported by the public is unintentional on the part of the message producers. News reporters and editors are not intentionally attempting to alter the public's perception of what the important issues of the day are. Rather, they believe they are reflecting shared understandings of the significance of those events.

Agenda-setting studies over the past three decades have employed both short-term and longitudinal designs to assess public awareness and concern about specific news issues such as unemployment, energy, and inflation in relation to the amount and form of relevant news coverage (for example, Behr & Iyengar, 1985; Brosius & Kepplinger, 1990; Iyengar, Peters, & Kinder, 1982). Recent research has attempted to broaden understanding of agenda setting by investigating both attitudinal and behavioral outcomes (e.g., Ghorpade, 1986; Roberts, 1992; Shaw & Martin, 1992). Concern over possible mediating factors such as audience variations, issue abstractness, and interpersonal communication among audience members has fueled significant debate within the field concerning the strength of the agenda-setting effect on public learning. Some studies have suggested that agenda setting is strongly influenced by audience members' varying interests, the form of media employed, the tone of news stories toward issues, and the type of issue covered. Current directions in agenda-setting research suggest that though the agenda-setting function of media can be demonstrated, the relationship between media and learning is more complex than

a simple relationship between message content and learning outcomes.

3.2.4 Violent Content Studies

Another learning outcome of media consumption in relation to television content, according to many critics (e.g., Bushman & Huesmann, 2001), is the notion that violent and aggressive behaviors are the most common strategies for resolving conflict in U.S. society. This line of research suggests that the lesson learned from television viewing is that violent and aggressive behavior is ubiquitous and effective. Investigators following this tradition (e.g., Gerbner, Gross, Morgan, & Signorielli, 1994; Potter, 1999) have argued that violent content represents the dominant message across television program genres—drama, cartoons, news, and so on. Program creators, on the other hand, argue that violence occurs in day-to-day experience, and the use of violence in television programming merely reflects real-life events (Baldwin & Lewis, 1972; Lowry, Hall, & Braxton, 1997). According to program producers, the learning effect examined in studies of television's violent content represents an unintentional effect.

The debate concerning violent content on television has focused, to a large extent, on the presence of such content in children's programming. The impetus for research on the topic emerged from public outcries that children were learning aggressive behaviors from television because the dominant message in televised content was that violence was a common, effective, and acceptable strategy for resolving conflicts.

The theoretical model applied in this research is grounded in social learning theory. The early work in social learning theory involved children and imitative aggressive play after exposure to filmed violence (Bandura, 1965). Studies were designed in the highly controlled methodology of experimental psychology. The social learning model, which attempts to explain how children develop personality and learn behaviors by observing models in society, was extended to the study of mediated models of aggression. The crux of the theory is that people learn how to behave from models viewed in society, live or mediated (Bandura, 1977). This approach examines learning as a broad-based variable that involves knowledge acquisition and behavioral performance. In a series of experiments (Bandura, 1965; Bandura, Ross, & Ross, 1961, 1963), Bandura and his colleagues demonstrated that exposure to filmed aggression resulted in high levels of imitative aggressive behavior.

For the past 4 decades research on the relationship between exposure to aggressive or violent content on television and resulting attitudes and behaviors has persisted in examining processes related to these basic questions: (1) To what extent does the presence of such content in children's programming influence children's understanding of the world around them? (2) How does such content influence children's perception of appropriate behaviors to adopt in response to that world? In general, this line of research has found a finite number of short-term learning effects of televised violence (see Potter, 1999). First, TV violence can lead to disinhibition—a removal of internal and social checks on aggressive behavior, though this effect is dependent on the viewer's personality, intelligence, and

emotional state at the time of viewing, as well as on the nature of the portrayal of violent behavior (e.g., whether it is rewarded or punished, realistic, etc.). Second, televised violence can desensitize viewers to such content and, perhaps, to real-life aggression. In most cases, this effect is the result of repeated exposures, not the result on just one viewing (e.g., Averill, Malmstrom, Koriat, & Lazarus, 1972; Mullin & Linz, 1995; Wilson & Cantor, 1987). Here, too, the effect is dependent on both viewer and content characteristics (Cline, Croft, & Courier, 1973; Gunter, 1985; Sander, 1995). In this way, children can acquire attitudes and behavioral scripts that tell them aggression is both an effective and appropriate response to a range of social situations (Bushman & Huesmann, 2001).

Recent questions have asked which children are most susceptible to such messages. Two comprehensive reviews of such literature (Potter, 1999; Singer & Singer, 2001) have charted the scope of this body of research. A wide range of viewer characteristics (e.g., intelligence, personality, age, hostility, arousal or emotional reactions, and affinity with TV characters) has been associated with children's varying displays of aggression subsequent to viewing televised violence. In addition, a separate line of studies has charted the environmental or contextual factors such as the role of parental mediation (e.g., Nathanson, 1999) that influence this process. Despite these findings, meta-analysts and critics alike maintain that the effects of violent content are universally significant across viewers, types of content, and methodological approaches (Bushman & Huesmann, 2001; Paik & Comstock, 1994). Most such studies cite a consistent concern with children's level of exposure to television content as a mediating factor in this process. This area of study culminated in a body of work referred to as cultivation research.

3.2.5 Cultivation Theory

Beginning in the late 1960s when initial research was underway to examine the links between level of exposure to violent content on television and subsequent behavior, research on the long-term socialization effects of television achieved prominence in the study of media and audiences. This approach, known as cultivation research, conceptualized learning as a generalized view of the world, the perception of social reality as conveyed by the mass media. Concerned primarily with television as the foremost "storyteller" in modern society, researchers argued that television's power to influence world views was the result of two factors. First, television viewing was seen as ritualistic and habitual rather than selective. Second, the stories on television were all related in their content.

Early cultivation research hypothesized that heavy television viewers would "learn" that the real world was more like that portrayed on television—particularly in regard to pervasive violence—than would light viewers (Gerbner, Gross, Eeley, Jackson-Beeck, Jeffries-Fox, & Signorielli, 1977, 1978; Gerbner, Gross, Morgan, & Signorielli, 1980, 1986). Heavy viewers were expected to estimate the existence of higher levels of danger in the world and feel more alienated and distrustful than would light viewers (i.e., the "mean world" effect—viewers come to believe that the real world is as mean and violent as

the televised world). On one level, this effect is demonstrated with a “factual” check of viewer beliefs with real-world statistics. For example, heavy viewers in these studies have tended to overestimate crime rates in their communities. However, cultivation theorists argue that the effect is much more pervasive (Gerbner et al., 1994). For example, heavy viewers have tended to report more stereotypically sexist attitudes toward women and their roles at work and home (Signorielli, 2001). Heavy viewing adolescents were more likely to report unrealistic expectations of the workplace, desiring glamorous, high-paying jobs that afforded them long vacations and ample free time (Signorielli, 1990). Politically, heavy viewers were more likely to describe themselves as “moderates” or “balanced” in their political views (Gerbner et al., 1982). Though research following this model has been inconclusive in demonstrating direct content effects independent of other factors, the theoretical orientation associated with the possibility of direct effects continues to influence research on media and learning.

3.3 MEDIA AND LEARNING: BEYOND CONTENT

Research approaches based on understanding learning effects in response to specific media content have yielded mixed results. Researchers have concluded that further investigation of learning from media will require systematic investigation of other factors to understand learning processes associated with media experiences.

Because of the limitations of the traditional content-based models, a number of research orientations examining the relationship between media and learning have emerged that focus on factors that extend beyond message content. These orientations include the study of learning as it relates to the unique characteristics of individuals who process the messages, the expectations they bring to media situations, the way in which they process the messages, and the contextual and social factors that influence the communication process. Discussions of a series of such orientations follow.

3.3.1 Cognitive Processing of Media Messages

For several decades, communication research has attempted to apply the principles of cognitive psychology and information processing models to the reception of media content. The concerns of this research tradition are myriad, but can be grouped into three general categories: (1) examinations of the underlying processes of information acquisition (i.e., attention, comprehension, memory); (2) the relative activity or passivity with which viewers process content; and (3) media’s capacity to encourage or discourage higher order cognition. While we do not attempt a comprehensive review of this literature (readers may find one in the edited work of Singer & Singer, 2001), a summary of its focal concerns and principle findings is in order.

Much research has been devoted to the study of what are called subprocesses of information processing. This model was introduced in cognitive and learning psychology (Anderson, 1990) and focuses on a sequence of mental operations that result

in learners committing information to memory. Studies of attention to television content, for example, have long attempted to resolve the relationship between visual and auditory attention (e.g., Anderson, Field, Collins, Lorch, & Nathan, 1985; Calvert, Huston, & Wright, 1987). At issue here is how children attend to or monitor TV messages, at times while engaged in other activities. Later research (Rolandelli, Wright, Huston, & Eakins, 1991) proposed that both types of attention contribute to children’s comprehension of a program, but that a separate judgment of their interest in and ability to understand the content governed their attention to it. These judgments were often made by auditory attention. Children monitored verbal information for comprehensible content, then devoted concentrated attention to that content, resulting in comprehension and learning (Lorch, Anderson, & Levin, 1979; Verbeke, 1988).

3.3.1.1 Attention. If the goal is to encourage positive learning from television, a paramount concern becomes how to foster sustained attention to content. Berlyne (1960) was among the first researchers to identify the formal production features that encourage sustained visual attention (e.g., fast motion, colorful images). Comprehension was found to increase when attention was sustained for as little as 15 seconds (Anderson, Choi, & Lorch, 1987), though this kind of effect was more pronounced for older children (Hawkins, Kim, & Pingree, 1991) who are able to concentrate on complex, incomprehensible content for longer periods of time. According to one study (Welch, Huston-Stein, Wright, & Plehal, 1979), the use of these techniques explains boys’ ability to sustain attention longer than girls, though this did not result in any greater comprehension of content. Indeed, gender has been linked to distinct patterns of attention to verbal information (Halpern, 1986). Attention to TV content also has been linked to other variables, including a child’s ability to persist in viewing and learning activities, particularly in the face of distractions (Silverman & Gaines, 1996; Vaughn, Kopp, & Krakow, 1984).

