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**Local television crime news visuals and concern about crime:
Exploring the cultivation process through recall and meaning of
visual images**

Artwick, Claudette Guzan, Ph.D.

University of Washington, 1994

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Local Television Crime News Visuals and
Concern About Crime:
Exploring the Cultivation Process Through
Recall and Meaning of Visual Images

by

Claudette Guzan Artwick

A dissertation submitted in partial fulfillment
of the requirements for the degree of

Doctor of Philosophy

1994

Approved by *Nancy K. Rweil*
(Chairperson of Supervisory Committee)

Program Authorized
to Offer Degree _____ School of Communications

Date May 26, 1994

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Doctoral Dissertation

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Date May 26, 1994

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Abstract

**Local Television Crime News Visuals and Concern About Crime:
Exploring the Cultivation Process Through
Recall and Meaning of Visual Images**

by Claudette Guzan Artwick

Chairperson of the Supervisory Committee:
Professor Nancy K. Rivenburgh
School of Communications

This study explores cognitive processes involved in cultivation by examining recall and meaning of visual images in local television crime news and their relation to concern about crime. Data were gathered through a content analysis, viewing experiment, and survey. The content analysis documented visual patterns found in a sample of local television crime news in six U.S. cities, and provided data used to construct the study's viewing experiment. Free recall and meanings of visuals were measured in three crime news viewing treatments. The survey measured television exposure (including news and local news), concern about crime (through 15 measures and four indexes), criminal victimization, and general demographic data. A sample of 118 University of Washington students participated in the study.

Results show significant differences between heavier and lighter viewers in their constructed meanings of television crime news visuals. The differences appear to be linked to higher concern about crime for the heavier viewers. Heavier news viewers, more often than lighter

viewers, interpret crime-specific visuals (i.e. a body on a stretcher) with meanings that go far beyond what is evident in the pictures. Their interpretations also focus on crime. Viewers who remember crime-specific shots are more likely to express greater concern about crime than viewers who recall more general visuals. Results imply that specific content viewing, particularly the visual aspects of television news, play an integral role in cultivation. The findings further our understanding of the cultivation process by suggesting that cognitive differences in visual processing between heavier and lighter viewers contribute to greater concern about crime for heavier viewers.

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ACKNOWLEDGEMENTS

This research grew out of a study addressing urban images in the mass media, directed by Margaret T. Gordon, Dean of the University of Washington Graduate School of Public Affairs. Thank you, Margo, for supporting my involvement in that project, and encouraging me to pursue television news visuals as a dissertation topic. I wish to extend my gratitude to the CUNY Foundation and the Graduate School of the University of Washington for funding my position as research assistant for the duration of the urban images study. Thanks to Dr. Edward Bassett, Director of the UW School of Communications, for recognizing my research interests and facilitating professional relationships. I extend my sincere appreciation to Professor Nancy Rivenburgh, my committee chair, for her support and guidance through every stage of the dissertation process. Thanks to Professors Katharine Heintz-Knowles and Tony Chan for their helpful suggestions. My appreciation to Dr. Angela B. Ginorio, Director of the Northwest Center for Research on Women. Thank you, Angela, for your friendship and mentoring. Joan, thanks so much for your visits to Seattle, and for your help. And to all my family, whose love and support helped make this a reality, I express my deepest gratitude.

To Thomas, with all my love.

INTRODUCTION

There's a well-known saying in local television newsrooms. "If it bleeds, it leads." If there are enough body bags, that's your top story. (Brokaw, 1994)

Crime news pervades local television news. Violent visuals, such as scenes depicting Los Angeles police beating Rodney King, reach millions of viewers through their local broadcasts. Most Americans believe the news does not exaggerate the amount of violence in the United States. And eight out of ten feel that stories about violence have made Americans more fearful than they were in the days before television (*Times Mirror*, 1993).

Television viewing and its relationship to concern about crime has been a major emphasis in cultivation analysis. Early cultivation research focused on the total number of hours viewers watched entertainment programs, and related heavier viewing with conceptions of the world that mirrored television reality. However, that emphasis on entertainment television left out a sizeable portion of programming--news--that may be vital in shaping people's beliefs about their world. More recent cultivation research specifically addresses news viewing, finding positive relationships between viewing some types of television news and crime-related beliefs (O'Keefe & Reid-Nash, 1987; O'Keefe, 1984; Perse, 1990; Tamborini, Zillmann, & Bryant,

1984). Focusing on local news viewing also appears relevant, as it is heavily watched (Comstock, Chaffee, Katzman, McCombs, & Roberts, 1978), and perceived to be realistic by many viewers (Rubin, Perse, & Powell, 1985).

Examining specific content in television news, namely crime reports, produces further positive findings. For example, higher attention to television crime news relates to fear of crime. Curiously, this is not apparent for newspapers, leading researchers to conclude that the visual impact of television may make a difference in people's perceptions about crime (O'Keefe & Reid-Nash, 1987).

Investigating television news visuals in relation to conceptions of crime grows out of traditional cultivation research, which analyzed visual acts of violence. Studies of television news, however, have largely focused on verbal content; a convention that developed based on technological limitations in the medium's infancy. Live reports were rare, as were instant pictures. Film took time to process and ship, complicating production of stories that included visuals. Modern television news gathering and production have eliminated those restrictions. Videotape has made film obsolete, and live reports are common in even small markets. While verbal analysis in television news is still useful, a need for visual research is now evident. A number of recent studies indicate a trend toward visual research in television news (Brosius, 1993; Newhagen & Reeves, 1992;

Graber, 1991; Entman, 1992). Memory for pictures has been found to be stronger than memory for words. And types of visuals, especially compelling images, influence recall of visual and verbal information. Visuals have also been shown to produce their own meanings.

What has not been addressed specifically, is the research question guiding this study:

How do local television crime news visuals relate to concern about crime?

Cultivation provides the theoretical framework for this study; however, the present research augments its traditional focus on viewing and social reality construction. This investigation focuses on specific content, namely crime news visuals, and individual processing, including memory and meaning. This approach should provide a valuable contribution to the understanding of the cultivation process. In a larger context, this research addresses issues relating to the pervasiveness of local crime news coverage, and the impact of crime-related visual images on our conceptions of safety in our cities, our neighborhoods, and in our own homes.

The research is presented in four chapters. Chapter 1 reviews the literature relevant to the study and introduces its conceptual framework. The statement of the problem, research question, and specific questions and hypotheses with rationale are also included here. Chapter 2 describes

the research design and methodology. Chapter 3 presents the results and discussion of the findings. And Chapter 4 concludes the work, summarizing major findings with implications for current theory, and suggestions for future research.

CHAPTER 1

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

They [the movies] constitute "the gravest menace to the morals of our boys and girls this country has ever seen," and "nothing seems to have less oversight by parents, Church, and State." (Twombly, 1932, p. 16)

Since the inception of "talking pictures," public concern over the impact of audio-visual media on society has challenged communication researchers. From the Payne Fund Studies of film and children in the early 1930s¹ to current experiments involving television effects, media research has produced myriad findings. And while our understanding of media effects has come a long way in six decades; for every conclusion reached, new questions seem to evolve. A number of questions which have grown out of a tradition of research, cultivation analysis, form the basis for this study. Cultivation offers a rich literature on the relationship of television viewing to our conceptions of the world. At the fore today are issues involving its process and the role of specific content in cultivation, which the present study will address. Contributing to that framework, this chapter also reviews a body of work on the study of visuals and takes a brief look at memory processes, semiotics, and meaning.

CULTIVATION ANALYSIS

Cultivation research examines the content of television programming and its relationship to people's conception of the world--their social reality. Cultivation has been described as "part of a continual, dynamic, ongoing process of interaction among messages and contexts" (Gerbner, Gross, Morgan, & Signorielli, 1986, p. 24). The research format includes coding television content to ascertain its representation of reality, conducting surveys to determine people's viewing habits and their perceptions of the world, and comparing those perceptions to the television "reality," based on amount of viewing. General findings assert that people who watch large amounts of television are more likely than light viewers to perceive the world as it is depicted on television.

The notion that heavy viewing "cultivates" conceptions of television reality has come under fire. However, cultivation research has addressed this and other criticisms to continue its strong research tradition. The strengths and weaknesses of cultivation analysis will be discussed in this section, concluding that certain aspects of this research model provide a valuable approach to the study of television news visuals and social reality.

Early Cultivation Research

The roots of cultivation research date to the late 1960s, when a project called Cultural Indicators was launched to study violence on television. The National Commission on the Causes and Prevention of Violence funded the research that examined the content of dramatic television programs to measure and describe the violence they contained (Gerbner, 1972). Work continued under contract to the Surgeon General's Scientific Advisory Committee on Television and Social Behavior, focusing on prime-time entertainment programming as well as on shows airing weekend mornings and afternoons (Gerbner, 1972). The National Institute of Mental Health (NIMH) later recommended that viewer conceptions be added to the content studies, funding a study of television and the social reality that "...viewing cultivates in child and adult audiences" (Gerbner & Gross, 1976, p. 174). Adding viewer conceptions expanded Cultural Indicators, marking the beginning of cultivation analysis. The NIMH study measured viewers' conceptions of law enforcement, trust, and safety, and compared them to the depicted television reality, based on amount of television viewed. People who watched many hours of programming consistently gave "television answers" to questions researchers asked. For example, when asked if their chances of being involved in violence in any given week was one in ten (the television answer) or one in one

hundred², more than half of the heavier viewers chose one in ten. On the other hand, only about one-third of light viewers gave responses that matched television reality.

These early studies analyzed the content of television drama while excluding news programs and commercial advertising. It is perplexing that news was excluded, for two reasons. First, early cultivation researchers argued that television must be studied as a whole, (Gerbner & Gross, 1976, p. 180), contending:

The 'world' of television is an organic system of stories and images. Only system-wide analysis of messages can reveal the symbolic world....

Nonetheless, the researchers excluded television news from their analysis. Second, consider the national climate during the late 1960s and early 1970s, when the research was commissioned. The Vietnam war and political protest, racial rioting, and the assassination of Martin Luther King and Bobby Kennedy all contributed to considerable violence in the news. As the committees sponsoring Cultural Indicators research were concerned with violence as well as television and social behavior, it seems to make sense to have included news as part of television reality. However, Gerbner (1972) was interested in studying dramatic violence and its symbolic functions, and excluded what might be considered the more realistic representations of reality found in news. Perhaps at the time, news was considered as reality,

obviating the need to study its role in the cultivation process.

While news was not initially considered in the cultivation process, perhaps not viewed as part of the system, more recent cultivation analysts have included or focused exclusively on television news in their research (Perse, 1990; Cohen, Adoni, & Drori, 1983; Hawkins and Pingree, 1981; Neville, 1980). As will be discussed later, the findings of these studies indicate a relationship between viewing news content and conceptions of crime. The present study follows more recent trends in cultivation research, by examining news in relation to the process. This approach moves away from the traditional focus on general entertainment content only.

The Visual Component of Cultivation

Program content coding in the early cultivation studies concentrated primarily on violence. As can be seen from the following definition, a scene was coded as violent based largely on visual content. Violence was defined as:

the overt expression of physical force against self or other, compelling action against one's will on pain of being hurt or killed, or actually hurting or killing. (Gerbner & Gross, 1976, p. 184)

The words "physical force" and "action," connote pictures, not verbiage. In addition, "...idle threats, verbal abuse, or comic gestures with no real consequences were not to be considered violent" (Gerbner, 1972, p. 31). So clearly, content coding focused heavily on the visual component of television programming. This aspect of cultivation analysis is key to the present research. Studying the visual portion of television news can provide a perspective which, until the early 1990s, has rarely been sought in communication research.

The tradition in television news research has been to study the verbal text of programs. This may be explained in terms of custom and convenience. The custom of studying television news text grew out of newspaper analysis, and developed based on technological limitations in early broadcasting. Live coverage was rare, and film processing delayed availability of visuals. As a result, news producers relied on file footage or still photographs to accompany the audio portions of the programs. These restrictions led to a research emphasis on text (Newhagen & Reeves, 1992), which is supported by the assumption that visuals only reiterate the text or convey idiosyncratic meanings (Graber, 1990).

Convenience comes into play when researchers select a method of analyzing the news. Models for analyzing news text abound in the literature, while approaches to visual

analysis of television news are few. The relevance of the Gerbner model to this study lies not in his specific examples for coding violence in entertainment programming, but in the support cultivation analysis provides to the study of visual content, period. Hence, the visual emphasis in cultivation research provides a foundation for the study of television news visuals and social reality.

Cultivation Under Fire and New Research Directions

In 1972, the first set of Surgeon General reports, called **Television and Social Behavior**, included early Cultural Indicators results based on Gerbner's 1969 study. A decade later, a follow-up report published by NIMH included a chapter reviewing cultivation research (Hawkins & Pingree, 1982). In it, the authors summarize and critique 48 papers written or published between 1977 and 1980, most of which were written by Gerbner and Gross and associates. The review reported that most studies show evidence for a link between television viewing and social reality, and that the evidence is most supportive in areas related to violence. The aspects of social reality researched had expanded beyond perceptions of violence to include racial and gender attitudes, family values, and images of doctors and the aged.

The most prominent critique offered in the Hawkins and Pingree review concerned television's influence as a direct

effect. They recommended a modification in theory, proposing that researchers consider television's influence as a complex process that occurs within individual contexts. A number of processes that may be involved in cultivation were proposed. Four areas, drawn from the proposed processes, provide a means of organizing literature relevant to the present study: 1) specific content viewing; 2) processing abilities; 3) direct experience; and 4) critical attention to television.

Specific Content Viewing

A number of studies reviewed by Hawkins and Pingree (1982) examined particular program types and specific viewing of those programs. They included: medical, entertainment, and ethnic programs (Volgy & Schwarz, 1980); police/crime shows (Gerbner, Gross, Jackson-Beeck, Jeffries-Fox, & Signorielli, 1978); news, police/crime shows, and daytime entertainment (Neville, 1980); soap operas (Pingree, Starrett, & Hawkins, 1979); medical ads (Robertson, Rossiter, & Gleason, 1979); and various content types ranging from television news to cartoons (Hawkins & Pingree, 1981). More recent research specifying content ranges from religious programs (Hoover, 1990) to local television news (Perse, 1990). This emphasis on specific content since the late 1970s demonstrates a move away from the notion of television as a system to be studied as a whole, which underlay previous cultivation work. Most relevant to the

present study is research on television news and cultivation.

Television News and Cultivation

Relatively few studies have examined the role of television news in cultivation. However, more recent work in this area reveals positive relationships between news viewing and conceptions of social reality. For example, O'Keefe and Reid-Nash (1987) found a relationship between television news viewing and increased fear, concern, and avoidance activity, which are common social reality measures. The researchers measured attention to television crime news by asking survey respondents how much attention they paid to crime stories when they watch the news. Their dependent measures included orientation toward crime and crime prevention, and crime prevention behaviors. They controlled for victimization experience and demographics and still found a positive and significant association between attention to television crime news and fear of crime. Contrary to traditional cultivation findings, the relationship was not supported for total television exposure. It was instead found unrelated to the crime orientations and most of the crime prevention behaviors.

Other results support studying specific programming in relation to cultivation. A nationwide survey on the impact of crime prevention campaigns provided the data for a secondary analysis in which O'Keefe (1984) found a

relationship between attention to crime-related television news and public perceptions and attitudes about crime. Findings from a secondary analysis may not be as strong as those from direct research; however, the national sample lends credibility to the results. These studies demonstrate the importance of specifying program type in cultivation research and strengthen the argument for studying television news in relation to cultivation. Other work offers even more support.

Perse (1990) found attention to local television news related to perceptions of personal safety. She measured hours of television news exposure and attention to government and crime reports as well as creating a measure of non-news television exposure. Neither news nor non-news exposure was linked to perceived risks, while attention to specific story types was.

Another study focusing on crime news content offers support for its relation to social reality. A viewing experiment which showed four different program types to subjects, found that subjects exposed to a crime documentary condition exhibited more exaggerated perceptions of crime and fear of assault in urban areas (Tamborini, Zillmann, & Bryant, 1984). This study and the work by Perse (1990) and O'Keefe and Reid-Nash (1987) indicate that narrowing the study of cultivation within program type to specific

content, such as type of news story, makes a difference in understanding the cultivation process.

Cultivation studies specifying television news content have not all produced supportive findings. Hawkins and Pingree (1981) found weak and even negative correlations between news viewing and social reality beliefs. However, the reliability of the findings may be questionable, as the study sample was comprised of Australian children in second, fifth, eighth, and eleventh grade. Perceptual ability can vary so much for children in that age range, that the lack of findings among the youth studied may be attributed to cognitive differences.³

In general, cultivation studies that examine television news viewing and particular content indicate that this is a viable research route to be pursued.

Critical Attention to Television

While a number of studies have addressed critical attention in relation to cultivation, those involving the notion of perceived reality, or the degree of reality that people "see" in media messages (Potter, 1986), are most relevant to the present research.

Perceived Reality

A review of the research on perceived reality led Potter (1986) to conclude that television content will more likely influence viewers who believe it is real rather than those who believe the content to be fictional or stylized.

His own research measured perceived television reality, television exposure, and perceptions of the world in two samples; one comprised of communications undergraduates and the other of high school students. He found that perceived television reality measures were stronger in relation to perceptions of the world than was amount of viewing. He also found evidence of an interactive effect.

Television news credibility is another area of perceived reality relevant to social reality construction. Local television news is perceived as realistic by much of its audience (Rubin, Perse, & Powell, 1985). Experiments by Tamborini, Zillmann, and Bryant (1984) led them to conclude that "...presenting information about the real dangers in society has a somewhat greater impact on perceptions" (p. 509). Subjects were shown one of four television programs; three entertainment dramas and one news/crime documentary. Those who watched the news program held more exaggerated perceptions of crime and fear of assault in urban areas.

O'Keefe (1984) found that higher crime news credibility was related to feeling unsafe when out at night. Crime news credibility was measured by asking people if they thought that crime is more serious, about as serious, or less serious than the newspapers and television say it is. The question may have been problematic, though; first for its overgeneralization regarding crime, and second for its reference to both newspapers and television. Specifying

neighborhood crime, crime in the city, or crime nationwide might offer clearer responses. Stipulating television news rather than including both newspapers and television would also provide more validity. Despite the shortcomings, the findings suggest that news credibility may play a relevant role in shaping social reality. In a later interpretation of these findings, O'Keefe and Reid-Nash (1987) assert that television news has enough credibility to significantly influence citizens' fear of crime. This contention becomes even more significant when considering the argument that news media present a distorted picture of the world.

Figures comparing crime statistics to newspaper and television crime coverage indicate an exaggerated representation of crime in the news (O'Keefe & Reid-Nash, 1987). A study comparing newspaper coverage of rape to police data found a great divergence between news accounts and police statistics (Gordon & Heath, 1981). For every 14 newspaper stories on rape, 13, or 93 percent, were about completed rapes, often with a bizarre angle. The police reports showed that in one of four attacks, the victim escaped. Another study cited police reports that indicated fewer than one-third of rapes were committed by strangers, while nearly two-thirds of the rapes covered in news stories were committed by strangers (Schwengels & Lemert, 1986).

The overrepresentation of crime and violence in news media does not seem apparent to the American public. In a

recent nationwide survey, only about one-third of respondents said they thought television news exaggerates the amount of violence in the United States (Times Mirror, 1993). That leaves potentially two-thirds who believe the television representation to be realistic. The same survey reports that 84 percent of Americans felt that stories about violence have made us more fearful than we were in the days before television.

Hence, people believe television crime news accurately depicts crime and violence in the world around us, and feel those news accounts have an impact on our perceptions of safety and fear of crime. Given the credibility of television news and its apparent exaggeration of crime and violence, and considering the notion that television content will more likely influence people who believe it is real, television news may contribute greatly to our construction of social reality. Therefore, the study of television news in relation to cultivation is highly relevant and should be pursued.

Direct Experience

One notion that has challenged and then contributed to reformulating cultivation analysis concerns the role of the individual's personal experience in social reality construction. The viewer's environment is one area which has been shown to make a difference in relation to cultivation of fear. Doob and Macdonald (1979) hypothesized

that the neighborhoods people live in, not the amount of television they watch, influence their fear of crime. Through a survey of Toronto neighborhoods, the researchers found that people who lived in high crime areas watched more television, including more violent television, and were more afraid than those in low crime areas. They concluded from the data that television itself is not likely to directly influence people's fear of criminal victimization. Critics of cultivation have used this finding to illustrate the spuriousness of the relationship between heavy television viewing and fear of crime. However, Gerbner, Gross, Morgan, and Signorielli (1980), proffered another interpretation, which actually enhances cultivation. They argue that the real-life perceptions of people who live in high crime urban areas may be congruent with television's depiction of the world. "These people receive a 'double dose' of messages that the world is violent, and consequently show the strongest associations between viewing and fear" (p. 20). The researchers call this phenomenon "resonance."

Subsequent findings support the notion of "resonance." Heath and Petraitis (1987) found a relationship between specific crime viewing and urban fear for residents of high-crime neighborhoods, but not for those living in low-crime neighborhoods.

These findings suggest that personal experience with criminal victimization may play a role in the relationship

between television viewing and fear of crime. Weaver and Wakshlag (1986) tested this notion in a survey of undergraduate communications students. They categorized respondents into groups according to their criminal victimization experience: 1) direct--having been a victim of a violent crime; 2) indirect--knew a victim of crime; and 3) mediated--only experience with criminal victimization was through the media. For respondents in the mediated category, viewing of crime programs was positively related to concerns for personal safety in hypothetical situations similar to those presented on television. But for respondents who had been a victim of crime, the correlations between crime-related viewing and fear were negative. The investigators interpret this finding as follows. Crime victims may be especially fearful of future victimization and may avoid crime-related television programming.

These findings show that when a person's only experience with crime is through the media, heavier viewing relates to fear of crime. And for those viewers who have been victimized, the experience may influence their viewing of violent programs. The potential impact direct experience with crime may have on viewing, and, consequently, fear of crime, is important to consider in cultivation research. However, the findings and their interpretation in this area of research have been mixed, making it equally important to

recognize victimization as a sufficient but not necessary condition relating to fear of crime.

Processing Abilities

The ways in which we learn from television may provide greater understanding of social reality construction. Early cultivation researchers held the view that cultivation is an incidental learning process, occurring unintentionally without motivation to learn (Perse, 1990). A more theoretically grounded approach to learning may be found in the cognitive psychological literature. An important distinction to be considered regarding learning concerns remembering and understanding information as different cognitive processes (Ortony, 1978). In a review of literature on learning from television news, Woodall, Davis and Sahin (1983), criticize measures of learning, questioning whether researchers measured viewers' memory or understanding of television news events, or both. They argue for the importance of clarifying this, asserting that separate types of memory may be related to each mode of learning.

...a great deal of televised news information may be stored and retrieved according to episodic memory principles, while semantic network models may provide an explanation of viewers' understanding of televised news. (p. 22)

Cultivation analysis may benefit from considering these

processes. Within episodic memory, individual differences in cognitive visual processing skills may influence what a viewer does with television information (Salomon, 1972; Salomon & Cohen, 1977).

Another study supporting the role of visual processing differences found better television news comprehension among students higher in visual spatial processing ability (Pezdek, Simon, Stoeckert, & Kiely, 1987). Is that ability related to experience with the medium, and does greater exposure relate to higher processing ability? Research by Elkind (1969) suggests that experience with a medium can cultivate the skill requirements of that symbol system. The findings showed that children who had experience with pictorial representation had higher spatial and pictorial skills than children who had no experience with the medium. But as the inexperienced youth gained experience, they reached the mastery level of the initially skilled children. This research suggests that heavier television viewers, because of their greater experience with the medium, may be more adept at learning from it than lighter viewers.

Semantic memory differences between heavy and light viewers may also play a role in cultivation. This form of memory may be considered a network of interrelated words, concepts, and properties (Quillan, 1968; Collins & Loftus, 1975), or in other words, pre-existing knowledge. An interaction between that knowledge and incoming information

would lead to understanding (Woodall, et al., 1983). If a portion of a heavy viewer's pre-existing knowledge was gained from entertainment television viewing, then incoming information might be processed with that person's semantic memory to construct social reality.

Considering the visual nature of television and the emphasis on the visual in cultivation analysis, differences in visual processing should be regarded in research. Examining memory in relation to cultivation may offer a richer understanding of the role of learning in social reality construction, moving beyond the notion of incidental learning.

Summary of Research Directions in Cultivation

Nearly a decade after their review of cultivation research, Hawkins and Pingree (1990) pose two questions they feel are crucial to cultivation research: 1) How does watching television contribute to certain social reality beliefs and not others? and; 2) What are the psychological processes involved in individuals' construction of social reality? If such questions are not addressed successfully, ...cultivation runs the risk of being dismissed as a label for a single correlate (television time) masquerading as a program of research, and as an ideological position more than as a focus for social scientific research" (p. 35).

Research is moving in a positive direction, away from that single correlate of television exposure, toward attention to specific content viewing and processing abilities. Consideration of direct experience and critical attention to television has opened new doors in cultivation research. Perceived reality and news credibility have been shown to be important components in cultivation. Individual experience also appears to contribute to social reality construction. Most relevant to the present research is the examination of specific program content and individual processing abilities. Examining television news in terms of the differences between heavy and light viewers, and the relationship to recall and meaning merit attention.

RESEARCH ON VISUALS

I think that the movies are mostly responsible for my criminal career. When I would see a crime picture and notice how crime was carried out it would make me feel like going out and looking for something to steal (Blumer & Hauser, 1933, pp. 27-28).

Anecdotal evidence concerning the impact of visual images on society covers a range of behaviors--from having inspired prison inmates to commit crimes, to inciting riots. According to some observers, film of the war in Vietnam

broadcast repeatedly during the nightly news made Americans unsympathetic to the war. A network newscaster described the live television coverage of the 1992 Los Angeles riots as, "...the carrier of a virus," conveying the "fever of street violence" (Koppel, 1992). And, on an individual basis, consider an elderly woman who refuses to ride on the city bus after witnessing a mugging on her favorite television drama. These anecdotes signal potential effects of visuals on society.

This chapter now turns to scholarly research on visual images in constructing the framework of the present research. Relevant studies center on two general areas: 1) the role of visuals in learning; and 2) content and interpretation of news visuals.

Visuals and Learning

As discussed earlier in the section on processing abilities, learning from television news may involve two separate processes--remembering and understanding. The literature has been criticized for not addressing these areas as distinct. Perhaps the inconsistency and confusion in conceptualization and operationalization has led to mixed results in the area of learning from television news. The earliest findings on visual and verbal recall show that memory for pictures is stronger than for words. However, television news research of the mid-1950s to early 1970s

produced little support for the notion that pictures enhance verbal information gain. More recent studies, on the other hand, show television news video enhances recall and learning of verbal material. They also support the very early studies on visual and verbal recall, showing memory for pictures is stronger than for words.

Literature in this section is presented in sections on verbal and visual recall and learning. Care has been taken to specify recall, information gain, and learning throughout. Early research is presented in a separate section.

Early Research on Visual and Verbal Recall

Studies on visual and verbal recall date to the turn-of-the-century, when Kirkpatrick (1894) used objects and names of objects to test subjects' recall. The average recall was higher for objects than for words naming objects. Research done in 1919 by Moore found that immediate recall was better for objects than for pictures, and better for pictures than for words. Shepard (1967) found further evidence of higher picture recall. Subjects identified a greater percent of pictures than words they had seen, and more words than sentences, when new stimuli were intermixed with items already introduced. And finally, among this type of research, Standing, Conezio, and Haber (1970) found that subjects who were shown 2,560 photos during a period of two

to four days were able to remember approximately 2,000 items, up to three days later.

These early studies indicate memory for pictures is greater than for verbal content. Pictures have been found to be encoded faster and to deeper semantic levels than verbal information, indicating longer retention (Dhawan and Pelligrino, 1977). If subjects are able to remember still photographs more often and longer than words, what results will moving pictures, such as film and video, produce?

The Role of Visuals in Verbal Recall and Learning

A number of studies on television visuals and learning test for recall of the text of a broadcast news story under various conditions, including the presence of visuals. The more recent research indicates visuals enhance memory for verbal material. However, early studies are not as conclusive. This may be due to weaknesses in early methodology. Or perhaps early findings were valid, but audience inexperience with television visuals may have influenced results. These propositions will be discussed in this section.

Studies supporting visual enhancement in verbal information memory include work by Katz, Adoni, and Parness (1977), who used a panel of 200 people to test recall of news content. After watching the evening news or listening to it on the radio, subjects were interviewed over the phone for story recall, being asked which stories and what detail

within the stories they remembered. The researchers found that recall was somewhat improved by seeing rather than just hearing the news. Foreign news and negative news items had the highest recall.

Another supporting study was done by Gunter (1980), who concluded that "...picture-content features seem to have profound effects upon learning of brief television news items" (p. 132). His research looked for number of news items recalled, directly following exposure to either an audio-visual condition, or an audio-only condition. Subjects, 30 male psychology students, heard or saw 15 short news briefs of four to six seconds in length. After exposure, they were asked to write brief descriptions of the items. In the video condition, Gunter found that picture items were recalled significantly more frequently than nonpictorial items.

Some researchers initially set out to show that television pictures detract from the narrative text, but instead found enhancement of comprehension. Edwardson, Grooms, and Proudlove (1981) used a random sample of residents from a Florida university town in an experiment to test that notion. Their study differs from earlier work, in that the researchers tested for information gain, or comprehension, rather than recall. In particular, they hypothesized that "interesting video" would distract from the audio narration and result in less information gain than

would a talking head treatment. However, they found the opposite. Subjects who had seen "interesting video" gave more correct answers to a multiple-choice post-viewing quiz than the viewers who had received the same audio information delivered by a talking head.

Another finding, more relevant to the present study, emerged during further analysis. Subjects in the "interesting video" treatment who reported three or more evenings of news viewing per week exhibited significantly greater information gain than did those who viewed fewer than three evenings. In their interpretation of this finding, Edwardson, et al. (1981, p. 23) noted:

It is tempting to speculate that these people's greater experience with television is somehow linked to their ability to profit from interesting pictures.

The link between heavier viewing, visuals, and comprehension may prove fruitful in relation to social reality construction. This notion will be explored further in the section, "Linking Television News to Cultivation."

Earlier research produced weaker results. One of the first studies concerning the influence of television visuals on recall compared information gain in three treatments--newscaster alone, newscaster with still pictures, and newscaster with film (Jorgenson, 1955). The researcher found that the film treatment produced more information gain than still pictures, but not more than the newscaster alone.

Another early study using the same three treatments found no difference in information gain among the groups (Hazard, 1963). One explanation for both the Hazard and Jorgenson findings (McDaniel, 1973) specifies their methodology; neither examined effects of presentation on a specific news story, but instead tried to test for a generalized effect. McDaniel (1973) addressed the notion of generalized effect of visuals by constructing a number of treatments for two separate news stories. He found inconsistent information gain with the use of film between the two stories. The finding led him to conclude that film may improve information gain from a news story, but that content appears to influence the effect.

Booth (1970) found that respondents recalled a much higher number of news items with visuals than they did items without visuals. However, the results are buried in a table within the article, and are given only minor mention in the author's conclusions, "The use of pictorial materials in news presentations appears to have about the same effect as item location" (p. 610).

Lack of early support for enhanced verbal information gain through visuals may have been due to generalized methodology, as suggested by McDaniel (1973). But in addition to advances in methodology, the gain in audience experience with television between the 1950s and 1970s may also explain the difference in results. Snow, Tiffin, and

Seibert (1965) found that prior experience with films predicted students' degree of learning from physics films.

Visual Recall and Learning

In addition to research which examines the role of visuals in remembering and comprehending verbal information, a handful of studies have recognized the potential value of visuals themselves in memory and learning. Drew and Grimes (1987) measured visual recall in an experiment of audiovisual redundancy. They showed students newscasts in which the audio and video were manipulated to exhibit high, medium, and low redundancy. In other words, treatments ranged from all pictures matching the audio, to no matches. The researchers measured visual recall by showing participants a second videotape of freeze frames and asking subjects who had viewed newscasts to identify visuals they remembered seeing. Visual recall was strongest in the medium redundancy condition, in which some of the pictures matched the audio. While perplexing to the experimenters, the finding makes sense when one considers the medium redundancy treatment probably most closely replicates the presentation of most television news. Audiences are used to this presentation and may be most comfortable processing information in this modality. However, the types of visuals shown and recalled could have also made a difference. Details on the pictures in the study were not provided. In

addition, aided recall might have influenced the findings. Subjects may have said they remembered seeing a visual presented them when they may not have. Free recall might provide a more accurate assessment of memory.

Graber (1990) did use free recall in her study of visual recall and learning. Subjects in the experiment, 48 adults who were primarily academics and students, viewed 12 television news stories. Six of the reports included visuals and six did not. Immediately following exposure to each story, subjects were asked if they remembered any of the pictures and were probed for descriptions and meaning. They were also asked to describe the report they had seen as if they were telling a friend about it. This technique allows for synthesis of memory and interpretation, demonstrating learning.

Graber found that visual themes were remembered and learned more readily than verbal themes. Perhaps this finding extends to adults the notion of the visual superiority effect in children. The findings show better story recall as well as greater comprehension in a visual presentation format (Hayes, Kelly, & Mandel, 1986; Pezdek, Lehrer, & Simon, 1984) and higher recall of visual versus auditory information (Hayes & Birnbaum, 1980; Hayes, Chemelski, & Birnbaum, 1981; Pezdek & Stevens, 1984).

Returning to the Graber findings--subjects most often recalled close-ups of people. The shots featured familiar

people such as the president or the pope, and those of unfamiliar people in exotic circumstances or who became familiar to the audience because of what they had to say. Largely unmentioned were the stereotypical pictures which were illustrative, such as farms, buildings, etc. It is interesting to note that shots of people were most often remembered, but problematic because the facial visual in many cases was a sound bite, a portion of an interview. Were subjects remembering the picture of the person featured, or were the person's words memorable? Also, were visuals of people recalled more often than other visuals because they appear more frequently in stories? Facial shots, such as sound bites, may also appear on the screen longer than other types of visuals.

In the same study (Graber, 1990), one third of subjects reported that visuals made stories more realistic.

People gain a sense of witnessing an event when they see it presented in moving pictures. They trust what they see more than what they hear. (p. 152)

In another paper based on the same research, Graber (1991) reported that subjects frequently made inferences from the pictures presented in news stories, using phrases such as, "'I got the feeling that...' or 'it seems like...'" (p. 10). The visuals provided insight not evident in the audio narration. Graber argues that these cues contribute to "the kinds of meanings that audiences want" (p. 17). It

also indicates that visuals may play a role in social reality construction. Not infrequently the meanings ran counter to the information provided in the text, indicating that visuals may in some cases be stronger than words in conveying meaning. At least two other studies indirectly support this notion.

Son, Reese, and Davie (1987) tested for recall of the verbal text in stories with pictures that did not closely match the script. They found lower recall for the words in stories with pictures that poorly matched the audio. Perhaps the mismatch distracted the viewers from the audio narration. On the other hand, based on Graber's findings, the visuals may have provided meanings counter to the script. Audiences may be attending more to the pictures than to the audio portion of television news reports.

The types of pictures presented may also make a difference in visual recall. Newhagen and Reeves (1992) investigated the relationship between compelling negative visuals and memory for television news stories. The researchers found that highly intense and vivid video, such as scenes of war, plane crashes, famine, and crime reports (emphasis mine), impedes memory for narrative and visuals presented before them. The compelling images also improve memory for information presented after them. Findings varied for long-term memory, however. Verbal facts and story topics were remembered better for news reports without

compelling images. But in both long-term and short-term memory, visual information was remembered better for stories with the intense, vivid visuals.

Berry and Clifford (1985) found similar results. However, their findings indicate that gender may also play a role in recall when compelling negative visuals are involved. Their experiment used three treatments to test for recall of verbal content of a story about an execution in El Salvador. In the first, male and female subjects were shown the actual story which included visuals of the execution. The second treatment group saw the story without seeing the execution, and the third group heard the narration only. While males had no difference in recall across treatments, females showed poorer recall in each visualization treatment. This indicates that some people may attend to and interpret certain types of visuals differently than other people do. Gender differences in visual perception were also found in work by Lain and Harwood (1992), Gunter, Furnham and Gietson (1984), and Furnham and Gunter (1985).

Another line of research argues that the manner in which visuals are constructed plays a role in recall and persuasion. Young and Robinson (1992) argue that television viewers process more visuals in persuasive commercials than in nonpersuasive ads. The researchers showed subjects commercials which had been judged by others to be high,

moderate, or low in persuasiveness. After viewing, subjects were shown still photographs of the commercial they had seen which had been taken directly from the television screen. They were then asked to sort the photos into two piles-- those they remembered seeing and those they did not remember. Subjects who viewed the high-persuasive ads recognized 67 percent of the visuals, while only 47 percent of the visuals in low-persuasive ads were recalled. Part of the reason, they believe, is that the images in persuasive commercials are perceived by viewers as being better connected to one another. Subjects who viewed the highly-persuasive ads were more likely to recall sequential pairs of images. The authors have labeled this phenomenon "visual connectedness." This notion relates to the Newhagen and Reeves (1992) finding that the pictures following compelling video are remembered better than the pictures that precede it.

In addition to linkage of visuals, the images in persuasive commercials might be considered inherently more memorable. In the high-persuasive treatment, 41 percent of visuals were remembered by at least 75 percent of respondents. In the low-persuasive treatment, the figure was only 28 percent. What were these highly memorable visuals? The researchers offer no specifics, but do mention that they may be product-related, but are just as likely to be "emotion-laden imagery" (p. 55). This research and the

work of Son, et al. (1987), and Berry and Clifford (1985) show that type of picture may play a role in visual memory.

Content and Interpretation of News Visuals

Altheide (1985, p. 112) argues that visuals drive television news coverage.

...TV news presents information about the visuals it presents; longer reports, with more information units, achieve this status because of the visuals and what can be done with them, to them, and through them.

The visual, according to this view, provides the foundation for the television news code. It dictates that stories are told about the visuals at hand. Altheide contends that actors, action, and objects, comprise those images, which are acquired in sites most amenable to visual formats. Viewers' impressions of the world, he argues, could be influenced by the way news organizations pursue and present visuals.

Forms of presentation, including production variables such as camera angle and distance, lighting, focus, etc., contribute to connotative meaning of the visuals (Barthes, 1977; Gumpert & Cathcart, 1985). A visual analysis of more than 1,500 newspaper sports feature photos taken by photographers in different regions of the country led Hagaman (1992) to conclude that the photos are stereotyped, highly conventionalized images.

Some of the conventional stories found in the photos and the formulas for depicting them were: winners in groups celebrating victory, losers alone, isolated; and athletes as heroes, shown injured and in pain. Hagaman (1992) argues that this limited visual vocabulary impedes photo communication.

One might argue that sports photographs represent a specific genre of picture not representative of news visuals in general. Hagaman (1992) asserts her analysis would likely apply to other news categories, and calls for future work in that area.

If visuals in the news are formula-driven and offer stereotypic and homogenous representations of people and events nationwide, what impact might they have on viewers and readers? Visual content studies alone can do little more than speculate on audience effects. However, inferences made in such research provide a starting point for audience research. Visual symbolism has been employed in several television news studies. For example, Weiss (1985) argued that certain signs in television news visuals represent specific meaning to audiences. For example, a flag in the frame would signify patriotism; an airplane, power; and hard hats, the working public.

Another study employed symbolism to interpret the portrayal of blacks in local television news. A content analysis of the late news on four Chicago television

stations found visual images to depict blacks as threatening (Entman, 1992). The research found blacks more likely than whites to be shown in the grip of a restraining officer, less likely to be shown in motion, and more likely to be shown in jail or street clothing. Entman (1992) interprets the police grip to signify that the person in custody is dangerous. He argues that motion symbolizes the person as a human being, disclosing something of the person's individuality. Shabby or jail clothing indicates more of a threat than does a coat and tie. Entman (1992) finds these images contribute to modern racism.

In another study, Entman (not dated), argues television news constructs public understanding of poverty in a largely visual manner. He offers data on the most frequent visual images of poverty found in Chicago late evening news, which included deteriorating neighborhoods and depictions of black persons. Entman linked verbal mentions of poverty symptoms with visuals, and found the symptoms associated with visuals most frequently were violent crime, discrimination, and drug abuse. He argues that

...the frequent and image-filled coverage of violent crime and drug abuse could, by equating poverty most memorably with threat, reduce sympathy to the poor.

The Entman and Weiss studies discussed above are important in documenting patterns and in presenting possible

effects, but impact can only be measured through audience research.

Television Visuals, Recall, and Meaning

Studies cited earlier in this review have illustrated that memory for pictures is stronger than for words and that pictures enhance recall and learning of verbal information. Types of visuals and their presentation also appear to influence visual and verbal recall. However, visuals and the role of recall and information gain in the construction of meaning is unclear. And meaning may be the critical link in the relationship between television viewing and the cultivation of social reality. Graber (1991, p. 17) argues that visuals are "...important stimuli for inference-making," and that their messages lead to "...new cognitions and feelings." Her conclusions are based on viewer reactions to television news stories in which she specifically asked about the meanings conveyed by the pictures in the stories.

The role of visuals in meaning was also measured in an experiment using mug shots, which showed that the kind of picture accompanying a story can influence readers' attitudes toward the story source. Lain and Harwood (1992) randomly distributed four treatments of a newspaper story to more than 500 student subjects. Three contained an accompanying mug shot showing the same man with a positive, negative, or neutral facial expression, and one had no photo

at all. After reading the story, subjects were asked to evaluate how the story subject was portrayed in the piece. The researchers found differences in attributes ascribed based on the nature of the mug shot. The types of mug shots influencing ratings were mixed, however. Story ratings for the positive photo were highest in seven of fourteen categories; however, high ratings were also split between the neutral and no photo treatments. Negative photos appeared to make a difference, almost always receiving the lowest ratings. These findings indicate that type of visual may make a difference in the meanings audiences construct. While the researcher only studied newspaper mug shots, general news photos and television visuals may have a similar impact on meaning.

Semiotics, Television Visuals, and Meaning

Semiotics, or simply defined, "the science of signs" (Fiske & Hartley, 1978, p. 37), has been applied as a useful approach in critical analysis of television. Its study of the relationship between signs and their meanings is most relevant to the present research. One might argue that in television, as in film, the most prevalent sign is the visual. In addition, however, text, voice, music, and sound effects may also be considered in semiotic analysis (Metz, 1976).

Verbal language, some argue, defines meaning for the image (Barthes, 1977). Others contend that the soundtrack as a whole dominates the image, in effect, calling viewers' attention to the screen (Altman, 1984). While these scholars recognize the potential impact of audio components on the sign's meaning, film semiotics has focused on examining the image much more than the soundtrack (Seiter, 1987). Semiotics in television analysis as well, appears to favor scrutinizing the visual. Fiske & Hartley (1978), and Ellis (1982) offer two central works that employ this visual emphasis.

Readily applicable to the visual image is semiotics' three orders of signification, a method of assessing meanings related to signs. In the first order of signification the sign represents what it depicts at the most basic level. A visual of a car, for example, would mean a car. In the second order, cultural knowledge or experience is used in constructing meaning. A car would perhaps signify freedom. The third order of signification is based on cultural knowledge as well, but in addition, is more global, in that it exhibits a cultural picture of the world. A car in the third order could signify industrialism or materialism (Fiske & Hartley, 1978).

While a gifted semiotician may analyze visuals using these categories of signification, the work may be limited to that individual's interpretation of the images.

Assessing meanings viewers construct from visuals using semiotics' three orders of signification would provide a more useful approach to understanding the relationship among visuals, meaning, and social reality construction.

Summary of Research on Visuals

Much of the literature on visuals focuses on their role in remembering television news. The emphasis has been on recall of verbal information, based on a tradition grounded in newspaper analysis, and shaped by early technological limitations in television news. In most cases, visuals enhanced recall of verbal text, with the exception of some early television research results, which may have been spurious due to methods, or no longer applicable due to more sophisticated audience viewing skills.

More recent studies focusing on visual recall found that pictures made television stories more realistic and allowed viewers to make inferences about the reports. Types of visuals and their manner of presentation, as well as certain viewer characteristics, such as gender, seemed to make a difference in what was recalled. Visual information was remembered better in news stories containing highly intense, negative images, such as scenes of war and crime reports. Connectedness of visuals, or logical sequencing, also appeared to enhance recall.

Meanings gleaned from visuals sometimes conflicted with information reported in the verbal portion of stories, indicating that visuals may sometimes be more powerful than words in conveying meaning. Type of visual may also contribute to meaning construction. Semiotics has been used in television visual analysis, and an analysis using its orders of signification would offer a viable method to approach the relationship among visuals, meaning, and social reality construction.

CONCEPTUALIZATION

While traditional cultivation research is based on the concepts of television reality and social reality, the addition of meaning, television news reality, and visual recall offers more specificity toward understanding the cultivation process. The aspect of social reality relevant to the present research focuses on concern about crime. Hence, four concepts provide the conceptual framework for this study: meaning, television news reality, concern about crime, and visual recall.

Meaning

Meaning is a major concept underlying this study. As it may be used in many contexts, a specification of its intended application to the present research follows.

In the conventional sense, meaning pertains to verbal messages, with a heavy emphasis on the sender of the message, as Kaplan's (1964, p. 68) definition illustrates, "Meaning is a process, a succession of acts of speech in which utterances are used to fulfill purposes." However, in relating meaning to social reality construction, the message receiver is of interest. Hence for the present study, meaning concerns the receiver of symbolic audiovisual messages.

Early cultivation research centers on the symbolism of television, a system that serves to extend and maintain conventional conceptions, beliefs, and behaviors (Gerbner and Gross, 1976, p. 175). The perspective assumes a direct effect, wherein television symbols represent and convey shared meaning.

However, the viewer's cognitions of those symbols may not mirror the intended significance of the symbolic television content. White (cited in Brookfield, 1986) criticizes the linearity of the direct effects model, asserting that to consider viewers as "acted-upon" insults and ignores the critical awareness and proactive nature of the audience. This study recognizes the cognitive ability of television viewers. Meaning is therefore concerned with viewers' cognitions of television's symbolic visual content.

Semiotics adds more to the present conceptualization of meaning. "Semiotics is concerned with everything that can

be taken as a sign. A sign is everything which can be taken as significantly substituting for something else" (Eco, 1976, p. 7). As discussed earlier, semiotics recognizes in signs three orders of signification. In the first-order sign, the picture of, for example, a microwave oven, represents the appliance itself, the thing. In the second-order sign, cultural experience is involved to interpret the sign. The microwave might signify a quick dinner alone. In the third order of signification, the sign embodies a larger context or "cultural picture of the world, a coherent and organized view of the reality with which we are faced" (Fiske and Hartley, 1978, p. 41). In that view, the picture of the microwave might signify consumerism.

Semiotics' orders of signification provide an explanation for some differences in cultivation research findings that have led to recent criticism. The criticism basically points to a weakness in conceptualizing cultivation, arguing that instead of one type of cultivation, there are two (Potter, 1993). The distinction separates cultivation of facts (first-order measures) from cultivation of beliefs (second-order measures).

The differing measures of cultivation appear to fit the various orders of semiotics' signification. First-order signs seem to relate to what cultivation analysts have termed first-order measures, or facts. Second- and third-order signs appear to fit the second order measures. This

notion is important to the present study's conceptualization of meaning. It is ultimately concerned with the cultivation of beliefs, or second order measures, and second- and third-order signification, meaning derived from cultural knowledge. According to Lippmann (1922, p. 81)

...we do not first see, and then define, we define first and then see. In the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture.

The role of knowledge acquired through an individual's cultural experience is key to the present conceptualization of meaning.

Visual Images and Meaning

Barthes (1985, pp. 16-17) also recognizes the role of knowledge in signification, specifically, when interpreting a visual image.

Thanks to its code of connotation, the reading of the photograph is therefore always historical; it depends on the reader's "knowledge," just as if this were a matter of a real language, intelligible only if one has learned its signs.

Barthes wrote of reading a still photograph, but his ideas may be applicable to the moving image as well. In addition, however, myriad contributions to the process of meaning

construction from television must also be considered.

The process by which meanings are constructed from television is recognizably more complex than that from written or spoken language, or static pictorial symbols. Adding motion to the pictures along with narration, dialogue, music, and sound effects, makes identifying what contributes to meaning almost enigmatic. Because of our history as a verbal culture, scholars have argued, the spoken language provides the definitive meaning for the image (Barthes, 1977, cited in Seiter, 1987). According to that view, the verbal text acts as anchor, closing down the number of possible meanings the image might have. Sound may also act as a lure, calling viewer attention to what visual images merit closer attention (Altman, 1984, cited in Seiter, 1987). Another view (Graber, 1990) considers audio and visual cues together in discerning meaning. However, this gestalt approach also relies on verbal elements to guide the overall significance of the message. These ideas are recognized as important considerations with regard to the present study. However, an additional approach offers even more relevance to this research.

That perspective recognizes that visuals, themselves, convey meaning. In a study of viewer reaction to television news stories, Graber (1991, p. 10) found that pictures "...provided important insights into the situation that were not supplied by the verbal portions of the story." Other

research focusing on local television news revealed that while the words "poverty," or "poor" were seldom used in stories, visual images depicting poverty were used often (Entman, undated). From an industry perspective, because of time constraints in telling a television news story, the pictures used must have "instant meaning" (Epstein, 1973, p. 242). That meaning may be of the first-order, going no further than what the picture depicts. More likely, what Epstein is referring to is a shared meaning among viewers, a universal meaning of the second- or third-order; for example, a flag representing patriotism.

To summarize the conceptualization of meaning for the present study: **meaning represents viewers' cognitions of television's symbolic visual content.** It is concerned with second- and third-order signification, meaning derived from cultural knowledge. While the audio portion of television content may play a role in constructing meaning from visuals, the visuals themselves are recognized as conveying meaning.

Television News Reality

Traditional cultivation research focuses on entertainment programming in its study of the reality presented on television. Dramatic television content has been defined as a mythical world, a fictional world, and a symbolic world; a world in which violence plays a key role

(Gerbner and Gross, 1976). And to measure television reality, the conventional approach has been to count acts of violence.

Until fairly recently, television news had been excluded from the study of cultivation. And of those studies of television news and cultivation, few conceptualize television reality in terms of news. Perhaps an underlying assumption that television news mirrors the world has obviated the need for a conceptualization of television news reality. This study, however, recognizes television news reality as distinct from social reality. It also makes a distinction between the reality of television news and the meaning constructed by the viewer.

Brookfield (1986) argues that we must consider the news as a constructed reality, based on empirical studies of how television producers and reporters frame the news. One such study, by Tuchman (1978), explores the processes by which news is constructed in terms of organizational concerns of news companies and their employees. Relevant to the present study is her description of the news visual:

...we should regard television news film as professionally and organizationally produced patterns of news culture. (p. 108)

The culture is based on rules and codes, stated and unstated. Fishman (1978) argues that crime news is selected based on themes. The procedure dictates that incidents must

be stripped of context in order to relocate them into new, symbolic contexts or news themes. Employing these themes can lead to construction of crime waves that really don't exist.

The emotive power of news is recognized by network news executive Reuven Frank, "...the highest power of television journalism is not in the transmission of information but in the transmission of experience" (cited in Epstein, 1973, p. 242). An anecdote from Edwin Diamond's **The Tin Kazoo: Television, Politics, and the News** (1975), illustrates his point. A reporter describes the conversation among station executives while they watch their own and competing stations' coverage of a fire at a Roman Catholic orphanage on Staten Island. One executive complained that a rival station captured better visuals, saying, "Their flames are higher than ours." Another executive replied, "Yes, but our nun is crying harder than theirs...." (p. xi)

Flames and crying nuns might be considered visual symbols. Epstein (1973) argues that camera operators and producers favor a limited repertory of symbols, resulting in stories containing similar visual elements. A media research group reduced the number of images found on television news to about fifty shots and variations (cited in Tuchman, 1978, p. 121).

The conceptualization of television news reality for the present study recognizes that the news does not mirror

society, but is a constructed reality guided by professional and organizational codes and conventions. The visual symbolism of television news is generally a formulaic discourse designed to be readily understood by large masses of people; however, meanings constructed by viewers may not reflect that discourse. News visuals are symbols which are influenced by media professional's cultural experience. In the language of semiotics, this interpretation would consider television visuals to be largely second- and third-order signs. In other words, the meaning of the symbol is based on cultural experience. While the industry may assume the visuals convey similar meanings to viewers, in reality, viewers' conceptions may differ greatly.

In order to avoid problems concerning intended meaning and conveyed meaning, television reality for the present study will be considered in terms of the first-order sign. In other words, the visual stands for the thing it represents.

Concern About Crime

Social reality is the broader concept from which concern about crime is drawn, and merits discussion in that it provides a framework for concern about crime. Addressed in much of the cultivation literature, social reality is considered as individuals' conceptions of the world (Hawkins and Pingree, 1982). Gerbner and Gross (1976, p. 176)

describe socially constructed reality as giving "...a coherent picture of what exists, what is important, what is related to what, and what is right. Lippmann's (1922, p. 29) notion of public opinion fits well with the conception of social reality. He states that a person cannot contemplate all existence at one glance.

Yet this same creature has invented ways of seeing what no naked eye could see, of hearing what no ear could hear, of weighing immense masses and infinitesimal ones, of counting and separating more items than he can individually remember. He is learning to see with his mind vast portions of the world that he could never see, touch, smell, hear, or remember. Gradually he makes for himself a trustworthy picture inside his head of the world beyond his reach.

The distinction between meaning and social reality is a fine one. For the present study, meaning is concerned with the significance a person derives from the symbols and messages of television. Social reality is created when a person uses those meanings and other stored information to construct his or her view of the world.

The element of social reality relevant to this study centers on concern about crime, which focuses on conceptions of the likelihood of victimization as well as crime prevention behaviors. The reason for this focus is threefold. First, the emphasis follows traditional

cultivation research and its concern with television violence and audience perceptions of the world as a "mean and dangerous" place (Signorielli, 1990). Second, news studies that suggest television visuals may have an impact on social reality (O'Keefe & Reid-Nash, 1987) have focused on audience conceptions of crime. And third, the heavy representation of crime in local television news also supports this approach (Gordon & Artwick, 1993; Graber, 1980).

Visual Recall

Research suggests that differences in visual processing skills are related to the level of information gain from viewing television (Salomon, 1979; Salomon and Cohen, 1977). People who are adept at representing, storing, and retrieving visual information may be considered visually dependent. Those who are inept at such visual tasks could be viewed as visually independent (Woodall, et al., 1983). Visual recall, or remembering visual information, is the processing skill of interest for the present study.

The lack of distinction between recall of information, and meanings conveyed has been criticized by communication scholars, and has led to mixed results in research on learning from television news. This study recognizes the distinction, and finds it key to include visual recall as an integral component in the cultivation process.

Television news studies concerning visual recall have generally investigated characteristics of the visuals or their presentation, rather than viewer characteristics, in relation to recall. Type of visual and meaning (Graber, 1990), audio-visual redundancy (Drew & Grimes, 1987), compelling negative images (Newhagen & Reeves, 1992), and visual connectedness (Young & Robinson, 1992), all focus on the visuals, rather than viewers, in recall. Research on viewer characteristics and recall center on gender differences (Berry & Clifford, 1985; Lain & Harwood, 1992; and Furnham & Gunter, 1985).

The present study's inclusion of visual recall considers differences in viewers as well as the external forces at work in recall.

STATEMENT OF THE PROBLEM:

LINKING TELEVISION NEWS VISUALS TO CULTIVATION

Early cultivation research has been criticized for its emphasis on total entertainment program viewing in relation to social reality construction. Studying only dramatic television left out a sizeable chunk of programming, namely news, that likely influences people's beliefs about their world. Subsequent cultivation research has begun to bridge the gap by examining television news. Results indicate a positive relationship between viewing some types of television news and social reality beliefs (O'Keefe & Reid-

Nash, 1987; O'Keefe, 1984; Perse, 1990; Tamborini, Zillmann, & Bryant, 1984).

Another finding that supports the inclusion of television news in cultivation research involves the notion of perceived reality. Proponents of perceived reality assert that television content will more likely influence viewers who believe it is real (Potter, 1986). Much of the local television news audience perceives the news as realistic (Rubin, Perse, & Powell, 1985). In addition to perceiving the news as realistic, the public finds it representative of crime and violence in the country. Up to two-thirds of Americans feel television news does not exaggerate the amount of violence in the United States (Times Mirror, 1993), despite a heavy representation of televised crime and violence in the news. Considering: 1) people believe television news to be a realistic representation of their world; and 2) television content more likely influences those who believe it is real; it follows that television news should have an impact on people's social reality construction.

The literature also suggests focusing on specific content within the news. A number of studies found higher attention to television crime news related to fear of crime. Curiously, attention to news about crime in newspapers did not produce the same effect. This finding led the researchers to recommend that future research consider

whether television's "greater immediacy and visual impact (emphasis mine) lead to closer identification with crime-related stories for viewers" (O'Keefe & Reid-Nash, 1987). Hence, the visuals in television crime news may play a role in constructing people's views of the world.

Specifying analysis of visuals in television news follows from traditional cultivation research, which largely involved coding visual acts of violence. However, the convention in television news research has been to investigate verbal content. Moving away from the tradition, a number of recent studies indicate a trend toward visual research (Newhagen & Reeves, 1992; Graber, 1991; Entman, 1992). Memory for pictures has been found to be stronger than memory for words. And the types of visuals, especially compelling images, influence recall of visual and verbal information. Visuals have also been shown to produce their own meanings. What has not specifically been addressed, is the research question guiding the present work:

How do local television crime news visuals relate to concern about crime?

Both traditional cultivation research and some work with visuals and learning have assumed that content has a direct effect on social reality construction and learning respectively. That emphasis has shifted, and a move toward individual processing abilities has been made. Hence, the critical distinction between visual content and individual

processing differences must be considered in the present study. This doesn't mean abandoning the traditional measure of television exposure, but instead, exploring differences in heavy and light viewers in relation to individual processing. Also to be explored are the relationships among exposure, recall, meaning, and concern about crime.

SPECIFIC QUESTIONS AND HYPOTHESES, AND THEIR RATIONALE

Analyzing Visual Content in Local Television News

As suggested by Hawkins and Pingree (1982), meaningful results from research on social reality construction require that content first be analyzed to determine the existence of patterns in television programming. Patterns in prime-time entertainment programs have been documented through cultural indicators and cultivation research, but few studies address content of television news in relation to cultivation. In those that have focused on news programming, local television news appeared to offer content that may be associated to conceptions of social reality. Local news originates close to home, and its images may help "...shape the audience's emotional and cognitive responses to community conditions in a way that national news cannot" (Entman, p. 8, 1992). In addition, local news programs are heavily watched (Comstock, et al., 1978).

A large percent of local news on television focuses on crime. Gordon and Artwick (1993) found more than one-fourth

of local television stories to be crime news. That figure represents only reports about crimes themselves. Add to it news about criminal trials, police-related crime, and general social problems involving crime--and crime-related stories in general likely comprise close to a third of local television news.

Strong viewership of local television news programs, and the heavy representation of crime reports in local news, indicate that local television crime news may be an important content area to examine in relation to concern about crime. Even more specifically, the visual portion of local crime news calls out to be considered. Given research that indicates that memory for pictures is greater than memory for words and that visuals enhance verbal information memory, the role of local television crime news visuals in relation to cultivation merits examination.

The first step is to document the existence of patterns in the visual representation of local crime news. Identifying the visual content of local television crime news through an objective, systematic analysis, provides data needed to adequately address questions regarding potential effects of that content. An exploratory question, rather than hypothesis, guides this analysis.

**Question A: How do local television newscasts
visually represent local crime news?**

Viewers and Television Crime News Visuals: Visual Processing and Visual Recall

What do viewers remember visually from local television crime news? Does verbal information in local crime news make a difference in visual recall? Are differences in visual processing related to levels of television exposure? And how is visual processing related to concern about crime? These questions, hypotheses for addressing them, and the logic behind posing them follow.

What is Recalled

Research on news visual recall has produced mixed findings; that the most frequently recalled visuals are close-up shots of people (Graber, 1990), and that visual information is remembered better for stories with intense, vivid visuals (Newhagen & Reeves, 1992). One study included crime news, but it was among other general types of network news shown to subjects. Considering the large portion of crime news present in local television news programs, specific attention to local crime news visuals merits examination. Identifying what viewers recall visually is important to understanding the relationship of the visual to concern about crime. As this area of research is new with regard to cultivation, an exploratory question rather than hypothesis guides this analysis.

Question B: What do viewers recall visually from local television crime news?

The Role of Verbal Information in Visual Recall

The traditional approach to assessing what television news viewers remember from the reports they view has been to measure verbal recall and then to investigate the possible impact of the visual on memory for verbal themes. However, the role of the verbal relative to visual recall has been less frequently addressed. One study showed that moderate redundancy between audio and visual information led to the strongest visual recall (Drew & Grimes, 1987), indicating that the verbal contributes to visual recall, but also that visuals are remembered even when the audio does not reinforce them. An experiment with separate audiovisual and visual-only treatments shall address the following exploratory question:

Question C: How does the audio track in local television crime news contribute to what visuals are recalled and the number of visuals recalled?

Television Exposure and Recall

Amount of television viewing is the independent variable that has traditionally been used in cultivation research in relation to the construction of social reality. This measure has held strong over the years; however a move to understand the process within individual contexts is underway. Differences in processing abilities is one area

cultivation researchers have been addressing (Hawkins & Pingree, 1990). Within that venue, the role of memory and learning in relation to cultivation has garnered interest.

Research indicates a relationship between visual processing and learning (Pezdek, et al., 1987). And heavier television viewers displayed greater information gain from news visuals than did lighter viewers, leading researchers to speculate that greater experience with television is somehow associated with people's ability to profit from visuals (Edwardson, et al., 1981).

The present research links those findings and speculation by asking the question:

Question D: Is the recall aspect of visual processing related to television exposure?

A number of hypotheses address this question. As other research findings have varied based on type of exposure, three separate exposure measures are included.

Hypothesis 1: Visual recall of local television crime news is positively related to television exposure.

Hypothesis 2: Visual recall of local television crime news is positively related to television news exposure.

Hypothesis 3: Visual recall of local television crime news is positively related to local television news exposure.

Another question guides this line of research. Cultivation research suggests that heavy television viewers' conceptions of the world differ from those of light viewers, and that the social reality of heavy viewers is more in line with television reality. If what viewers remember is somehow linked to social reality construction, differences in the types of visuals recalled by heavy and light viewers might be expected.

Question E: Does recall of specific visuals differ based on level of exposure?

The following hypotheses address this question.

Hypothesis 4: A significant difference in television exposure exists between respondents who recall and those who do not recall particular crime news visuals.

Hypothesis 5: A significant difference in television news exposure exists between respondents who recall and those who do not recall particular crime news visuals.

Hypothesis 6: A significant difference in local television news exposure exists between respondents who recall and those who do not recall particular crime news visuals.

The final questions in this line of research concern visual recall and concern about crime.

Question F: Is there a relationship between visual recall of local crime news and concern about crime?

The measure of social reality traditionally associated with cultivation research has centered on perceptions of personal safety and fear of crime. The hypothesis that explores this question also focuses on concern about crime.

Hypothesis 7: Visual recall of local crime news is positively related to concern about crime.

Delving deeper into understanding individual visual processing and concern about crime is the following question.

Question G: How does type of visual recalled relate to concern about crime?

Due to its exploratory nature, the question is not addressed by a hypothesis. Type of visual will be determined based on the analysis of crime news content proposed in Question A.

The Role of Meaning in Cultivation

Question H: How do meanings viewers construct from crime news visuals relate to level of exposure?

Cultivation argues that the assumptions, beliefs, and values of heavy viewers differ systematically from those of light viewers (Gerber, Gross, Morgan, & Signorielli, 1986). This notion of "mainstreaming" fits well with the tenets of semiotics, in which television uses a constructed semiotic system to communicate culturally agreed, conventional meanings (Fiske & Hartley, 1978). It follows that the meanings heavier viewers assign to visuals should more closely match television reality than do the lighter viewers' meanings. Heavier viewers may also construct more second-order meanings than lighter viewers. Also to be considered here is the notion that the spoken language may provide the definitive meaning for the image (Barthes, 1977, cited in Seiter, 1987), versus the perspective that visuals themselves convey meaning (Graber, 1991; and Epstein, 1973).

Hypothesis 10: The meanings heavier television viewers construct from crime news visuals differ significantly from the meanings constructed by lighter television viewers. The differences are apparent whether or not verbal context is provided to the visuals.

Meaning, Recall, and Concern About Crime

Finally, relationships among meaning, recall, and concern about crime will be examined based on the findings of the questions and hypotheses presented above.

NOTES TO CHAPTER 1

1. See Lowery and DeFleur (1983), Chapter 2, and DeFleur and Dennis (1988), Chapter 15, for a discussion of the Payne Fund studies from a communications perspective.
2. The research implied that the one in one hundred figure represented the actual chance of encountering violence; however, this was not explicitly stated in the Gerbner & Gross (1976) text.
3. See work by Piaget and Inhelder (1969) for more on perceptual ability and cognitive development.

CHAPTER 2
RESEARCH DESIGN AND METHODOLOGY

This study employs both a content analysis and viewing experiment with survey to explore the relationship between local television crime news visuals and concern about crime. An operationalization of measures used in this investigation begins the chapter, followed by separate sections on the content analysis and viewing experiment with survey. Within each section the sample, instrument, and procedures are discussed.

OPERATIONALIZATION

This section presents each question and hypothesis with operational definitions and a discussion of the rationale for selecting specific measures.

Question A: **How do local television newscasts visually represent local crime news?**

This question is addressed by the content analysis. The variables are operationalized as follows.

Visual representation:

- . number of shots per local crime story.
- . presence of shots depicting police, suspects, bodies, or police/crime-related objects.
- . percent of a city's total number of shots devoted to particular visual categories.

These measures are based on Gordon and Artwick's (1993) use of individual shots, and Graber's (1990) categorical coding of the focus of scenes. The goal here is to quantify the pictures in television newscasts at the most basic semiotic level, without imposing viewer interpretation on the visual. Categorical coding such as Graber used offers a way to identify visuals without interpreting or assigning a value to them.

Local Crime News

Stories about crime committed within a 50-mile radius of the city in which the television station broadcasts, are considered local crime news. The measure does not include stories about criminal trials, police-committed offenses, or general social problems such as drugs, or issues, such as gun control.

This measure is based on Gordon and Artwick's (1993) local news measures which considered crime-related news involving issues and social problems in separate categories. Their approach to categorizing the issues separately allows for individual analysis as well as a combined analysis if desired. However, for the present study, the decision to exclude the issue-related crime news was made for simplicity and in order to be consistent with the notion of coding at the most basic semiotic level. The specificity of coding a crime event rather than an abstraction of crime was desired. While some studies, such as Graber (1980) do include the

issues and policies involved in crime as crime news, such an approach would be inappropriate for the present study.

Data Analysis for Question A

These data and all other tests for the present study were analyzed using SPSS/PC+ Version 5.0.1 (SPSS Inc., 1984-1992). A count procedure was run for each type of shot, then frequency distributions were run for each type of shot controlling for city. For each city, the total number of shots in each category was divided by the city's total number of shots to yield percentages of total visuals for each city.

Question B: **What do viewers recall visually from local television crime news?**

This question is addressed through free recall of visuals after subjects viewed seven television crime news stories.

What is Recalled

Specifically, subjects were instructed to, "take a moment to think about the news stories you have just seen, and write down (in a few words) as many of the pictures you remember seeing in the stories." Responses were then compared to a list of actual shots that appeared in the stories viewed, and coded to correspond to the story shots.

Local Television Crime News

See Question A above.

Data Analysis for Question B

A frequency distribution was conducted for each coded shot response to determine the number of times each shot was recalled.

Question C: How does the audio track in local television crime news contribute to what visuals are recalled and the number of visuals recalled?

Audio Track

This includes all audio accompanying a news story. The experimental design controls for this variable through two treatment groups--one sees and hears seven crime news stories, and the other only sees the stories. After the viewing treatment, both groups are asked to recall what they have seen (see Question B for specific recall instructions).

What is Recalled

This is described under Question B.

Number of Visuals Recalled

Each item recalled is counted as one. Redundant responses are counted if separate shots exist for each response. For example, two separate responses, anchorwoman, and blond anchorwoman, are counted as two items recalled.

Data Analysis for Question C

Visuals recalled a minimum of 20 times (total) were examined. The number was chosen for statistical testing reasons; anything lower would likely provide inadequate data to produce reliable results. A crosstabulation for each visual assessed viewing treatment (view & hear, view only), by recall condition (recall, no recall).

Question D: Is the recall aspect of visual processing related to television exposure?

Three hypotheses address this question. The aspect of interest in visual processing is visual recall.

- H1: Visual recall of local television crime news is positively related to television exposure.
- H2: Visual recall of local television crime news is positively related to television news exposure.
- H3: Visual recall of local television crime news is positively related to local television news exposure.

These hypotheses are measured through responses to a viewing experiment and self-reported responses in the survey questionnaire. Each hypothesis is tested for separate treatment groups as well as for the combined population.

Visual Recall

Visual recall has often been measured by showing subjects pictures of something they may or may not have seen previously, and asking if they remember having seen the picture (Drew & Grimes, 1987; and Young & Robinson, 1992). This study is concerned more with active than passive memory, and instead uses free responses to measure visual recall. Graber (1990) used a similar approach, asking respondents if they remembered any of the pictures in a news story, which ones, and what they showed.

For this study, visual recall is the total number of visuals a subject records in five minutes after being shown seven local crime news stories. Recall is measured after all stories have been seen.