3.3.1.2 Comprehension. A long line of research has examined the ways that media users make sense of content. In general, communication researchers examining cognitive processes agree that viewers employ heuristics (Chaiken, 1980) to minimize the effort required to comprehend content. One theory garnering extensive research attention is schema theory (Fiske & Taylor, 1991; Taylor & Crocker, 1981; Wicks, 2001). In the face of novel stimuli, viewers use schemata to monitor content for salient material. With entertainment programming, viewers are more likely to employ story related schemata—that is, their knowledge of story structure. This knowledge is acquired from prior experience with stories, elements of plot and character, and storytelling for others. Story grammar, as it is called, is usually acquired by age seven, though its signs show up as early as age two (Applebee, 1977; Mandler & Johnson, 1977). Story schemata are seen as most analogous to television programming, most easily employed by viewers, and (therefore) most easily used to achieve the intended outcomes of production. At least one study (Meadowcroft, 1985) indicated that use of story schemata results in higher recall of content and efficient use of cognitive resources to process incoming content.

Two other issues associated with content comprehension concern the nature of the televised portrayal. The first deals with the emphasis viewers place on either formal production features or storytelling devices when they interpret content. Formal production techniques like sound effects, peculiar voices, or graphics serve not only to attract attention, but also to reinforce key points or plot elements (Hayes & Kelly, 1984; Wright & Huston, 1981). Young viewers (ages three to five) have been found to rely on visual cues to interpret content more so than older children (Fisch, Brown, & Cohen, 1999). Storytelling devices such as sarcasm, figures of speech, and irony are more difficult to comprehend (Anderson & Smith, 1984; Christenson & Roberts, 1983; Rubin, 1986). Once child viewers reach 7 years of age, they are better able to identify storytelling devices that advance a program's plot rather than becoming distracted by production techniques designed to arrest their attention (Anderson & Collins, 1988; Jacobvitz, Wood, & Albin, 1991; Rice, Huston, & Wright, 1986).

The second issue concerns the realism of the content (Flavell, Flavell, & Green, 1987; Potter, 1988; Prawat, Anderson, & Hapkeiwicz, 1989). The relevant viewing distinction is between television as a "magic window" on reality (i.e., all content is realistic because it is on TV) and television as a fictional portrayal of events with varying bases in fact (i.e., the content is possible, but not probable in the real world). In both cases, a viewer's ability to isolate relevant information cues and make judgments about their realism are crucial to comprehension of content.

3.3.1.3 Retention. Though there are differences between studies that test for viewers' recall or simple recognition of previously viewed content (Cullingsford, 1984; Hayes & Kelly, 1984), most research on recall shows that it is influenced by the same factors that govern attention and comprehension. Hence, there are several studies indicating that formal production features (e.g., fast pace, low continuity) result in lower content recall. Other studies (e.g., Hoffner, Cantor, & Thorson, 1988; van der Molen & van der Voort, 2000a, 2000b) have found higher recall of visual versus audio information, though the latter often supplements understanding and interpretation. Finally, two studies (Cullingsford, 1984; Kellermann, 1985) concluded children recalled more content when specifically motivated to do so. That is, viewers who were watching to derive specific information showed higher content recall than those who viewed simply to relax. Thus, motivation may enact a different set of processing skills.

3.3.1.4 Active vs. Passive Processing. Communication research has long presented a passive model of media audiences. Some of the earliest work on mass media, the Payne Fund studies of movies, comic books, and other early 20th century media, for example (Cressey, 1934; Holaday & Stoddard, 1933; Peterson & Thurstone, 1933; Shuttleworth & May, 1933), examined the question of passive versus active message processing. Research on audience passivity typically examines viewing by young children and focuses on television production techniques. Researchers have suggested that rapid editing, motion, and whirls of color in children's programming, as well as the

frequency with which station breaks and commercials interrupt programs, are the prime detractors that inhibit elaborated cognition during viewing (Anderson & Levin, 1976; Greer, Potts, Wright, & Huston, 1982; Huston & Wright, 1997; Huston et al., 1981). The assumption, of course, is that these visual features sustain attention, thereby enhancing comprehension of the message. However, others (e.g., Lesser, 1977) have charged that these techniques produce "zombie viewers," rendering children incapable of meaningful learning from media. However, a series of experiments conducted by Miller (1985), concluded that television viewing produced brain wave patterns indicative of active processing rather than hypnotic viewing.

An active-processing model of television viewing also focuses on these production features. However, this model posits that such features are the basis of children's decisions about attending to content. Children do not always devote their attention to the television screen. One reason is that they often engage in other activities while viewing. A second theory is that they have a finite capacity of working memory available for processing narratives and educational content (Fisch, 1999). Hence, they must monitor the content to identify salient message elements. Some research has shown that children periodically sample the message to see if interesting material is being presented (Potter & Callison, 2000). This sampling may take the form of monitoring audio elements or periodically looking at the screen. When such samples are taken, children are looking for production features that "mark" or identify content directed specifically to them. For young children, these "markers" might include animation, music, and child or nonhuman voices. Older children and adolescents would conceivably rely on an age-specific set of similar markers (e.g., a pop music song or dialogue among adolescents) as a way of identifying content of interest to them. Content that includes complex dialogue, slow action, or only adult characters would consequently lose children's attention. Thus, some researchers (e.g., Rice, Huston, & Wright, 1982) have proposed a "traveling lens" model of attention and comprehension. This model holds that content must be neither too familiar nor novel to maintain attention. Similarly, content must strike a middle ground in its complexity, recognizability, and consistency to avoid boring or confusing viewers.

3.3.1.5 Higher Order Cognition. Concerns about media's effects on cognition extend beyond the realm of attention and information processing to more complex mental skills. Television, in particular, has been singled out for its potentially negative impact on higher order thinking. Studies of children's imaginative thinking are a good case in point. Imagination refers to a number of skills in such work, from fantasy play to daydreaming. One group of scholars (Greenfield, 1984; Greenfield & Beagles-Roos, 1988; Greenfield, Farrar, & Beagles-Roos, 1986; Greenfield, Yut, Chung, Land, Kreider, Pantoja, & Horsley, 1990) has focused on "transcendent imagination," which refers to a child's use of ideas that cannot be traced to a stimulus that immediately precedes an experimental test. Creative children are said to transcend media content viewed immediately before testing, while imitative imagination is indicated when children use the content as the basis of their subsequent play. In general, this research argues that electronic media (as opposed to print media like

books) have negative effects on imaginative thought, though these effects are not uniform.

Research on television and creative imagination has included field investigations on the introduction of television to communities (Harrison & Williams, 1986), correlations of viewing with either teacher ratings of creativity or performance on standardized creative thinking tests (e.g., Singer, Singer, & Rapaczynski, 1984), and experimental studies on the effects of viewing alone (Greenfield, et al., 1990) and in comparison to other media (e.g., Greenfield & Beagles-Roos, 1988; Runco & Pezdek, 1984; Vibbert & Meringoff, 1981). While many studies reported that children drew ideas for stories, drawings, and problem solutions from televised stimuli (e.g., Greenfield & Beagles-Roos, 1988; Greenfield et al., 1990; Stern, 1973; Vibbert & Meringoff, 1981), virtually all of this literature reached one or both of two conclusions. First, TV fostered fewer original ideas than other media stimuli. Second, children who viewed more TV gave fewer unique ideas than those who viewed less TV. However, Rubenstein (2000) concluded that the content of TV and print messages had more to do with children's subsequent creativity than the delivery medium, *per se*.

Because of this, Valkenburg and van der Voort (1994) argued that these studies reveal a variation of the negative effects hypothesis—a visualization hypothesis. This argues that because television provides ready-made visual images for children, it is difficult to dissociate his/her thoughts from the visual images. As a result, creative imagination decreases. Anderson and Collins (1988) argue that in using an audio-only stimulus channel (e.g., radio), children are required to fill in added detail that visually oriented stimuli (e.g., television) would provide automatically. Most of the comparative studies of television, radio, and print media (e.g., Greenfield & Beagles-Roos, 1988; Greenfield et al., 1986) support the notion that television fosters fewer creative or novel ideas than other media that engage fewer sensory channels. When tested experimentally, then, such visual responses would be coded as novel and imaginative for those who listened to the radio, but not counted for those who just finished watching TV.

In this regard, research on media's impact on imagination is more concerned with the source of imaginative thought and play than the relative creativity or quantity of such behavior. Anderson and Collins (1988) called for a recategorization of television content, however, to better reflect the educational intent of some children's shows. The "animation" category, for example, is far too broad a distinction when several shows (e.g., *Sesame Street*, *Barney and Friends*) explicitly attempt to expand children's imagination.

3.3.2 Developmental Research on Media and Children

The collected work of cognitive processing research (e.g., Singer & Singer, 2001) demonstrates, if nothing else, the dominance of developmental psychology theories in work on learning from media. One foundation of the work on cognitive processing lies in the stage-based model of child development advanced by Piaget (1970, 1972). That model charts a child's

intelligence as beginning in egocentric, nonreflective mental operations that respond to the surrounding environment. Children then progress through three subsequent stages of development (preoperational, concrete operational, formal operational) during which they acquire cognitive skills and behaviors that are less impulsive and deal more with abstract logic. Interaction with one's environment, principally other people, drives the construction of new cognitive structures (action schemes, concrete and formal operations). Three processes drive this development. Some novel events are assimilated within existing cognitive structures. When new information cannot be resolved in this way, existing structures must accommodate that information. Finally, the resolution of cognitive conflict experienced during learning events is referred to as equilibration.

When applied to media use, particularly audiovisual media, Piaget's model has revealed a series of increasingly abstract viewing skills that guide children's message processing. From infancy through the toddler years, the focus of processing skills is to distinguish objects on the screen by using perceptually salient visual (e.g., motion, color, shapes, graphics) and auditory (e.g., music, voices, sound effects) cues. This stage of childhood is devoted to perceiving and comprehending the complex code system of television and an evolving sense of story grammar. The task is to integrate novel stimuli with existing knowledge structures (assimilation) while familiarizing oneself with the dual processing demands of visual and verbal information. Children show greater visual attention to the TV screen during this developmental stage (Anderson et al., 1986; Ruff, Capozzoli, & Weissberg, 1998), partially because visual cues are more perceptually salient.