Television Exposure

The study employs two measures of television exposure. The first is an estimated "yesterday" daily viewing amount, and the second, an estimated weekly viewing amount. The "yesterday" measure has been used reliably in previous research, for example, Rubin, Perse, and Powell (1985). The weekly measure was added to guard against potentially unusual viewing behavior in the student sample (e.g. not viewing to study or complete an assignment).

Daily television exposure was measured by the question, "How much time did you spend watching television yesterday?"

Weekly television exposure was measured by the question, "During an average week, how much time do you spend watching television?"

Television News Exposure

Several studies have measured viewing of specific content type by asking respondents to report the number of programs watched (Wober & Gunter, 1982; Doob & Macdonald, 1979; Perse, 1990). That approach may involve calculation to reach an hourly figure, which appears to be potentially unreliable. For example, viewing television news three times may only total 15 to 20 minutes, if only the opening segment was viewed. Hence, the decision was made to use a television news exposure measure that would reflect weekly news viewing. Specifically, television news exposure was measured by the question, "During an average week, how much time do you spend watching television news?"

Local Television News Exposure

The same rationale that directed the measure of television news exposure influenced the decision to use this measure. Local television news exposure was measured by the question, "During an average week, how much time do you spend watching local television news?"

Data Analysis for Question D

Correlations between recall and exposure were run for each exposure measure, within treatment groups, as well as for the combined population of the groups.

Question E: Does recall of specific visuals differ based on level of exposure?

The following hypotheses address this question.

H4: A significant difference in television exposure exists between respondents who recall and those who do not recall particular crime news visuals.

H5: A significant difference in television news exposure exists between respondents who recall and those who do not recall particular crime news visuals.

H6: A significant difference in local television news exposure exists between respondents who recall and those who do not recall particular crime news visuals.

Exposure Measures

See Question D above.

What is Recalled

See Question B above.

Data Analysis for Question E

This group of hypotheses is tested for visuals recalled a total of at least 20 times. The number was chosen for statistical testing reasons, as explained in Question C, and yielded 12 visuals. Each shot was examined using two-tailed t-tests to determine differences in exposure levels for respondents who did and did not recall individual shots. The t-test was selected as the most suitable test of differences in exposure between two groups (those who recalled, and those who did not recall). Separate tests were conducted for each of the four exposure measures. The data were analyzed for separate treatment groups as well as the combined total.

Question F: Is there a relationship between visual recall of crime news and concern about crime?

H7: Visual recall of crime news is positively related to concern about crime.

Visual Recall

See Question D above.

Concern About Crime

Measures of social reality in the literature range widely--from perceptions of the elderly to neighborhood safety. However, a frequently used social reality measure in cultivation research, and one that is best suited to the

present study specifies personal safety or fear of crime (see Heath & Petraitis, 1987, for studies using this measure). The present study uses 15 seven-point semantic differentials as social reality measures, specifically, to measure concern about crime. Questions are based on several previous studies (O'Keefe & Reid-Nash, 1987; O'Keefe, 1984; Heath & Petraitis, 1987; and Weaver & Wakshlag, 1986) and reflect few new measures. The questions are considered individually, as a total score (Concern About Crime Index), and as three separate scores: Personal Victimization Index; General Safety Index; and Prevention Behavior Index. The distinctions among measures were made to determine what aspects of concern about crime would be related to crime news visuals, providing a more thorough look at the question. The measures are as follows.

Personal Victimization

- 1) How likely do you think it is that you will be mugged or seriously assaulted within the next year?
- 2) How likely do you think it is that your residence will be broken into within the next year?
- 3) How likely do you think it is that you will have something stolen from you within the next year?

General Safety

- 1) How likely do you think it is that the average person will be assaulted or robbed on a metro bus during the daytime?

2) How likely do you think it is that the average person will be assaulted or robbed on a metro bus at night?

3) How safe do you think it is for children who are not supervised by an adult to play in a local park during the daytime?

4) How safe do you think it is for the average person to walk alone in downtown Seattle during the daytime?

5) How safe do you think it is for the average person to walk alone in downtown Seattle at night?

6) How safe do you think it is for the average person to walk in downtown Seattle with another person at night?

Prevention Behaviors

1) How often do you lock the doors to your home, even when you're at home or leaving for a short time?

2) How often do you lock the windows and screens to your home, even when you're at home or leaving for a short time?

3) When parking a vehicle, how often do you lock the doors?

4) When driving a vehicle, how often do you lock the doors?

5) When going out after dark, how often do you go with someone else because of concern about crime?

6) When going out after dark, how likely is it that you will avoid certain areas because of concern about crime?

Data Analysis for Question F

Correlations between recall number and each of 15 individual concern about crime measures, as well as each of the four indexes were conducted for each viewing treatment.

Question G: How does type of visual recalled relate to concern about crime?

What is Recalled

See Question B above.

Concern About Crime

See Question F above.

Data Analysis for Question G

This question is exploratory in nature and is not addressed by hypotheses. T-tests were run to determine if concern about crime scores are higher for people who recalled particular types of visuals, and to determine the types of visuals that might be related to higher concern about crime scores. In other words, to determine if people who recalled certain visuals had higher concern about crime than those who did not remember the pictures. Separate tests were conducted for each visual, measuring differences in mean concern about crime scores between respondents who did and did not recall the shot. This was done for both the view & hear, and view-only groups, as well as for the respondents combined.

Question H: How do meanings viewers construct from local crime news visuals relate to level of exposure?

H10: The meanings heavier television viewers construct from crime news visuals differ significantly from the meanings constructed by lighter television viewers. The differences are apparent whether or not verbal context is provided to the visuals.

This hypothesis is addressed through the visual meaning portion of the experiment. Fourteen still frames made from the crime news videotape and based on the content analysis findings and a pretest, comprise the local crime news visuals. Meaning is assessed through four measures: 1) semiotic meaning; 2) response identification; 3) focus on crime; and 4) viewer orientation. The four measures grew out of a desire to include both a quantitative method for measuring meaning and a more inductive, qualitative approach. Semiotic category, focus on crime, and viewer orientation are quantitative, while response identification is more qualitative. Coding semiotic level is based on work by Fiske & Hartley (1978) and Eco (1976). The other three measures are new. A description of these measures may be found in this chapter in the section on "Coding the Questionnaire."

Local Crime News Visual

Local crime news is operationalized as above. The visual is comprised of a single shot within a story. A shot is the single, continuous recording of material in a news story separated by an edit. (The definition of shot is based on Shook, 1989.)

Meaning

A subject's response to the question, "What comes to mind when you see this picture?" after seeing a local crime news visual. The wording is based on a question used in a study of the cognitive aspects of agenda setting (Carter, Stamm, & Heintz-Knowles, 1992), wherein subjects were asked to give the "first word that comes to mind" for each of a list of topics. A pretest used several wordings, including: "What do you think of when you see this picture?"; "What does this picture say to you?"; and "What does this picture mean to you?". The wording chosen was the most clear to subjects in the pretest, and allowed responses of various semiotic meanings.

Data Analysis for Question H

T-tests and crosstabulations were conducted to address this question. The t-tests measured differences in mean semiotic scores, crime orientation, and viewer orientation, between lighter and heavier viewers (four exposure measures). For this hypothesis, it was necessary to recode the continuous exposure variables into lighter and heavier

viewing. This was done by making as close to an even split in frequency distribution, based on percent of respondents. This approach was based on Signorielli (1990, p. 103), who divides viewers into "as close to an even three-way split as possible." The range of hours for heavier viewers is quite large, but was done to include a sufficient number for statistical tests. As stated by Signorielli (1990):

Traditional cultivation analysis is set up to focus upon the relative degree of television viewing rather than the exact or specific number of hours a respondent says he or she watches television

The divisions appear in Table 1 below.

**Table 1. Hours of Viewing Constituting
Lighter and Heavier Exposure**

Exposure Type	Lighter	Heavier
TV Yesterday	0-1.5 hours	2-8 hours
TV Weekly	0-7.5 hours	8-40 hours
News Weekly	0-2.5 hours	3-20 hours
Local News Weekly	0-2 hours	2.5-15 hours

CONTENT ANALYSIS

The rationale for using content analysis is based on a recommendation by Hawkins and Pingree (1982) in their critical review of cultivation research. Existence of patterns in television programming must be established and documented before relationships between viewing that content

and social reality construction can effectively be explored. The content analysis is used in the present study to establish and document patterns in the visual representation of local television crime news. Audience interpretation of those visuals are later assessed in a viewer experiment.

The Content Analysis Sample

Local television news programs from six U.S. cities provide the sample for this content analysis. The sample is purposive, to include newscasts from small, medium, and large markets. Newscasts selected for analysis are part of a sample which was initially videotaped for a study on urban images in the mass media (Gordon & Artwick, 1993; Artwick & Gordon, 1993).¹ The top-rated local television news program in each of the sample cities was videotaped for two weeks, July 8-12, 1991 and August 5-9, 1991, yielding 56 news programs (ten programs for each city except Austin and Philadelphia, where program preempting or machine failure yielded nine and seven programs respectively). The cities represent diversity in geographic regions as well as in population size: Austin, Texas and Louisville, Kentucky (smaller metropolitan regions with fewer than one million persons); Seattle, Washington and New Orleans, Louisiana (mid-sized regions with between 1.5 and 3 million persons); and New York, New York and Philadelphia, Pennsylvania (large cities with populations greater than 4 million persons).

Newscasts rated highest in their markets by Nielsen (or Arbitron, when Nielsen was unavailable) were selected for study as they are watched by the greatest number of people. While conclusions about effects cannot be made by simply studying content, inferences made about content effects may be stronger knowing that the programs studied are indeed being watched. The cities and news programs selected for the present study include: 1) Austin, Texas - KTBC at 10 p.m.; 2) Louisville, Kentucky - WHAS at 6 p.m.; 3) New Orleans, Louisiana - WWL at 10 p.m.; 4) New York, New York - WNBC at 11 p.m.; 5) Philadelphia, Pennsylvania - WPVI at 11 p.m.; and 6) Seattle, Washington - KING at 11 p.m.

The newscasts were coded by the author on a general level for the urban images project mentioned earlier. Newscasts were watched and listened to while timing television program elements, and noting story placement, story length, number of stories, and type of story. For the present study, only local crime news stories were selected for visual coding. Details on coding follow in the section, "Coding Procedure." A story was considered local if it took place within a 50-mile radius of the city in which the television newscast originates.

For the purposes of this study, crime news focuses on particular crimes and does not include news about criminal trials, police-committed offenses, or general social problems such as drugs.

The Coding Instrument

A handful of television news studies have coded visual content, employing various methods to do so. Graber (1990) used the scene as unit of analysis, and coded the focus of the scene as people, animals, inanimate objects, locations, or text/graphics. Entman (undated) focused on visual images, and visual attributes (1992) at the story level. Gordon and Artwick (1993) coded individual shots into about 30 categories designed to measure positive, negative, or neutral images of cities. For the present study, coding at the most basic semiotic level was desired, that is, the first-order level, which requires little or no cultural knowledge for interpretation. In other words, the visual stands for the thing it depicts, and coding must reflect that approach. The purpose of this content analysis is to establish and document visual patterns in local television news, not to assess meaning or implications of those visuals. Interpretation is to be left to the viewer, and that shall be explored in the viewing experiment and survey portion of this study.

To best serve that purpose, the shot was selected as unit of analysis. A shot is the single, continuous recording of material in a news story separated by an edit. (The definition of shot is based on Shook, 1989). It is the most basic visual unit and lends itself best to first-order coding.

Coding Categories

Coding categories were developed to define the predominant element of each shot at the most basic semiotic level. In other words, as much as possible, pictures of things were identified as what they are, rather than what they might represent. The coding task requires using as little cultural knowledge or experience as possible when categorizing a shot. For example, a picture of police officers standing in the street at night would be coded "police at night" rather than interpreting the shot as perhaps a crime scene or an accident scene. Coding categories were developed based on Graber's (1990) classification, expanding categories and making them more specific for richness and clarity.

The coding categories and guidelines for coding follow:

- 1) Building Exterior: The shot features a building exterior only. No people, cars, or other elements are present in the shot. The building is intact--if not, it is coded "destruction." Further distinctions within this category include urban or rural building, and well maintained or poorly maintained.
- 2) Building Interior: The inside of a house, office, or other building. No people are present in the shot. The building is intact--if not, it is coded "destruction." The distinction of well maintained or poorly maintained is also included here.

3) Landscape: This includes both rural and urban landscapes. A wide shot of a street with many buildings and traffic as well as a picture of a wooded area beside a lake would be coded in this category. Urban and rural landscapes are coded distinctly within this category.

4) Destruction: Bombed-out buildings, stripped-down cars, and shattered glass are examples of the shots coded in this category. If damage is evident, this category is coded.

5) Police: A shot featuring police presence of any kind is coded in this category. This includes officers as well as vehicles. However, when the shot features a person or people being escorted by or in the grip of the police, the shot is not coded in this category. Distinctions within this category include: police cars at night, police cars during the day, officers at night, and officers during the day.

6) Suspect: A person or people in police custody, handcuffed, or in jail garb would be coded in this category.

7) People: Individuals as well as groups of people are included here. If people are in the shot and they are not obviously police officers, the shot is coded as people. Individuals and groups of people are coded distinctly within this category.

8) Graphics: This includes still or animated full-frame graphics.

- 9) Sound Bites: Shots of people being interviewed including sound on tape.
- 10) Stand-Ups: A reporter on the scene making a statement on camera.
- 11) Reporter Reaction: A shot of a reporter reacting to an interviewee's statement.
- 12) Body: A shot in which a body is featured. If a body appears in the frame, this category is coded over others.
- 13) Crime/Police-Related Objects: Things associated with crime or law enforcement, such as a chalk body outline, a bloody cloth, or a badge.
- 14) Objects: Shots of things not categorized above are included here.

Coding Procedure

Coding sheets from the urban images study were used to identify local crime stories for the six television stations in the present study sample. A realistic viewing environment was sought for coding; hence, the videotapes containing the crime news were played with the sound on. However, tapes were paused periodically and shots were replayed to facilitate coding. All coding was done by the author using a coding grid listing each type of shot by city. Hash marks were used to record the number of times a particular shot appeared in each city's news sample. The coding grid appears in Appendix 1. A test of coding

reliability on 10 percent of the sample was conducted by an adult professional with some college, yielding a 90 percent level of reliability.

VIEWING EXPERIMENT WITH SURVEY

The viewing experiment was designed to measure recall of television crime news visuals and meanings assigned to the visuals. The survey's purpose was to measure television exposure and television news exposure, attention to television crime news, concern about crime, perceptions of television news, and demographic data. Together, the experiment and survey were essentially intended to measure relationships among visual recall, meaning, and concern about crime, as well as the television experience (exposure, attention, and perception) and demographics.

The two-part experiment used three groups of subjects/participants. Part one was designed to measure recall of crime news visuals, and part two measured meaning of visuals. In this after-only design, different viewing treatments were used as the manipulation to address the role of audio and visual context on meanings of crime news visuals.

The Experiment/Survey Sample

University of Washington students attending undergraduate summer school classes during August 1993

comprised this convenience sample. Instructors of courses at the 200 and 300 level in communications, sociology, and political science were asked and gave permission to conduct the study with their students during class time. Students were allowed to leave if they did not wish to participate. Six classes that participated varied in enrollment from 15 to 45 students. Class size was used as a guideline for determining which treatments to assign to students. The goal was to place approximately 60 students in each treatment group. Hence, assignment to groups depended only on the class size and no other characteristics of the students.

The Videotapes

The experiment required three videotapes: one containing crime news stories for the recall component of the study; one containing still frames of 14 pictures that appeared in the crime stories, for the meaning component; and one containing the same 14 still frames plus six generic shots not related to crime news, also for the meaning component.

The Crime News Videotape

The crime news tape was developed based on the findings of the content analysis. Seven stories, running a total of about seven minutes, were selected based on the types of shots they contained, reflecting the distribution and

diversity of shots found as a whole in the content analysis. The decision to include seven minutes of crime news was made based on the approximate length of an opening television news segment. It was also guided by a general rule-of-thumb in video production that limits the length of informational videotapes to about seven minutes.

The stories selected from the content analysis tape excluded news from Seattle, as participants may have seen the Seattle reports when they were broadcast, possibly influencing recall. Locations of the stories were not necessarily apparent; however, the following description includes them for documentation. The stories were ordered as follows:

1) Austin, Texas: A reporter package² about a suspected murder of a young woman whose body was found in a rural river. The video shows the woman's body lying in a field, covered, as well as the body being carried on a stretcher. The victim's mother is interviewed as well as police officials and a man the victim danced with where she was last seen. The story, including the anchor person's introduction and close runs 2:02 (two minutes, two seconds).

2) New Orleans, Louisiana: A voice over concerning a convenience store robbery suspect. Video from a surveillance camera is used in the story. It runs :25.

3) New Orleans, Louisiana: A voice over about transit crime going down in New Orleans. The story is illustrated

by a still graphic and no moving video. It runs :16.

4) Philadelphia, Pennsylvania: A voice over about three murders in the city. The videotape shows police, blood, body outlines in chalk, and yellow crime-line tape, and is all shot at night. The piece runs :56.

5) Louisville, Kentucky: A reporter package concerning a reported rape of a woman in her rural home. A police sketch of the suspect is featured. Interviews include police officials, a gun shop owner, and a concerned area woman. The story runs 1:54, including the anchor person's introduction.

6) New York, New York: A reporter package about an elderly woman murdered in her apartment. Visuals consist mainly of shots of the apartment building and area residents. A neighbor and police official are interviewed. The report runs 1:35, including the anchor person's introduction.

7) New Orleans, Louisiana: A voice over about a drug arrest showing black undercover police officers with rifles escorting black suspects. The story runs :21.

See Appendix 2 for a script of the crime news stories which includes verbal text and a description of each shot.

The Still Frame Videotapes

A pretest guided the selection of shots included in the still frame videotapes. In order to draw relationships between recall, meaning, and concern about crime, it was

important to include in the still frame video, shots that were recalled by respondents. After viewing the crime news stories, pretest respondents were asked to write down as many of the pictures they remembered seeing in the stories. Most frequently recalled shots were included in the still frame videotapes as well as some others that were highly represented in the content analysis tape. More detail on the pretest appears in a subsequent section devoted to the pretest.

Two separate tapes were developed for the meaning measurement exercise. The first, which was shown to the treatment groups that viewed the crime stories, included 14 still frames from the crime news videotape. The pictures appeared on the screen for 10 seconds, with a 15-second pause between each. For the second, which was shown to the treatment group that did not view any news stories, six non-crime related shots were added to the 14 stories at the front of the tape. They included, for example, people walking in a city, and a summer lake scene. This was done so that respondents would not be cued in to the notion that the pictures of interest were crime visuals. Shots were also on the screen for 10 seconds with a 15-second pause between each. See Appendix 3 for computer-generated photographs made from each of the 14 crime news still frames.

The Survey Questionnaire

The first two pages of the instrument were used for the recall and meaning responses, and were lined and numbered to facilitate recording of responses. Pages 3 through 7 contain 35 questions, most of which are semantic differentials. A seven-point scale was used based on Osgood, Suci, and Tannenbaum (1975), whose review of numerous studies using such scales revealed that all alternatives were used with equal frequency. The questionnaire may be found in Appendix 4.

Four continuous television exposure measures were employed to measure daily and weekly viewing, weekly news viewing, and weekly local news viewing. The measures are fairly standard in the literature. A fifth exposure measure, lifetime viewing, was constructed as a seven-point scale, and included in the questionnaire. It was not used in tests of hypotheses as the continuous measures were better suited for analysis.

Concern about crime measures include questions about likelihood of personal victimization, perceived safety, and prevention action. Attention to television crime news is measured as well as perception of local and national crime relative to the severity of crime presented in television news. Law enforcement perception is also measured. Questions measure previous victimization and self protection. Finally, the questionnaire measures

demographics. A discussion of the rationale for employing particular measures, as well as citations for the measures' sources, follows in the operationalization section.

The Pretest

A pretest was conducted with students in a small introductory communications course to evaluate the questionnaire, crime news videotape, freeze-frame videotape, and procedures in general. Of particular interest was the potential placement effect of stories in relation to visual recall, and exclusion of visuals from the freeze-frame videotape that might have had heavy recall. While visuals from the first and last stories were indeed recalled, others placed throughout the crime news tape were amply remembered as well. A laundry room visual was added to the freeze frames after the pretest showed prominent recall. In addition, minor adjustments were made to the questionnaire based on the pretest.

Experiment and Survey Procedures

Data were gathered during class time at the beginning or end of class. The researcher was introduced by instructors as a doctoral student in communications gathering data for her dissertation. Students were encouraged to participate, but were told they were free to go if they did not wish to take part. The researcher then

introduced the study and explained what students would do. Details for treatment groups follow.

Group 1 - View and Hear, and Group 2 - View Only

The research was described as a television news study. Students were told they were going to see a videotape of television news stories from around the country, that the tape ran about seven minutes, and that they should relax and watch the stories without taking notes. The difference for Group 2, was that students were told they would watch the tape with the sound turned all the way down. After viewing the tape, they would then complete a short exercise based on what they saw. Before showing the tape, the researcher asked if all students could see the video monitor, and students were asked to move if they needed a better view. Late arrivals were asked to mark "L" in the right-hand corner of their questionnaire. Those questionnaires were excluded from the full analysis.

The lights were then dimmed and the tape played. One 27-inch monitor on a raised cart was the standard equipment for showing the videos. However, in one classroom two monitors, one mounted in each corner at the front of the room, were used. The quality of the sound and picture was equivalent for both set-ups. Immediately after viewing, the lights were turned back up, and the questionnaire was distributed. Students were then directed to take a moment to think about the news stories they had just seen, and on

the first page of the questionnaire, to write down in a few words, as many of the pictures they remembered seeing in the stories. They would have five minutes to do so. Pacing of the experiment minimized interaction among students, and individual responses were not likely influenced by other participants.

Next, the researcher told students to turn to page 2 of the questionnaire. They were then told they would see several pictures from the news stories they watched a few minutes ago. They were asked to write down, after each one, "what comes to mind when you see the picture." Also, they were told that each picture would appear for 10 seconds, with a 15-second pause after each. A few students wanted clarification on what they should write down, and the researcher replied, "whatever comes to mind." The lights were dimmed slightly, and the tape was played. As the first shot was shown, the researcher announced, "This is number one," so that students could record their response in the correct space on the questionnaire. After a 15-second pause, the next shot appeared, and was identified by the researcher. This procedure continued until all 14 shots were shown.

After seeing the last shot, students were asked to complete the remainder of the questionnaires and bring them to the front of the class when finished. They were assured

that all their responses would be anonymous. The exercise took about 30 minutes to complete.

Group 3 - No View

The research was described as a television images study. This differed from the description given Groups 1 and 2, as the research design dictated that respondents in Group 3 were not to be given any context with which to interpret the visuals. Students were told they were going to see a series of still frames that had been made from television broadcasts. For each one, they were asked to write down what comes to mind when they see the picture. The tape was played, and from this point on, the procedure was the same as it was for Groups 1 and 2, except instead of seeing 14 shots, Group 3 saw 20. Six neutral shots were added to the front of the videotape for additional protection against providing crime news context. The exercise took about 15 minutes to complete.

Coding the Questionnaire

Visuals recalled were coded by the researcher for: 1) story recalled; and 2) particular shot recalled. The coding scheme for shots recalled was developed by viewing the crime news videotape and jotting down a short description of each shot. Additional general categories were added as coding

progressed. The coding scheme for recall may be found in Appendix 5.

Responses to the still frame visuals were coded four ways: 1) semiotic meaning; 2) response identification; 3) focus on crime; and 4) viewer orientation. A discussion of each follows.

Coding Semiotic Meaning

Semiotic meanings for this study are based on the three orders of signification discussed by Fiske and Hartley (1978). In the first-order sign, the picture of the thing represents the thing itself. For example, a visual of a car would be considered nothing more than a car. Cultural experience is involved in the second-order sign, and in the third order, the sign represents a larger context or world view. A distinction was added to the second-order sign to identify meanings that may cross over into the construction of concern about crime. For the purposes of this study it is considered cultural knowledge-plus, in that it adds detail to the second-order sign, by specifying something outside the picture, or recognizing an emotional reaction to the visual.

To clarify these distinctions, consider semiotic categories for a picture of a police car parked outside a boarded building at night, with a person facing the building. The first category, or "the picture is the thing," would be basically what was just described, focusing

on the elements of the picture. The second category, is actually split into two: 2a) Cultural knowledge, and; 2b) Cultural knowledge-plus. In the cultural knowledge category, the meaning would be constructed based on cultural experience, for example, "police probably investigating a complaint." The cultural knowledge-plus meaning would add specific detail to the cultural knowledge response, for example, "apartment where a woman was murdered." Note the distinction between the response, investigating a complaint, and the more abstract meaning, woman was murdered. By separating the two types of responses within the category, the relationship between meaning and concern about crime might be better understood. In the third category, a meaning would take more of a world view, for example, focusing on a societal problem, such as "inner-city crime."

A coding reliability check on 10 percent of responses, conducted by an adult professional with some college, yielded an 80 percent agreement. The distinction between the cultural knowledge and cultural knowledge-plus categories created the most difficulties in agreement. This was due, primarily to training issues. With a complex task such as this, an ample number of examples illustrating the distinction is crucial.

Coding Response Identification

For this element of coding, responses were grouped into categories based on similarity or distinction of response.

The grouping was largely a subjective process, inductively categorizing responses into coherent categories. A separate set of codes was developed for each still frame while reviewing individual responses. The coding schemes appear in Appendix 6. This qualitative aspect of the coding was done to add depth to the statistical analysis. It provides yet another way to assess meanings assigned to the crime news visuals, offering more detail in understanding the relationship between the visuals and concern about crime.

Coding Focus on Crime

Responses were coded as either focusing on crime or not focusing on crime. This was done to assess if crime-related meanings were related to concern about crime. A response was coded as focusing on crime if it made any mention of crime, suspicion, victim, violence, or protection. A coding reliability check on ten percent of responses, conducted by an adult professional with some college yielded a 91 percent agreement.

Coding Viewer Orientation

While coding for response identification, a pattern emerged that appeared to follow Altheide's actor, action, and object orientation (1985). Four additional categories were added for more specificity, yielding the variable viewer orientation. Viewer orientation includes: 1) actor; 2) victim; 3) action; 4) place/time; 5) issue; 6) comment/emotion; and 7) thing. Some specifics in coding

viewer orientation follow. If people and action are mentioned in the response, code action. In other combinations, code the first mention. For example, police at a crime scene would be coded actor, while crime scene and police would be coded place/time. Victim is coded when the word victim is used in the response. Mention of a dead body is also coded as victim. A coding reliability check done by an adult professional with some college yielded a 92 percent agreement.

VALIDITY AND RELIABILITY, AND DATA CONTROLS

Validity and Reliability

High coding reliability scores for content analysis coding as well as measures of meaning indicate that measures used in this study have the ability to produce consistent results. The use of four viewing measures, rather than one, helps to ensure validity of the exposure variables. The concern over crime measures are based on a number of standard measures, addressing general as well as specific fears and behaviors regarding crime. This helps avoid making a generalization of respondents' fear of victimization, when concern over the average person's safety may be what is really being measured.

Data Controls

One early criticism of cultivation research centered on its lack of controls for possible intervening variables that might influence concern about crime. Two areas of potential influence are recognized in the present study: gender, and criminal victimization (either having been a victim or knowing a victim of crime). A number of tests were conducted to measure any influence these variables might have on the outcome of the data analysis. They included: gender in relation to exposure (TV Yesterday, TV Weekly, News Weekly, and Local News Weekly); gender in relation to recall of particular visuals, and to focus on crime; and criminal victimization in relation to recall of particular visuals. Notable differences that may have influenced particular findings are discussed in Chapter 4. Tables including these data may be found in Appendix 7.

NOTES TO CHAPTER 2

1. The Urban Images study was conducted under the direction of Margaret T. Gordon, Dean of the Graduate School of Public Affairs at the University of Washington, and was funded by the CUNY Foundation and the Graduate School of the University of Washington. While newscasts and newspapers from eight cities were sampled for the research, the present study excludes two of those cities' newscasts from its sample. Los Angeles was excluded because of the overrepresentation of news about the Rodney King beating investigation. Chicago was excluded due to missing stories resulting from videotaping error.

2. Television news stories are packaged in various ways. A reporter package is a story that is narrated by a reporter, not an anchor person, and often includes portions of interviews. Other packaging used in the crime news videotape shown to study participants includes a voice over, in which the anchor person narrates the story over videotaped shots.

CHAPTER 3

RESULTS AND DISCUSSION

This section presents research results and a discussion of those findings in two main sections, the content analysis and the viewing experiment with survey. Within each, section headings featuring summaries of questions and hypotheses will guide the reader. The bulk of the findings are presented in tabular form. Quantitative as well as qualitative findings are reported and interpreted.

THE CONTENT ANALYSIS

This content analysis is purposefully brief and specific, as it was designed to: 1) document patterns in the use of crime visuals in local television newscasts; and 2) provide data needed to develop a viewing experiment that would include a variety of visuals representative of those used across local broadcast markets. Interpretation of visual content is minimal here, as this is left to the viewers who participated in the experimental portion of this research.

The Content Analysis Sample

The 56 local news programs studied yielded 87 local crime news stories, or an average of 1.6 per newscast, with a range of .8 to 4. The number of local crime stories per newscast varies closely with city size. Austin and

Louisville, the smallest cities in the sample, averaged the fewest, .8 and .9 respectively. Mid-sized cities, New Orleans and Seattle, broadcast, on average, 1 and 1.1 local crime stories per newscast, and the largest cities, Philadelphia and New York carried 4 and 2.2. Higher crime rates in the larger cities may explain the amount of coverage given to crime news in those areas.

The amount of time devoted to local crime news overall averaged 1:14 (one minute fourteen seconds) per newscast, with a range of :21 (New Orleans) to 1:52 (New York). The story length averaged about one minute, with a range of :21 (New Orleans) to 1:40 (Austin). All but one of the 87 sample stories contained videotaped or live pictures.

The Visual Representation of Local Crime News in Local Television Newscasts

Question A: How do local television newscasts visually represent local crime news?

This question explores differences and similarities in the way local television newscasts use visuals in local crime news coverage. Three measures were used to address the question: 1) number of shots per story; 2) presence of shots depicting police, suspects, bodies, or police/crime related objects; and 3) percent of a city's total number of shots devoted to particular visual categories. Table 2

presents the findings, which are discussed in some detail below.

Number of Shots Per Story

A variation in the number of visuals used per story is evident among the cities studied. The smallest cities in the sample, Austin and Louisville, used the largest number of shots per story, 11 shots. New York featured nine shots, Philadelphia and Seattle used seven, and New Orleans used only four visuals per story.

Presence of Certain Shots

All cities in the sample included in their local crime stories, visuals of police cars, police officers, and objects related to crime, such as weapons and drugs. Every city except Austin featured suspects, and all cities except New Orleans and Seattle showed bodies in their local crime news.

Visual Categories

Predominant Visuals

Pictures of police appeared as the predominant visual in the local crime stories studied, in that the police visual was used most frequently in the greatest number of cities. Three of the six cities, Austin, New Orleans, and Philadelphia, featured police shots most frequently in their local crime coverage. A fourth city, Louisville, also used pictures of police heavily. For New York and Seattle, shots of people (non-law enforcement) predominated the visual

representation. And Louisville devoted its greatest percent of shots to suspects.

Visual similarities and differences across cities

Every city used a substantial number of people shots (non-law enforcement) in their local crime coverage, ranging from 14 percent to 29 percent of each city's crime news visuals. Pictures of building exteriors were featured consistently across cities, as were shots of crime/police-related objects. Building interiors and reporter reaction shots were seldom used. Five of the six cities featured interviews (sound bites), visual graphics, and reporters on camera (stand-ups) fairly consistently. Four of the six cities used a substantial percent of police shots, and a small number of body visuals and shots of general objects.

Differences in visual coverage lie primarily in three areas--landscapes, destruction, and suspects. Police shots, while discussed under similarities, will also be considered here. Four cities devoted fewer than ten percent of their shots to landscapes. New York stands out in terms of visuals depicting destruction, as the only city devoting close to ten percent of its visuals to that category. Note that destroyed structures were not coded as buildings, but instead, as destruction. Shots featured, for example, a bombed-out bodega and shattered window glass on a car. And the frequency of suspect visuals is very different across cities. Suspect shots appeared in less than five percent of

Austin's and New York's local crime news, about ten percent for Philadelphia and Seattle, and more than 20 percent for Louisville and New Orleans. New Orleans also used the greatest percent of police shots, 38 percent of its local crime news coverage. Conversely, New York and Seattle featured pictures of police in less than seven percent of their coverage.

Table 2. Frequency Distributions of Local Crime News Visuals
(Percent of Total Visuals for Each City)

Type of Visual	Austin N=78	Louis- ville N=101	New Orl. N=37	New York N=195	Philly N=189	Seat- tle N=76
Building	06	06	08	06	08	05
Interior	00	01	00	01	00	00
Landscape	09	03	00	06	12	16
Destruct- ion	01	02	00	09	03	04
Police	21	17	38	07	25	05
Suspect	00	21	27	04	10	09
People	18	18	16	29	14	29
Crime/ Police Objects	06	08	08	08	11	04
Other Objects	03	00	00	06	05	04
Body	05	02	00	02	01	00
Sound Bite	19	14	00	14	07	17
Stand-up	04	04	00	05	02	09
Graphics	06	05	03	03	02	00
Reporter Reaction	01	00	00	01	01	01

Visual Profile of Local Crime News

The visuals used in the sample crime stories emphasize the police, and people other than law enforcement or suspects. Perpetrators are infrequently featured visually, except in Louisville and New Orleans, which are among the smaller cities studied. Police appear symbolic of crime in local television news--ever present where there's crime. The public is there as well; as victims, those who knew the victims, or as potential victims. Criminals, on the other hand, are not in the picture--figuratively or literally. And without that visual presence, perhaps viewers don't focus on the perpetrators as much as they do victims or the police. Or, since suspects are not pictured in news stories, viewers may conjure images of criminals out in their streets and neighborhoods. This limited use of suspect visuals likely relates to videographers' accessibility to those shots. Arrests are not among law enforcement action normally announced over police scanners. So in order for news organizations to obtain visuals of suspects, they most likely must have a close relationship with the police department, so that someone on the inside calls them to coordinate videotaping of arrests or bookings. Trial coverage offers another opportunity for taping suspects. However, this content analysis focused on crime news, and did not include trials, unless they were part of a general crime story. Adding criminal trials to the analysis

might reveal a greater presence of suspects in visual coverage.

Returning to the emphasis on police in crime visuals; police presence in crime news may help viewers feel safer. Their absence may have the opposite impact. In New York and Seattle next to no police presence was pictured. Instead, newscasts in those cities heavily emphasized the public in their visuals. Does this communicate visually that the people are on their own, facing crime with little law enforcement presence? On the other hand, in cities with heavy visual police and criminal representation, one might argue that the pictures convey the message of a safer community. This may be plausible, considering that suspects are generally pictured in court or police custody. Recall that New Orleans featured suspects heavily in its visual representation of crime news. According to the U.S. Department of Justice, the state of Louisiana had the highest incarceration rate in the country in 1992 (Famighetti, 1993).

Body bags and blood were less frequently depicted than might have been expected, with smaller cities just as likely as larger ones to include such shots.

THE VIEWING EXPERIMENT WITH SURVEY

The Viewing Experiment With Survey Sample

The sample yielded a total of 118 respondents, with

approximately 60 percent women and 40 percent men. See Table 3 below for the distribution of gender by treatment group. Note the small number of males in the view-only group, and the larger number of males in the no-view group. Ideally, the distribution would have been more equal across groups. Tests for the impact of these differences can be found in Appendix 7, and notable differences are discussed throughout this chapter. The age ranges from 18 to 50, with the majority of respondents being between 20 and 23 years old. Only four percent are graduate students, the rest are undergraduates. The majority of respondents are caucasian, 62 percent, with 14 percent Asian American, five percent Hispanic, four percent African American, and 16 percent other ethnicities. Eighty percent have lived in the United States all or most of their lives.

Table 3. Distribution of Gender by Treatment Group

	Female	Male
View & Hear	33	12
View Only	24	8
No View	16	25
TOTAL	73	45

What Viewers Recall Visually from Local Television Crime News

Question B: What do viewers recall visually from local television crime news?

The Sound Bite: More Than a Visual

As Table 4 illustrates, for respondents in the audio-visual treatment groups (this excludes the no-view group), the most frequently recalled visual was actually more than a picture--it was a sound bite. In television news, a sound bite refers to a portion of an interview, basically a head-and-shoulder shot, featuring a person talking. Sound bites had been coded into three categories: 1) male, official; 2) male, unofficial; and 3) female, unofficial (there were no female, official sound bites in the sample). The most frequently recalled sound bites were in the third category, from interviews with women who were not officials of any companies or government agencies. Participants indicated sound bites recalled with responses such as, "victim's mother talking about her daughter," or "woman in laundromat who said she was afraid." Respondents recalled female unofficial sound bites 80 times, which averages a little more than once for each participant. Those sound bites appeared in three stories; the first, fifth, and sixth. Each story was a "package," a videotaped piece narrated by a reporter. Two were about murders, one about rape. Most of the recalled sound bites came from the first story, and were of the murder victim's mother talking about the last time she saw her daughter, and how she never thought this could happen to just normal, everyday people. The other sound bites recalled were of the "people on the street" ilk--a

woman in a laundromat fearing a rapist at large, and a neighbor who knew an elderly murder victim.

Why Respondents Recalled the Female Sound Bites Most Often

Several possible explanations for the high recall of female sound bites include: more frequent appearance of the shots; longer duration of the shots; impact of the audio track on visual recall; and story order. Coding did not differentiate among individuals, so that the mother of the murder victim, and woman in a laundromat would be considered together as "sound bite--female, unofficial." Sound bites also remained on the screen longer than most other shots, perhaps giving respondents more time to process the information into memory for retrieval. The bulk of the recalled sound bites were of the murder victim's mother, from the first story shown to respondents. Placement effect, as well as what the woman said, could have influenced recall. Although what she said was tearful and moving, respondents who didn't hear what the mother said recalled her frequently. As will be seen in the next section on the audio track and visual recall, a sizeable portion (nearly two-thirds) of participants in the view-only treatment recalled female sound bites. Eight out of ten in the view & hear treatment remembered the shots. Perhaps the emotion conveyed in the facial expressions made the visuals memorable even for those who did not hear the women's words.

Black Undercover Police & Suspects (Drug Arrest)

The second most frequently recalled shot was from the last story, and was recalled 66 times. It was a very long shot, running approximately 20 seconds, and featured several plainclothes black police officers with rifles escorting young black suspects either to or from jail (the location was identified on screen as "Central Lock-up.") The story was a voice over. The length of the shot as well as its placement, may have contributed to its high recall. However, the content may have made a notable impact. A bulky undercover officer with rifle in hand, escorting a young, almost scrawny suspect in a torn t-shirt provides substantial visual detail.

Robbery Suspect in Convenience Store Surveillance Video

Third in recall frequency was a surveillance camera videotape of a robbery suspect in a convenience store, recalled 45 times. The story was narrated by an anchor person and ran 30 seconds, using several surveillance shots throughout. The shots were very similar in appearance, possibly contributing to the shot's frequency of recall. In addition, however, its focus on the criminal may have made a significant impact on recall. Returning to the content analysis, recall that visuals of suspects were infrequently used in most newscasts. Respondents may generally rely on mental images to fill in the gaps left by the absence of this type of visual. Yet when they see a suspect in a news

story, that shot may be more memorable to them because of the "novelty" of the visual.

Body Bags and Blood

The gory and morose pictures associated with crime were recalled less frequently than the top three shots discussed above. In fact, respondents remembered a hi-rise building more often than they did a chalk mark body outline, body on a stretcher, or bloody cloth. As the content analysis revealed, these types of shots appear rather infrequently in local crime news coverage. The level of recall reflects subjects' likely low level of news exposure to these types of pictures.

Table 4. Crime News Shots and Number of Times Recalled by Respondents in View & Hear and View-Only Treatment Groups (combined)

Shot and (Story Number)*	Times Recalled	Shot and (Story Number)	Times Recalled
Sound bite/female unofficial (1, 5, 6)	80	General building (1, 4, 5, 6)	8
Black officers and suspects (7)	66	Police on bridge (1)	7
Surveillance video (2)	45	Sheriffs Dept. phone number (1)	7
Sound bite/male unofficial (1, 5)	43	General police (1, 4, 5, 6, 7)	7
Rural river (1)	41	"Rape" chroma key (5)	7
Anchor person (1-7)	40	Cars outside building (1)	6
Hi-rise building (6)	37	Black police officers (4)	4

Chalk mark body outline (4)	35	Laundromat and child (5)	4
Reporter (1, 5, 6)	32	Yellow crime ribbon (4)	4
Body on stretcher (1)	26	No such shot (-)	4
Photo of victim (1)	24	"Philadelphia" chyron (4)	4
Parking lot (1)	20	Men and van (1)	3
Bloody cloth (4)	16	Police car (4) outside building	3
Man holding gun in sound bite (5)	16	General people (1-7 except 3)	1
Sound bite/male official (1, 5, 6)	16	Corpse (1)	1
Police dispatcher (5)	15	Journalist (6)	1
Body in field (1)	14	Comment on visuals (-)	1
Transit crime graphic (3)	14	"Central lock up" chyron (7)	1
Laundromat and woman (5)	13	Black officer at crime line (4)	0
General crime (1-7)	12	Close-up of hand (5)	0
Rape suspect graphic (5)	11	Officer outside hi-rise (6)	0
People outside hi-rise (6)	11	Officer outside house (4)	0
Police in street at night (4)	10	Building address (6)	0
Elderly people (6)	10	Black woman (6)	0
Blood (4)	9		
"Murder" chroma key (4)	9		

Pistol	(5)	8	Not codable (-)	51
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*The visuals come from seven crime stories. The number in parentheses indicates presentation order of the story(ies) from which each visual was taken.

The Crime News Audio Track and its Contribution to Visual Recall

Question C: How does the audio track in local television crime news contribute to what visuals are recalled and the number of visuals recalled?

Two treatment groups were used to address this question; a view & hear group, and a view-only group. Procedures for each were identical, except the view-only group watched the crime news videotape with the sound turned off. The mean number of visuals recalled for the view and hear group was 11. The view-only group remembered more visuals, 11.7 on average. The percent of respondents who recalled more visuals was also higher for the view-only group. More than half of that group recalled 12 or more visuals, while only about a third of the view & hear group remembered that many. The range of visual recall was 6-21 for both groups.

It appears, then, that the audio track may have hampered visual recall in terms of the number of items remembered. Differences in the type of visuals recalled are also apparent, as illustrated in Table 5. Visuals recalled at least 20 times were examined for recall by each group.

The shots recalled by a greater percent of respondents in the view-only treatment include anchor people, a river scene, a body being carried on a stretcher, a photo of a murder victim, and surveillance video. Shots recalled considerably less frequently by the view-only group include the female sound bite, a parking lot, and a hi-rise building.

Table 5. Percent of Subjects in Each Viewing Treatment Who Recalled Particular Shots*

Shot	View and Hear N=45	View Only N=31
Anchor Person	28.8	53.1
Reporter	37.8	31.3
Female Sound Bite	80.0	65.7
Unofficial Male Sound Bite	48.9	46.9
Rural River	46.7	50.0
Parking Lot	35.6	12.5**
Body on Stretcher	26.7	43.8
Photo of Victim	31.1	31.3
Surveillance Video	51.1	59.4
Chalk Body Outline	46.7	43.8
Hi-Rise	53.3	37.5
Black Officers and Suspects	84.4	81.3

*Table based on individual crosstabulations for each shot by treatment group (2 x 2 tables--2 treatment groups by recall/no recall conditions).

**Chi Square=5.17, $p \leq .05$, DF=1

Remembering the Sound or the Picture?

Even with the sound turned off, respondents remembered sound bites with considerable frequency. Recall that a sound bite is basically a talking head. Almost two-thirds of respondents in the view-only treatment recalled the female sound bites, and nearly half remembered the male sound bites. Shots of anchor persons were recalled by more than half of view-only respondents, but by less than one-third of respondents in the view & hear group. Interesting, unusual, attractive faces, or the emotion they convey, may contribute to the recall of these "talking heads," even when what they're saying is not apparent.

Seemingly generic shots, such as a hi-rise apartment and parking lot, were more memorable to respondents who saw and heard the crime stories than to those who only saw the reports. Given the audio context, the shots represent a murder scene and location where a victim was last seen alive. It appears that for generic building and location shots, verbal text that gives them a specific crime-related context makes a difference in visual recall.

A more crime-specific shot, a body being carried on a stretcher, was recalled with greater frequency by the view-only group than by the view & hear group. However, for another crime-related visual, a chalk body outline, recall was about the same for both treatment groups. For these more obvious crime shots, the impact of audio narration

seems mixed. A look at the verbal text that accompanied the shots reveals a possible explanation for the inconsistency. While watching the visual of the body being carried on a stretcher, the view & hear group heard the victim's mother saying "This kind of thing don't happen to us. We're just normal people." This audio technique varies from the norm in which a reporter or anchor person narrates over the visual. Respondents may have been focusing on the mother's words, and visualizing her, rather than processing the picture of her dead daughter being carried away. This explanation seems plausible when one considers that eight out of ten respondents in the view & hear group remembered the female sound bite.

The findings suggest that audio context may play a role in remembering visuals; enhancing recall for generic location shots, while impeding recall for more crime-specific pictures. Sound related to close-up shots of anchor people and people featured in sound bites may not be as important to visual recall as the physical and emotive characteristics of the faces.

Visual Processing and Television Exposure

Question D: Is the recall aspect of visual processing related to television exposure?

Three hypotheses addressed this area of inquiry, testing visual recall in relation to four different measures

of television exposure. The measures included: television yesterday; television weekly; news weekly; and local news weekly. The range of responses for each measure follows:

Television yesterday:	0-8 hours
Television weekly:	0-40 hours
News weekly:	0-20 hours
Local news weekly:	0-15 hours

Correlations were run to relate hours of each type of exposure with number of visuals recalled. Relationships were examined within treatment groups as well as for the combined population of the groups. The correlations yielded only one significant result, a negative relationship between local weekly news viewing and recall for the sample group.

General Television Exposure and Recall

H1: Visual recall of local television crime news is positively related to television exposure.

Two separate measures were used to test television exposure; daily viewing "yesterday," and weekly viewing. No significant correlations were found between either exposure measure and number of visuals recalled. This was true for the entire sample as well as for the view and hear, and the view-only treatment groups. The hypothesis was not supported.

Television News Exposure and Recall

H2: Visual recall of local television crime news is positively related to television news.

This measure was not related to number of visuals recalled; not for the congregate sample nor for either treatment group. The hypothesis was not supported.

Local Television News Exposure and Recall

H3: Visual recall of local television crime news is positively related to local television news exposure.

A significant linear relationship was found for the entire sample between local television news exposure and number of visuals recalled. But instead of a positive relationship, the test yielded a negative one ($r = -.23$, $p \leq .05$, $N = 75$). In other words, the heavier the local news viewing, the lower the number of visuals recalled. This finding goes counter to what was predicted. Research on children and television might help explain the finding. Studies have shown that children who are light television viewers do better in school than those who are heavier viewers (Huston, Donnerstein, Fairchild, Feshbach, Katz, Murray, Rubinstein, Wilcox, and Zuckerman, 1992). If this holds for adults, perhaps the academic superiority is reflected in better memory for lighter viewers. Another possible explanation concerns exposure and desensitization. The heavier local news viewers may have become desensitized to the pictures in crime stories, resulting in lower recall than lighter viewers, who may view the pictures as novel and memorable. Also, the possibility exists that the results

are an anomaly, as further tests using individual treatment groups and number of visuals recalled showed no significant correlations, and did not support the hypothesis.

Summary of Visual Recall and Exposure

The lack of support for this set of hypotheses indicates that heavier television exposure, whether it be general, or news-specific, is not a good predictor of higher visual recall. The only significant relationship showed higher recall with lighter viewing. And while not statistically significant, all other tests except one showed similar negative relationships. So, people who view larger amounts of television, whether general or news-specific, recall fewer pictures than those who view less. While this finding runs contrary to what was expected, sheer numbers of visuals recalled may not be key to understanding the role of visuals in relation to concern about crime. The next step is to examine exposure and type of visuals recalled. The following section addresses this issue.

Level of Exposure and Type of Visual Recalled

Question E: Does recall of specific visuals differ based on level of exposure?

Each of 12 visuals that respondents recalled a total of at least 20 times was analyzed to assess differences in television exposure between those who recalled and those who did not recall the visuals. H4, H5, and H6 predict that a

significant difference in television exposure, television news exposure, and local television news exposure exists between respondents who do and do not recall particular crime news visuals. As Tables 6 through 13 illustrate, t-tests showed significant differences in mean exposure for each of four exposure measures. However, in all but one case, the respondents who did not recall the visuals had higher exposure levels. That one case is pivotal, considering the type of visual recalled by heavier viewers. The shot featured a body on a stretcher, being carried away from a river. This scene is among the most sensationalistic in the crime news shown to respondents prior to the recall exercise. Considering that heavier viewers may become desensitized to general visuals in crime news, the more morose, sensationalistic shots may be what makes an impression on them. The plausibility of this explanation is supported by research that showed higher recall of visual information in stories that contained "compelling images" (Newhagen & Reeves, 1992).

The Male Sound Bites, Recall, and Exposure

Whether looking at individual treatment groups, or the respondents as a whole, viewers who remembered the male sound bites were significantly lighter news and local news viewers than those who did not remember the sound bites. As can be seen in Table 6, the most significant difference was for the combined respondents for weekly local news viewing.

Those who recalled the male sound bites viewed an average of 1.7 hours of local news per week, versus 3.65 hours for those who did not recall the male sound bites ($t=3.56$, $df=66$, $p \leq .001$). For these and all other t-tests in the analysis, data were produced for both equal and unequal variances. Levine's Test for Equality of Variance was used to determine if the variance for each test was equal or unequal. An asterisk is used within the tables to identify cases for which the variance was unequal.

Why did the lighter but not heavier viewers recall the visual? The audio track accompanying the male sound bites did not appear to make an impact, as the findings were significant in both treatment groups. In other words, whether respondents saw and heard the male sound bites, or only saw the men being interviewed, those who recalled them were significantly lighter viewers than those who did not recall them. Perhaps heavier news viewers are so accustomed to the "talking head," that this type of shot did not make an impression strong enough for recall. Lighter viewers, on the other hand, may have focused more on what was said, or facial features and emotions to facilitate recall. In addition, a control test for gender showed that a significantly greater percent of males in the view-only treatment group recalled the male sound bites. Without the audio, males may have processed the facial visuals more deeply, facilitating recall.

Table 6. T-Tests: Differences in Mean Exposure Levels for Respondents Who Did and Did Not Recall Male Sound Bite--Non-authority (Significant Results Only)

Treatment Group	Exposure Type	# Cases per Recall Group	Mean # Hours Viewed	SD
View & Hear	Weekly News*	No Recall 23	4.78	4.13
		Recall 22	2.48	2.28
	t 2.33 df 35 p ≤ .05			
	Weekly Local News*	No Recall 23	3.57	3.19
Recall 22		1.86	1.78	
t 2.22 df 35 p ≤ .05				
View Only	Weekly Local News*	No Recall 17	3.76	2.65
		Recall 15	1.43	1.88
t 2.90 df 29 p ≤ .01				
Both	Weekly News*	No Recall 40	4.86	3.99
		Recall 37	2.70	2.60
	t 2.83 df 68 p ≤ .01			
	Weekly Local News*	No Recall 40	3.65	2.93
Recall 37		1.69	1.81	
t 3.56 df 66 p ≤ .001				

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

The Rural River Scene, Recall, and Exposure

Table 7 points out that for the view-only treatment group and the groups combined, respondents who recalled the rural river scene were significantly lighter television viewers than those who did not recall the visual. The

finding supports the hypothesis that significant differences in exposure exist between those who recall and do not recall crime news visuals. Although the shot depicted a crime scene, that may not have been readily apparent, making it more difficult for heavier viewers to recall. More sensational, morbid, or graphic visuals may be needed for heavier viewers to process deeply enough to allow for free recall.

Notably, the view & hear treatment showed no significant difference in exposure based on recall, while the view-only group did. This suggests the audio narration may have made an impact on recall of the river scene. The visual context provided to the view-only group by adjacent scenes may have aided lighter viewers in recalling this visual. Without the audio, shots may have been perceived as better connected to one another, aiding recall. The notion of "visual connectedness" has been shown to be related to visual recall (Young & Robinson, 1992).

Table 7. T-Tests: Differences in Mean Exposure Levels for Respondents Who Did and Did Not Recall Rural River Scene (Significant Results Only)

Treatment Group	Exposure Type	# Cases per Recall Group	Mean # Hours Viewed	SD
View Only	Television Weekly*	No Recall 16	14.78	9.93
		Recall 16	8.22	8.00
	t 2.06			
	df 29			
	p ≤ .05			

Both	Television	No Recall	40	1.84	1.97
	Yesterday	Recall	37	1.05	1.25
	t				
	df				
	p ≤				
	2.06				
	75				
	.05				

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

The Parking Lot, Exposure, and Recall

As the following table illustrates, respondents in the view & hear treatment group who remembered the parking lot were significantly lighter television viewers than those who did not remember the visual. This is another generic scene which may not have been processed deeply enough by heavier viewers to be recalled.

Table 8. T-Tests: Differences in Mean Exposure Levels for Respondents Who Did and Did Not Recall Parking Lot (Significant Results Only)

Treatment Group	Exposure Type	# Cases per Recall Group	Mean # Hours Viewed	SD	
View & Hear	Television Yesterday*	No Recall	29	1.55	1.80
		Recall	16	.72	.80
	t				
	df				
	p ≤				
	Television Weekly*	No Recall	29	10.62	8.23
		Recall	16	5.91	4.62
	t				
	df				
	p ≤				

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $\leq .05$)

Body on Stretcher, Exposure, and Recall

For the view-only group, respondents who remembered the visual of a body being carried on a stretcher were considerably heavier television viewers than those who did not remember it. This is the only case in which respondents who remembered the visual were heavier viewers than those who did not recall. What might explain this finding? The shot may be considered sensationalistic, as it depicts a murder victim in a body bag. It is also one of the more crime-specific visuals in the stories shown to respondents, and may be representative of the fare viewers consume in crime dramas and other entertainment programming. Recall, that the measure in this test was television viewing, not news-specific. And considering that roughly one-fourth of all prime-time programming since the 1960s has directly focused on crime or law enforcement (Surette, 1992), the likelihood exists that heavier viewers have repeatedly been exposed to shots of bodies on stretchers. The finding indicates that there is a difference in the types of visuals recalled by heavier and lighter viewers, with those who watch more television remembering morose and sensational scenes.

The fact that the finding holds for the view-only group indicates that the audio may have taken the scene out of context in terms of crime drama viewing. In other words, heavier television viewers may be used to seeing a scene of

a body being carried away on a stretcher without accompanying verbiage, or with music playing under the scene. So, the heavier viewers in the audio/visual treatment group may have recalled the body visual less frequently than they might have if they had seen it in the context they are used to seeing. In addition, a crosstabulation control test for gender showed that a significantly greater percent of males in the view-only group recalled the body on the stretcher. Perhaps without the audio track, visual processing for males is more acute.

Table 9. T-Tests: Differences in Mean Exposure Levels for Respondents Who Did and Did Not Recall Body on Stretcher (Significant Results Only)

Treatment Group	Exposure Type	# Cases per Recall Group	Mean # Hours Viewed	SD
View Only	Television Weekly	No Recall 18	8.31	5.98
		Recall 14	15.61	11.63
	t -2.31			
	df 30			
	p ≤ .05			

The Hi-Rise Building, Exposure, and Recall

As Table 10 illustrates, respondents in the view-only treatment who recalled the hi-rise building were lighter local news viewers than those who did not remember the shot. Again, this building shot is another generic visual that may not be memorable enough for the heavier viewers to process deeply enough for recall.

Table 10. T-Tests: Differences in Mean Exposure Levels for Respondents Who Did and Did Not Recall Hi-Rise Building (Significant Results Only)

Treatment Group	Exposure Type	# Cases per Recall Group	Mean # Hours Viewed	SD
View Only	Local News Weekly*	No Recall 20	3.38	2.81
		Recall 12	1.50	1.61
	t 2.40			
	df 30			
	p ≤ .05			

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

The Drug Arrest, Exposure, and Recall

As Table 11 illustrates, respondents in both treatment groups who recalled the drug arrest visual were also significantly lighter television viewers than those who did not recall the shot. Because of the rather sensationalistic subject matter of this shot--a large black undercover agent with a rifle escorting a smallish suspect; and other police and a suspect walking together--respondents who recalled the shot should have been the heavier viewers. However, the shot may not be considered as sensationalistic as the body on a stretcher. One depicts arrest, the other, death.

Story placement and length were likely factors in recall of this visual. It appeared last and ran for approximately 20 seconds--much longer than the usual three-to-five-second shot used in most stories. A very high percentage of respondents in each group recalled this shot, 84 percent in the view & hear group, and 81 percent in the view-only group. This makes the number of respondents who

did not recall the shot very small, possibly influencing the outcome of the test.

Table 11. T-Tests: Differences in Mean Exposure Levels for Respondents Who Did and Did Not Recall Drug Arrest (Significant Results Only)

Treatment Group	Exposure Type	# Cases per Recall Group	Mean # Hours Viewed	SD
Both	Television Yesterday	No Recall 13 Recall 64	2.65 1.22	2.63 1.35
	Television Weekly*	No Recall 13 Recall 64	14.81 9.03	7.80 8.19
	t 2.91 df 75 p ≤ .01			
	t 2.36 df 18 p ≤ .05			

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Differences in What Heavier and Lighter Viewers Recall

The finding that stands out in this group of tests shows that only in the case of a very sensationalistic image--a murdered woman in a body bag being carried away on a stretcher--did significantly heavier viewers recall the visual. For all other significant findings, respondents who recalled visuals were lighter viewers. Those visuals were, for the most part, generic, rather than crime-specific in nature. They included sound bites, a parking lot, and a hi-rise building. Two others may have appeared related to

crime. They include a rural river scene, and undercover police escorting suspected drug dealers.

The stretcher shot, as well as the rural river, the parking lot, and some of the male sound bites, were featured in the first story. Story placement in relationship to differences in lighter and heavier viewers' recall is not likely at work here.

As a whole, this group of findings supports the hypotheses that significant differences in television exposure, television news exposure, and local television news exposure exist between respondents who do and do not recall particular crime news visuals. The question for this set of hypotheses asked if recall of specific visuals differs based on level of exposure. Those who recalled the more sensationalistic visual, the body on the stretcher, were found to be heavier viewers. This supports what the literature would predict.

What alternative explanations might be used to interpret the finding? Females were not more likely to recall the shot. In fact, in the view-only group, which yielded the significant result, 75 percent of males recalled the shot, while only 33 percent of females recalled it. Having known a victim of crime may have made a difference in the recall of the shot. In the view-only group, 55 percent of respondents who recalled the body on the stretcher knew a victim of crime. In the view & hear group, where the

results were not significant, only 22 percent of those who recalled the shot knew a victim of crime.

Visual Recall and Concern About Crime

Question F: Is there a relationship between visual recall of crime news and concern about crime?

Correlations yielded very little support for the hypothesis addressing this question, H7: **Visual recall of crime news is positively related to concern about crime.** In tests of the relationship between recall number and 15 individual concern about crime measures as well as four indexes, the only significant result was found in the view and hear treatment group. Its respondents who recalled a greater number of visuals also reported a greater likelihood of having something stolen from them within the next year, ($R=.30$, $P=.05$, 45 cases). In the view-only group, the relationship was negative and statistically insignificant. Perhaps the context provided to those visuals by the audio track made an impact on respondents' perceptions of the safety of their personal property.

The finding also indicates that number of visuals recalled is not a good predictor of concern about crime. Type of visual recalled, as can be seen in the following section, is much more useful in relation to concern about crime.

Type of Visual Recalled and Concern About Crime

Question G: How does type of visual recalled relate to concern about crime?

This area of inquiry was addressed with t-tests for differences in mean concern about crime scores between respondents who did and did not recall particular visuals. The concern about crime measures included four indexes and 15 individual measures. The concern about crime index represents the total score of the 15 individual measures. The personal victimization index includes the score for questions about assault, burglary, and theft. The general safety index represents the total score for six questions about crime and the "average person." For example, "How safe do you think it is for the average person to walk alone in downtown Seattle at night?" The prevention behavior index reflects the total score for six questions regarding actions taken by respondents to prevent crime, such as locking doors, and avoiding certain areas. As can be seen in Tables 12 through 21, nine of the 12 crime news visuals tested showed significant score differences between the viewers who recalled them and those who did not.

For these significant findings, the visuals that were more directly related to crime were associated with higher concern about crime scores for respondents who recalled them. In other words, respondents who remembered seeing a rural river scene (murder scene), a murder victim's picture,

a convenience store surveillance video (perpetrator at large), and heavily armed undercover police arresting suspected drug dealers, had higher concern about crime scores than those who did not recall these shots. Respondents who recalled seeing an anchor person also had higher concern about crime scores. Viewers who recalled seeing the more general shots, such as a reporter, female and male sound bites, and a hi-rise building, had lower concern about crime scores. Table 12 groups visuals recalled into two categories--crime-specific, and general, and shows how they relate to higher concern about crime. For example, respondents who recalled crime-specific visuals in the view & hear treatment group, the view-only group, and in both groups combined, scored higher on the concern about crime index (total of all concern about crime measures), than those who did not recall the visual. Respondents who did not recall the general visuals also scored higher on the concern about crime index.

These findings strongly support the premise that type of visual recalled is related to concern about crime.

**Table 12. Type of Visual and
Higher Concern About Crime**

Concern About Crime Measures	Crime-Specific Visuals*	General Visuals**
	Treatment Group with Higher Scores that Recalled (R) /did not Recall (NR) Visual	Treatment Group with Higher Scores that Recalled (R) /did not Recall (NR) Visual
Concern About Crime Index	View & Hear (R) View Only (R) Both (R)	Both (NR)
General Safety Index	View & Hear (R) View Only (R) Both (R)	
Prevention Behavior Index	View & Hear (R) View Only (R) Both (R)	View & Hear (NR) View Only (NR) Both (NR)
Likelihood Something Stolen From You		View Only (NR) Both (NR)
Concern for Safety on Buses	View & Hear (R) View Only (R) Both (R)	View & Hear (R)
Concern for Safety in Parks	View & Hear (R) View Only (R) Both (R)	View & Hear (NR) Both (NR) (R)
Concern for Safety Downtown	View & Hear (R) View Only (R) Both (R)	View Only (NR)
Lock Doors & Windows at Home	View Only (R)	View & Hear (NR) View Only (NR) Both (NR)
Lock Car while Driving	View & Hear (R) Both (R)	
Go Out With Someone Due to Concern About Crime	View & Hear (R) Both (R)	View & Hear (NR) View Only (NR) Both (NR)

Avoid Places After Dark	View & Hear (R) View Only (R) Both (R)	View & Hear (NR) View Only (NR) Both (NR)
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*Respondents who recalled a visual in this category had higher concern about crime scores

**Respondents who did not recall a visual in this category had higher concern about crime scores

Anchor Persons, Recall, and Concern About Crime

Table 13 shows that respondents as a whole, and from the view & hear treatment, who recalled anchor person visuals had higher concern about crime scores than those who did not recall them. This was true for: likelihood of being assaulted on a metro bus at night, and level of danger to children playing alone in local parks during the day. Why were anchor persons related to safety on buses and in parks? Perhaps respondents remembered the anchor persons because of what they reported regarding crime. The audio narration may have somehow related to respondents' concern about crime in these two areas. Transit crime was the focus of one story, which could have related to the concern about crime measure concerning buses. Other stories concerning murder and rape in rural areas may have related to respondents' perception of children's safety in parks.

The same respondents had lower scores when it came to how often they locked their windows at home. On the surface, it seems contradictory that these respondents would be concerned over bus and park safety, but not lock their windows at home. However, the bus and park comprise the

world "out there," not the safety of one's own home. These viewers may have perceived the anchor person's delivery of crime news to pertain to areas other than their own neighborhoods. This line of reasoning follows findings that suggest fear of distant urban areas and fear of the immediate neighborhood are substantially different (Heath & Petraitis, 1987). Alternative explanations include the bus ridership of the sample, and the type of residence in which respondents live. For example, people who live on the fourth floor may not lock their windows when they leave home.

Table 13. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Anchor Persons Visuals (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Likelihood Average Person Assaulted or Robbed on Bus at Night (7=Extremely Likely)	View & Hear*	No Recall 32	4.19	1.53
		Recall 13	5.23	1.30
	t -2.31			
	df 26			
	p ≤ .05			
Safety of Child in Park Alone (7=Not Safe at All)	Both Groups*	No Recall 47	5.13	1.26
		Recall 30	5.87	1.25
	t -2.52			
	df 62			
	p ≤ .01			

How Often Lock Windows at Home (7=Always)	View & Hear*	No Recall 32	4.91	1.77
	t 2.20	Recall 13	3.54	1.94
	df 21			
	p ≤ .04			
	Both Groups	No Recall 47	5.23	1.61
	t 1.98	Recall 30	4.40	2.06
	df 75			
	p ≤ .05			

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Reporters, Recall, and Concern About Crime

As Table 14 illustrates, respondents in the view-only group who recalled reporters on the scene had lower concern about crime scores than those who did not recall the visual. Viewers who recalled the visual felt it was safer to walk alone in downtown Seattle during the day, and locked their windows less frequently than those who did not recall the visual. What might explain this? In two out of three reporter visuals viewed by respondents, the reporters stood outside police stations that were clearly marked as such. Recall that these respondents did not hear the audio track to the crime stories, but only saw the visuals. Perhaps the viewers associated the police stations with protection or safety, which in turn, may have been related to their conceptions of safety in Seattle's downtown area, where they reported it safer to walk, as well as safety in their own home, where they less frequently lock their windows.

Table 14. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Reporters on the Scene Visuals (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Average Person Safe Walking Downtown Alone During Day (7=Not at all Safe)	View Only* t 2.19 df 19 p ≤ .05	No Recall 22 Recall 10	3.59 2.80	1.01 .92
How Often Lock Windows at Home (7=Always)	View Only t 2.48 df 30 p ≤ .05	No Recall 22 Recall 10	5.92 4.50	1.11 2.12

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at ≤ .05)

Female Sound Bites, Recall, and Concern About Crime

Both treatment groups combined, as well as individually, showed significant results in this category, as Table 15 illustrates. First, consider respondents as a whole, and in the view-only group. Those who recalled female sound bites, felt it was less likely than those who did not recall the visual, that they would have something stolen from them within the next year. The fact that there was no verbal context provided to respondents in the view-only group, may have made a difference in the outcome of this test. However, respondents who recalled female sound bites and had heard what the women said, also had lower concern about crime scores than those who did not remember the visual. They locked their doors at home less often, and felt it was less likely they would avoid certain areas

because of crime, than respondents who did not recall the visuals. The women in the crime stories talked about: 1) a daughter who had been murdered; 2) locking windows at home for fear of a rapist; and 3) an elderly woman who had been killed in her apartment. The audio does not help to explain the finding, as it appears unrelated to leaving doors unlocked at home, and not avoiding certain areas because of crime. Other factors, or perhaps a problem with the measure, may have contributed to the findings.

Table 15. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Female Sound Bites--Non-Authority (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
How Often Lock Doors at Home (7=Always)	View & Hear*	No Recall 9 Recall 36	6.56 5.69	.53 1.55
	t 2.76 df 39 p ≤ .01			
	Both Groups*	No Recall 20 Recall 57	6.55 6.07	.69 1.35
	t 2.04 df 65 p ≤ .05			
Likelihood of Avoiding Places After Dark (7=Extremely Likely)	View & Hear*	No Recall 9 Recall 36	6.56 5.56	.53 1.68
	t 3.02 df 41 p ≤ .01			

Likelihood of Something Stolen from You in Next Year (7=Extremely Likely)	View Only*	No Recall 11	5.00	1.55
	t 2.75	Recall 21	3.43	1.50
	df 20			
	p ≤ .01			
	Both	No Recall 20	4.70	1.53
	Groups*	Recall 57	3.84	1.61
	t 2.13			
	df 35			
	p ≤ .05			

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Male Sound Bites, Recall, and Concern About Crime

This is another case in which respondents who recalled the visual had lower concern about crime scores than those who did not recall the shot. This is true for respondents who heard the male sound bites, as well as those who only saw them. The concern about crime measures are all different from those of significance with the female sound bites. As Table 16 illustrates, respondents who recalled the male sound bites reported local parks to be safer, felt walking downtown with another person at night was safer, and went out after dark alone more often than those who did not recall the visuals. As noted earlier, males recalled the male sound bite more often. Males in general, may feel safer than females in the situations noted above.