During their early school years (ages 6 to 12, or Piaget's concrete logical operations stage), children become much more adept at monitoring both video and audio information from the screen. It is during this stage that children spend less time looking at the screen and more time monitoring the audio content (Baer, 1994) for salient cues. However, salience is not determined by perceptual features (e.g., novel music, sound effects), but more by personally relevant features (e.g., the use of familiar voices or music). Thus, children develop more discriminating viewing patterns because of their increased familiarity with the medium. They are better able to sort out relevant from irrelevant information, concentrate on dialogue, and process video and audio information separately (Field & Anderson, 1985). Because so much of this developmental model is dependent upon the formal features and symbol systems of media, it has fostered a great deal of research on the link between production techniques and individual cognitive skills. Consequently, a discussion of these "media attributes" research is in order.

3.3.2.1 Media Attributes Studies. One research tradition that has been explored in an effort to explain why different individuals respond to media messages in different ways is research on media attributes. For the most part, studies following this line of research have focused on formal learning outcomes related to media experiences in formal settings. However, the approach has been examined in both in-school and out-of-school contexts, and, therefore is relevant here.

The media attributes approach to the study of media and learning explores unique media characteristics and their connections to the development or enhancement of students' cognitive skills. Researchers propose that each medium possesses inherent codes or symbol systems that engage specific cognitive abilities among users. In this research, the conceptualization of learning outcomes includes the learner's higher order interpretive processes. For example, according to the media attributes perspective, a researcher might ask how children interpret use of a fade between scenes in a television show and its connection to the viewer's ability to draw inferences about the passage of time in a story.

Early media attributes studies (Salomon, 1974, 1979; Salomon & Cohen, 1977) concluded that mastery of certain skills was a requisite for competent use of a medium. For instance, students had to be able to encode letters on a page as meaningful words in order to use a book. A series of laboratory and field experiments following this line of research reported that learning was mediated by the cognitive skills necessary for effective use of a particular medium.

In addition, scholars have analyzed the relationship between media attributes and the cultivation or development of certain cognitive skills. For television alone, studies have documented positive learning effects for the use of motion (Blake, 1977), screen placements (Hart, 1986; Zettl, 1973), split-screen displays (Salomon, 1979), and use of various camera angles and positions (Hoban & van Ormer, 1950). Researchers also explored cognitive skills linked to other media attributes, including the use of verbal previews, summaries, and repetition (Allen, 1973); amount of narration on audio/video recordings (Hoban & van Ormer, 1950; Travers, 1967); and the use of dramatization, background music, graphic aids, and special sound/visual effects (e.g., Beck, 1987; Dalton & Hannafin, 1986; Glynn & Britton, 1984; Morris, 1988; NIMH, 1982; Seidman, 1981). The list of cognitive skills linked to such attributes included increases in attention, comprehension and retention of information, as well as visualization of abstract ideas.

Critics have pointed out the potential weaknesses of this research, noting that assertions about media's cognitive-cultivation capacities remain unproven (Johnston, 1987). One detailed review of the research (Clark, 1983) argued that media attributes research rests on three questionable expectations: (1) that attributes are an integral part of media, (2) that attributes provide for the cultivation of cognitive skills for learners who need them, and (3) that identified attributes provide unique independent variables that specify causal relationships between media codes and the teaching of cognitive functions. A subsequent review found that no one attribute specific to any medium is necessary to learn any specific cognitive skill; other presentational forms may result in similar levels of skill development (Clark & Salomon, 1985). While some symbolic elements may permit audience members to cultivate cognitive abilities, these elements are characteristic of several media, not unique attributes of any one medium (Clark, 1987).

According to Salomon's original model, the relationships among these three constructs—perceived demand characteristics, perceived self-efficacy, and amount of invested mental effort—would explain the amount of learning that would result from media exposure. For example, he compared students'

learning from reading a book with learning from a televised presentation of the same content. Salomon found more learning from print media, which he attributed to the high perceived demand characteristics of book learning. Students confronted with high demands, he argued, would invest more effort in processing instructional content. Conversely, students would invest the least effort, he predicted, in media perceived to be the easiest to use, thus resulting in lower levels of learning.

In a test of this model, Salomon and Leigh (1984) concluded that students preferred the medium they found easiest to use; the easier it was to use, the more they felt they learned from it. However, measures of inference-making suggested that these perceptions of enhanced learning from the *easy* medium were misleading. In fact, students learned more from the *hard* medium, the one in which they invested more mental effort. A series of studies extended Salomon's work to examine the effect of media predispositions and expectations on learning outcomes. Several studies used the same medium, television, to deliver the content but manipulated instructions to viewers about the purpose of viewing. The treatment groups were designed to yield one group with high investments and one with low investments of mental effort.

Though this research began as an extension of traditional research on learning in planned, instructional settings, it quickly evolved to include consideration of context as an independent variable related to learning outcomes. Krendl and Watkins (1983) found significant differences between treatment groups following instructions to students to view a program and compare it to other programs they watched at home (entertainment context), as opposed to viewing in order to compare it to other videos they saw in school (educational context). This study reported that students instructed to view the program for educational purposes responded to the content with a deeper level of understanding. That is, they recalled more story elements and included more analytical statements about the show's meaning or significance when asked to reconstruct the content than did students in the entertainment context.

Two other studies (Beentjes, 1989; Beentjes & van der Voort, 1991) attempted to replicate Salomon's work in another cultural context, the Netherlands. In these studies, children were asked to indicate their levels of mental effort in relation to two media (television and books) and across content types within those media. The second study asked children either watching or reading a story to reproduce the content in writing. Beentjes concluded, "the invested mental effort and the perceived self-efficacy depend not only on the medium, but also on the type of television program or book involved" (1989, p. 55).

A longitudinal study emerging from the learner-centered studies (Krendl, 1986) asked students to compare media (print, computer and television) activities on Clark's (1982, 1983) dimensions of preference, difficulty, and learning. Students were asked to compare the activities on the basis of which activity they would prefer, which they would find more difficult, and which they thought would result in more learning. Results suggested that students' judgments about media activities were directly related to the particular dimension to which they were responding. Media activities have multidimensional, complex sets of expectations associated with them. The findings suggest that simplistic, stereotypical characterizations of media

experiences (for example, books are hard) are not very helpful in understanding audiences' responses to media.

These studies begin to merge the traditions of mass communication research on learning and studies of the learning process in formal instructional contexts. The focus on individuals' attitudes toward, and perceptions of, various media has begun to introduce a multidimensional understanding of learning in relation to media experiences. Multiple factors influence the learning process—mode of delivery, content, context of reception, as well as individual characteristics such as perceived self-efficacy and cognitive abilities. Research on these factors is more prominent in other conceptual approaches to learning from media.

3.4 MEDIA AND LEARNING: WITHIN CONTEXT

Beginning in the 1970s, a reemergence of qualitative and interpretive research traditions signaled a marked skepticism toward content and cognitive approaches to media and learning. In communication research, these traditions are loosely referred to as cultural studies. This label refers to a wide range of work that derives from critical Marxism, structuralism, semiotics, hermeneutics, and postmodernism (among several others). Its fullest expression was made manifest by scholars of the Centre for Contemporary Cultural Studies at the University of Birmingham (Hall et al., 1978; Morley, 1980). The emphasis on media as cultural products is illustrative of these traditions' grounding in media messages as situated social acts inextricably connected with the goals and relationships of one's local environment. This section will briefly overview the theoretical tenets of this approach, illustrate its key theoretical concepts with exemplary studies, and discuss its implications for a definition of learning via media messages.

3.4.1 Theoretical Tenets of Cultural Analysis

Cultural studies as a research approach fits under Carey's ritual view of communication. It assumes that media messages are part of a much broader social, political, economic, and cultural context. Media messages are examined less in terms of content than in the relationship of the content and the social environment in which it is experienced. That is, media messages are not viewed in isolation, but rather as part of an integrated set of messages that confront audience members. One's definition of and experience with objects, events, other people, and even oneself, is determined through a network of interpersonal relationships. Basing his perspective on the work of Wilson and Pahl (1988), Bernardes (1986), and Reiss (1981), Silverstone (1994) argues that researchers must account for this social embeddedness of media users. Specifically, this means that any examination of media use must account for psychological motivations for viewing as well as the nature of the social relationships that give rise to such motivations. For example, office workers have strong motivations for viewing a TV sitcom if they know that their colleagues will be discussing the show at work the next day. Talk about the show might maintain social relationships that, in part, comprise the culture of a workplace. This talk can result in highlighting particularly salient aspects of a show

(e.g., a character's clothing or hair, a catch phrase from the dialogue). Together, viewers work out the meaning of the show through their social talk about content. That is, the meanings we form are products of social *negotiation* with other people. This negotiation determines both the symbols we use to communicate and the meanings of those symbols (Blumler, 1939, 1969; Mead, 1934).

3.4.1.1 Culture. On a micro level, then, participants arrive at shared meaning for successful communication. However, cultural analysts are concerned at least as much about macro-level phenomena. Individual action is influential when it becomes routine. Patterns of social action take on a normative, even constraining, force in interpersonal relationships. They become a set of social expectations that define life within specific settings (such as a home or workplace). Thus, social routines (such as office talk about favored TV shows) become the very fabric of cultural life. Hall (1980), in fact, defines culture as "the particular pattern of relations established through the social use of things and techniques." Whorf (1956) and his colleague Sapir hypothesized that the rules of one's language system contain the society's culture, worldview, and collective identity. This language, in turn, affects the way we perceive the world. In short, words define reality, reality does not give us objective meaning. When this notion is applied to media messages, the language and symbols systems of various media assume a very powerful influence over the structure and flow of individual action. They can determine not only the subject of conversation, but the tone and perspective with which individuals conduct that conversation. Hence, the role of media and other social institutions becomes a primary focus in the formation of culture.