Table 16. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Male Sound Bites--Non-Authority (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Safety of Child in Park Alone (7=Not at all safe)	View & Hear t 2.14 df 43 p .04	No Recall 23 Recall 22	5.65 4.86	1.27 1.21
	Both Groups* t 2.03 df 73 p ≤ .05	No Recall 40 Recall 37	5.70 5.11	1.22 1.33
Safety of Average Person Walking Downtown with Another Person at Night (7=Not at all safe)	View Only* t 2.33 df 30 p ≤ .05	No Recall 17 Recall 15	5.12 4.13	1.27 1.13
How Often Go Out at Night with Another Person (versus alone) Because of Concern About Crime (7=Always)	View Only* t 2.67 df 28 p ≤ .01	No Recall 17 Recall 15	4.59 2.60	1.91 2.26
	Both Groups t 2.28 df 75 p ≤ .05	No Recall 40 Recall 37	4.65 3.54	1.90 2.35

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Rural River Scene, Recall, and Concern About Crime

As can be seen in Table 17, respondents who did not hear the audio track showed the most significant results for this visual. The respondents in that group who recalled the rural river scene had higher concern about crime scores in

several areas. They scored higher on three of four aggregate measures: the concern about crime index (sum of all 15 individual measures); the general safety index (sum of six measures pertaining to general safety); and the prevention behavior index (sum of six measures). Individual measures for which they scored higher included: danger to children in local parks; danger in downtown Seattle at night, while alone or with another person; how frequently they locked their doors at home; and the likelihood they would avoid certain places at night.

The view-only group received no verbal context for the shot. However, the visual context that may have been provided through other shots throughout the story (i.e. uniformed police, body in field), may have suggested the river shot was a crime scene. Relating the shot to danger in parks makes sense, as the river scene looks like a park. The shot might also represent the kind of place respondents would avoid at night.

The context provided the shot in the view & hear group may have made the difference in terms of recall and its relationship to concern about crime.

Table 17. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Rural River Scene (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Concern About Crime Index (Maximum=105)	View Only* t -2.56 df 28 p ≤ .05	No Recall 16 Recall 16	63.81 74.56	13.26 10.36
General Safety Index (Maximum=42)	View Only* t -2.65 df 30 p ≤ .01	No Recall 16 Recall 16	25.19 29.69	5.09 4.48
Prevention Behavior Index (Maximum=42)	View Only* t -2.10 df 28 p ≤ .05	No Recall 16 Recall 16	29.25 34.56	8.16 6.01
Safety of Child in Park Alone (7=Not Safe at All)	View Only* t -3.02 df 29 p ≤ .01	No Recall 16 Recall 16	5.00 6.25	1.27 1.07
Safety of Average Person Walking Downtown Alone at Night (7=Not at all Safe)	Both Groups* t -2.37 df 75 p ≤ .05	No Recall 40 Recall 37	5.58 6.16	1.13 1.04
Safety of Average Person Walking Downtown with Another Person at Night (7=Not at all Safe)	View Only* t -2.53 df 30 p ≤ .05 Both Groups* t -2.30 df 75 p ≤ .05	No Recall 16 Recall 16 No Recall 40 Recall 37	4.13 5.19 4.28 4.92	1.20 1.17 1.30 1.14
How Often Lock Doors at Home (7=Always)	View Only t -2.18 df 30 p ≤ .05	No Recall 16 Recall 16	6.44 6.89	.73 .34

How Often Go Out at Night with Another Person (versus alone) Because of Concern About Crime (7=Always)	View & Hear t 2.14 df 43 p ≤ .05	No Recall 24 Recall 21	5.04 3.76	1.76 2.26
Likelihood of Avoiding Places After Dark (7=Extremely Likely)	View Only t -2.03 df 30 p ≤ .05	No Recall 16 Recall 16	4.63 6.06	2.31 1.65

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at ≤ .05)

Murder Victim Photo, Recall, and Concern About Crime

Table 18 reports that in both treatment groups combined, respondents who recalled the murder victim's photo also felt it was more likely that people would be assaulted or robbed on a Seattle area bus at night. The woman had been killed at night, after leaving a public place, but these connections to safety on a bus are rather weak.

Table 18. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Photo of Victim (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Likelihood Average Person Assaulted or Robbed on Bus at Night (7=Extremely Likely)	Both Groups* t -2.04 df 45 p ≤ .05	No Recall 53 Recall 24	4.36 5.08	1.44 1.44

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at p ≤ .05)

**Surveillance Video (Robbery Suspect), Recall, and
Concern About Crime**

This shot, taken from a convenience store surveillance video, pictures an alleged robbery in progress. It features a medium shot of the suspect in black and white. The two treatment groups combined, and each individual group separately, showed significant results for this shot, as Table 19 illustrates. For every significant finding, the respondents who recalled this visual had higher concern about crime scores than those who did not recall it. Every concern about crime measure that showed a significantly higher score for respondents who recalled the visual dealt with the world "out there," beyond the safety of one's home. In other words, viewers who remembered the robbery suspect also scored higher in such areas as: the likelihood of an average person being robbed or assaulted on a bus during the day and at night; how often respondents locked their cars while driving; and the likelihood that respondents will avoid certain areas because of concern about crime.

The story related to this visual provided both audio and visual context, with narration and text on the screen referring to the man pictured as a robbery suspect. Text also identified the visual as "store surveillance video." Respondents in both treatment groups likely interpreted the scene as it was intended--a man allegedly robbing a store. The higher concern about crime scores pertain to danger in

public places. The alleged crime pictured in the video was committed in public. Recalling this visual connects well with the areas of concern about crime generating higher scores.

The cognitive process in this case, may involve remembering the convenience store robbery suspect based on conceptions of danger in public. This line of thinking also relates to the observation that none of the crime prevention measures specific to respondents' homes, or measures of likelihood of personal victimization produced significant findings.

Table 19. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Robbery Suspect Surveillance Video (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Concern About Crime Index (Maximum=105)	View & Hear*	No Recall 22 Recall 23	62.32 72.61	13.71 11.62
	t -2.71 df 41 p ≤ .01			
	Both Groups*	No Recall 35 Recall 42	63.23 72.43	13.83 11.28
	t -3.16 df 66 p ≤ .01			

General Safety Index (Maximum=42)	View & Hear*	No Recall 22 Recall 23	24.68 28.52	5.29 4.87
	t -2.53 df 42 p ≤ .05			
	Both Groups*	No Recall 35 Recall 42	24.94 28.67	5.19 4.83
	t -3.23 df 70 p ≤ .01			
Prevention Behavior Index (Maximum=42)	View & Hear*	No Recall 22 Recall 23	28.14 33.26	7.01 7.00
	t -2.45 df 43 p ≤ .05			
	Both Groups*	No Recall 35 Recall 42	28.86 33.21	7.72 6.64
	t -2.63 df 68 p ≤ .01			
Likelihood Average Person Assaulted or Robbed on Bus During Day (7=Extremely Likely)	Both Groups	No Recall 35 Recall 42	2.77 3.60	1.09 1.73
	t -2.45 df 75 p ≤ .05			
Likelihood Average Person Assaulted or Robbed on Bus at Night (7=Extremely Likely)	View Only*	No Recall 13 Recall 19	4.08 5.16	1.12 1.43
	t -2.29 df 30 p ≤ .05			
	Both Groups*	No Recall 35 Recall 42	4.06 5.02	1.35 1.44
	t -3.04 df 74 p ≤ .01			

Safety of Child in Park Alone (7=Not at all Safe)	View & Hear* t -2.13 df 39 p ≤ .05	No Recall 22 Recall 23	4.86 5.65	1.39 1.07
	Both Groups t -2.07 df 75 p ≤ .05	No Recall 35 Recall 42	5.09 5.69	1.44 1.12
Safety of Average Person Walking Downtown Alone During Day (7=Not at all Safe)	Both Groups* t -1.96 df 71 p ≤ .05	No Recall 35 Recall 42	3.03 3.55	1.18 1.13
Safety of Average Person Walking Downtown Alone at Night (7=Not at all Safe)	View & Hear t -2.23 df 43 p ≤ .05	No Recall 22 Recall 23	5.59 6.26	1.18 .81
How Often Lock Car When Driving (7=Always)	View & Hear* t -2.51 df 42 p ≤ .05	No Recall 22 Recall 23	3.41 5.00	1.94 2.30
	Both Groups* t -2.65 df 74 p ≤ .01	No Recall 35 Recall 42	3.57 4.95	2.20 2.36
How Often Go Out at Night with Another Person (versus alone) Because of Concern About Crime (7=Always)	View & Hear t -2.55 df 43 p ≤ .05	No Recall 22 Recall 23	3.68 5.17	2.19 1.72
	Both Groups* t -2.72 df 71 p ≤ .01	No Recall 35 Recall 42	3.40 4.71	2.17 2.04

Likelihood of Avoiding Places After Dark (7=Extremely Likely)	View & Hear	No Recall 22	5.23	1.85
	t -2.32 df 43 p ≤ .05	Recall 23	6.26	1.05
	Both Groups	No Recall 35	5.09	2.19
	t -2.27 df 75 p ≤ .05	Recall 42	6.00	1.31

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Hi-Rise, Recall, and Concern About Crime

Respondents who recalled this visual had lower concern about crime scores than those who did not recall it.

Viewers who did not recall the hi-rise building might have been focusing on the more crime-specific shots. See Table 20 below for details.

Table 20. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Hi-Rise Building (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Concern About Crime Index (Maximum=105)	Both Groups*	No Recall 41	71.07	11.12
	t 2.00 df 64 p ≤ .05	Recall 36	65.03	14.83

Prevention Behavior Index (Maximum=42)	View & Hear t 2.06 df 43 p ≤ .05	No Recall 21 Recall 24	33.10 28.71	5.38 8.37
	View Only t 2.38 df 30 p ≤ .05	No Recall 20 Recall 12	34.20 28.08	5.68 8.91
	Both Groups t 3.20 df 75 p ≤ .01	No Recall 41 Recall 36	33.63 28.50	5.49 8.43
Safety of Average Person Walking Downtown with Another Person at Night (7=Not at all Safe)	Both Groups* t 2.21 df 69 p ≤ .05	No Recall 41 Recall 36	4.88 4.25	1.12 1.34
How Often Lock Doors at Home (7=Always)	View Only t 2.55 df 30 p ≤ .05	No Recall 20 Recall 12	6.85 6.33	.37 .78
	Both Groups* t 2.26 df 63 p ≤ .05	No Recall 41 Recall 36	6.49 5.86	1.00 1.38

Likelihood of Avoiding Places After Dark (7=Extremely Likely)	View & Hear	No Recall 21	6.38	.87
		Recall 24	5.21	1.84
	t 2.67			
	df 43			
	p ≤ .01			
	View Only	No Recall 20	5.95	1.54
		Recall 12	4.33	2.57
	t 2.24			
	df 30			
p ≤ .05				
Both Groups	No Recall 41	6.17	1.24	
	Recall 36	4.92	2.12	
t 3.22				
df 75				
p ≤ .01				

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Drug Arrest, Recall, and Concern About Crime

Respondents who recalled this shot had higher concern about crime scores than those who did not recall it, as Table 21 illustrates. Significant findings clustered in three areas--all featuring concern about crime in the public realm. In other words, respondents who recalled versus those who did not recall the drug arrest felt that it was more likely the average person would be robbed on a bus during the day, and that it was less safe to walk downtown alone during the day. They also reported greater likelihood that after dark, they would go out with another person (rather than alone) because of concern about crime.

This shot features undercover police officers escorting suspected drug dealers outside a building. All are black males. A bulky officer holds a rifle in one hand and a suspect in the other. At one point during the story, the

words "Central Lock-Up" appear on the screen to identify the location. The shot likely represents crime in an urban location, an area that may be perceived as a distance from respondents' own homes or neighborhoods. The shot's representation appears to connect with viewers' concern about crime on a bus, downtown, or in certain places after dark--all locations that were associated with higher concern about crime scores for respondents who recalled the visual.

Table 21. T-Tests: Differences in Mean Concern About Crime Scores for Respondents who Did & Did Not Recall Drug Arrest (Significant Results Only)

Concern About Crime Measures	Treatment Group	# Cases per Recall Group	Mean	SD
Likelihood Average Person Assaulted or Robbed on Bus During Day (7=Extremely Likely)	View & Hear* t -2.77 df 14 p ≤ .05	No Recall 7	2.14	.90
		Recall 38	3.32	1.56
	Both Groups* t -2.61 df 24 p ≤ .05	No Recall 13	2.46	1.05
		Recall 64	3.38	1.56
Safety of Average Person Walking Alone Downtown During Day (7=Not at all Safe)	Both Groups* t -2.20 df 21 p ≤ .05	No Recall 13	2.77	.93
		Recall 64	3.42	1.19

How Often Go Out at Night with Another Person (versus alone) Because of Concern About Crime (7=Always)	Both Groups*	No Recall 13	2.92	2.18
	t -2.18 df 17 p ≤ .05	Recall 64	4.36	2.13

*Unequal Variances (Based on Levene's Test for Equality of Variance--Equal at $p \leq .05$)

Summary of Findings for Visuals Recalled and Concern

About Crime

This set of t-tests shows that recall of crime-specific visuals relates to higher concern about crime. In many cases, the concern was expressed for the "average person" rather than the respondents themselves. However, crime prevention behaviors (such as locking windows and avoiding certain places after dark) indicated personal concern about crime, although indirectly. The visual most associated with concern about crime featured a close-up of a robbery suspect from a convenience store surveillance camera. Respondents who recalled the robbery suspect also showed higher concern about crime in public places: on buses, and walking downtown both during the day and at night; and in parks. Their prevention behaviors also related to the world outside their own homes--locking their cars while driving, avoiding certain places after dark, and going out after dark with another person rather than alone.

While the data show relationships between recall of crime-specific visuals and higher concern about crime, they

do not reveal the direction of those relationships. Do respondents recall the visuals because they already have a higher concern about crime? Or does the act of recalling the visual contribute to heightened concern for crime? These questions might be addressed in future studies.

Television Exposure and Meanings of Local Crime News Visuals

Question H: How do meanings viewers construct from crime news visuals relate to level of exposure?

The hypothesis that addresses this question predicts significant differences in meaning between heavier and lighter viewers.

H10: The meanings heavier television viewers construct from crime news visuals differ significantly from the meanings constructed by lighter television viewers. The differences are apparent whether or not verbal context is provided to the visuals.

Four measures addressed the hypothesis: 1) semiotic meaning; 2) response identification; 3) focus on crime; and 4) viewer orientation. Recall that these meanings were measured by asking respondents what came to mind after seeing each of 14 crime news visuals, and then coding for each of the measures. Data were analyzed: 1) using each of 14 visuals with each measure; and 2) using the 14 visuals together (as a total score) with each of the following

measures: semiotic meaning, focus on crime, and viewer orientation.

A discussion of the second, more general approach, follows, for each of the three measures. Then, each of the 14 visuals is considered individually including results for each measure.

General Visual Analysis for Meaning

Semiotic Meanings of Local Crime News Visuals

Recall the semiotic categories used in this analysis. Category 1 concerns the picture as the thing it depicts. For example, a picture of a six-year-old boy reaching for a handgun on a nightstand might be described as "boy and gun," in Category 1. In Category 2a, meaning is based on cultural knowledge. A response to the same picture in this category might be, "That boy is going to get hurt or killed!" Taking the category one step further, might be the Category 2b response, "That boy is going to accidentally kill his playmate." Note that this response goes beyond what is feasible based on what is evident in the picture. No playmate is present, yet the respondent builds that element into the picture. And finally, a Category 3 response is global or societal in nature. It, too, is based on cultural knowledge, but generally specifies a social issue. For example, "We need tougher gun controls," is an example of a Category 3 response for the picture described above.

As Table 22 illustrates, the distribution of responses into semiotic categories varies by treatment group. Respondents who saw and heard the crime stories related to the freeze frames, assigned nearly three-fourths of meanings to Category 2b (based on cultural knowledge, plus...). The less context provided the visual, the fewer responses fell into this category. The no-view treatment, which was provided no context, assigned the most "picture is the thing" meanings, but also, the most global/societal meanings.

The results indicate the audio track provided context used in constructing more abstract visual meaning. However, this format also seemed to inhibit issue-oriented meanings at the global/societal level.

**Table 22. Semiotic Categories by Treatment Group
(Percent of Total Responses for Each Group)**

Semiotic Categories	View & Hear N=45	View Only N=32	No View N=41
1 - Picture is the thing	11%	16%	19%
2a - Meaning based on cultural knowledge	13%	24%	21%
2b - Same as 2a, plus, goes beyond what is evident in picture	74%	57%	53%
3 - Global/Societal	1%	3%	7%

For this measure, the hypothesis predicts a difference between lighter and heavier viewers in the semiotic meanings

assigned to crime news visuals. This should hold regardless of the context provided the visuals, which is measured by the three treatment groups. T-tests for each of four semiotic categories and four exposure measures were executed for the entire sample population and for each treatment group.

Semiotic Meanings and the Entire Sample Population

Examining the sample population as a whole, no significant differences were found between lighter and heavier viewers in the four semiotic categories. Table 23 lists the mean number of visuals (of 14 total) for each category. Respondents most frequently assigned semiotic meanings to visuals based on cultural knowledge, going beyond what was evident in the pictures (Semiotic Category 2b). Both the heavier and lighter viewers in all four exposure measures did so. And while not statistically significant, the average score for Semiotic Category 2 meanings was higher for heavier than lighter viewers in most exposure measures. The biggest differences were between heavier and lighter news and local news viewers.

Table 23. Television Exposure and Semiotic Meanings of Crime News Visuals (Mean # of Responses in Each Category for Lighter and Heavier Viewers)*

Semiotic Categories	TV Yesterday	TV Weekly	News Weekly	Local News Weekly
1 - Picture is the thing	L 2.11 H 1.90	1.99 2.09	2.26 1.79	2.26 1.67
2a - Meaning based on cultural knowledge	L 2.57 H 2.48	2.27 2.84	2.52 2.55	2.51 2.57
2b - Same as 2a, plus, goes beyond what is evident in picture	L 8.17 H 8.74	8.41 8.33	7.98 8.80	8.06 8.87
3 - Global/Societal	L .53 H .52	.68 .35	.52 .54	.54 .50

*Table is based on t-tests for each exposure measure and semiotic category. None of the differences was significant.

Would differences between heavier and lighter viewers become significant if Semiotic Categories 2a and 2b were combined? As the literature does not make the distinction between the two levels made in the present study, separate t-tests were conducted for the combined Semiotic Category 2 with each exposure measure. As can be seen in Table 24, heavier news and local news viewers assigned Category 2 meanings to significantly more visuals than did lighter viewers.

Table 24. T-Tests: Semiotic Category 2 (Combined) and Exposure to News and Local News

Exposure	# of Cases		Mean	SD
Weekly News*	L	62	10.50	2.06
	H	56	11.36	1.84
Weekly Local News**	L	72	10.57	2.06
	H	46	11.43	1.79

*df=116, 2-tailed $t=-2.38$, $p \leq .05$, unequal variances

**df=116, 2-tailed $t=-2.34$, $p \leq .05$, unequal variances

This finding supports the hypothesis that meanings heavier viewers construct from crime news visuals differ significantly from those of lighter viewers. It also shows that distinct program viewing, specifically news and local news, plays a role in meaning construction. Heavier news viewers' greater experience with the programs' format and method of presenting information may make a difference in the way they assign meanings to visuals. For example, take a scene of police in the street at night. Heavier news viewers may have seen this type of visual many times before, connected with perhaps a murder or drug story. That store of audio and visual knowledge based on past news viewing may have provided the information used to assign meaning to the visual. So instead of just identifying the scene as "police in the street," a Category 1 response, they instead say "police investigating a murder," a Category 2 response. Why not Category 3--the global/societal meaning? A longtime criticism of television news may explain why. Consider a late evening local news program. With only 30 minutes to

cover the day's events from the local community to the world, the news is basically presented in snapshot incidents, rather than as in-depth issues. Heavier television news viewers may order their interpretation of these events in the same way. Instead of having an issue-orientation, heavy viewers may be event-oriented.

Semiotic Meanings and Individual Treatment Groups

Group 1: View and Hear. The hypothesis predicts a difference between lighter and heavier viewers in the semiotic meanings assigned to crime news visuals. For the view and hear treatment group, the analysis did not support the hypothesis. T-tests for each of four semiotic measures and four exposure measures showed no significant differences for respondents in this group. Combining the Category 2 semiotic measures yielded insignificant results as well.

Group 2: View Only. T-tests yielded a significant difference between heavier and lighter television (yesterday) viewers in the view-only treatment for Semiotic Categories 1, 2a, and 2b. All other tests including the combined Semiotic 2 measures showed insignificant differences between the viewers. As illustrated in Tables 25-27, the lighter viewers more often gave "the picture is the thing" responses when asked what came to mind when they saw the 14 crime news visuals. Heavier viewers gave fewer of this type of response, instead providing more detail and context. Their more frequent

television viewing could be contributing to their store of television-based cultural knowledge used to make sense of the visual information.

The fact that the findings were significant for the view-only group indicates that without audio context, lighter viewers chose the simplest meanings. But heavier viewers constructed more complex, abstract meaning, perhaps due to their experience with the visual medium.

**Table 25. T-Test: View-only Treatment Group
Semiotic Category 1 Meaning and
Television Exposure Yesterday**

# of Cases	Exposure	Mean	SD
18	Lighter	2.89	2.30
14	Heavier	1.43	1.40

df=29, 2-tailed $t=2.22$, $p \leq .05$, unequal variances

**Table 26. T-Test: View-only Treatment Group
Semiotic Category 2a Meaning and
Television Exposure Yesterday**

# of Cases	Exposure	Mean	SD
18	Lighter	3.89	1.68
14	Heavier	2.64	1.55

df=29, 2-tailed $t=2.18$, $p \leq .05$, unequal variances

**Table 27: T-Test: View-only Treatment Group
Semiotic Category 2b Meaning and
Television Exposure Yesterday**

# of Cases	Exposure	Mean	SD
18	Lighter	6.94	3.39
14	Heavier	9.29	1.98

df=28, 2-tailed $t=-2.45$, $p \leq .05$, unequal variances

Group 3: No View. For this group, a significant difference exists in the number of Semiotic Category 3 responses between lighter and heavier weekly television viewers. In this case, however, the lighter viewers had the higher scores. In other words, respondents who watched less television on a weekly basis more often noted global, societal meanings in the visuals they saw. It is likely that lighter viewers rely on sources other than television to make sense of their world. Those sources may provide more of an issue-orientation than does television.

**Table 28. T-Test: No-view Treatment Group
Semiotic Category 3 Meaning and
Weekly Television Exposure**

# of Cases	Exposure	Mean	SD
24	Lighter	1.38	1.53
17	Heavier	.47	.72

df=39, 2-tailed t=2.27, $p \leq .05$

Summary of the General Analysis for Semiotic Meaning

Drawing from the entire sample population, heavier news and local news viewers construct meanings from crime news visuals that go beyond simply what is pictured. They reflect the use of cultural knowledge, as their responses clustered in Semiotic Category 2. On average, meanings for more than 11 out of 14 visuals fell into this category, a significantly higher number than for lighter viewers.

Considering each treatment group individually, the difference did not hold for the view & hear group. In the

view-only group, lighter viewers focused more on "the picture is the thing," than did heavier viewers. And in the no-view treatment, lighter viewers offered more global, societal meanings than did heavier viewers.

Focus on Crime and Local Crime News Visuals

The Entire Sample Population and Focus on Crime: For this measure, the hypothesis suggests that respondents with higher television exposure will assign meanings to local crime news visuals that focus on crime, regardless of treatment group. Recall that the meanings each respondent assigned to 14 visuals were coded as either focusing or not focusing on crime. Differences in mean scores for meanings that focused on crime were explored using t-tests for each exposure variable. For the 14 visuals, heavier local news viewers had a significantly higher number of meanings that focused on crime than did the lighter viewers, as can be seen in Table 29.

Table 29. T-Test: Focus on Crime and Local News Exposure

Exposure Level	# of Cases	Mean	SD
Lighter	72	7.29	3.12
Heavier	46	8.65	3.21

df=94, 2-tailed $t=-2.27$, $p \leq .05$, unequal variances

This finding supports the hypothesis that the meanings heavier television viewers construct from crime news visuals differ significantly from the meanings constructed by

lighter television viewers. It also offers some insight into the cultivation process. First, heavier local news viewing, rather than television or general news viewing, made a difference in constructing meanings that focused on crime. This supports the assertion that specific program viewing is related to cultivation. It also underscores the differences between news and local news exposure, and illustrates the utility of making the distinction in measuring exposure.

Individual Treatment Groups and Focus on Crime: T-tests were executed for each treatment group as they were for the entire sample population. For these tests, the significant difference between heavier and lighter viewers appeared in the view-only treatment, for weekly television exposure. But instead of heavier viewers having higher scores as expected, the lighter viewers assigned meanings to visuals that focused on crime more often than did heavier viewers, as can be seen in Table 30.

The finding appears to contradict the results for the previous test, but it actually points out an important distinction between heavier television viewers and heavier local news viewers. Heavier local news viewers as a whole perceive more meanings that focus on crime, while heavier television viewers perceive fewer such meanings. Heavier television viewers may have more explicit, violent, and gory images of crime stored in memory, based on viewing crime in

entertainment programming. Those images could be used to process meanings of crime news visuals, which in comparison, may not appear to focus on crime. Stored images of the heavier local news viewers may not be as graphic, but instead, may represent to them, a news image of crime.

This explanation might be tested by showing respondents visuals from television crime drama as well as from local newscasts. Heavier viewers should identify the entertainment visuals as focusing on crime more often than they would the news visuals.

Table 30. T-Test: Weekly Television Viewing and Focus on Crime for View-only Treatment

Exposure	# of Cases	Mean	SD
Lighter	14	9.57	2.31
Heavier	18	7.44	3.28

df=30, 2-tailed $t=2.15$, $p \leq .05$, unequal variances

Specific Visual Analysis for Meaning

This section presents findings for each of 14 visuals and three measures of meaning. First, "response identification" gives a qualitative assessment of the meanings respondents assigned each visual. Next, findings on semiotic meanings are presented in tabular form. They include data from crosstabulations for each visual, controlling for treatment group. Focus on crime results follow. Viewer orientation is not analyzed in this section;

only in the previous section on general meaning analysis. The measure serves well as a total score to be used in correlations and t-tests, as was done in the previous section, but not in crosstabulations for the present section.

Visual #1: Rural River Scene

Response Identification: This wide shot features verdant foliage and a river, with people standing in the far background. Among those people are a few police officers, barely distinguishable as such.

For those respondents who saw and heard the crime news story from which this shot was taken, the most prevalent response focused on the assault or crime that had allegedly taken place there, information clearly taken from the audio track narration. Those who saw the story without hearing the narration focused on the body that was found there. Pictures of the victim's body lying, covered, in a field, and being carried away on a stretcher, may have contributed to the meaning assigned to the river shot. The group that had seen no crime news prior to seeing this visual identified it as a murder scene, crime scene, or death scene, as well as a river. This finding supports a premise of semiotics, in which television uses a constructed semiotic system to communicate culturally agreed, conventional meanings. The presence of police in the shot, though hardly distinguishable, may have been the anchor that

attached the crime-related meaning to the shot. And reaching into the underlying assumptions of cultivation research--that violent television reality relates to viewers' conceptions of their world--the process may be rooted not only in what is heard, but perhaps more importantly, what is seen.

Semiotic Meaning: Recall the four semiotic categories used in the present study: 1) the picture is the thing; 2a) meaning is based on cultural knowledge; 2b) meaning also based on cultural knowledge but goes beyond what is pictured; and 3) meaning is global or societal in nature. For the rural river visual, semiotic meanings varied by treatment group and exposure level. Not one respondent in the view & hear treatment identified the river as a river, yet in the no-view treatment, up to 40 percent of heavier viewers did see the picture as thing. A large percent of respondents in all three treatment groups went beyond the obvious in assigning meanings to this visual--moving into the cultural knowledge-plus category. This occurred more frequently for lighter viewers than for heavier viewers. And not one respondent constructed a global/societal meaning from the rural river visual. See Table 31 for specific percentages.

For this type of location shot, in which the connection to crime is vague, narrative or visual context seems to make a considerable difference in constructing semiotic meaning.

Yet exposure level also appears to play a role, as the lighter rather than heavier viewers scored higher on the semiotic abstraction ladder, so to speak. Perhaps heavier viewers rely more on stereotypic crime shots to construct more abstract semiotic meaning.

Table 31. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #1: Rural River Scene

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	00	00	07	20	93	80	00	00
	G2	11	00	28	21	61	79	00	00
	G3	19	33	31	33	50	33	00	00
TV Weekly	G1	00	00	08	15	92	85	00	00
	G2	00	11	14	33	86	56	00	00
	G3	13	40	30	33	57	27	00	00
News Weekly	G1	00	00	14	09	86	91	00	00
	G2	07	11	21	28	71	67	00	00
	G3	17	33	39	20	44	47	00	00
Local News Weekly	G1	00	00	13	09	87	91	00	00
	G2	05	08	21	31	74	62	00	00
	G3	19	36	33	27	48	36	00	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: Heavier news and local news viewers focused on crime more often than lighter viewers in their constructed meanings of the rural river scene. Table 32 illustrates these differences. But lighter television viewers, as opposed to news viewers, more often focused on

crime. The visual may not be crime-specific or sensationalistic enough to elicit meanings that focus on crime from heavier television viewers, who may base meanings on their store of violent crime scenes from entertainment television. Heavier news viewers, on the other hand, find this visual to focus on crime, likely basing that meaning on the general location scene often depicted in crime news.

Table 32. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #1: Rural River Scene

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	79	60
	View Only (N=32)	56	79
	No View (N=41)	42	25
TV Weekly	View & Hear	75	70
	View Only	79	56
	No View	44	27
News Weekly	View & Hear	73	73
	View Only	71	61
	No View	30	47
Local News Weekly	View & Hear	70	76
	View Only	63	69
	No View	37	36

Visual #2: Parking Lot

Response Identification: In this shot, cars and pick-up trucks are parked outside a one-story building identified by a sign as "New West."

The group that saw and heard the crime story associated with the picture focused on the building as the place the

victim was last seen. Both groups that had been given no audio context made prevalent mention of a store, or shopping when providing meaning to this shot. It was actually a country-western dance club. The consumer-orientation on which commercial television operates is evident in the meanings respondents assigned this visual.

Semiotic Meaning: As Table 33 illustrates, the view-only treatment group, more often than the other groups, found the parking lot shot to mean parking lot and nothing more. This was true for a greater percent of lighter viewers of each exposure type in the group. Heavier news and local news viewers in each group constructed more abstract semiotic meanings than lighter viewers. And very few respondents, only lighter viewers in the view-only treatment constructed global/societal meanings from the parking lot visual.

For this visual, one with virtually no indication of crime, heavier viewing, particular news exposure, appears associated with greater semiotic abstraction. News viewers may be more adept at interpreting this type of exterior landscape shot, as it is used frequently in news stories. In their visual coding of nearly 3,900 shots in 415 local news stories, Gordon and Artwick (1993) found building exteriors to be the second most frequently used shot.

Table 33. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #2: Parking Lot

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	03	07	17	20	79	73	00	00
	G2	28	14	39	29	28	57	06	00
	G3	41	39	26	31	33	31	00	00
TV Weekly	G1	00	11	20	16	80	74	00	00
	G2	21	22	36	33	36	44	07	00
	G3	44	35	17	41	39	24	00	00
News Weekly	**G1	00	10	30	05	70	86	00	00
	G2	29	17	29	39	36	44	07	00
	G3	42	38	21	38	38	25	00	00
Local News Weekly	G1	00	09	27	09	73	82	00	00
	G2	26	15	32	39	37	46	05	00
	G3	41	36	28	27	31	36	00	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

**Chi Square=6.54, df=2, $p \leq .05$, N=23 L and 21 H viewers
(4 of 6 cells < 5)

Focus on Crime: For both crime news treatment groups, heavier viewers of all types more often than lighter viewers found the parking lot visual to focus on crime. No respondents in the no-view treatment found the shot to focus on crime. Table 34 provides detail.

This finding indicates that location shots, with no evident connection to crime, can be construed as focusing on crime, especially by heavier viewers. This holds even when verbal context is not provided, but not when no context is provided at all.

Table 34. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #2: Parking Lot

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	45	67
	View Only (N=32)	33	57
	No View (N=41)	00	00
TV Weekly	View & Hear	44	63
	View Only	43	44
	No View	00	00
News Weekly	View & Hear	44	62
	View Only	43	44
	No View	00	00
Local News Weekly	View & Hear	41	64
	View Only	42	46
	No View	00	00

Visual #3: Body on Stretcher

Response Identification: This shot depicts a body covered in black plastic being carried on a stretcher by several men. The location is rural, very green, and leafy. A few onlookers can be seen in the background.

The view & hear treatment group focused on the body and also emphasized the "dead girl" and her assault. The view-only group also focused on the body, but in addition, made considerable mention of murder, crime, and police or officials. The no-view treatment, which one would expect to stress the obvious in the scene, instead heavily interpreted it. What could just as well have been a car accident or drowning, was instead interpreted as murder or crime. The picture's meaning for nearly one-fifth of the group was even

more specific, focusing on the Green River killer or murders.¹

For all three groups, seeing a body on a stretcher means foul play. Even without context, this visual represents murder or crime. Its constructed meaning reflects the violent television reality documented by cultivation researchers.

Semiotic Meaning: For heavier television viewers, but not news viewers, the picture of a body on a stretcher meant simply a body. The heavier news viewers ascribed deeper semiotic meaning. And heavier viewers in the no-view treatment group found global/societal meaning in the visual. See Table 35 for detail.

A body being carried away conjures more abstract meanings for heavier viewers, especially news viewers, regardless of context provided the image.

Table 35. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #3: Body on Stretcher

Exposure Type & Treatment Group*	Picture is the Thing	Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal		
		Exposure Level		Exposure Level		Exposure Level		
		L	H	L	H	L	H	
TV G1	17	20	23	27	60	53	00	00
Yesterday G2	17	29	33	14	50	57	00	00
G3	04	12	36	31	57	54	04	08

TV Weekly	G1	12	25	24	25	64	50	00	00
	G2	14	28	29	22	57	50	00	00
	G3	00	12	37	29	58	53	04	06
News Weekly	G1	22	14	22	27	57	59	00	00
	G2	21	22	21	28	57	50	00	00
	G3	08	00	40	25	48	69	04	06
Local News Weekly	G1	22	14	22	27	57	59	00	00
	G2	16	31	21	31	63	39	00	00
	G3	07	00	33	36	57	55	03	09

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: For most types of exposure and treatment group combinations, a body on a stretcher connoted a focus on crime. For the most part, heavier viewers more frequently constructed this meaning, as can be seen in Table 36. But the strongest support for the hypothesis that differences in constructed meanings exist between heavier and lighter viewers was evident in the no-view treatment. In that group, meanings focused on crime for twenty percent more of heavier news viewers than did those of lighter viewers.

Table 36. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #3: Body on Stretcher

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	47	60
	View Only (N=32)	56	71
	No View (N=41)	71	84
TV Weekly	View & Hear	52	50
	View Only	71	56
	No View	75	77

News Weekly	View & Hear	48	55
	View Only	64	61
	No View	68	88
Local News Weekly	View & Hear	52	50
	View Only	63	62
	No View	70	91

Visual #4: Robbery Suspect Surveillance Video in Convenience Store

Response Identification: This visual features a man at the counter of a convenience store. He is highlighted by a shaded circle around his head. The picture is black and white, and somewhat fuzzy.