3.4.1.2 Power. Because of its roots in the critical Marxism of theorists such as Adorno and Horkheimer (1972), cultural studies assigns a central role to the concept of power. Those theorists, and others in the Frankfurt School (Hardt, 1991; Real, 1989) believed that media institutions exerted very powerful ideological messages on mass audiences (particularly during the first half of the 20th century). Because the mass media of that time were controlled largely by social and financial elites, critical theorists examined media messages in reference to the economic and political forces that exercised power over individuals. Initially, this meant uncovering the size, organization, and influence of media monopolies in tangible historical/economic data. Consequently, an intense focus on the political economy of mass media became a hallmark of this approach. Media elites were seen as manufacturing a false consciousness about events, places, and people through their presentation of limited points of view. In news coverage, this meant exclusively Western perspectives on news events, largely dominated by issues of democracy, capital, and conquest. With entertainment programming, however, it usually meant privileging majority groups (e.g., Whites and males) at the expense of minority groups (e.g., African-Americans, Hispanics, females) in both the frequency and nature of their representation. The result, according to some analysts (e.g., Altheide, 1985; Altheide & Snow, 1979), was that TV viewers often received slanted views of cultural groups and social affairs.

3.4.1.3 Reaction to Transmission Paradigm. One ultimate goal of the Frankfurt School was audience liberation. Attention focused on the historical, social, and ideological contexts of media messages so that audiences might see through the message to its intended, sometimes hidden, purpose. Cultural studies scholars have taken these ideas and turned them on academia itself, communicating a deep mistrust of the research traditions discussed above. In her introduction to a collection of analyses of children's programs, Kinder expresses these sentiments specifically toward studies of TV violence. She explains,

While none of these researchers endorse or condone violent representations, they caution against the kinds of simplistic, causal connections that are often derived from "effects studies." Instead, they advocate a research agenda that pays more attention to the broader social context of how these images are actually read. (Kinder, 1999, p. 4)

In contrasting the cultural studies approach and the transmission paradigm, Kinder (p. 12) characterizes the latter as "black box studies" that "address narrowly defined questions of inputs and outputs, while bracketing out more complex relations with school, family, and daily life, therefore yielding little information of interest." Instead, she calls for a move "... to a program of 'interactive research' which looks at how technology actually functions in specific social contexts, focuses on process rather than effects, and is explicitly oriented toward change."

This kind of skepticism is widespread among cultural studies scholars. Several (e.g., Morley, 1986; Silverstone, 1994) criticize scientific research as disaggregating, isolating relevant aspects of media use from their social context. To these scholars, merely measuring variables does not give us insight on the theoretical relationships between them. Media use must be studied in its entirety, as part of a naturalistic setting, to understand how and why audiences do what scientists and TV ratings companies measure them doing. To treat media use, specifically TV viewing, as a measurable phenomenon governed by a finite set of discrete variables is to suggest that the experience is equivalent for all viewers. Consistent with the emphasis on power and political economy, Morley (1986) reminds scholars that research is a matter of interpreting reality from a particular position or perspective, not from an objective, "correct" perspective. Audiences (i.e., learners) are social constructions of those institutions that study them. That is, an audience is only an audience when one constructs a program to which they will attend. Learners are only learners when teachers construct knowledge to impart. While they do have some existence outside our research construction, our empirical knowledge of them is generated only through that empirical discourse. Becker (1985) points to the perspectives offered by poststructural reader theories that define the learner as a creator of meaning. The student interacts with media content and actively constructs meaning from texts, previous experience, and outside influences (e.g., family and peers) rather than passively receiving and remembering content. According to this approach, cultural and social factors are seen as active forces in the construction of meaning. To understand viewers, then, is to approach them on their own terms—to illuminate and analyze their processes of constructing meaning whether or not that meaning is what

academicians would consider appropriate. Thus, the purpose in talking to viewers is that we can open ourselves to the possibility of being wrong about them—and therefore legitimize their experience of media.

3.4.1.4 Viewing Pleasures. This celebration of the viewer raises an important tension within cultural studies. Seiter, Borchers, and Warth (1989) referred to this as "the politics of pleasure." Viewers' pleasure in television programming is an issue used to motivate many studies of pop culture and to justify the examination of popular TV programs. Innumerable college courses and academic studies of Madonna and *The Simpsons* are only the beginning of the examples we could provide on this score (e.g., Cantor, 1999; Miklitsch, 1998). However, Seiter et al. (1989) charge that some rather heady political claims have been made about the TV experience. Fiske (1989), for example, states that oppressed groups use media for pleasure, including the production of gender, subcultures, class, racial identities, and solidarity. One case in point would seem to be the appropriation of the Tinky Winky character on *Teletubbies* by gays and gay advocacy groups (Delingpole, 1997). The character's trademark purse gave him iconic status with adults that used the program as a means of expressing group identity (and creating a fair amount of political controversy about the show—see Hendershot, 2000; Musto, 1999). Questions of pleasure, therefore, cannot be separated from larger issues of politics, education, leisure, or even power. *Teletubbies* is clearly not produced for adults, and the publicity surrounding the show and its characters must have been as surprising to its producers as it was ludicrous. Still, the content became the site of a contest between dominant and subordinate groups over the power to culturally define media symbols.

According to Seiter et al. (1989), this focus on pleasure has drawbacks. There is nothing inherently progressive about pleasure. "Progressive" is defined according to its critical school roots in this statement. If the goal is to lift the veil of false consciousness, thereby raising viewers' awareness of the goals of media and political elites, then discussions of popular pleasures are mere wheel spinning. Talk about the polysemic nature and inherent whimsy of children's TV characters does little to expose the multinational media industries that encourage children to consume a show's toys, lunchboxes, games, action figures, and an endless array of other tie-in products. Thus, by placing our concern on audience pleasures, we run the risk of validating industry domination of global media. A discussion of audience pleasures, strictly on the audience's terms, negates the possibility of constructing a critical stance toward the media. The tension between the popular and the critical, between high versus low art, is inherent within the cultural studies perspective. Indeed, as we shall see below, it is an issue that analysts have studied as a social phenomenon all its own.

In summary, cultural studies analysts have proposed a very complex relationship where one's interpersonal relationships with others (e.g., as teacher, student, parent, offspring, friend) and one's social position (e.g., educated/uneducated, middle/working class) set parameters for one's acquisition and decoding of cultural symbols presented through the media. Any analysis of this relationship runs the risk of isolating some aspect

(i.e., variable) of the phenomenon, cutting it off from its natural context and yielding an incomplete understanding of cultural life. Studying media's role in the production and maintenance of culture, then, is a matter of painstaking attention to the vast context of communication.

3.4.2 Applications of Cultural Studies

3.4.2.1 *Studies of Everyday Life.* One methodological demand of this approach, then, is to ground its analysis in data from naturalistic settings. Several cultural analysts (e.g., Morley, 1986; Rogge & Jensen, 1988; Silverstone, 1994) argue for the importance of studying viewing within its natural context and understanding the rules at work in those contexts. The effort to get at context partially justifies this argument, but these authors also point out that technological changes in media make received notions of viewing obsolete. Lindlof and Shatzer (1989, 1990, 1998) were among the first to argue this in response to the emergence of VCRs and remote control devices, both of which changed the nature of program selection and viewing. Media processes underwent significant change, meaning that the social routines of media use also changed. The central goal of cultural research, then, is to discover the "logic-in-us" for organizing daily life and how media are incorporated into daily routines.

The method most employed toward these ends is ethnographic observations of media use. Jordan (1992) used ethnographic and depth interview techniques for just such a purpose. The ostensible goal of her study was to examine media's role in the spatial and temporal organization of household routines. Ethnographers in her study lived with families for a period of 1 month, observing their interactions with media and one another at key points during the day (e.g., mornings before and evenings after work and school). She concluded that family routines, use and definition of time, and the social roles of family members all played a part in the use of media. Children learned at least as much, if not more, from these daily routines than any formal efforts to regulate media use. Parents, for example, controlled a great deal of their children's viewing in the patterned activities by which they accomplished household tasks like preparing dinner. In addition, she uncovered subtle, unacknowledged regulations of TV viewing during family viewing time (e.g., a parent shushing to quiet children during a program). Similarly, Krendl, Clark, Dawson, and Troiano (1993) used observational data to explore the nature of media use within the home. Their observations found that children were often quite skilled at media use, particularly the use of media hardware devices like a remote control. Their study also concluded that parents' and children's experience with media was often vastly different, particularly when parents exercised regulatory power over viewing. Many children in their study, for example, reported few explicit rules for media use, though parents reported going to extremes to control viewing (e.g., using the TV to view only videotapes).

3.4.2.2 *Social Positioning.* Studies of everyday social life revealed that media are important resources for social actors

seeking to achieve very specific goals. The nature of these goals is dependent upon one's position in the local social setting. In the home, for example, children's goals are not always the same as, or even compatible with, parents' goals for TV viewing. Thus, one's position in relation to social others influences the goals and nature of media use. Cultural studies scholars foreground this purposeful activity as an entry point in our understanding of both local and global culture. In essence, this approach claims that individuals use media messages to stake out territory in their cultural environment. Media messages present images and symbols that become associated with specific social groups and subgroups (e.g., "yuppies," teens, the elderly). Media users, given enough experience, attain the ability to read and interpret the intended association of those symbols with those cultural identities (for example, a white hat as a symbol of the "good" cowboy). The display of such cultural competence is a means by which individuals identify themselves as part of certain social groups and distinguish themselves from others. In this way, social agents come to claim and occupy a social position that is the product of their cultural, social, educational, and familial background. This background instills in us our set of cultural competencies and regulates how we perceive, interpret, and act upon the social world. It creates mental structures upon which one bases individual action. Bourdieu (1977, p. 78) calls this the *habitus*, "the durably installed generative principle of regulated improvisation." It constitutes the deep-rooted dispositions that surface in daily social action.