The view & hear group focuses on the man as robber. While some of the respondents mention suspect, the emphasis for many is robber--he's guilty even before being caught. For the view-only group, many see the man as a suspect, while a few do emphasize robber in their responses. In the no-view treatment, the more obvious surveillance video is stressed. However, the group does mention suspect and criminal about equally.

The news story shown to the view & hear and view-only treatment groups mentioned the word suspect several times, as well as using the word in a title on the screen. Why did the view-only group focus on suspect? Perhaps the title had more of an impact on the view-only group, who attended with their eyes and not ears. Why did the view & hear treatment

focus on robber and not suspect? Perhaps it was because the man was "captured" on camera, and that the audio mentioned that the man was wanted in connection with other robberies in the area.

Semiotic Meaning: For this picture of a man allegedly robbing a convenience store, heavier viewers in all three treatment groups constructed more abstract semiotic meanings than did the lighter viewers. See Table 37 for details. Only the no-view treatment identified the visual at the most basic level, a man in a store, and a greater percent of lighter rather than heavier viewers did so. A small percent of respondents constructed global/societal meanings from the visual, with heavier viewers generally doing so more frequently than lighter viewers. Type of viewing did not appear to make a difference in semiotic meaning construction.

These findings indicate support for the hypothesis that meanings between heavier and lighter viewers differ, regardless of context.

Table 37. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #4: Robbery Suspect Surveillance Video

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	00	00	17	13	77	87	07	00
	G2	00	00	28	29	72	64	00	07
	G3	52	23	26	15	19	54	04	08
TV Weekly	G1	00	00	20	10	76	85	04	05
	G2	00	00	21	33	79	61	00	06
	G3	48	35	26	18	22	41	04	06
News Weekly	G1	00	00	26	05	74	86	00	09
	G2	00	00	29	28	64	72	07	00
	G3	42	44	29	13	29	31	00	13
Local News Weekly	G1	00	00	22	09	78	82	00	09
	G2	00	00	26	31	68	69	03	00
	G3	45	36	28	09	24	46	03	09

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: Meanings for the surveillance video shot focused on crime for heavier viewers in every treatment group and nearly every exposure type. For the no-view treatment, crosstabulations yielded significant positive relationships between local news viewing and focus on crime, and viewing yesterday and focus on crime. See Table 38 for statistics.

This store surveillance visual, while somewhat fuzzy and difficult to decipher, appears to convey a crime-oriented meaning regardless of story context. Even without

seeing a story to provide context to the visual, heavier viewers assigned it a crime-oriented meaning. This finding strongly supports the hypothesis that meanings differ between heavier and lighter viewers regardless of context. It also indicates that visual meaning may play an integral role in the cultivation process.

Table 38. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #4: Robbery Suspect Surveillance Video

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	93	100
	View Only (N=32)	83	86
	No View* (N=41)	33	77
TV Weekly	View & Hear	96	95
	View Only	93	78
	No View	39	59
News Weekly	View & Hear	96	96
	View Only	93	78
	No View	42	56
Local News Weekly	View & Hear	96	96
	View Only	84	95
	No View**	38	73

*Chi Square=6.69, df=1, $p \leq .01$

**Chi Square=3.87, df=1, $p \leq .05$

Visual #5: Police Car Parked Outside a Building at Night

Response Identification: The title pretty much describes the visual, except that the building has a boarded-up window, and a person is standing near the door.

For this visual, the no-view treatment focused heavily

on police in its responses, while the other two emphasized crime. However, the no-view group also mentioned crime in nearly one-third of its responses. The police car is placed prominently in the foreground of the shot, and for all three groups, a police car likely means trouble. While police on duty spend much of their time driving--not responding to murders--the sight of a squad car appears to represent serious crime to many viewers. As demonstrated in the present study's content analysis, police visuals represent the greatest percent of shots in the local crime news stories analyzed. The meanings assigned to this visual reflect this emphasis.

Semiotic Meaning: For this visual of a police car parked outside a boarded-up building at night, the more abstract semiotic meanings predominated. In the cultural knowledge-plus category, heavier viewers had the highest percent of responses. However, for global/societal meanings, findings were mixed. Heavier viewers from the view-only group, and lighter viewers from the no-view group constructed these meanings, while no respondents in the view & hear treatment did so.

The visual context provided to the group who saw the crime story connected with this visual may have made the difference in its constructed meaning. And lighter viewers in the no-view treatment may have been focusing on the building rather than the police car in their global/societal

meanings. One response, for example, was "home health care," another, "drugs, ghetto." Regardless of this disparity, the strong percentages in the knowledge-plus category, support the hypothesis that heavier viewers construct different meanings from lighter viewers.

Table 39. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #5: Police Car at Night

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	04	07	15	07	81	86	00	00
	G2	06	07	22	00	72	78	00	14
	G3	07	00	36	31	39	54	18	15
TV Weekly	G1	05	05	19	05	76	90	00	00
	G2	00	11	07	17	93	61	00	11
	G3	08	00	21	53	46	41	25	06
News Weekly	G1	06	05	17	09	78	86	00	00
	G2	07	06	14	11	79	72	00	11
	G3	08	00	32	38	40	50	20	13
Local News Weekly	G1	06	05	17	09	78	86	00	00
	G2	11	00	11	15	79	69	00	15
	G3	07	00	37	27	37	64	20	09

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: For the squad car at night visual, at least seven out of ten heavier viewers in each treatment group constructed a meaning with the focus on crime, as Table 40 illustrates. Crosstabulations yielded significant

positive relationships between weekly television exposure and focus on crime and weekly news exposure and focus on crime. And in all treatment groups, a higher percentage of heavier versus lighter news and local news viewers focused on crime in their constructed meanings of the visual.

This finding supports the hypothesis that visual meanings differ for heavier and lighter viewers, regardless of verbal context.

Table 40. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #5: Police Car at Night

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	81	79
	View Only (N=32)	78	71
	No View (N=41)	57	69
TV Weekly	View & Hear	81	79
	View Only	79	72
	No View*	50	77
News Weekly	View & Hear	78	82
	View Only	64	83
	No View**	48	81
Local News Weekly	View & Hear	78	82
	View Only	63	92
	No View	57	73

*Chi Square=4.53, df=1, $p \leq .05$

**Chi Square=4.42, df=1, $p \leq .05$

Visual #6: Police in the Street at Night

Response Identification: This shot depicts several male officers standing in the street near a cordoned-off area. All three groups identified the shot as a crime

scene; however, the view-only and no-view groups placed additional emphasis on the police and specific crimes. Drugs and murder were featured heavily among the responses. While the action in the visual could have been a car accident or some other type of emergency, viewers labeled the shot as crime. As in visual #5, police presence indicates trouble, and the trouble, to many of these respondents, is crime.

Semiotic Meaning: Crosstabulations yielded a significant relationship between television exposure yesterday and semiotic meaning for the view-only treatment. Table 41 provides statistics. In addition, heavier viewers in every treatment group and for every exposure type had a higher percent of meanings in the cultural knowledge-plus category than did lighter viewers.

This finding supports H10, showing that heavier viewers construct meanings from visuals that differ from meanings constructed by lighter viewers.

Table 41. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #6: Police in Street at Night

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yester- day	G1	09	08	09	08	82	85	00	00
	**G2	06	00	39	00	56	100	00	00
	G3	07	00	22	15	63	85	07	00
TV Weekly	G1	11	06	11	06	79	88	00	00
	G2	07	00	21	22	71	78	00	00
	G3	04	06	21	19	67	75	08	00
News Weekly	G1	18	00	12	06	71	94	00	00
	G2	07	00	29	17	64	83	00	00
	G3	04	06	25	13	62	81	08	00
Local News Weekly	G1	17	00	11	06	72	94	00	00
	G2	05	00	21	23	74	77	00	00
	G3	03	09	21	18	69	73	07	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

**Chi Square=8.30, df=2, $p \leq .05$, N=18 L and 14 H viewers
(4 of 6 cells < 5)

Focus on Crime: As Table 42 shows, at least two-thirds of respondents assigned meanings to this visual that focused on crime. But the differences between lighter and heavier viewers was insignificant, with lighter viewers more often constructing the crime-oriented meaning.

The high percent of meanings focusing on crime for this visual indicates that perhaps the presence of police officers signifies crime to viewers despite their exposure levels.

Table 42. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #6: Police in Street at Night

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	82	71
	View Only (N=32)	72	71
	No View (N=41)	67	69
TV Weekly	View & Hear	84	71
	View Only	79	67
	No View	71	63
News Weekly	View & Hear	77	79
	View Only	79	67
	No View	67	69
Local News Weekly	View & Hear	72	83
	View Only	74	69
	No View	69	64

Visual #7: Chalk Body Outline

Response Identification: In this shot, the chalk outline of a body fills the screen. Blood can be seen on the pavement in the head and foot areas.

All three groups thought of violent crime when they saw the visual; however, the crime news treatments stressed the victim or dead person more heavily than did the no-view group. The audio narration would explain that emphasis for the view & hear group, but not for the view-only treatment. Perhaps a victim's picture shown in another crime story, or the presence of blood in the shot contributed to the view-only groups' focus on victim when they saw the chalk body outline.

Semiotic Meaning: Table 43 shows that very high percentages of responses to the chalk body outline were highly abstract semiotic meanings. Responses in the cultural knowledge-plus category ranged from 64 percent of lighter viewers' responses, to 93 percent of heavier viewers' responses. Lighter viewers in the view-only treatment group interpreted the picture as a chalk body outline up to 29 percent of the time, while heavier viewers did so half that often and less. The preponderance of responses in the cultural knowledge-plus category, especially in the no-view treatment, indicates that respondents went far beyond the information in the visual to construct their meanings. Specifically, the chalk body outline meant "murder, violent crime," "somebody gunned down by accident," "drive-by shooting," and "gang-style shooting," just to name a few. The visual actually did depict the place a shooting victim had been found--alive. However, the chalk mark could just as well have outlined an auto accident victim. To respondents who did not even see the news story connected with the visual, the chalk body outline meant more than a victim of crime. They constructed the method of assault, shooting, and even alluded to the perpetrator--gangs.

Table 43. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #7: Chalk Body Outline

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	07	14	04	07	89	71	00	07
	G2	22	07	11	00	67	93	00	00
	G3	00	15	00	00	93	77	07	08
TV Weekly	G1	09	11	04	05	87	79	00	05
	G2	21	11	07	06	71	83	00	00
	G3	00	13	00	00	88	88	13	00
News Weekly	G1	10	09	05	05	85	82	00	05
	G2	29	06	07	06	64	89	00	00
	G3	04	06	00	00	88	88	08	06
Local News Weekly	G1	05	14	05	05	90	77	00	05
	G2	21	08	05	08	74	85	00	00
	G3	03	09	00	00	86	91	10	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: Crosstabulations revealed a significant relationship between heavier news viewers in the view-only treatment and focus on crime, as Table 44 illustrates. In the other two treatment groups, the percent of meanings focusing on crime was also higher for heavier news viewers.

The significant relationship supports the hypothesis that heavier television viewers construct meanings significantly different from lighter viewers, regardless of verbal context. However, what could have been considered

the most violent, gory visual in the study did not actually elicit the level of crime-related meanings that might have been expected. For example, for respondents who saw the chalk body outline with no news story connected to it, only about half of heavier television viewers and local news viewers constructed meanings that focused on crime. The view-only treatment also had some lower percents for heavier viewers. Perhaps heavier viewers have been sensitized to this type of visual--mentioning only death, and not a crime-related one. For them, crime may be an underlying assumption.

Table 44. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #7: Chalk Body Outline

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	79	86
	View Only (N=32)	78	57
	No View (N=41)	63	54
TV Weekly	View & Hear	78	84
	View Only	79	61
	No View	67	50
News Weekly	View & Hear	80	82
	View Only*	50	83
	No View	58	63
Local News Weekly	View & Hear	85	77
	View Only	58	85
	No View	62	55

*Chi Square=4.07, df=1, $p < .05$

Visual #8: Pistol Held by Person in T-Shirt

Response Identification: The visual shows a small handgun held by a person wearing a tropical t-shirt. The

shot is framed from the upper chest to waist. The gun is pointed toward the side of the frame, not at the camera, and is in a relaxed hold, not ready to shoot.

The view & hear group used audio track information heavily in the meanings they constructed from this visual. They mentioned in their responses increased gun sales, people wanting protection, and fear of the rapist. They also linked the visual to the person holding the gun, who had been featured in a sound bite during the news story they had seen previously. The view-only group also made that connection to the gun shop owner, who had been identified by a title on the screen during his interview. The view-only and no-view groups focused on issues such as gun control, and kids and guns in their responses. They also associated the gun with the police, as in buy-back programs, weapons seized, and evidence. And about one fourth of those respondents saw the gun as a gun, and nothing more. In only a small number of responses was the gun associated with fear, danger, or with a criminal. Those responses came primarily from the view & hear, and no-view groups.

Semiotic Meaning: Crosstabulations yielded significant relationships between: 1) weekly television viewing and semiotic meaning in the view & hear treatment group; and 2) weekly news viewing, and local news viewing, and semiotic meaning for the view-only treatment. However, the statistics are mixed, as can be seen in Table 45. In the

view-only group, more lighter viewers constructed meanings based on cultural knowledge, yet in the view & hear group, more heavier viewers did so. Perhaps the verbal context made a difference for the viewers who got to hear the news story connected with the visual. But some strong differences in the cultural knowledge-plus category for respondents who only saw the news story, indicate this may not be the case. Take, for example, the TV yesterday exposure measure. Half of the heavier viewers constructed the more abstract meanings, while only about one in ten lighter viewers did so. Similar statistics were found for weekly news viewers in the same group.

Also relevant is the rather strong showing of global/societal meanings for this visual. Up to 39 percent of heavier viewers, and 29 percent of lighter viewers constructed these meanings. The highest percentages were found in the groups where no verbal context was provided.

These findings show support for the hypothesis that the meanings heavier viewers construct from crime news visuals differ significantly from those of lighter viewers, regardless of verbal context.

**Table 45. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group
Visual #8: Pistol**

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV	G1	03	07	24	33	59	60	14	00
Yesterday	G2	39	07	28	21	11	50	22	21
	G3	25	15	00	15	57	31	18	39
TV	**G1	08	00	13	45	63	55	17	00
Weekly	G2	29	22	36	17	21	33	14	28
	G3	25	18	00	12	46	53	29	18
News	G1	09	00	27	27	50	68	14	05
Weekly	***G2	21	28	50	06	14	40	14	28
	G3	28	13	00	13	56	38	16	38
Local	G1	09	00	23	32	59	59	09	09
News	G2	32	15	37	08	21	39	11	39
Weekly****	G3	27	09	00	18	53	36	20	36

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

**Chi Square=9.33, df=3, $p \leq .05$, (4 of 8 cells < 5)

***Chi Square=8.70, df=3, $p \leq .05$, (7 of 8 cells < 5)

****Chi Square=7.96, df=3, $p \leq .05$, (4 of 8 cells < 5)

Focus on Crime: Lighter television viewers focused on crime in their meanings of the pistol much more frequently than did heavier viewers. However, the opposite is true for news viewing. The differences between lighter and heavier viewers are very slight in most cases, and the percent of viewers associating the gun with crime is rather low. See Table 46 for detail.

It is curious that the chalk body outline elicited crime-related meanings focusing on shooting, while the pistol wasn't heavily connected with crime cognitively.

Perhaps the pistol differed from the type of gun the respondents associated with shooting deaths.

Table 46. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #8: Pistol

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	62	53
	View Only (N=32)	28	36
	No View (N=41)	39	23
TV Weekly	View & Hear	71	45
	View Only	36	28
	No View	33	35
News Weekly	View & Hear	55	64
	View Only	29	33
	No View	32	38
Local News Weekly	View & Hear	64	55
	View Only	32	31
	No View	33	36

Visual #9: Sketch of Rape Suspect with Description

Response Identification: This shot features a sketch of a white male filling the screen. The title "Rape Suspect" appears at the top, and along the right-hand side of the frame appears his estimated height, weight, etc.

For this visual, constructed meaning appears to cross over into the area of concern about crime. For all three groups it elicited comments such as, "Be on the lookout," "Immediately think of who it looks like," "He doesn't look like a rapist," "Mentally unstable individual," "He looks like everyone I meet," and, "Never find him." These responses indicate a connection to the respondents' personal

world, eliciting concern. On the other hand, the visual's meaning for a number of respondents across groups went no further than the obvious, a rape suspect. The varying responses across groups indicates individual respondent characteristics may be at work in meaning construction and development of concern about crime.

Semiotic Meaning: In two of the treatment groups, heavier viewers more often than lighter viewers saw the rape suspect sketch as simply a sketch, and the percentages were substantial--up to 57 percent. The view-only treatment was just the opposite, more lighter than heavier viewers constructed that basic meaning. Heavier viewers in that group instead, constructed more abstract meanings (the cultural knowledge-plus category). The more abstract meanings were also constructed by lighter viewers in the view & hear treatment and no-view treatments. See Table 47 for statistics.

Why are there such different patterns for the view-only group? Perhaps the visual context made a difference in the meanings constructed by this group. Heavier viewers were perhaps more adept at processing visual information, hence using it more readily to construct meaning.

Table 47. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #9: Sketch of Rape Suspect

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	30	57	15	07	56	36	00	00
	G2	44	36	06	07	50	57	00	00
	G3	14	23	07	08	75	69	04	00
TV Weekly	G1	33	45	10	15	57	40	00	00
	G2	50	33	07	06	43	61	00	00
	G3	13	24	08	06	75	71	04	00
News Weekly	G1	33	45	05	20	62	35	00	00
	G2	57	28	00	11	43	61	00	00
	G3	12	25	08	06	76	69	04	00
Local News Weekly	G1	33	45	05	20	62	35	00	00
	G2	47	31	05	08	47	62	00	00
	G3	13	27	10	00	73	73	03	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (41)

Focus on Crime: Responses that focused on crime were very high for the view & hear treatment, high for the view-only treatment, and moderate for the no-view group. A higher percent of heavier viewers in the view & hear group focused on crime, while in the other two groups, more lighter viewers constructed crime-related meanings. See Table 48 for details.

This visual included textual information--a description of the suspect. Perhaps the lighter viewers were more adept

at processing the text, using it in constructing meanings that focused on crime.

Table 48. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #9: Sketch of Rape Suspect

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	85	93
	View Only (N=32)	83	71
	No View (N=41)	64	54
TV Weekly	View & Hear	86	90
	View Only	93	67
	No View	63	59
News Weekly	View & Hear	86	90
	View Only	86	72
	No View	68	50
Local News Weekly	View & Hear	91	85
	View Only	79	77
	No View	63	55

Visual #10: Urban Hi-Rise Building

Response Identification: This generic building fills the frame. It appears somewhat upscale, with clean lines and modern design. Several people are in the frame.

For the view & hear group, the building represented the victim who had been killed there, or the place it had happened. The view-only group made some mention of crime, but for the most part, focused on place, as did the no-view treatment. But the places named ranged from restaurant to

hospital. The shopping theme, or mall, surfaced again for the no-view treatment.

A generic shot such as this building invokes a variety of responses, apparently related to context provided the visual. When no context is available, constructed meaning ranges widely.

Semiotic Meaning: The differences in meanings for the urban hi-rise building were not as evident for levels of viewing as they were for treatment groups. The cultural knowledge and cultural knowledge-plus categories showed the greatest differences. The highest percent of meanings in the cultural knowledge category were for the no-view treatment. While in the cultural knowledge-plus category, the view & hear treatment had the highest percent of responses. For the view-only group, scores were moderate in both categories. Refer to Table 49 for statistical details.

With no context provided the visual, the no-view treatment went beyond the building as thing, into meaning based on cultural knowledge. The view & hear group likely relied on verbal narration from the news story in constructing their meanings that went beyond what was feasibly apparent in the picture.

Table 49. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #10: Urban Hi-Rise

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	03	07	07	21	87	71	03	00
	G2	22	08	44	23	33	69	00	00
	G3	12	08	69	54	19	31	00	07
TV Weekly	G1	04	05	08	15	83	80	04	00
	G2	08	22	39	33	54	44	00	00
	G3	09	12	64	65	23	24	05	00
News Weekly	G1	05	05	09	14	82	82	05	00
	G2	08	22	31	39	62	39	00	00
	G3	13	06	61	69	22	25	04	00
Local News Weekly	G1	05	05	09	14	82	82	05	00
	G2	17	15	28	46	56	39	00	00
	G3	14	00	64	64	18	36	04	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: Table 50 shows that for the urban hi-rise visual, significant relationships were found for the view-only treatment group between: 1) weekly television viewing and focus on crime; and 2) weekly local news viewing and focus on crime. But it was the lighter, not heavier viewers that had more responses focusing on crime.

Perhaps heavier television viewers rely more on the stereotypical crime images in constructing crime-related meanings. Even though an elderly woman had been murdered in the building shown, the heavier viewers did not seem to have

drawn from that information in constructing their meanings of the shot. Prior to the meanings exercise, those respondents had seen the story connected with the visual. Perhaps, because no sensationalistic crime visuals had been used in the story, heavier viewers were unable to discern the building's relationship to crime. Lighter viewers, on the other hand, may have drawn from other visual information in the story in constructing the crime-related meaning for the hi-rise.

Table 50. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #10: Urban Hi-Rise

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	67	79
	View Only (N=32)	33	15
	No View (N=41)	04	15
TV Weekly	View & Hear	71	70
	View Only*	46	11
	No View	05	12
News Weekly	View & Hear	73	68
	View Only*	46	11
	No View	04	13
Local News Weekly	View & Hear	77	64
	View Only**	39	07
	No View	04	18

*Chi Square=4.84, df=1, $p \leq .05$

**Chi Square=3.84, df=1, $p \leq .05$

Visual #11: Policeman Outdoors During the Day

Response Identification: In this freeze-frame, a white male police officer stands outside a building on what

appears to be a city street. He is framed from head to waist, and is wearing a short-sleeved shirt.

In every treatment group, a sizeable number of respondents described what the officer was doing, i.e. "A police sting operation," "Police watch--hostage situation possible," "Policeman at scene of crime," or "Police confused about woman's death." Context didn't seem to matter as much for this visual--respondents assigned similar types of meanings regardless of treatment group. In fact, the no-view treatment described what type of policeman he was, for example, "A responsible police," "A jerk policeman," and "Lazy." They also made editorial comments on the scene, "Don't let that attitude get too big," and "Too many cops."

Semiotic Meaning: For this shot of a white male police officer standing outdoors during the day, heavier viewers in the two treatment groups that were not provided verbal context constructed more abstract meanings. In fact, the highest percent of responses in the cultural knowledge-plus category came from heavier viewers in the no-view treatment. See Table 51 for details.

Although not statistically significant, this finding supports the hypothesis that meanings differ between heavier and lighter viewers regardless of context.

Table 51. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #11: Policeman During Day

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	08	31	24	23	68	46	00	00
	G2	17	08	44	46	39	46	00	00
	G3	22	08	07	00	67	92	04	00
TV Weekly	G1	14	18	19	29	67	53	00	00
	G2	15	11	46	44	39	44	00	00
	G3	17	18	04	06	74	77	04	00
News Weekly	G1	26	05	11	37	63	58	00	00
	G2	08	17	39	50	54	33	00	00
	G3	21	13	04	06	71	81	04	00
Local News Weekly	G1	26	05	11	37	63	58	00	00
	G2	06	23	39	54	56	23	00	00
	G3	21	09	07	00	69	91	03	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: Heavier viewers' responses to this visual generally focused on crime more often than did the lighter viewers' responses. See Table 52 for statistics.

Table 52. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #11: Policeman During Day

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	72	54
	View Only (N=32)	44	54
	No View (N=41)	37	54
TV Weekly	View & Hear	62	71
	View Only	46	50
	No View	35	47
News Weekly	View & Hear	53	79
	View Only	46	50
	No View	38	50
Local News Weekly	View & Hear	53	79
	View Only	50	46
	No View	35	64

Visual #12: Drug Arrest--Black Undercover Officers Escorting Young Black Males

Response Identification: In this shot, black plainclothes officers are walking with black male suspects. An officer holds a shotgun in one hand, and in the other, grasps a suspect by the arm.

For this visual, constructed meanings varied by treatment. The view & hear group's responses focused heavily on drugs, apparently guided by the audio narration. The view-only group targeted the arrest, and for the no-view group, meanings centered on gangs. While the meanings appear diverse, they may also be considered as connected. Without the audio or visual context to aid in constructing meaning, the no-view respondents chose a more general

description focusing on the people rather than the action of the shot.

Semiotic Meaning: For this visual of a drug arrest, no significant relationships were found, as Table 53 illustrates. In examining the percentages, however, nearly one-fourth of lighter weekly news viewers in the no-view group saw the visual at the most basic semiotic level, as black people walking, while none of the corresponding heavier viewers constructed that semiotic meaning. Instead, the heavier viewers chose more abstract meanings. Perhaps heavier viewers' exposure to similar shots may have provided the cultural knowledge used to make sense of the shot.

Table 53. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #12: Drug Arrest

Exposure Type & Treatment Group*	Picture is the Thing	Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal			
		Exposure Level		Exposure Level		Exposure Level			
		L	H	L	H	L	H		
TV Yesterday	G1	00	07	03	13	93	80	03	00
	G2	06	00	50	57	44	36	00	07
	G3	15	08	22	23	41	54	22	15
TV Weekly	G1	04	00	00	16	92	84	04	00
	G2	07	00	50	56	43	39	00	06
	G3	17	06	17	31	38	56	29	06
News Weekly	G1	05	00	05	09	91	86	00	05
	G2	07	00	64	44	29	50	00	06
	G3	21	00	13	38	46	44	21	19

Local	G1	05	00	04	09	91	86	00	05
News	G2	05	00	58	46	32	54	05	00
Weekly	G3	17	00	17	36	45	46	21	18

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: Heavier weekly news viewing seemed to make a difference in focusing on crime in this visual's meaning. In all three groups, the heavier local news viewers more often constructed crime-oriented meanings than did the lighter viewers. The difference was considerable for the no-view group. For most other exposure measures, the differences between lighter and heavier viewers for focus on crime were small. Table 54 provides details.

Table 54. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #12: Drug Arrest

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	93	87
	View Only (N=32)	83	71
	No View (N=41)	37	62
TV Weekly	View & Hear	96	84
	View Only	86	72
	No View	46	44
News Weekly	View & Hear	91	91
	View Only	86	72
	No View	46	44
Local News Weekly	View & Hear	86	96
	View Only	74	85
	No View	38	64

Visual #13: Woman in Laundromat

Response Identification: The shot features a young woman taking clothes out of an industrial-sized dryer, apparently at a laundromat.

While all three groups focused on the obvious in the shot, a woman in a laundromat, some notable differences exist among groups. For half of the respondents in the view and hear treatment the picture meant fearful women, reflecting concern expressed throughout the audio narration and sound bites in the story. The view-only treatment identified the shot as an area where a suspect was at large, or where a crime took place. For the no-view group, the picture meant low income and poverty. Generic location shots do not appear to convey universal meaning, but instead, seem to rely on audio or visual context provided them.

Semiotic Meaning: For the most part, meanings assigned to the woman in laundromat visual were either very basic or abstract. Heavier viewers in the view-only and no-view treatments, more often than lighter viewers, constructed meanings in the cultural knowledge-plus category. Lighter viewers in those groups more often found the picture as the thing. As can be seen in Table 55, statistics are fairly evenly split, except in the view & hear group, where responses were generally more abstract.

For a general shot with no apparent visual connection to crime, differences in semiotic meaning between lighter and heavier viewers are not readily apparent. Verbal context does seem to contribute to meaning construction, as is evidenced by the higher percentages of responses in the cultural knowledge-plus category for the view & hear treatment.

Table 55. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #13: Woman in Laundromat

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	19	29	00	00	81	71	00	00
	G2	50	29	00	07	50	64	00	00
	G3	50	50	00	08	50	42	00	00
TV Weekly	G1	19	26	00	00	81	74	00	00
	G2	43	39	00	06	57	56	00	00
	G3	52	47	04	00	44	53	00	00
News Weekly	G1	20	25	00	00	80	75	00	00
	G2	36	44	07	00	57	56	00	00
	G3	50	50	04	00	46	50	00	00
Local News Weekly	G1	19	26	00	00	81	74	00	00
	G2	42	39	05	00	53	62	00	00
	G3	52	46	03	00	45	55	00	00

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: For this very general visual with no apparent connection to crime, lighter viewers more often

than heavier viewers constructed meanings that focused on crime. Table 56 illustrates the findings. Could it be that heavier viewers are somehow conditioned to more obviously crime-related visuals, so that when they see a neutral picture, even though it may be a location where a crime was committed, the relationship to crime is not made?

Table 56. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #13: Woman in Laundromat

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	62	50
	View Only (N=32)	33	43
	No View (N=41)	04	08
TV Weekly	View & Hear	71	42
	View Only	50	28
	No View	09	00
News Weekly	View & Hear	65	50
	View Only	50	28
	No View	08	00
Local News Weekly	View & Hear	62	53
	View Only	42	31
	No View	07	00

Visual #14: Group of Black Police Officers at Night

Response Identification: The shot basically depicts what the title describes. The officers are framed tightly, creating a forceful presence.

For all three treatment groups, responses focused on police at a crime scene and police and their actions. In addition, the groups made editorial comments on the scene,

i.e., "Police swarm--why are they all needed?" "Wasting time," "Police have to protect and provide equal treatment," and "To see more than one black police officer--wow! It must not be the U.S.A." As noted in the content analysis portion of this study, shots of police appear symbolic of crime. The meanings assigned to this visual support that assertion, even though some of the comments indicate dismay with the icon.

Semiotic Meaning: For both crime news treatments, heavier viewers constructed more abstract meanings for the black police officers visual. Heavier viewers in the no-view treatment found the visual to be more than just police officers, but did not interpret the visual as deeply as the other two groups. It was the lighter viewers in that group who constructed the more abstract meanings. See Table 57 for findings.

Context appears to play a small role in constructing meaning for this visual, with respondents who at least saw the crime story related to the picture constructing more complex meanings. But why would lighter viewers in the no-view treatment construct more abstract meanings than heavier viewers? Perhaps a design effect made an impact. Seeing 13 visuals, many strongly crime-oriented, prior to this picture of police officers, may have somehow shaped the lighter viewers' responses. As shown in the present study's exploration of recall, lighter viewers recalled a higher

number of visuals than heavier viewers. A relationship between exposure, recall, and meaning may explain the lighter viewers' more abstract meanings.

Table 57. Crosstabulations: Television Exposure by Semiotic Meaning--Percent of Responses for Lighter and Heavier Viewers in Each Treatment Group

Visual #14: Black Police Officers at Night

Exposure Type & Treatment Group*		Picture is the Thing		Cultural Knowledge		Cultural Knowledge Plus...		Global/Societal	
		Exposure Level		Exposure Level		Exposure Level		Exposure Level	
		L	H	L	H	L	H	L	H
TV Yesterday	G1	26	15	00	00	74	85	00	00
	G2	22	00	17	14	61	86	00	00
	G3	04	15	11	31	74	46	11	08
TV Weekly	G1	30	13	00	00	70	88	00	00
	G2	21	06	21	11	57	83	00	00
	G3	08	06	13	25	67	63	13	06
News Weekly	G1	32	12	00	00	68	88	00	00
	G2	21	06	14	17	64	78	00	00
	G3	08	06	08	31	75	50	08	13
Local News Weekly	G1	29	17	00	00	72	83	00	00
	G2	21	00	11	23	68	77	00	00
	G3	07	09	14	27	69	55	10	09

*G1=View & Hear (N=45) G2=View Only (N=32) G3=No View (N=41)

Focus on Crime: For all exposure types, heavier viewers in the view & hear treatment had higher focus on crime. For other treatment groups and exposure types, the focus on crime was about the same for lighter and heavier viewers. Table 58 illustrates the percentages.

For this visual, verbal context may make a difference in constructing meanings that focus on crime.

Table 58. Percent of Responses that Focus on Crime for Heavier and Lighter Viewers by Treatment Group

Visual #14: Black Officers at Night

Type of Exposure	Treatment Group	Exposure Level	
		L	H
TV Yesterday	View & Hear (N=45)	61	71
	View Only (N=32)	72	71
	No View (N=41)	59	46
TV Weekly	View & Hear	60	71
	View Only	79	67
	No View	54	56
News Weekly	View & Hear	58	72
	View Only	79	67
	No View	58	50
Local News Weekly	View & Hear	61	68
	View Only	74	69
	No View	55	55

Summary of Findings for the Specific Visual Analysis for Meaning

As a whole, the results from these tests support the hypothesis that the meanings heavier television viewers construct from crime news visuals differ significantly from those constructed by lighter viewers. The differences are apparent regardless of verbal context.

Response Identification

Three general meanings emerge from this qualitative approach to respondents' reactions to 14 crime news visuals. Police officers signify crime, bodies indicate foul play,

and a police car specifies trouble. Shots of buildings with cars or people symbolize shopping, or stores. The more crime-specific visuals elicited similar meanings across treatment groups. Respondents thought of "crime scene" when they saw a visual of police in the street at night. A chalk body outline represented violent crime to all three groups; however, those respondents who had seen the story related to the shot stressed the victim in addition to crime.

Respondents focused on assault, murder, and crime when describing a body being carried on a stretcher. The no-view treatment went so far as to specify "Green River" in their responses, relating the shot to a local serial killer.

Two crime-specific visuals produced meanings that varied with verbal context. Respondents in the view & hear treatment focused on the man in a convenience store surveillance video as "robber." The view-only group focused on "suspect," while the no-view respondents centered on the surveillance video. For a pistol shot, view & hear respondents stressed information from the audio track, such as wanting protection, and increased gun sales. The other two groups focused on issues relating to guns and police.

More general shots, such as a laundromat and parking lot reflect a reliance on audio track in assigning meaning. View & hear respondents related the laundromat to fearful women, and the parking lot to the location a murder victim was last seen. A hi-rise also conjured meanings of the

victim. Without the audio context, respondents related the laundromat to low income, and the parking lot and hi-rise to shopping and stores, or other places.

Semiotic Meaning

Recall the semiotic categories used in this analysis: 1--picture is thing; 2a--cultural knowledge; 2b--cultural knowledge, plus; and 3--global/societal. Significant relationships were found between exposure and semiotic category for two visuals; police in the street at night, and pistol. For the police in the street visual, heavier television viewing in the view-only treatment group related to more Category 2b responses (cultural knowledge, plus). The pistol visual showed relationships within all three treatment groups. For the view & hear treatment, heavier television viewing related to more Category 2b responses. View-only respondents who were heavier news viewers also had more Category 2b responses. And for the no-view treatment, heavier viewing related to more Category 3 responses (global/societal). In fact, the pistol was the most issue-oriented visual, demonstrated by the number of global/societal responses related to it.

The findings from this set of tests indicate that heavier viewing relates to construction of more abstract semiotic meanings, regardless of verbal context. Type of visual, however, must be kept in mind when interpreting this finding. The two shots that yielded significant results

were among the more crime-specific in the analysis. Other visuals of this type also supported the pattern of heavier viewers constructing more abstract semiotic meanings. Though not statistically significant, the following shots showed more Category 2b responses in all three treatment groups for heavy viewers: body on stretcher; robbery suspect surveillance video; and police car at night.