3.4.2.3 *Children "Reading" Television.* The work of David Buckingham (1993, 2000) forcefully illustrates the roles of context, power, and social position in children's use of media. His extensive interviews with children about television programming reveal the dependence of their interpretation upon social setting and the presence of others. This principal surfaces in his analysis of children's recounts of film narratives. Buckingham's interviews revealed marked differences in the ways that boys and girls retold the story of various films. In several recounts, proclaiming any interest in romance, sex, or violence made a gender statement. Boys' social groups had strong norms against any interest in romantic content, resulting in several critical and negative statements about such content. Further, boys often referred to the fictional machinations of production when making such comments, further distancing themselves from any interest in love stories. Thus, boys claimed a social position by making a gendered statement about film content. They define their interests in terms similar to their same-sex friends, but they also deny any potential influence the content may have upon them. In short, they deny enjoying any romantic content and define themselves as separate from viewers who are affected by it. Such comments were also prevalent in boys' talk about soap operas and the American show *Baywatch*. Boys were more likely to indicate their disgust with the attractive male actors on the show, belittling their muscled physiques or attributing their attractiveness to Hollywood production tricks. Their talk was a matter of taking up a social position with their friends and peers, but it was also a statement on their own masculinity. Girls, on the other hand, had an easier time talking about the pleasures they derived from watching such programs (e.g.,

seeing attractive clothes, finding out about relationships), but only in same-sex groups. When placed in cross-sex discussion groups, girls were much more likely to suppress such remarks and talk more critically about TV shows. Particularly in same-sex peer groups, then, children's comments reveal the influence of gender and social position (i.e., peer groups) on their critical stance toward TV programs.

Gender was not the only factor of influence in these discussions, however. Buckingham also grouped children in terms of their social class standing (i.e., upper, middle, and working class children). Here Buckingham takes issue with social science findings that class and education are direct influences on children's ability to apply "critical viewing" skills. Through his interviews, Buckingham concluded that it might not be that social class makes some children more critical than others, but that critical discourse about television serves different social purposes for children of different social classes. This was especially true in his data from preadolescent, middle-class boys. During their discussions, these boys often competed to see who could think of the wittiest put-downs of popular TV shows. This had the consequence of making it problematic to admit liking certain television shows. If one's peer group, for example, criticizes *Baywatch* as "stupid," one's enjoyment of the show is likely to be suppressed. Indeed, children who admitted to watching shows their friends considered "dumb" or "babyish" often justified their viewing by saying they were just watching to find material for jokes with their friends. In other cases, children claimed they viewed only to accompany a younger sibling or to humor parents. This discussion pattern fits the theoretical notion of cultural capital and social distinction. Television provides children with images and symbols that they can exchange for social membership. Children seek to define their identities (e.g., as members of peer or gender groups) through their critical position toward TV.

This theoretical stance also works in children's higher order cognitions about the distinction between fantasy and reality on television, or its modality. Buckingham (1993) identifies the internal and external criteria by which children make modality judgments about TV content on two dimensions: (1) Magic Window (children's awareness of TV's constructed nature), and (2) social expectations (the degree to which children compare TV to their own social experiences). Internal criteria included children's discussion of genre-based forms and conventions (e.g., writing a script to make a character or situation seem scarier in a horror film) and specific production techniques (e.g., having a male *Baywatch* character lift weights right before filming to make him appear more muscular). External criteria referred to children's estimates of the likelihood that TV events could happen in real life. In general, children made such assertions based on their ideas about characters' psychological motivations or on the social likelihood that such events would actually happen. The latter could refer to direct personal experience with similar people or situations, or to a child's knowledge of the real-life setting for a show (e.g., their knowledge of New York when judging a fictional sitcom set in that real city).

As with comments about film narratives or characters, Buckingham found that children's assessment of TV's realism was a

matter of social positioning and was dependent on their coconversants and the social setting. For example, all children (regardless of age) were likely to identify cartoon programming as unrealistic, a comment that was offered as a sign of their maturity to the interviewer. Cartoons were most frequently identified as "babyish" programming because of this distinction. When speaking with their peers, however, children were also likely to include humorous or appreciative comments about the jokes or violent content in cartoons. According to Buckingham, modality judgments are also social acts. Children make claims about the realism of a TV show as a means of affiliation or social distancing. They are claims of knowledge, mastery of content, and superiority over those who are easily influenced by such content. Such claims were far more prevalent when conversation was directed toward the adult interviewer, however, than they were with peers. When children perceive social capital (e.g., adult approval) in making critical comments about TV, such comments are easily offered and more frequent.

This conclusion reveals the extent to which power governs the relationship between children and media. As with most aspects of social life, adults have a great deal of power over what children can do with their time and with whom children share that time. This power stems chiefly from parents' formal role as decision maker, caregiver, and legal authority in most cultures. Much adult power is institutionalized, as Murray (1999) points out in her examination of "Lifers," a term used for fans of the 1994–1995 television drama *My So Called Life*. Murray's analysis of online chat group messages about the show tracks adolescent girls' struggle to maintain a personal relationship with the program even as network executives were considering its future. Several of the participants in this study saw the situation as another instance of adults taking away a good thing, or what Murray (1999, p. 233) calls a "struggle for control over representation." The chat rooms were often filled with negative comments about network executives' impending cancellation of the show in particular, and about adults' control over children's pleasures in general. Because the show's fans identified so strongly with the adolescent lead character (Angela), Murray's chapter documents the young viewers' struggle with their own identity and social relationships. Thus, media are resources with which viewers learn of and claim social positions in relation to the culture at large (Kinder, 1999)—a culture the media claim to represent and shape at the same time. However, because adults control media industries, children's entry into these cultures is at once defined and limited by adults. Only those needs recognized by adults are served; only those notions of childhood legitimized by adults are deemed "appropriate" for children. Children's voices in defining and serving their needs are lost in such a process (Buckingham, 2000).

3.5 IMPLICATIONS FOR RESEARCH ON LEARNING FROM MEDIA

The implications of these studies for learning from media are far reaching. First, the position of cultural studies scholars on scientific research is extended to developmental psychology.

Buckingham (2000) argues that one limitation of the Piagetian approach is its strict focus on individual differences, which isolates action from its social context. Audience activity is seen as an intervening variable between cause (TV programming) and effect (pro- or antisocial behavior). Viewing becomes a series of variables that are controlled and measured in isolation. Thus, developmental approaches have been criticized for oversimplifying children's social contexts and for neglecting the role of emotion (e.g., pleasures of viewing become guilty pleasures). Several cultural analysts (e.g., Buckingham, 1993; Hodge & Tripp, 1986) similarly critique Salomon's definition of TV attributes for its micro-level focus. They charge that Salomon ignores the levels of narrative structure, genre, and mode of address that go into TV messages. For example, a zoom can mean several things depending on its context. In one show, it might serve to highlight a fish so children can see its gills. In another show, however, it might serve to heighten the suspense of a horror movie by featuring a character's screaming mouth. The hierarchy of skills implied by developmental approaches, while having a legitimate basis in the biology of the brain, inevitably leads to mechanized teaching that subordinates children's own construction of meaning from television. The only legitimate meaning becomes the one teachers build for children.

Cultural studies takes a decidedly sociological view toward its research. Questions shift from the effects of media content to issues of meaning. Learning, consequently, is not an effort to impart approved instructional objectives upon children. To do so denies children's power to interpret media messages according to their own purposes and needs. Instead, cultural analysts favor an approach which recognizes children's social construction of meaning and uses that process to help children negotiate their social and cultural environments (Seiter, 1999). Hodge and Tripp (1986) offered a seminal effort to explicate the social, discursive, semiotic processes through which viewers construct meaning from television. Their work was seen as the first detailed explanation of how children interpret a program (e.g., cartoon) and decode its symbol systems. To be sure, common meanings for television codes exist, much as Salomon's work (above) would indicate. The contribution of cultural studies research lies in the shifting nature of those codes as they operate within television's narrative structures and programming genres, as well as within local and global social systems.

A second implication is more obvious, that teachers and other adults assume very powerful positions when it comes to children's learning from media. Indeed, Buckingham argues, power is wrapped up in our notions of learning. Signs of "precocious" behavior both define and threaten the boundary between childhood and adulthood. To maintain this boundary, adults legitimize certain forms of learning from media, such as prosocial learning or the critical rejection of inappropriate programming (e.g., sex or violence). Thus, the fundamental issues are those of access and control. In the process, academic theorists ignore a great deal of children's media processing. However, this power belongs to peer groups as well. The power of a modality judgment can be inherent in the utterance, but it can also be challenged. The boys criticizing the male characters on *Baywatch* (above) were just as likely to criticize each other for not "measuring up" to the muscled men on the beach of that

show. Simultaneously, comments about the show's lack of quality suppressed any discussion of the viewing pleasures some children derived from such programming. Hence, this kind of discourse oppresses any expression of emotional involvement with a show. It is not cool to become engaged, so children do not discuss their engagement unless it is socially approved. Engaging in such critical discourse can also indicate a child's willingness to play the teacher or interviewer's "game." Therefore, we must regard children's critical comments about TV as a social act at least as much (if not more) as an indication of the child's cognitive understanding of TV. Rationalist discourses supplant the popular discourses through which children make meaning of media messages. We miss the opportunity to more deeply explore the meanings that children construct from their viewing, and consequently deeper insight into the way children learn from media content.

The cultural studies approach, adopting a research orientation focused on the role of media in learning within a broader social and cultural environment, is particularly appealing at this point in time given the changes in the nature of the media environment. Today the media environment is conceptualized not as individual, isolated experiences with one dominant media system. Rather, researchers consider the broad array of media choices and selections with the understanding that individuals live in a media-rich environment in which exposure to multiple messages shapes experiences and learning and creates complex interactions in the audience's understanding of the world around them.

3.6 CONCLUSION

Since the introduction of television into the home, broadcast television was the delivery system that commanded the most attention from researchers, characterized by its wide appeal to mass audiences, its one-way delivery of content, and its highly centralized distribution and production systems. Today the media environment offers an increasingly wide array of technologies and combinations of technologies. In addition, emerging technologies share characteristics that are in direct contrast to the broadcast television era and the transmission paradigm research that attempted to examine how people learned from it. Contemporary delivery systems are driven by their ability to serve small, specialized audiences, adopting a narrowcast orientation, as opposed to television's broadcast orientation. They are also designed to feature high levels of user control, selectivity, flexibility, and interactivity, as well as the potential for decentralized production and distribution systems.

As the media environment has expanded to offer many more delivery systems and capabilities, the audience's use of media has also changed. Audience members now select systems that are responsive to their unique needs and interests. Such changes in the evolution of the media environment will continue to have profound implications for research on media and learning.

In the same way that researchers have adopted different perspectives in studying the role and nature of the media system in understanding the relationship between media and learning,

they have also adopted different theoretical orientations and assumptions about the nature and definition of learning in response to media experiences. This chapter has attempted to

summarize those orientations and provide some perspective on their relative contributions to understanding media and learning in out-of-school contexts.

References

- Adorno, T., & Horkheimer, M. (1972). *The Dialectic of Enlightenment*. New York: Herder and Herder.
- Allen, W. H. (1973). *Research in educational media*. In J. Brown (Ed.), Educational media yearbook, 1973. New York: R. R. Bowker.
- Altheide, D. L. (1985). *Media Power*. Beverly Hills, CA: Sage.
- Altheide, D. L., & Snow, R. P. (1979). *Media Logic*. London: Sage.
- Anderson, D. R., & Collins, P. A. (1988). The impact on children's education: Television's influence on cognitive development (Working paper No. 2). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Anderson, D. R., Choi, H. P., & Lorch, E. P. (1987). Attentional inertia reduces distractibility during young children's TV viewing. *Child Development*, 58, 798-806.
- Anderson, D. R., Field, D. E., Collins, P. A., Lorch, E. P., & Nathan, J. G. (1985). Estimates of young children's time with television: A methodological comparison of parent reports with time-lapse video home observation. *Child Development*, 56, 1345-1357.
- Anderson, D. R., & Levin, S. R. (1976). *Young children's attention to "Sesame Street"*. *Child Development*, 47, 806-811.
- Anderson, D. R., Lorch, E. P., Field, D. E., Collins, P. A., & Nathan, J. G. (1986). Television viewing at home: Age trends in visual attention and time with TV. *Child Development*, 52, 151-157.
- Anderson, D. R., & Smith, R. (1984). Young children's TV viewing: The problem of cognitive continuity. In F. J. Morrison, C. Lord, & D. P. Keating (Eds.), *Applied Developmental Psychology* (Vol. 1, pp. 116-163). Orlando, FL: Academic Press.
- Anderson, J. R. (1990). *Cognitive psychology and its implications* (3rd ed.). New York: Freeman.
- Applebee, A. N. (1977). A sense of story. *Theory Into Practice*, 16, 342-347.
- Averill, J. R., Malmstrom, E. J., Koriati, A., & Lazarus, R. S. (1972). Habituation to complex emotional stimuli. *Journal of Abnormal Psychology*, 1, 20-28.
- Baer, S. A. (1997). Strategies of children's attention to and comprehension of television (Doctoral dissertation, University of Kentucky, 1996). Dissertation Abstracts International, 57(11-B), 7243.
- Baldwin, T. F., & Lewis, C. (1972). Violence in television: The industry looks at itself. In G. A. Comstock & E. A. Rubinstein (Eds.), *Television and social behavior: Reports and papers: Vol. 1: Media content and control* (pp. 290-373). Washington, DC: Government Printing Office.
- Ball, S., & Bogatz, G. A. (1970). *The first year of Sesame Street: An evaluation*. Princeton, N.J.: Educational Testing Service.
- Bandura, A. (1965). Influence of model's reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology*, 1, 589-595.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A., Ross, D., & Ross, S. (1963). Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology*, 66, 3-11.
- Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *Journal of Abnormal and Social Psychology*, 63, 575-582.
- Beck, C. R. (1987). Pictorial cueing strategies for encoding and retrieving information. *International Journal of Instructional Media*, 14(4), 332-345.
- Becker, A. (1985). Reader theories, cognitive theories, and educational media research. Paper presented at the Annual Meeting of the Association for Educational Communications and Technology. (ERIC Document Reproduction Service No. ED 256 301).
- Beentjes, J. W. J. (1989). Learning from television and books: A Dutch replication study based on Salomon's model. *Educational Technology Research and Development*, 37(2), 47-58.
- Beentjes, J. W. J., & van der Voort, T. H. A. (1991). Children's written accounts of televised and printed stories. *Educational Technology Research and Development*, 39(3), 15-26.
- Behr, R. L., & Iyengar, S. (1985). Television news, real world cues, and changes in the public agenda. *Public Opinion Quarterly*, 49, 38-57.
- Berlyne, D. E. (1960). *Conflict, arousal, and curiosity*. New York: McGraw-Hill.
- Bernardes, J. (1986). In search of "The Family"—Analysis of the 1981 United Kingdom Census: A research note. *Sociological Review*, 34, 828-836.
- Blake, T. (1977). Motion in instructional media: Some subject-depth display mode interactions. *Perceptual and Motor Skills*, 44, 975-985.
- Blumler, H. (1939). The mass, public & public opinion. In A. N. Lee (Ed.), *New outlines of the principles of sociology*. New York: Barnes & Noble.
- Blumler, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, NJ: Prentice Hall.
- Bogatz, G. A., & Ball, S. (1971). The second year of Sesame Street: A continuing evaluation, Vols. I and II. Princeton, NJ: Education Testing Service. (ERIC Document Reproduction Service Nos. ED 122 800, ED 122 801).
- Bourdieu, P. (1977). *Outline of a theory of practice*. New York: Cambridge University Press.
- Brigham, J. C., & Giesbrecht, L. W. (1976). "All in the Family": Racial attitudes. *Journal of Communication*, 26(4), 69-74.
- Brosius, H., & Kepplinger, H. M. (1990). The agenda setting function of television news. *Communication Research*, 17, 183-211.
- Buckingham, D. (1993). *Children talking television: The making of television literacy*. London: The Falmer Press.
- Buckingham, D. (2000). *After the death of childhood: Growing up in the age of electronic media*. London: Polity Press.
- Bushman, B. J., & Huesmann, L. R. (2001). Effects of televised violence on aggression. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media* (pp. 223-254). Thousand Oaks, CA: Sage Publications.
- Calvert, S. L., Huston, A. C., & Wright, J. C. (1987). Effects of television preplay formats on children's attention and story comprehension. *Journal of Applied Developmental Psychology*, 8, 329-342.
- Cantor, P. A. (1999). The Simpsons. *Political Theory*, 27, 734-749.

- Carey, J. (1989). *Communication as culture: Essays on media and society*. Boston: Unwin Hyman.
- Chaiken, S. (1980). Heuristic versus systematic processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39, 752-766.
- Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic information processing within and beyond the persuasion context. In J. S. Uleman and J. A. Bargh, (Eds.), *Unintended thought* (pp. 212-252). New York: Guilford Press.
- Christenson, P. G., & Roberts, D. F. (1983). The role of television in the formation of children's social attitudes. In M. J. A. Howe (Ed.), *Learning from television*. New York: Academic Press.
- Clark, R. E. (1982). Individual behavior in different settings. *Viewpoints in Teaching and Learning*, 58(3), 33-39.
- Clark, R. E. (1983). Reconsidering research on learning from media. *Review of Educational Research*, 53(4), 445-459.
- Clark, R. E. (1987). Which technology for what purpose? The state of the argument about research on learning from media. Paper presented at the Annual Convention of the Association for Educational Communications and Technology. (ERIC Document Reproduction Service No. ED 285 520).
- Clark, R. E., & Salomon, G. (1985). Media in teaching. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) (pp. 464-478). New York: MacMillan.
- Cline, V. B., Croft, R. G., & Courier, S. (1973). Desensitization of children to television violence. *Journal of Personality and Social Psychology*, 27, 260-265.
- Cressey, P. (1934). The motion picture as informal education. *Journal of Educational Sociology*, 7, 504-515.
- Cullingsford, C. (1984). *Children and television*. Aldershot, UK: Gower.
- Dalton, D. W., & Hannafin, M. J. (1986). The effects of video-only, CAI only, and interactive video instructional systems on learner performance and attitude: An exploratory study. Paper presented at the Annual Convention of the Association for Educational Communications and Technology. (ERIC Document Reproduction Service No. ED 267 762)
- Delingpole, J. (1997, Aug 30). Something for everyone. *The Spectator*, 279(8822), 10-11.
- Dewey, J. (1916). *Democracy and education*. New York: The Free Press.
- Eagly, A. H. (1992). Uneven progress: Social psychology and the study of attitudes. *Journal of Personality and Social Psychology*, 63(5), 693-710.
- Field, D. E., & Anderson, D. R. (1985). Instruction and modality effects on children's television attention and comprehension. *Journal of Educational Psychology*, 77, 91-100.
- Fisch, S. M. (1999, April). A capacity model of children's comprehension of educational content on television. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Albuquerque, New Mexico.
- Fisch, S. M., Brown, S. K., & Cohen, D. I. (1999, April). Young children's comprehension of television: The role of visual information and intonation. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Albuquerque, New Mexico.
- Fisch, S. M. & Truglio, R. T. (Eds.) (2001). *"G" is for growing: Thirty years or research on children and Sesame Street*. Hillsdale, NJ: Lawrence Erlbaum.
- Fisher, B. A. (1978). *Perspectives on human communication*. New York: Macmillan.
- Fiske, J. (1989). *Reading the Popular*. Boston, MA: Unwin and Hyman.
- Fiske, S. T., & Taylor, S. E. (1991). *Social Cognition* (2nd ed.). New York: McGraw-Hill.
- Flavell, J. H., Flavell, E. R., & Green, F. L. (1987). Young children's knowledge about the apparent-real and pretend-real distinctions. *Developmental Psychology*, 23(6), 816-822.
- Gerbner, G., Gross, L., Eeley, M. F., Jackson-Beeck, M., Jeffries-Fox, S., & Signorielli, N. (1977). Violence profile no. 8: The highlights. *Journal of Communication*, 27(2), 171-180.
- Gerbner, G., Gross, L., Eeley, M. F., Jackson-Beeck, M., Jeffries-Fox, S., & Signorielli, N. (1978). Cultural indicators: Violence profile no. 9. *Journal of Communication*, 28(3), 176-206.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N., (1980). The mainstreaming of America: Violence profile no. 11. *Journal of Communication*, 30(3), 10-28.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1982). Charting the mainstream: Television's contributions to political orientations. *Journal of Communication*, 32(2), 100-127.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N., (1986). Living with television: The dynamics of the cultivation process. In J. Bryant & D. Zillman (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. 17-42), Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ghorpade, S. (1986). Agenda setting: A test of advertising's neglected function. *Journal of Advertising Research*, 25, 23-27.
- Glynn, S., & Britton, B. (1984). Supporting readers' comprehension through effective text design. *Educational Technology*, 24, 40-43.
- Greenfield, P., & Beagles-Roos, J. (1988). Radio vs. television: Their cognitive impact on children of different socioeconomic and ethnic groups. *Journal of Communication*, 38(2), 71-92.
- Greenfield, P., Farrar, D., & Beagles-Roos, J. (1986). Is the medium the message? An experimental comparison of the effects of radio and television on imagination. *Journal of Applied Developmental Psychology*, 7, 201-218.
- Greenfield, P. M. (1984). *Mind and media: The effects of television, computers and video games*. Cambridge, MA: Harvard University Press.
- Greenfield, P. M., Yut, E., Chung, M., Land, D., Kreider, H., Pantoja, M., & Horsley, K. (1990). The program-length commercial: A study of the effects of television/toy tie-ins on imaginative play. *Psychology and Marketing*, 7, 237-255.
- Greer, D., Potts, R., Wright, J. C., & Huston, A. C. (1982). The effects of television commercial form and commercial placement on children's social behavior and attention. *Child Development*, 53, 611-619.
- Gunter, B. (1985). *Dimensions of television violence*. Aldershot, UK: Gower.
- Hall, S. (1980). Coding and encoding in the television discourse. In S. Hall et al. (Eds.), *Culture, media, and language* (pp. 197-208). London: Hutchinson.
- Hall, S., Clarke, J., Critcher, C., Jefferson, T., & Roberts, B. (1978). *Policing the crisis*. London: MacMillan.
- Halpern, D. F. (1986). *Sex differences in cognitive abilities*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hardt, H. (1991). *Critical communication studies*. London: Routledge.
- Harrison, L. E., & Williams, T. M. (1986). Television and cognitive development. In T. M. Williams (Ed.), *The impact of television: A natural experiment in three communities* (pp. 87-142). San Diego, CA: Academic Press.
- Hart, R. A. (1986). *The effects of fluid ability, visual ability, and visual placement within the screen on a simple concept task*. Paper presented at the Annual Convention of the Association for Educational Communications and Technology. (ERIC Document Reproduction Service No. ED 267 774)