The more general shots depicting locations produced very different findings. The rural river scene, for example, showed more Category 2b responses for lighter viewers. Verbal context appeared to make a difference in semiotic meaning, as about 90 percent of responses for the view & hear group were in Category 2b. The urban hi-rise and laundromat shots showed similar patterns. Verbal context from the news stories seen by the view & hear group seemed to provide information used to assign meaning to the visuals, as their responses were largely in Category 2b. However, both treatment groups that received no verbal context described the hi-rise with Category 2a meanings. The same groups characterized the laundromat at the most basic semiotic level.

The findings indicate that for more explicitly crime-related visuals, more abstract meanings are constructed, especially by heavier viewers. Heavier news and local news viewing appears to make even more of a difference in constructing more abstract and global/societal meanings

(Categories 2b and 3). Verbal context need not be provided to the visuals to produce these results.

On the other hand, verbal context seems to make a difference for meanings of general visuals, which are not apparently crime-related. Lighter viewers of these visuals are more likely to construct more abstract meanings than heavier viewers. However, heavier news viewing may contribute to more abstract meanings for these general types of visuals.

Focus on Crime

Type of visual, exposure level, and viewing treatment all made a difference in respondent's focus on crime in their meanings of crime news visuals. Heavier viewers focused on crime when the visuals were more crime-specific, e.g. a surveillance camera close-up of a robbery suspect, a police car at night, and a chalk body outline. And for those visuals, the less context provided, the more likelihood that heavier viewers would find the shot to be crime-related. Even though they saw no crime stories related to the robbery suspect and police car shots, heavier viewers in the no-view treatment expressed that the shots focused on crime. The relationship between exposure and focus on crime was significant. Heavier viewing in the view-only treatment also showed a significant relationship with focus on crime, for the chalk body outline. In that case, the relationship held only for news viewing.

Lighter viewers, on the other hand, were more apt to focus on crime when assigning meaning to more general visuals. A significant relationship was found between lighter viewing and focus on crime for a shot of an urban hi-rise building. Lighter viewers also focused on crime when assigning meaning to a shot picturing a woman in a laundromat.

Key to these findings is the distinction between general and crime-related visuals. Heavier viewers are not likely to recognize a general visual as crime-related, as they may be conditioned to look for the sensationalistic, or gory in their images of crime. They may be desensitized to the more subtle connection to crime that lighter viewers may not experience. These findings support the hypothesis that meanings heavier and lighter viewers construct from crime news visuals differ significantly, regardless of verbal context.

Meaning and Concern About Crime

The final area of exploration in this analysis is the relationship between the meaning of crime news visuals and concern about crime. Correlations between each of three meaning measures and 19 concern about crime measures yielded a number of significant results. The significant results appear in Tables 56 through 60 below, demonstrating relationships between concern about crime and semiotic

meanings, focus on crime, and viewer orientation.

Semiotic Meanings and Concern About Crime

The correlations reported in Tables 59 through 61 relate semiotic Categories 2a, 2b, and 2 (combined) to concern about crime measures. Recall that Category 2a concerns meanings based on cultural knowledge, and Category 2b also uses cultural knowledge, but goes beyond what is evident in the visual. All measures are continuous variables. Semiotic measures are based on the total number of visuals whose meanings are assigned to a particular category. For example, of a possible total of 14 visuals, 10 shots may have had Category 2b meanings. Individual concern about crime measures are 7-point scales, with 7 being the highest. The indexes vary from 21 to 105. Correlations were run for the sample as a whole, and for each treatment group. Separate tests then specified lighter and heavier local news viewers within each group.

Semiotic Category 2a and Concern About Crime

As Table 59 points out, viewers in the no-view treatment had several positive relationships between meaning and concern about crime. The meanings they assigned to the crime visuals were somewhat abstract and based on cultural knowledge, moving beyond the "picture is the thing" response. But the respondents did not interpret the shots beyond what was evident in the visuals.

The group as a whole showed relationships between the

semiotic meaning score and: 1) the general safety index, 2) the likelihood they would be assaulted or mugged in the next year, 3) the likelihood the average person would be assaulted or mugged on a bus, and 4) danger walking alone downtown at night. In addition, heavier viewers in this group showed high positive correlations for meaning and likelihood of personal assault, and danger walking alone downtown at night. A separate test, a crosstabulation of gender by exposure, showed little difference between the percent of females and males that were heavier viewers in the no-view treatment. It showed 55 percent of females and 46 percent of males as heavier local news viewers. This indicates that gender is not likely a factor influencing the relationship between semiotic meaning and concern about crime for the view-only group.

Lighter viewers in the sample as a whole and the view & hear group showed negative relationships between meanings and locking their cars when parking. However, the view & hear respondents also related meaning to locking their windows at home, and the sample as a whole, to locking their doors at home.

Table 59. Correlations: Semiotic Category 2a
and Concern About Crime

Concern About Crime Measures	Total Sample*	View & Hear	View Only	No View
General Safety Index				All .34 (41) $p \leq .05$
Likelihood You will be Mugged or Assaulted				All .45 (41) $p \leq .005$ H .69 (11) $p \leq .05$
Likelihood You will have Something Stolen from You			All .36 (32) $p \leq .05$	
Likelihood Average Person Assaulted or Robbed on Bus During Day				All .36 (41) $p \leq .05$
Likelihood Average Person Assaulted or Robbed on Bus at Night			L -.47 (19) $p \leq .05$	All .34 (41) $p \leq .05$
Safety of Average Person Walking Downtown Alone at Night				All .39 (41) $p \leq .01$ H .60 (11) $p \leq .05$
How Often Lock Doors at Home	All .18 (118) $p \leq .05$			

How Often Lock Windows		All .31 (45) $p \leq .05$		
		L .46 (23) $p \leq .05$		
How Often Lock Car When Parking	L -.26 (72) $p \leq .05$	All -.35 (45) $p \leq .05$		
		L -.66 (23) $p \leq .001$		

*All=all respondents in the group,
L=lighter local news viewers, H=heavier local news viewers
()=number of cases

Semiotic Category 2b and Concern About Crime

For this category, the view & hear group had the highest number of positive correlations, as Table 60 reports. The findings were in the areas of: 1) personal victimization, 2) having your home broken into, 3) having something stolen from you, and 4) locking your car when parking. Heavier local news viewers also had positive correlations between Category 2b meaning and having your home broken into, and having something stolen from you. A separate control test, a crosstabulation of gender by exposure, showed that a greater percent of men than women were heavier local television news viewers. The results showed 46 percent of women, and 58 percent of men were heavier local television news viewers. This indicates that gender is not likely a factor in the relationship between semiotic meaning and concern about crime.

The no-view treatment showed only negative correlations for Category 2b meanings and the likelihood the average person would be robbed on a Seattle area bus. Lighter viewers who had fewer Category 2b meanings also felt it was less likely the average person would be robbed on a bus during the day. Findings for the sample as a whole and the view-only group were mixed, indicating concern, especially by lighter viewers, to walk downtown alone during the day, but little concern at home, where they felt they were not likely to be burglarized.

Table 60. Correlations: Semiotic Category 2b and Concern About Crime

Concern About Crime Measures	Total Sample*	View & Hear	View Only	No View
Personal Victimization Index		H .47 (22) $p \leq .05$		
Likelihood Your Residence will be Broken Into		H .45 (22) $p \leq .05$	H -.67 (13) $p \leq .01$	
Likelihood You will have Something Stolen from You		All .34 (45) $p \leq .05$ H .51 (22) $p \leq .05$		

Likelihood Average Person Assaulted or Robbed on Bus During Day				L -.38 (30) p≤.05
Likelihood Average Person Assaulted or Robbed on Bus at Night				All -.40 (41) p≤.01
Safety of Average Person Walking Downtown Alone During Day	All .19 (118) p≤.05 L .25 (72) p≤.05		L .46 (19) p≤.05	
How Often Lock Doors at Home	L -.24 (72) p≤.05			
How Often Lock Windows		L -.44 (23) p≤.05		
How Often Lock Car When Parking		All .31 (45) p≤.05 L .48 (23) p≤.05		

*All=all respondents in the group,
L=lighter local news viewers, H=heavier local news viewers
()=number of cases

Semiotic Category 2 (Combined) and Concern About Crime

Table 61 illustrates that combining the two categories of responses yielded a number of positive relationships for the view & hear respondents, many for heavier local news viewers. They were in the areas of personal victimization, likelihood of being burglarized or having something stolen

from you, and frequency of locking your car when driving. In other words, these results say that that for heavier local news viewers, the greater the number of abstract meanings, the higher their concern about crime scores. Their concern about crime concerns crimes against the respondent, rather than "the average person," as mentioned in the other measures. This indicates a personal fear of crime in relation to the respondents' use of cultural knowledge in constructing meanings from crime news visuals.

Table 61. Correlations: Semiotic Category 2 (combined) and Concern About Crime

Concern About Crime Measures	Total Sample*	View & Hear	View Only	No View
Personal Victimization Index			H -.59 (13) p≤.05	
Likelihood Your Residence will be Broken Into		H .43 (22) p≤.05	L .46 (19) p≤.05 H -.78 (13) p≤.005	
Likelihood You will have Something Stolen from You	All .23 (118) p≤.01 L .27 (72) p≤.05		L .48 (19) p≤.05	
Safety of Average Person Walking Downtown Alone at Night		L -.45 (23) p≤.05		All .34 (41) p≤.05

Safety of Average Person Walking Downtown with Another Person at Night				All .31 (41) p≤.05
				H .61 (11) p≤.05

*All=all respondents in the group,
L=lighter local news viewers, H=heavier local news viewers
()=number of cases

Focus on Crime and Concern About Crime

These correlations related concern about crime measures to the total number of visual meanings that focused on crime. Table 62 illustrates that most of the positive relationships are for heavier local news viewers in the view & hear treatment group. The heavier viewers who assigned crime-related meanings to a greater number of visuals also felt it was more likely they would be personally victimized by crime. This relationship held for the index of personal victimization measures, as well as the following individual measures: likelihood of being burglarized, or having something stolen from you; and frequency of locking your car while driving. As reported earlier, gender does not appear to be a factor in the relationship.

The tests yielded only one relationship for the view-only and no-view treatments. It was a negative correlation for lighter viewers in the view-only group. The lighter local news viewers assigned fewer crime-related meanings to visuals and locked their windows at home less frequently.

Considering that the bulk of the findings are in the

view & hear treatment group, they indicate that the verbal context plays a role in assigning crime-related meanings to visuals. The fact that most findings are for heavier local news viewers shows support for cultivation. What remains unclear is: 1) whether these respondents fear personal victimization as a result of heavy viewing, and hence see more visuals in terms of crime; or 2) if the heavy viewing makes an impact on the way they view and interpret visuals, leading to greater fear of personal victimization. These issues can best be addressed through further research.

Table 62. Correlations: Focus on Crime and Concern About Crime

Concern About Crime Measures	Total Sample*	View & Hear	View Only	No View
Personal Victimization Index	All .26 (118) $p \leq .005$	All .43 (45) $p \leq .005$		
	L .23 (72) $p \leq .05$	H .53 (22) $p \leq .01$		
Likelihood You Will Be Mugged or Assaulted	All .20 (118) $p \leq .05$	All .29 (45) $p \leq .05$		
Likelihood Your Residence will be Broken Into		All .29 (45) $p \leq .05$		
		H .50 (22) $p \leq .05$		

Likelihood You will have Something Stolen From You	All .26 (118) p≤.005 L .27 (72) p≤.05	All .50 (45) p=.000 L .52 (23) p≤.01 H .50 (22) p≤.05		
How Often Lock Windows			L -.49 (19) p≤.05	
How Often Lock Car while Driving		All .38 (45) p≤.05 H .43 (22) p≤.05		
Likelihood of Avoiding Places After Dark			H -.64 (13) p≤.05	All .31 (41) p≤.05 L .40 (30) p≤.05

*All=all respondents in the group,
L=lighter local news viewers, H=heavier local news viewers
()=number of cases

Action Orientation and Concern About Crime

As can be seen in Table 63, nearly all the positive relationships in this category are for heavier local news viewers. It shows that the heavier viewers who assigned a greater number of action-oriented meanings to visuals also scored higher in concern about crime. The concern about crime areas include: 1) three of four general indexes-- concern about crime, personal victimization, and prevention

behavior; and 2) four individual measures--likelihood of being assaulted or mugged, having something stolen from you, or that the average person would be assaulted or robbed on a bus at night; and frequency of locking your car when parking. Most of these findings are for heavier viewers in the sample as a whole; however, the two viewing treatments also show significant relationships. This indicates that audio context is not a necessary condition for the effect.

The findings do show that heavier local news viewers who have higher concern about crime and personal victimization also find more crime visuals to be action oriented. Does their concern over crime result in their focusing on crimes being committed, or does the way they perceive visuals influence their concern about crime? The question can best be addressed through further research.

Table 63. Correlations: Action Orientation and Concern About Crime

Concern About Crime Measures	Total Sample	View & Hear	View Only	No View
Concern About Crime Index	All .19 (118) $p \leq .05$			
	H .37 (46) $p \leq .01$			

Personal Victimization Index	All .20 (118) $p \leq .05$ H .37 (46) $p \leq .01$	H .51 (22) $p \leq .05$		
Prevention Behavior Index	H .29 (46) $p \leq .05$			
Likelihood You will be Assaulted or Robbed		H .47 (22) $p \leq .05$		
Likelihood You will have Something Stolen from You	All .25 (118) $p \leq .01$ H .36 (46) $p \leq .01$	H .54 (22) $p \leq .01$	H .60 (13) $p \leq .05$	
Likelihood Average Person Assaulted or Robbed on Bus at Night	H .29 (46) $p \leq .05$			
Safety of Child in Park Alone				All .31 (41) $p \leq .05$
How Often Lock Car when Parking	H .36 (46) $p \leq .05$			
Likelihood of Avoiding Places After Dark				L .36 (30) $p \leq .05$

*All=all respondents in the group,
L=lighter local news viewers, H=heavier local news viewers
()=number of cases

Summary of Major Findings

A brief outline of the study's key findings follows.
An interpretation of the results in relation to the

literature may be found in the conclusions chapter.

Content Analysis

- . Range of visuals per story: 4-11 (smaller cities used more visuals.
- . Pictures of police predominate, followed by people other than law enforcement.
- . Body bags and blood infrequently depicted. Small as well as large cities equally as likely to use these sensational shots.

Viewing Experiment & Survey

Recall

- . Sound bites recalled most, followed by black undercover police and suspects, and robbery suspect on surveillance video.
- . Audio context appears to enhance recall for generic shots, impede it for more crime-specific shots.
- . A higher number of visuals recalled by lighter viewers.
- . For individual visuals, respondents who recalled specific shots were most often lighter viewers.
- . More sensational visuals recalled by heavier television viewers.
- . Respondents who recalled more crime-specific visuals scored higher in concern about crime.

Meaning

- . Viewers frequently interpret, complete, and sometimes

enhance the visual meaning based on cultural knowledge.

. Heavier news and local news viewers construct meanings from visuals that go beyond what is pictured (Category 2b).

. Heavier local news viewers find visuals more crime-oriented than lighter viewers.

. More crime-specific visuals elicit similar meanings across treatments.

. For crime-specific visuals, heavier viewing, especially news and local news viewing, relates to construction of more abstract semiotic meaning, regardless of verbal context. These meanings go far beyond what is evident in the picture.

. Heavier viewers focus on crime when visuals more crime-specific.

. Lighter viewers focus on crime when visuals less crime-specific.

Meaning & Concern About Crime

. In the no-view treatment, heavier viewers who assigned more Category 2a semiotic meanings to visuals also had higher likelihood of personal assault, and higher estimates of danger walking downtown alone at night.

. For view & hear respondents, heavier viewers who assigned more Category 2b semiotic meanings also had higher concern of burglary and personal theft.

. For view & hear respondents, heavier local news

viewers who assigned more Category 2 semiotic meanings (combined) also had higher concern with personal victimization.

. For view & hear respondents, heavier local news viewers who assigned crime-related meanings to a greater number of visuals also felt it more likely they would be personally victimized by crime.

. Heavier viewers who assigned more action-oriented meanings also scored higher in concern about crime (measured by a general index and personal victimization index).

NOTES TO CHAPTER 3

1. The serial killer stalked young women and disposed of their bodies in or near the Green River outside the Seattle area. The crimes received a great deal of media attention.

CHAPTER 4
CONCLUSIONS

MAJOR FINDINGS AND THEIR RELATIONSHIP TO THE LITERATURE

This study set out to answer the question:

How do local television crime news visuals relate to
concern about crime?

Results provide answers in two major categories. First, type of shot emerged as a key distinction regarding effects. The more crime-specific shots--for example, a body on a stretcher--make a critical difference in terms of recall, meaning, and concern about crime. Second, heavier exposure, both general and news-specific, appear key in relation to meaning, concern about crime, and recall of crime-specific visuals. Results show significant differences between heavier and lighter viewers in their constructed meanings of television crime news visuals. The differences appear to be linked to higher concern about crime for the heavier viewers. A discussion of the specific components of these results follows.

Crime-Specific Visuals and Heavier Exposure

Two very prominent findings include a combination of the elements: crime-specific visuals and heavier exposure.

1) Heavier viewers interpret crime-specific visuals with meanings that go far beyond what is evident in the picture. This holds whether or not verbal context was given

to the visuals, and is most evident for heavier news and local news viewers.

2) Heavier viewers interpret crime-specific visuals with meanings that focus on crime more often than do lighter viewers.

Cultivation research demonstrates relationships between television content, heavier viewing, and people's conceptions of the world. In other words, it argues that people who view more television see more violence, and in turn, they find the world to be a more negative and dangerous place. What remains unclear in cultivation is the process that explains the relationship between viewing and conceptions of the world. The two findings presented above offer insight in understanding that process.

Meaning construction appears to be a relevant component in the relationship between television viewing and concern about crime. First, consider the types of meanings heavier viewers perceive in crime-specific visuals. Their depth and abstraction is greater than simply recognizing the visual as the thing it depicts. This semiotic order of signification, based on cultural knowledge, goes far beyond what is evident in the picture. A visual of police in the street at night becomes a murder scene, or indicates action involving drugs. According to Findahl and Hoijer (1985), comprehension involves a merging of stored information and inference about it (also see Woodall, et al., 1983). The stored

information, or cultural knowledge, of heavier viewers may be based largely on television reality. Hence, when making sense of a crime-specific news picture, these viewers may draw on similar scenes they may have stored from watching crime dramas, or other crime news. The heavier viewers give the scene its own context, often sensational, brutal, or morose. The meanings specifically focus on crime. How does this relate to concern about crime? The following findings provide that answer.

Heavier Viewing, Meaning, and Concern About Crime

Results specific to meaning and concern about crime reveal heavier viewing to be a key factor in the relationships.

1) Heavier local news viewers who more often focus on crime in interpreting crime news visuals also feel a greater likelihood of being personally victimized by crime.

2) Heavier television and local news viewers who assign meanings to crime news visuals that go beyond what is evident in the pictures, express higher concern about crime. Respondents who interpreted the visuals after having seen and heard crime stories expressed higher concern for personal victimization (an index including assault, burglary, and theft), and also for burglary and theft individually. Respondents who only viewed the crime stories were more concerned with personal assault, and the general

safety of the downtown Seattle area at night. When the visuals received no context, relationships were not evident.

3) Heavier viewers who assigned action-oriented meanings to crime news visuals also expressed higher concern about crime. The concern was general (measured by a 15-question index) as well as specific to personal victimization (including assault, burglary, and theft).

This set of findings shows that for heavier viewers, meaning of crime news visuals is related to concern about crime. The distinction between general television viewing and local news exposure appears key in the relationship. This follows the work of Perse (1990) and O'Keefe and Reid-Nash (1987), in which program type and specific content, have made a difference in the cultivation process. Note also, that the heavier viewers in the present study showed greatest concern for personal victimization, in addition to crime in general. Perse (1990) also found perceptions of personal safety related to local crime news viewing (specifically, attention to crime news).

What explains the relationship between heavier viewers' fear of personal victimization and their detailed, crime-specific, action-oriented interpretations of crime news visuals? Semantic memory networks described by Woodall, et al. (1983) provide insight. This form of memory involves a network of interrelated words, concepts, and properties (Quillan, 1968; Collins & Loftus, 1975), or in other words,

pre-existing knowledge. Heavier television viewers may be drawing from a semantic memory filled with images of violence from crime dramas, when making sense of crime news visuals. The news pictures may then be stored among the semantic network, becoming available to those individuals in making judgments about their personal safety and crime in general. Heavier local news viewers may go through the same process, but instead of interpreting news visuals through crime drama images in their semantic network, they may draw on stored crime news information. Highly intense negative images are likely to be found among the pre-existing knowledge, as visuals are remembered better for stories with compelling video (Newhagen & Reeves, 1992).

The process of constructing meaning from local crime news visuals, and developing conceptions of crime and safety is likely dynamic and multidirectional. Fear of victimization stored in the semantic network may surface when interpreting a news visual, giving it a crime-oriented meaning. That meaning may then be stored in the memory network to later be used in sustaining or heightening that fear. Lighter viewers would have a less rich television-based memory network from which to draw in constructing conceptions of crime.

The Role of Recall in the Cultivation Process

As Geiger and Newhagen (1993) point out, memory is implicit in media effects research; some aspect of a message must be retained in order for an effect to take place. The present research shows that type of visual, rather than total number of visuals recalled makes a difference in concern about crime. Respondents who recalled crime-specific visuals exhibited higher concern about crime, while number of visuals recalled showed no relationship to concern about crime.

Lighter Viewers and Recall

Lighter viewers recalled a greater number of visuals than did heavier viewers. The shots included general visuals such as buildings, landscapes, and people, as well as the more crime-specific shots, such as bodies, police, and suspects. Semantic memory networks may explain this finding as well. The findings indicate that information being added to the lighter viewers' semantic memory stores may be more diverse and not as crime-specific. The images available to them in making judgments about personal safety and concern about crime would offer more balance, instead of focusing heavily on the sensationalistic representations of crime.

Lighter viewers' higher recall may also be attributed to amount of expected mental effort. The line of research suggests that preconceptions of the effort required by a

medium influence amount of mental effort learners invest in learning through that medium (Cennamo, 1993). Lighter viewers may have approached the task of viewing differently than did heavier viewers, anticipating having to invest a greater amount of mental effort. The expectation may have led to increased mental effort, resulting in greater recall for the lighter viewers.

Audio Information and Recall of Visuals

The study showed higher visual recall for viewers who saw crime reports without accompanying audio, indicating that audio information may impede ability to remember visuals. Episodic and semantic memory principles may explain why. Episodic memory concerns events, and stores them as unique episodes, while semantic memory consists of a network of "concepts, words, constructs, and their interrelationships" (Woodall, et al., 1983, p. 6). Recall of episodic memory improves with contextual cues to provide access to stored information (Watkins, Ho, & Tulving, 1976; and Woodall & Folger, 1981). Information stored in the semantic network is more accessible to retrieval, due to its deeper level of processing (Woodall, Davis, & Sahin, 1983).

Viewers who saw and heard the crime news might have stored more information in episodic memory, based on episodes created by the audio-visual context. Respondents who saw the crime stories without sound might have processed

the visual information in semantic memory, resulting in better access.

The types of shots recalled more frequently by the view-only respondents were, for the most part, more crime-specific, e.g. a body on a stretcher and a robber on surveillance video. Cue summation theory might explain this finding. It asserts that presentation of irrelevant cues in either audio-visual channel will cause loss of learning from the other channel. Slightly irrelevant cues were found more distracting than highly irrelevant cues (Severin, 1967, 1968). While originally used to explain how visuals detract from audio information, it may also apply to the impact of audio cues on visual recall. Respondents who only saw the crime stories received no audio cues to interfere with processing of the visuals seen. Viewers in the audio-visual treatment may have received irrelevant audio cues that influenced their processing of crime-specific visuals. Consider the shot of the body on a stretcher. Throughout the crime report, the viewers heard a male reporter narrating. But while the body was on the screen, respondents heard the victim's mother talking about how, "This kind of thing don't happen to us. We're just normal people." The grammatical error, the woman's voice--as opposed to the male reporter's narration, or her Texas accent may have constituted irrelevant audio cues that contributed to the depressed recall of the shot.

In addition to cue summation, there may be something inherent in crime-specific visuals that makes an impression when unaccompanied by audio. For example, morbid curiosity may play a role in the impact of crime-specific visuals on viewers.

Connecting Recall to Meaning and Concern About Crime

The third most frequently recalled visual in the study showed significant results in tests involving meaning and concern about crime. The shot features a robbery suspect who was videotaped by a convenience store surveillance camera. Heavier television and local news viewers focused on crime when interpreting this visual, going far beyond what was evident in the image. Heavier and lighter viewers alike recalled the image, and they scored significantly higher in concern about crime measures than those who did not recall it. This was true for three out of four concern about crime indexes and eight of fifteen individual measures. Every concern about crime measure that produced significant findings pertained to the world "out there," beyond the safety of one's own home. The cognitive process for this visual may involve remembering the convenience store robbery suspect based on conceptions of danger in public.

Concern for safety in areas outside respondents' own homes was also found to be higher for respondents who recalled another visual featuring suspects. Viewers who

remembered a shot of black undercover officers escorting suspects exhibited higher concern about crime on a bus, downtown, or in certain places after dark. Those respondents were significantly lighter viewers than the ones who did not recall the shot, contradicting what cultivation would predict. However, the content of the shot may have made a difference in terms of concern about crime for heavier viewers. The suspects in the visual were in police custody, rather than at large. In crime dramas, conflict is often resolved after a suspect is arrested. Perhaps this type of image boosts perceptions of safety for heavier viewers, who may connect arresting suspects with solving crime.

Implications for Current Theory

Hawkins and Pingree (1990) pose two questions they believe are crucial to understanding cultivation and social reality construction: 1) How does watching television contribute to certain social reality beliefs and not others? and; 2) What are the psychological processes involved in individuals' construction of social reality? The present study's findings address each.

Television Viewing and Certain Social Reality Beliefs

Recall and meaning of particular content appear to make a major difference in type of social reality constructed. This study examined concern about crime as a specific

element of social reality, and within concern about crime, included certain perceptions of crime and crime prevention behaviors. Crime news visuals comprised the content assessed in the study.

First, consider type of visual remembered and social reality. Viewers who recalled a close-up of a convenience store robbery suspect also showed higher concern for crime in public, but not for personal victimization, such as assault, burglary, or theft. Similar results were found for those who recalled a shot of suspected drug dealers being escorted by police. Respondents who remembered generic shots, such as a hi-rise building, had lower concern about crime--in general, and in crime prevention behavior. So, viewers who remember crime-specific shots are more likely to express greater concern about crime than viewers who recall more generic visuals.

Next, consider meaning of visuals and social reality. Heavier viewers who interpret crime news visuals with meanings that focus on crime also express a greater likelihood of being personally victimized by crime. The same holds for those who use meanings that go beyond what is evident in the pictures. Psychological processes discussed below offer some explanations for these observations.

Psychological Processes and Social Reality

The relationship between heavier viewers' fear of personal victimization and their detailed, crime-specific,

interpretations of crime news visuals indicates that beliefs may be constructed based on information stored in semantic memory. A network of interrelated words, concepts, and properties, or in other words, pre-existing knowledge, comprise this type of memory (Quillan, 1968; Collins & Loftus, 1975). That pre-existing knowledge for heavier viewers may be filled with violent, sensational images of crime from viewing dramatic programming, and highly intense negative images from television news. Lighter viewers would not have as rich a television-based network from which to draw in constructing conceptions of crime.

Summary of Implications for Theory

Differences in recall of and meanings derived from crime news visuals indicate individual cognitive processing differences between heavier and lighter viewers. The findings suggest that specific content viewing, particularly the visual aspects of television, plays an integral role in cultivation. However, this does not mean abandoning the general viewing approach. Instead, the results imply that semantic memory stores may play a role in the differences between heavier and lighter viewers, with heavier viewers drawing from a richer television-based network. The findings suggest recognizing the role of particular content and individual processing as part of the larger viewing picture in social reality construction.

Limitations of the Study

The use of convenience samples of university students and television newscasts limits generalization of the results. However, the findings offer directions for research with a more representative sample of the general population and nationwide local media.

While some local newscasts may feature crime news in an entire segment of news, the seven crime stories in a row shown to respondents in the study may have been overwhelming to process. Distinctions between heavier and lighter viewers may be more apparent by instead showing respondents a segment of mixed news.

The findings are limited to crime news visuals and concern about crime, but indicate that specific types of visuals may be related to construction of other types of social reality, i.e. perceptions of ethnic or racial groups or particular professions.

Separating visuals from the news story as a whole may have represented an unrealistic viewing environment; however, some relevant findings which proved useful in interpreting other results were produced.

While the visual-by-visual analysis provides a means to recognize patterns in meaning for crime-specific versus non-crime-specific visuals, it is important to recognize that relationships between individual visuals and concern about crime do not indicate causation. Instead, the relationships

offer an understanding of the potential processes involved in recall, meaning, and concern about crime.

As in any social science study, intervening variables not measured or controlled for may influence the outcome of the research. While care was taken to address this issue, not every potential influence could be considered. For example, neighborhood lived in was measured on the questionnaire, but turned out nearly impossible to code, and was unusable.

Recommendations for Future Research

In this study, visual processing emerged as an integral component in the cultivation process. To further explore the function of semantic memory in relation to social reality construction, a similar study could be conducted adding a listen-only treatment. After listening to the audio track from crime stories, respondents could be asked to write down images that come to mind based on the news they just heard. This would better address the images stored in memory. How would these differ between lighter and heavier viewers?

The present study could be used as a model for research on other types of social reality construction. Instead of crime news, respondents could view a general newscast, and visual recall could be assessed in relation to conceptions of, for example: government, education, or

racial/ethnic issues. Focusing on a single broadcast market with a diverse population would add depth to the research.

Industry Implications

The "if it bleeds it leads" approach to local television news may be conditioning heavier viewers to expect more explicit, sensationalistic, and morose visuals in local crime news coverage. Those viewers may judge the importance or relevance of particular crime stories in relation to conceptions of danger or fear of victimization based on the presence or absence of those visuals. Body bags may appeal to morbid curiosity, but may also relate to cultivating fear of urban areas. The fear may or may not be justified. Was the assault an isolated incident, and did the victim know his attacker? Or was the attack representative of more frequent, random violence? Recognizing the potential impact of the shot, if the event were isolated, featuring the body bag visual prominently may not be justified. Often local news programs "tease" or open the show with such a shot, just because they have the visual. Reporters, editors, and producers need to consider the reality the shot depicts, and take care in its use.

Shots of suspects at large may also contribute to perceptions of a dangerous world. Would including a suspect's visual in a report contribute to a police investigation, or is it just being used because of its

availability? In the fast-paced environment of local news gathering and production, time constraints may impede consideration of these issues. An awareness of the potential impact of crime-specific visuals on viewer's conceptions of crime, and sensitivity when determining their use is called for, if television journalists are to deliver news to the public responsibly and accurately.

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APPENDIX 1

CONTENT ANALYSIS CODING GRID

	AUSTN	LVL	NEW ORL	NEW YK	PHIL	SEA
URBAN BLDG EXT						
WELL MAINT						
POORLY MAINT						
RURAL BLDG EXT						
WELL MAINT						
POORLY MAINT						
BLDG INTERIOR						
WELL MAINT						
POORLY MAINT						
URBAN LANDSCAPE						
RURAL LANDSCAPE						
DESTRUCTION						
FROM CRIM VIO						
FROM CRASH						
POLICE						
CARS AT NIGHT						
CARS DUR DAY						
OFCS AT NIGHT						
OFCS DUR DAY						
SUSPECTS-NOTE BW, MF						
IN COURT						
IN POLICE GRIP						
IN POLICE CAR						
MUG SHOT						
PEOPLE-NOTE PC, MTG.						
FIGHT						
>10						
<10-2						
INDIV						
OBJECTS						
WEAPONS						
DRUGS						
POLICE RELATED						
OTHER						
GRAPHICS						
SOUND BITES						
STAND UPS						
REPORTER REAX						

APPENDIX 2
CRIME NEWS SCRIPTS

Story 1: Austin, Texas - Body Found, Suspected Murder

MWS 2-shot,
white male &
female anchors
C/U anchor woman
w/chroma box
reading: "7 News
Top Story
Investigation"

GOOD EVENING, THANKS SO MUCH FOR JOINING US, I'M NEIL SPELCE. I'M STEPHANIE WILLIAMS. THE BRUTAL MURDER OF MICHELLE LISA WAGNER HAS RESULTED IN FEW LEADS FOR CRIMINAL INVESTIGATORS TONIGHT. BUT AS STATE AFFAIRS REPORTER KEITH ELKINS EXPLAINS, THE WAY SHE DIED IS NO LONGER A MYSTERY.

WS* rural river,
people
MS 2 police
stooping down

AS A RESULT OF TODAY'S AUTOPSY, INVESTIGATORS SAY THEY NOW SUSPECT LISA WAGNER WAS PHYSICALLY AND SEXUALLY ASSAULTED BEFORE BEING THROWN OVER THE SIDE OF A BRIDGE.

CU white man
Chyron: Det.
Gary Cutler,
Travis Co.
Sheriff's Dept.
MWS River &
Foliage

And it appears that strangulation was probably prior to her being thrown off the bridge into the water.

THAT'S WHEN THE 23-YEAR-OLD HAYES COUNTY NATIVE LATER DROWNED IN LESS THAN A FOOT OF WATER.

WS Parking lot &
New West building

SHE WAS LAST SEEN ALIVE SUNDAY NIGHT COUNTRY WESTERN DANCING WITH HER PARENTS.

CU white woman
Chyron: Ruth
Wagner, Victim's
Mother

We went out there, and that's the last place we saw her, was on the dance floor.

CU white man
w/moustache

ONE OF WAGNER'S DANCE PARTNERS WAS STEVE SCHROEDER.

Chyron: Steve
Schroeder,
Nightclub Patron

And her mom came up while we were dancing and tapped her and said she was leaving.

CU Ruth Wagner

And we go, bye, and she goes bye.

CU Steve
Schroeder

I didn't know who she was at the time, so I made mention of the fact that it's unusual that her mother would be there, and I said something to the effect that the family that dances together stays together. And she kind of laughed at that.

Ruth Wagner's
voice over WS
covered body in
field
MS men carrying
body bag on
stretcher
MWS people & van
CU photo of
victim w/"Wagner"
Chryon

MCU white male
reporter stand-up
in front of
police station

Blue full-screen
graphic with
phone number

Before I thought it was just something you read in the paper or you see on the news. This kind of thing don't happen to us. We're just normal people, and, you know, live a everyday life, nothing exciting. And I swear to God, I would never ever thought this would ever happen. It's still real hard to believe. And I probably really won't realize it until I get back down to the funeral home.