- Hawkins, R. P., Kim, J. H., & Pingree, S. (1991). The ups and downs of attention to television. *Communication Research*, 18, 53-76.
- Hayes, D. S., & Kelly, S. B. (1984). Young children's processing of television: Modality differences in the retention of temporal relations. *Journal of Experimental Child Psychology*, 38, 505-514.
- Heath, R. & Bryant, J. (1992). *Human communication theory and research*. Hillsdale, NJ: Erlbaum.
- Hendershot, H. (2000). Teletubby trouble. *Television Quarterly*, 31(1), 19-25.
- Himmelweit, H., Oppenheim, A. N., & Vince, P. (1959). *Television and the child: An empirical study of the effects of television on the young*. London: Oxford University Press.
- Hoban, C. E., & van Ormer, E. B. (1950). Instructional film research, 1918-1950. Technical Report No. SDC 269-7-19, Port Washington, NY: U.S. Naval Special Devices Center.
- Hodge, R., & Tripp, D. (1986). *Children and television: A semiotic approach*. Stanford, CA: Stanford University Press.
- Hoffner, C., Cantor, J., & Thorson, E. (1988). Children's understanding of a televised narrative. *Communication Research*, 15, 227-245.
- Holiday, P. W., & Stoddard, G. D. (1933). *Getting ideas from the movies*. New York: MacMillan.
- Hovland, C. I., Lumsdaine, A. A., & Sheffield, F. D. (1949). *Experiments on mass communication* (vol. 3). Princeton, NJ: Princeton University Press.
- Huston, A. C., & Wright, J. C. (1997). Mass media and children's development. In W. Damon (Series Ed.) & I. E. Siegel & K. A. Renninger (Vol. Eds.), *Handbook of child psychology: Vol. 4. Child psychology in practice* (4th ed., pp. 999-1058). New York: John Wiley.
- Huston, A. C., Wright, J. C., Wartella, E., Rice, M. L., Watkins, B. A., Campbell, T., & Potts, R. (1981). Communicating more than content: Formal features of children's television programs. *Journal of Communication*, 31(3), 32-48.
- Iyengar, E., Peters, M. D., & Kinder, D. R. (1982). Experimental demonstrations of the 'not-so-minimal' consequences of television news programs. *American Political Science Review*, 76, 848-858.
- Jacobvitz, R. S., Wood, M. R., & Albin, K. (1991). Cognitive skills and young children's comprehension of television. *Journal of Applied Developmental Psychology*, 12(2), 219-235.
- Johnston, J. (1987). *Electronic learning: From audiotape to videodisk*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Jordan, A. B. (1992). Social class, temporal orientation, and mass media use within the family system. *Critical Studies in Mass Communication*, 9, 374-386.
- Kellermann, K. (1985). Memory processes in media effects. *Communication Research*, 12, 83-131.
- Kinder, M. (Ed.) (1999). *Kids' media culture*. Durham, NC: Duke University Press.
- Krendl, K. A. (1986). Media influence on learning: Examining the role of preconceptions. *Educational Communication and Technology Journal*, 34, 223-234.
- Krendl, K. A., Clark, G., Dawson, R., & Troiano, C. (1993). Preschoolers and VCRs in the home: A multiple methods approach. *Journal of Broadcasting and Electronic Media*, 37, 293-312.
- Krendl, K. A., & Watkins, B. (1983). Understanding television: An exploratory inquiry into the reconstruction of narrative content. *Educational Communication and Technology Journal*, 31, 201-212.
- Lasswell, H. D. (1948). The structure and function of communication in society. In L. Bryson (Ed.), *The communication of ideas*. New York: Harper & Brothers.
- Lazarsfeld, P. F. (1940). *Radio and the printed page: An introduction to the study of radio and its role in the communication of ideas*. New York: Duell, Sloan, and Pearce.
- Lesser, G. S. (1977). *Television and the preschool child*. New York: Academic Press.
- Lindlof, T. R., & Shatzer, M. J. (1989). Subjective differences in spousal perceptions of family video. *Journal of Broadcasting and Electronic Media*, 33, 375-395.
- Lindlof, T. R., & Shatzer, M. J. (1990). VCR usage in the American family. In J. Bryant (Ed.), *Television and the American family* (pp. 89-109). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Lindlof, T. R., & Shatzer, M. J. (1998). Media ethnography in virtual space: Strategies, limits, and possibilities. *Journal of Broadcasting & Electronic Media*, 42, 170-189.
- Lippmann, W. (1922). *Public Opinion*. New York: Free Press.
- Lorch, E. P., Anderson, D. R., & Levin, S. R. (1979). The relationship of visual attention to children's comprehension of television. *Child Development*, 50, 722-727.
- Lowry, B., Hall, J., & Braxton, G. (1997, September 21). There's a moral to this. *Los Angeles Times Calendar*, pp. 8-9, 72-73.
- Mandler, J., & Johnson, N. (1977). Remembrance of things parsed: Story structure and recall. *Cognitive Psychology*, 9, 111-151.
- McCombs, M. E., & Shaw, D. L. (1972). The agenda setting function of mass media. *Public Opinion Quarterly*, 36, 176-187.
- McGuire, W. J. (1973). Persuasion, resistance, and attitude change. In I. D. S. Pool, W. Schramm, F. W. Frey, N. Macoby, & E. B. Parker (Eds.), *Handbook of communication* (pp. 216-252). Chicago: Rand McNally.
- McQuail, D. (1983). *Mass communication theory: An introduction*. Beverly Hills, CA: Sage.
- Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.
- Meadowcroft, J. M. (1985). *Children's attention to television: The influence of story schema development on allocation of cognitive capacity and memory*. Unpublished doctoral dissertation, University of Wisconsin-Madison.
- Mielke, K. W. (1994). Sesame Street and children in poverty. *Media Studies Journal*, 8(4), 125-34.
- Miklitsch, R. (1998). *From Hegel to Madonna: Toward a general economy of commodity fetishism*. New York: State University of New York Press.
- Miller, W. (1985). A view from the inside: Brainwaves and television viewing. *Journalism Quarterly*, 62, 508-514.
- Morley, D. (1980). *The "Nationwide" audience: Structure and decoding*. BFI TV Monographs No. 11. London: British Film Institute.
- Morley, D. (1986). *Family television: Cultural power and domestic leisure*. London: Comedia Publishing Group.
- Mullin, C. R., & Linz, D. (1995). Desensitization and resensitization to violence against women: Effects of exposure to sexually violent films on judgments of domestic violence victims. *Journal of Personality and Social Psychology*, 69, 449-459.
- Murray, S. (1999). Saving our so-called lives: Girl fandom, adolescent subjectivity, and My So-Called Life. In M. Kinder (Ed.), *Kids' media culture* (pp. 221-236). Durham, NC: Duke University Press.
- Musto, M. (1999, Feb 23). Purple passion. *The Village Voice*, 44(7), 55-57.
- Nathanson, A. I. (1999). Identifying and explaining the relationship between parental mediation and children's aggression. *Communication Research*, 26, 124-143.
- National Institute of Mental Health (NIMH) (1982). In D. Pearl, L. Bouthilet, & J. Lazar (Eds.), *Television and behavior: Ten years of scientific progress and implications for the eighties* (Vol. 2) (pp. 138-157). Washington, DC: U.S. Government Printing Office.
- Paik, H., & Comstock, G. (1994). The effects of television violence on antisocial behavior: A meta-analysis. *Communication Research*, 21, 516-546.

- Perse, E. M. (2001). *Media effects and society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Peterson, R. C., & Thurstone, L. L. (1933). *Motion pictures and the social attitudes of children*. New York: MacMillan.
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer-Verlag.
- Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), *Carmichael's manual of psychology* (chap. 9, pp. 703-732). New York: Wiley.
- Piaget, J. (1972). *The principles of genetic epistemology*. (W. Mays, Trans.). New York: Basic.
- Potter, R. F., & Callison, C. (2000). Sounds exciting!: The effects of auditory complexity on listeners' attitudes and memory for radio promotional announcements. *Journal of Radio Studies*, 1, 59-79.
- Potter, W. J. (1988). Perceived reality in television effects research. *Journal of Broadcasting & Electronic Media*, 32, 23-41.
- Potter, W. J. (1999). *On media violence*. Thousand Oaks, CA: Sage.
- Prawat, R. S., Anderson, A. H., & Hapkeiwicz, W. (1989). Are dolls real? Developmental changes in the child's definition of reality. *Journal of Genetic Psychology*, 150, 359-374.
- Real, M. R. (1989). *Super media: A cultural studies approach*. Newbury Park, CA: Sage Publications.
- Reiser, R. A., Tessmer, M. A., & Phelps, P. C. (1984). Adult-child interaction in children's learning from Sesame Street. *Educational Communications and Technology Journal*, 32(4), 217-33.
- Reiser, R. A., Williamson, N., & Suzuki, K. (1988). Using Sesame Street to facilitate children's recognition of letters and numbers. *Educational Communications and Technology Journal*, 36(1), 15-21.
- Reiss, D. (1981). *The family's construction of reality*. Cambridge, MA: Harvard Press.
- Rice, M. L., Huston, A. C., & Wright, J. C. (1982). The forms and codes of television: Effects of children's attention, comprehension, and social behavior. In D. Pearl, L. Bouthilet, & J. Lazar (Eds.), *Television and behavior: Ten years of scientific progress and implications for the eighties*. Washington, DC: U.S. Government Printing Office.
- Rice, M. L., Huston, A. C., & Wright, J. C. (1986). Replays as repetitions: Young children's interpretations of television forms. *Journal of Applied Developmental Psychology*, 7(1), 61-76.
- Roberts, M. S. (1992). Predicting voting behavior via the agenda-setting tradition. *Journalism Quarterly*, 69, 878-892.
- Rogge, J. U., & Jensen, K. (1988). Everyday life and television in West Germany: An empathic-interpretive perspective on the family as a system. In J. Lull (Ed.), *World families watch television* (pp. 80-115). Newbury Park, CA: Sage.
- Rolandelli, D. R., Wright, J. C., Huston, A. C., & Eakins, D. (1991). Children's auditory and visual processing of narrated and nonnarrated television programming. *Journal of Experimental Child Psychology*, 51, 90-122.
- Rubenstein, D. J. (2000). Stimulating children's creativity and curiosity: Does content and medium matter? *Journal of Creative Behavior*, 34, 1-17.
- Rubin, A. M. (1986). Age and family control influences on children's television viewing. *The Southern Speech Communication Journal*, 52(1), 35-51.
- Ruff, H. A., Cappozzoli, M., & Weissberg, R. (1998). Age, individuality, and context as factors in sustained visual attention during preschool years. *Developmental Psychology*, 34, 454-464.
- Runco, M. A., & Pezdek, K. (1984). The effect of television and radio on children's creativity. *Human Communication Research*, 11, 109-120.
- Salomon, G. (1974). Internalization of filmic schematic operations in interaction with learners' aptitudes. *Journal of Educational Psychology*, 66, 499-511.
- Salomon, G. (1979). *Interaction of media, cognition, and learning*. San Francisco: Jossey-Bass.
- Salomon, G., & Cohen, A. A. (1977). Television formats, mastery of mental skills, and the acquisition of knowledge. *Journal of Educational Psychology*, 69, 612-619.
- Salomon, G., & Leigh T. (1984). Predispositions about learning from print and television. *Journal of Communication*, 34(2), 119-135.
- Sander, I. (1995, May). How violent is TV-violence? An empirical investigation of factors influencing viewers' perceptions of TV-violence. Paper presented at the annual conference of The International Communication Association, Albuquerque, NM.
- Schramm, W. (1977). *Big media, little media*. Beverly Hills, CA: Sage.
- Schramm, W., Lyle, J., & Parker, E. B. (1961). *Television in the lives of our children*. Stanford, CA: Stanford University Press.
- Seidman, S. A. (1981). On the contributions of music to media productions. *Educational Communication and Technology Journal*, 29, 49-61.
- Seiter, E. (1999). Power rangers at preschool: Negotiating media in child-care settings. In M. Kinder (Ed.), *Kids' media culture* (pp. 239-262). Durham, NC: Duke University Press.
- Seiter, E., Borchers, H., & Warth, E. M. (Eds.) (1989). *Remote Control*. London: Routledge.
- Severin, W. J., & Tankard, J. W., Jr. (2001). *Communication theories: Origins, methods, and uses in the mass media*. New York: Addison Wesley Longman.
- Shannon, C. & Weaver, W. (1949). *The mathematical theory of communication*. Urbana, IL: University of Illinois Press.
- Shaw, D. L., & Martin, S. E. (1992). The function of mass media agenda setting. *Journalism Quarterly*, 69, 902-920.
- Shaw, D. L., & McCombs, M. E. (Eds.) (1977). *The emergence of American political issues: The agenda setting function of the press*. St. Paul, MN: West.
- Shuttleworth, F. K., & May, M. A. (1933). *The social conduct and attitudes of movie fans*. New York: MacMillan.
- Signorielli, N. (1990, November). *Television's contribution to adolescents' perceptions about work*. Paper presented at the annual conference of the Speech Communication Association, Chicago.
- Signorielli, N. (2001). Television's gender role images and contribution to stereotyping: Past, present, and future. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media* (pp. 223-254). Thousand Oaks, CA: Sage Publications.
- Silverman, I. W., & Gaines, M. (1996). Using standard situations to measure attention span and persistence in toddler-aged children: Some cautions. *Journal of Genetic Psychology*, 16, 569-591.
- Silverstone, R. (1994). *Television and everyday life*. London: Routledge.
- Singer, J. L., Singer, D. G., & Rapaczynski, W. S. (1984). Family patterns and television viewing as predictors of children's beliefs and aggression. *Journal of Communication*, 34(2), 73-89.
- Singhal, A., & Rogers, E. M. (1999). *Entertainment-education: A communication strategy for social change*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Taylor, S. E., & Crocker, J. (1981). Schematic bases of social information processing. In E. T. Higgins, C. P. Herman, & M. P. Zanna (Eds.), *Social Cognition: The Ontario Symposium* (Vol. 1, pp. 89-134). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Travers, R. M. W. (1967). *Research and theory related to audiovisual information transmission*. Kalamazoo, MI: Western Michigan University Press.
- Trenholm, S. (1986). *Human communication theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Valkenburg, P. A., & van der Voort, T. H. A. (1994). Influence of TV on daydreaming and creative imagination: A review of research. *Psychological Bulletin*, 116, 316-339.

- van der Molen, J. H. W., & van der Voort, T. H. A. (2000a). The impact of television, print, and audio on children's recall of the news: A study of three alternative explanations for the dual-coding hypothesis. *Human Communication Research*, 26, 3-26.
- van der Molen, J. H. W., & van der Voort, T. H. A. (2000b). Children's and adults' recall of television and print news in children's and adult news formats. *Communication Research*, 27, 132-160.
- Vaughan, B. E., Kopp C. B., & Krakow, J. B. (1984). The emergence and consolidation of self-control from eighteen to thirty months of age: Normative trends and individual differences. *Child Development*, 55, 990-1004.
- Verbeke, W. (1988). Preschool children's visual attention and understanding behavior towards a visual narrative. *Communication & Cognition*, 21, 67-94.
- Vibbert, M. M., & Meringoff, L. K. (1981). *Children's production and application of story imagery: A cross-medium investigation (Tech. Rep. No. 23)*. Cambridge, MA: Harvard University, Project Zero. (ERIC Document Reproduction Service No. ED 210 682)
- Welch, R. L., Huston-Stein, A., Wright, J. C., & Plehal, R. (1979). Subtle sex-role cues in children's commercials. *Journal of Communication*, 29(3), 202-209.
- Westley, B. (1978). Review of The emergence of American political issues: The agenda-setting function of the press. *Journalism Quarterly*, 55, 172-173.
- Whorf, B. (1956). In J. B. Carroll (Ed.), *Language, thought, and reality; selected writings*. Cambridge, MA: Technical Press of the Massachusetts Institute of Technology.
- Wicks, R. H. (2001). *Understanding audiences: Learning to use the media constructively*. Mahwah, NJ: Lawrence Erlbaum.
- Wilson, B. J., & Cantor, J. (1987). Reducing children's fear reactions to mass media: Effects of Visual exposure and verbal explanation. In M. McLaughlin (Ed.), *Communication yearbook 10*. Beverly Hills, CA: Sage.
- Wilson, P., & Pahl, R. (1988). The changing sociological construct of the family. *The Sociological Review*, 36, 233-272.
- Wright, J. C., & Huston, A. C. (1981). The forms of television: Nature and development of television literacy in children. In H. Gardner & H. Kelly (Eds.), *Viewing children through television* (pp. 73-88). San Francisco: Jossey-Bass.
- Zettl, H. (1998). Contextual media aesthetics as the basis for media literacy. *Journal of Communication*, 48(1), 81-95.
- Zettl, H. (2001). *Video Basics 3*. Belmont, CA: Wadsworth.