AROUND THE CLOCK INVESTIGATORS
CONTINUE TRACKING DOWN LEADS IN THIS
CASE BUT SAY SO FAR THEY HAVE NOTHING
SOLID ABOUT ANY SUSPECT OR MOTIVE IN
THIS CASE. KEITH ELKINS, CHANNEL 7
NEWS.

IF YOU HAVE ANY INFORMATION ABOUT
THIS CRIME, WAGNER'S PARENTS AND
INVESTIGATORS ASK THAT YOU CALL THE
TRAVIS COUNTY SHERIFF'S DEPARTMENT,
AT 473-9285.

Story 2: New Orleans, Louisiana - Convenience Store Robbery Suspect

CU white male
 anchor w/chroma
 box "Robbery
 Suspect" & pic
 MS store, black
 man at counter,
 back of person in
 aisle
 MS similar shot
 plus back of
 woman at counter
 MS black man at
 counter
 CU black man at
 counter

NEW ORLEANS POLICE TONIGHT ARE TRYING
 TO IDENTIFY A ROBBERY SUSPECT
 CAPTURED ON VIDEOTAPE.

THIS ROBBERY TOOK PLACE AT A MAGIC
 MARKET ON CANAL STREET LAST THURSDAY
 NIGHT.

THE SUSPECT IMPLIED HE HAD A GUN, AND
 ESCAPED WITH AN UNDETERMINED AMOUNT
 OF MONEY.

HE IS DESCRIBED AS A BLACK MALE, 35
 TO 40 YEARS OLD, 5 FOOT 9, WEIGHING
 ABOUT 200 POUNDS.

POLICE SAY HE IS WANTED IN AT LEAST
 TWO SUCH ROBBERIES.

Story 3: New Orleans, Louisiana - Transit Crime Down

CU white male
 anchor w/chroma
 box "Crime" w/pic
 of buses
 Graphic "Transit
 Crime down 10%"
 city in
 background

CRIME ON BOARD NEW ORLEANS BUSES AND
 STREETCARS IS DOWN SO FAR THIS YEAR.

THE RTA REPORTS A TEN PERCENT
 DECREASE IN CRIME FOR THE FIRST SIX
 MONTHS OF THE YEAR COMPARED TO LAST
 YEAR.

OFFICIALS ATTRIBUTE THE DROP IN CRIME
 TO THE HIGH VISIBILITY OF TRANSIT
 POLICE OFFICERS.

Story 4: Philadelphia, Pennsylvania - Three Violent Crimes

CU white male
anchor, Chroma
"Murder" w/body
outline

MS police car &
building

MS building,
tilt down to car

CU boarded-up
door and window,
zoom out to MS
police car &
building

MWS police in
street at night

CU chalk body
outline w/blood &
yellow crime line
tape

MS black officer

CU chalk outline

MS black
officers in group

MS building with
crime tape
CU bloody cloth

MWS building,
back of police
officer

IT WAS MURDER LAST NIGHT IN WEST
PHILADELPHIA, AND POLICE SAY A FIGHT
OVER A WOMAN SPARKED THE VIOLENCE.

41-YEAR-OLD DENNIS BARKSDALE OF NORTH
60TH STREET WAS STABBED A TOTAL OF
EIGHT TIMES.

HE WAS RUSHED TO MISERICORDIA WHERE
HE DIED.

POLICE HAVE ARRESTED RICKY BROWN,
ALSO OF NORTH 60TH. HE WAS ARRESTED
NEAR THE SCENE AND WAS CHARGED WITH
THE MURDER.

BROWN IS BEING HELD WITHOUT BAIL
TONIGHT.

IT HAPPENED EARLY THIS MORNING ON
EDGELY STREET IN NORTH PHILADELPHIA.

36-YEAR-OLD JAMES JAMISON WAS SHOT IN
THE HEAD. HE IS NOW IN CRITICAL
CONDITION AT THE MEDICAL COLLEGE OF
PENNSYLVANIA.

THE SHOOTING HAPPENED AT THE RAYMOND
ROSEN HOUSING PROJECT. POLICE
ARRESTED 36-YEAR-OLD HELEN WILLIAMS,
AND 35-YEAR-OLD THEODORE GRAHAM.

THEY ARE CHARGED WITH AGGRAVATED
ASSAULT AND OTHER OFFENSES AND ARE
BEING HELD WITHOUT BAIL AT THIS HOUR.

A WOMAN WAS STABBED OVERNIGHT ON
SOUTH FIFTH STREET IN SOUTH
PHILADELPHIA, AND TONIGHT LAWYERS ARE
LOOKING FOR A PREGNANT WOMAN AS A
POSSIBLE SUSPECT.

THE VICTIM WAS RUSHED TO SAINT AGNES
MEDICAL CENTER. SHE IS IN CRITICAL
CONDITION.

Story 5: Louisville, Kentucky - Rape in Rural Home

MCU white female
anchor w/chroma
"Bullitt County
Rape"

IN BULLITT COUNTY KENTUCKY TONIGHT
THE SHERIFF'S SAYS THEY RECEIVED SOME
STRONG LEADS IN YESTERDAY'S RAPE OF A
LEBANON JUNCTION WOMAN. CHUCK
OLMSTEAD TELLS US POLICE ARE WORKING
TO CATCH THAT RAPIST AND ANOTHER MAN
WHO HAS ATTACKED FIVE OTHER WOMEN.

MCU white male
dispatcher at
desk
CU hand, pen, &
paper

A light blue Chevy Chevette---medium
blue--a black grill.

Full-screen
graphic,
description of
rape suspect
More details on
same graphic

CALLS TO POLICE IN BULLITT COUNTY
WERE ON THE RISE TODAY, FROM NERVOUS
WOMEN BELIEVING THEY MAY HAVE SPOTTED
THE MAN FITTING THIS DESCRIPTION OF
THE SO-CALLED COPYCAT RAPIST WHO
ATTACKED A LEBANON JUNCTION WOMAN
YESTERDAY.

BY THIS AFTERNOON, INVESTIGATORS SAID
THEY'RE MAKING PROGRESS.

MCU white male,
Chyron "Capt.
Robbie
Popperwell,
Bullitt County
Sheriff's Office"

We'll be contacting another
individual as soon as we can get them
located and try to identify them and
profile them as far as a description,
to see if it could possibly be our
suspect.

MS white woman
in laundromat at
dryer

BUT UNTIL HE'S CAUGHT, AREA WOMEN
REMAIN UNEASY.

MWS white woman
& child in
laundromat

CU white woman,
Chyron "Judy
Wade, Resident"

Leave my lights on every night, and
keep my windows shut.

Were you doing this before?

No, no.

MWS black
reporter stand-up
on rural street

IN THE MEANTIME, POLICE ARE URGING
WOMEN IN LEBANON JUNCTION TO KEEP
THEIR DOORS AND WINDOWS LOCKED, TO BE
WARY OF STRANGERS, AND SOME RESIDENTS
ARE GOING ONE STEP FURTHER.

MCU man in t-
shirt w/pistol

Load it, with the shells, put it in,
pull it back, and it's cocked.

THIS GUN SHOP OPERATOR, SAYING HIS BUSINESS IS WAY UP SINCE YESTERDAY'S RAPE.

MCU white man,
Chyron, "Harden
Stillwell, Gun
Shop Owner"

I sold one yesterday to a gentleman,
that was afraid for his family, and I
sold out all my mace.

Sold it out?

Yeah.

MCU white male
dispatcher at
desk

Looking for a blue, medium blue,
Chevy Chevette.

Full-screen
graphic with
sketch of suspect
"Rape Suspect"

MEANWHILE, MORE REPORTED SIGHTINGS OF
A BLUE CHEVETTE WITH A DENTED DOOR
AND A BLACK GRILL--THE CAR BELIEVED
TO BELONG TO A SECOND RAPIST, WHO
STALKED THE BULLITT COUNTY AREA FOR
MORE THAN A YEAR--RAPING FIVE
FEMALES, THE LATEST A 12-YEAR-OLD ON
FRIDAY.

MCU white male,
Chyron, Tom
Grossman, Bullitt
County Police
MCU white male
dispatcher at
desk

We've got quite a lot of phone calls
in the last two or three days, from
people who are just literally scared.

FOR POLICE, THE NEXT CALL COULD BE
THE ONE THAT PROVIDES THE BIG BREAK.
IN BULLITT COUNTY, CHUCK OLMSTEAD,
ACTION 11 NEWS.

Story 6: New York, New York - Elderly Woman Murdered in Hi-Rise

MCU black female
anchor w/Chroma
"East Side
Murder"

POLICE TONIGHT ARE CALLING THE MURDER OF AN ELDERLY UPPER-EAST-SIDE WOMAN A HATE CRIME. A NOTE WAS FOUND WITH THE VICTIM'S BODY THAT SAID THE KU-KLUX-KLAN WAS RESPONSIBLE. GABE PRESSMAN REPORTS.

MS people on
street during day
MWS white
policeman and man
outside building
WS building with
awning & people,
tilt up building

SHOCK, AND FEAR. THE AFTERMATH OF MURDER, HERE AT KNICKERBOCKER PLAZA ON EAST 92ND STREET. ONCE THE RUPERT BREWERIES DOMINATED THIS NEIGHBORHOOD.

MWS same
building
CU building
address

TODAY, IT'S THIS HI-RISE, WITH 575 APARTMENTS. AT ELEVEN LAST NIGHT, A SMALL, 74-YEAR-OLD WOMAN WAS FOUND IN HER SIXTH FLOOR APARTMENT, STABBED ABOUT 20 TIMES. A BROKEN KNIFE NEARBY. AND A NOTE READING, "KKK KILLS JEWS AND NIGGER-LOVERS."

CU white woman,
Chyron "Irene
Seltzer, Building
Resident"

As far as I know she was very unprejudiced. She was too nice a person to be prejudiced.

MS white officer
& people
MS elderly black
women walking
MS white man
coming out of
building
CU white man

HELEN CLEWELL, A WIDOW, WAS NEITHER BLACK NOR JEWISH, POLICE SAID, BUT OF ITALIAN ORIGIN. THE BUILDING HAS PEOPLE OF DIVERSE BACKGROUNDS. POLICE ARE BAFFLED.

We're not even sure that the note is directly connected to the homicide.

MWS white woman
& child go into
building
WS high angle
shot of building,
tilts down

MISS CLEWELL, A RETIRED CITY EMPLOYEE, WAS DISCOVERED BY HER BROTHER AFTER HE HAD TRIED UNSUCCESSFULLY TO REACH HER BY PHONE.

WHEN A SECURITY GUARD OPENED THE DOOR FOR HIM, THEY FOUND HER LYING ON THE BLOODY FLOOR.

CU white man,
Chyron, "Capt.
William Roe,
NYPD"

The apartment was not ransacked, it was not terribly disturbed. And it looked like quite a bit of a struggle took place.

MS reporter
stand-up outside
19 Precinct

THERE'S NO PATTERN OF RACIAL BIAS INCIDENTS IN THE NEIGHBORHOOD, THE CAPTAIN SAID. A FRAIL, ELDERLY WOMAN IS DEAD. THE MOTIVE, STILL A MYSTERY. GABE PRESSMAN, NEWS 4, NEW YORK.

Story 7: New Orleans, Louisiana - Drug Arrest

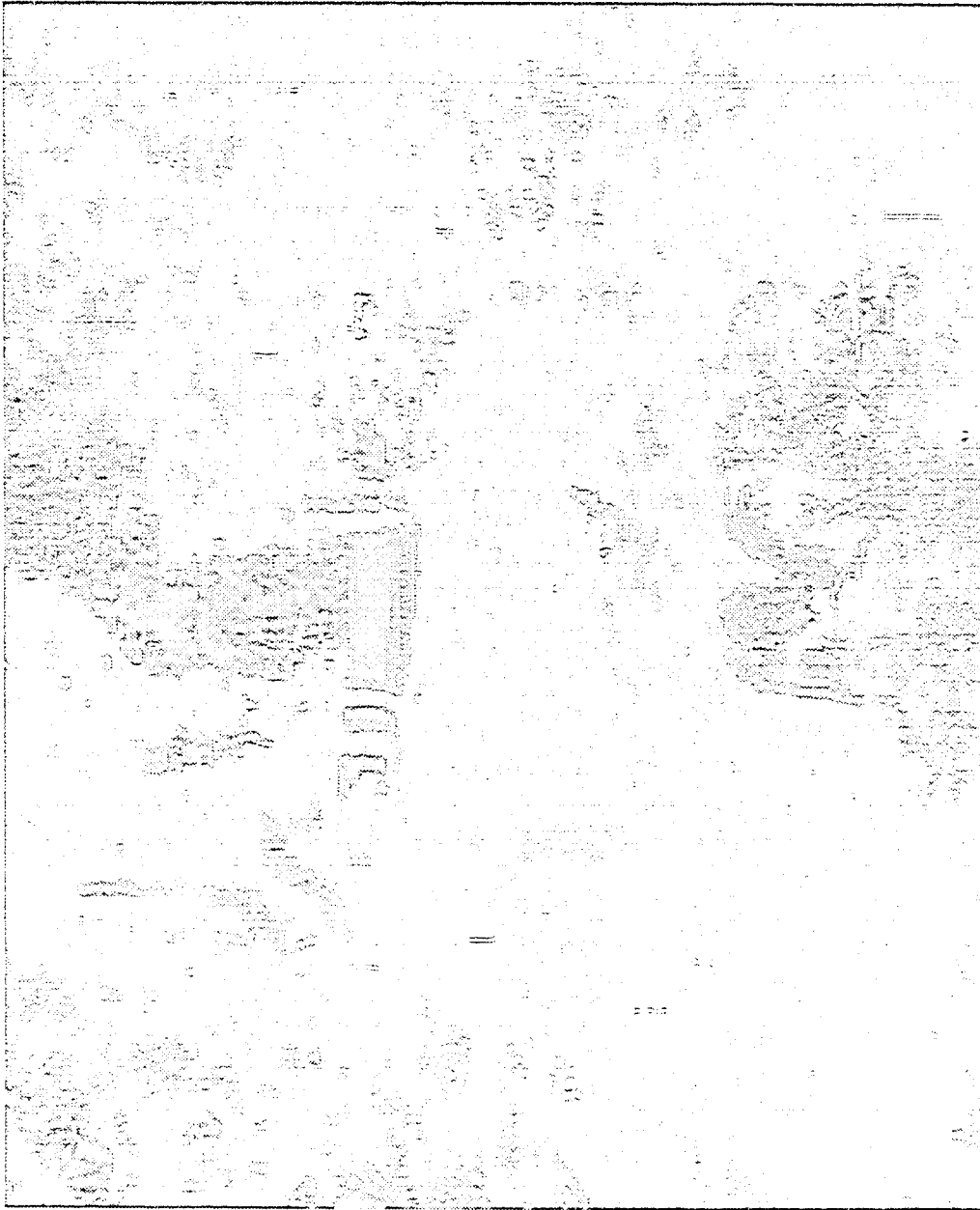
CU black female anchor on camera MS 2 black men, zooms out to MWS revealing rifle held by man who is escorting a smaller black man. Several more black men in street clothes and also in police garb appear in shot.

NEW ORLEANS POLICE ARRESTED TWO LOCAL MEN TONIGHT ON DRUG CHARGES. 24-YEAR-OLD ALVIN BANKS, AND 22-YEAR-OLD EUGENE EVAN ARE ACCUSED OF POSSESSION OF 100 ROCKS OF COCAINE.

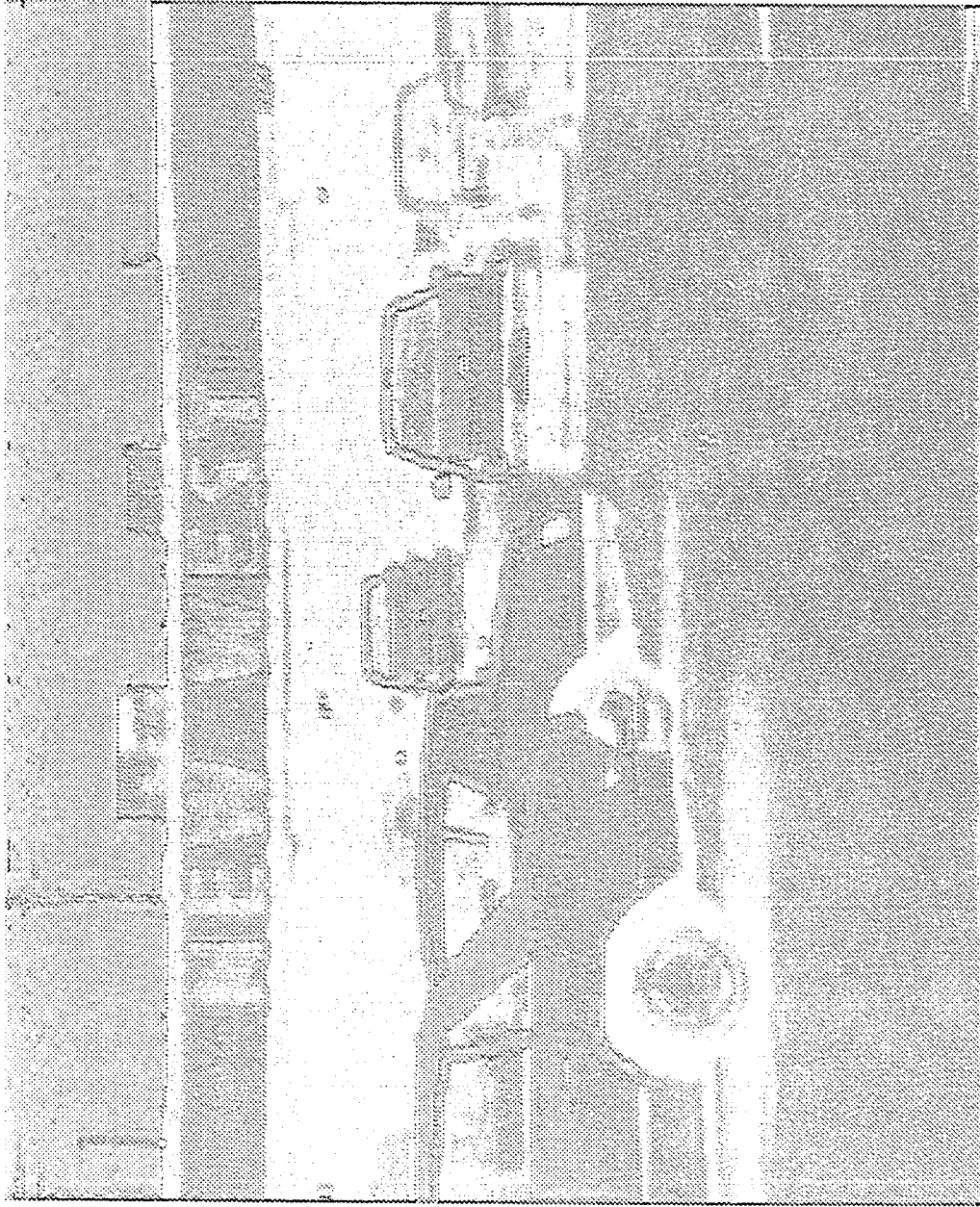
POLICE SAY THE TWO ARE ALSO CHARGED WITH INTENT TO DISTRIBUTE THE COKE. THE ARRESTS CAME AFTER NEIGHBORS IN THE AREA CALLED POLICE ABOUT THE ALLEGED DRUG ACTIVITY IN A HOUSE ON NORTH MIRO STREET.

*WS= Wide Shot
MWS=Medium Wide Shot
MS= Medium Shot
MCU=Medium Close-up
CU= Close-up
XCU=Extreme Close-up

APPENDIX 3
COMPUTER-GENERATED PHOTOGRAPHS OF LOCAL TELEVISION
CRIME NEWS VISUALS USED IN VIEWING EXPERIMENT



Visual #1: Rural River Scene



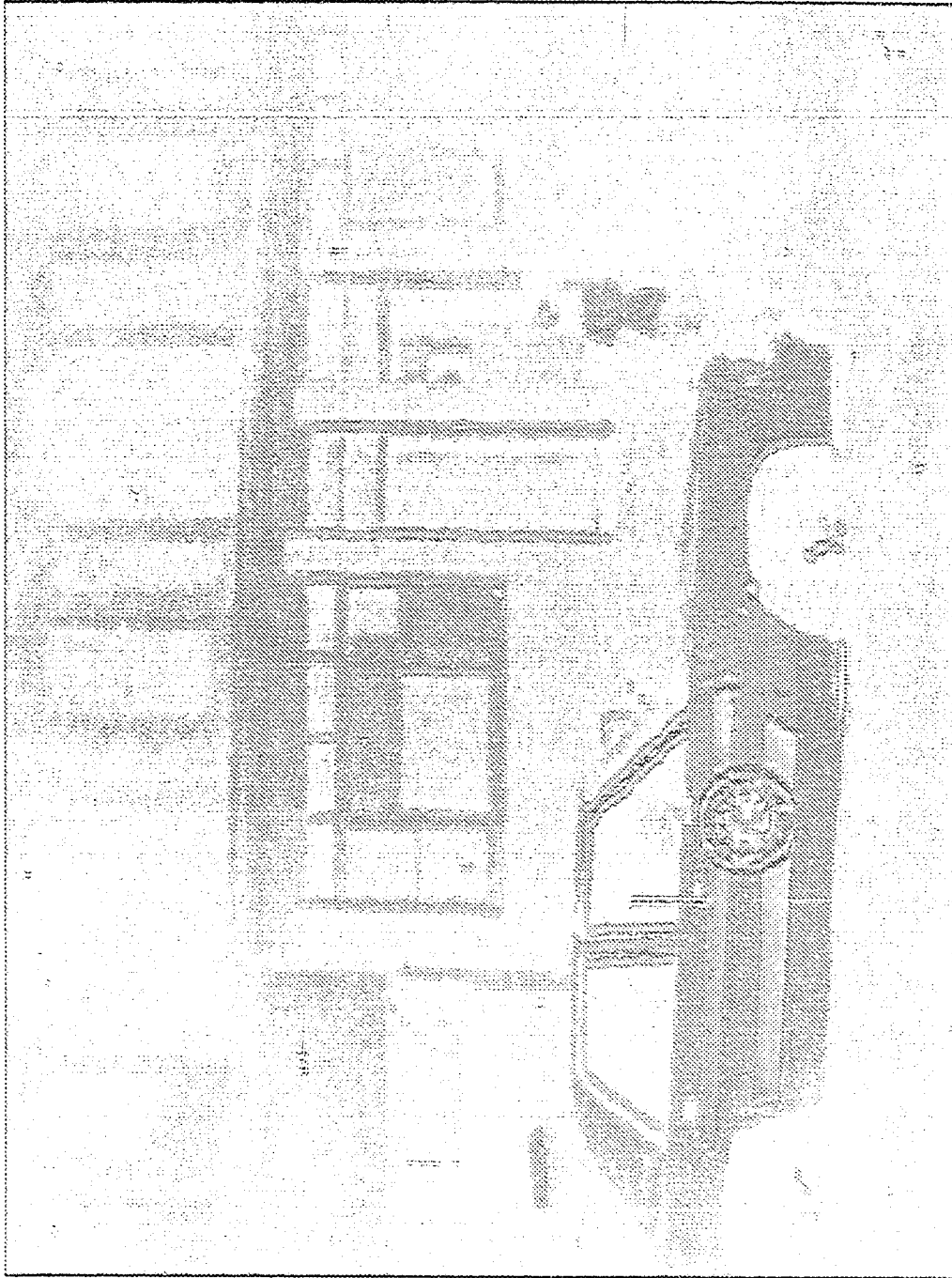
Visual #2: Parking Lot



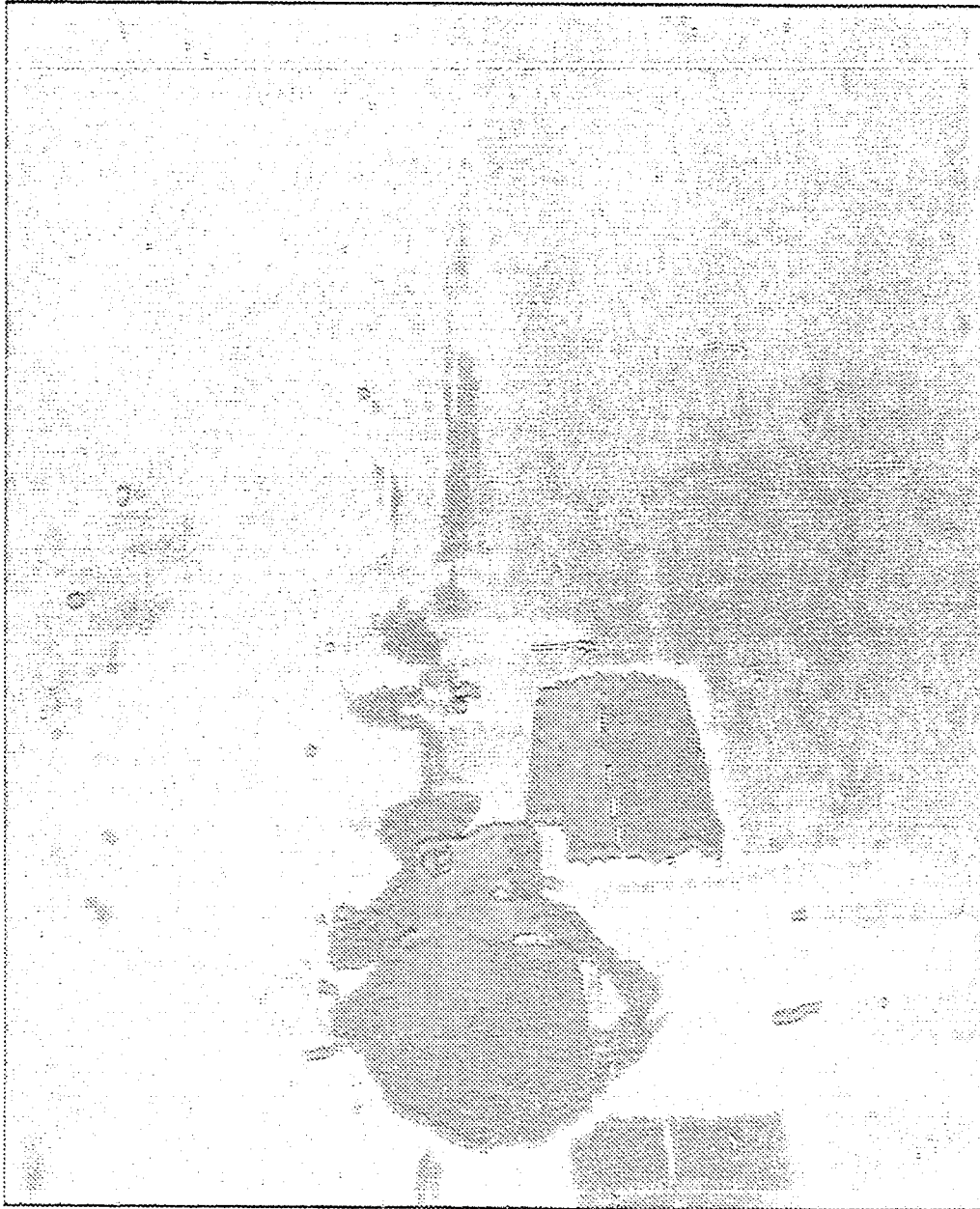
Visual #3: Body on Stretcher



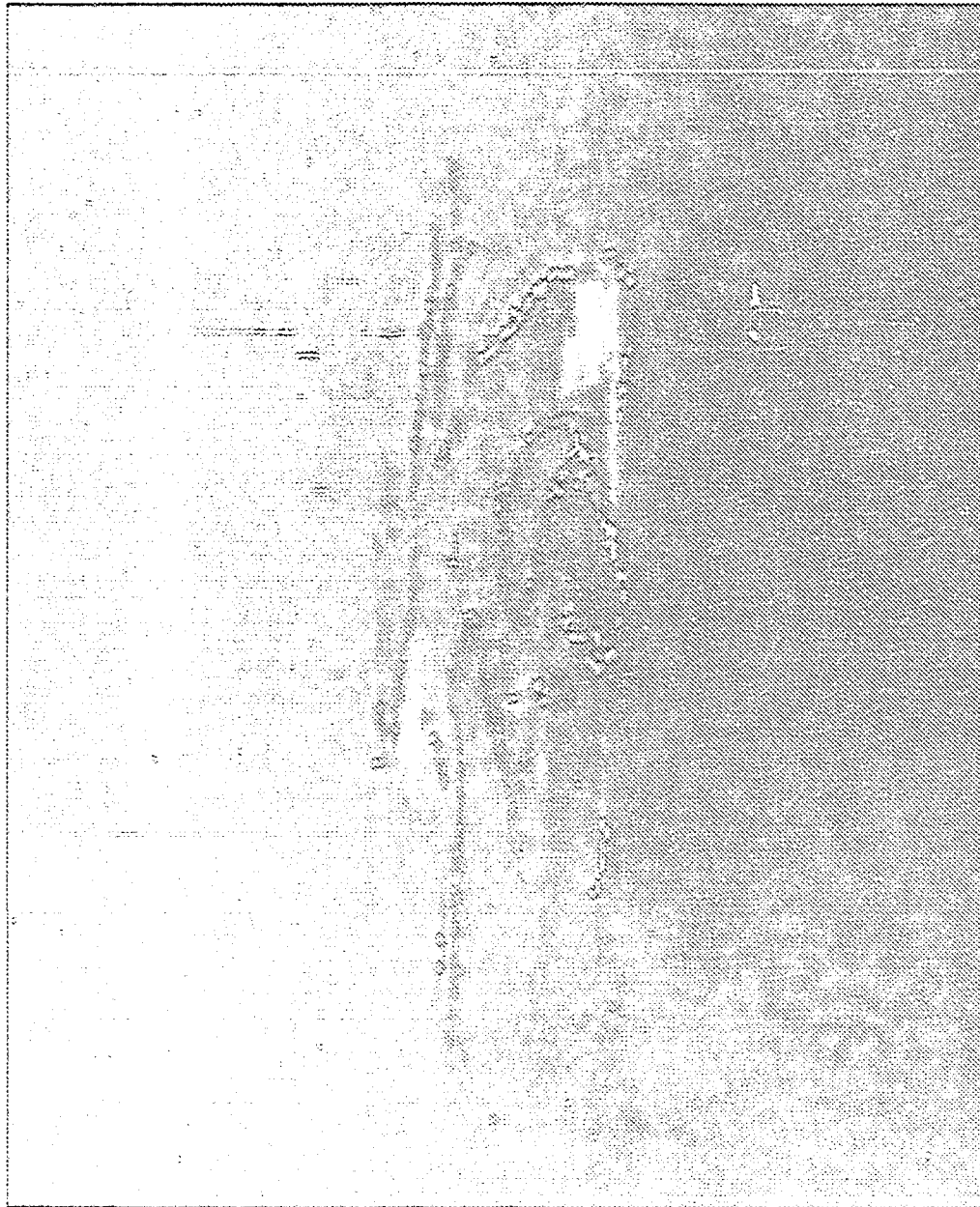
Visual #4: Robbery Suspect Surveillance Video



Visual #5: Police Car at Night



Visual #6: Police in Street at Night



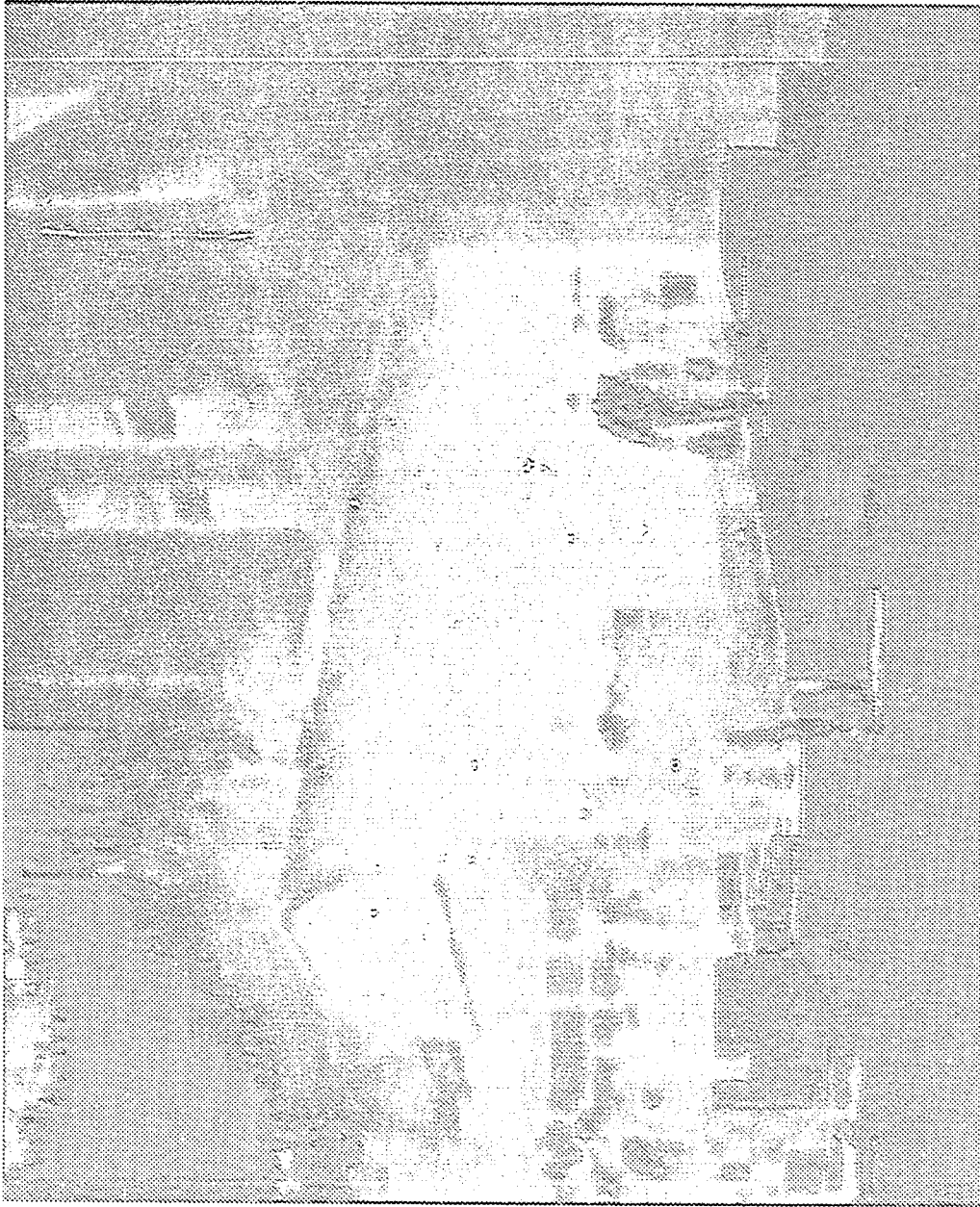
Visual #7: Chalk Body Outline



Visual #8: Pistol



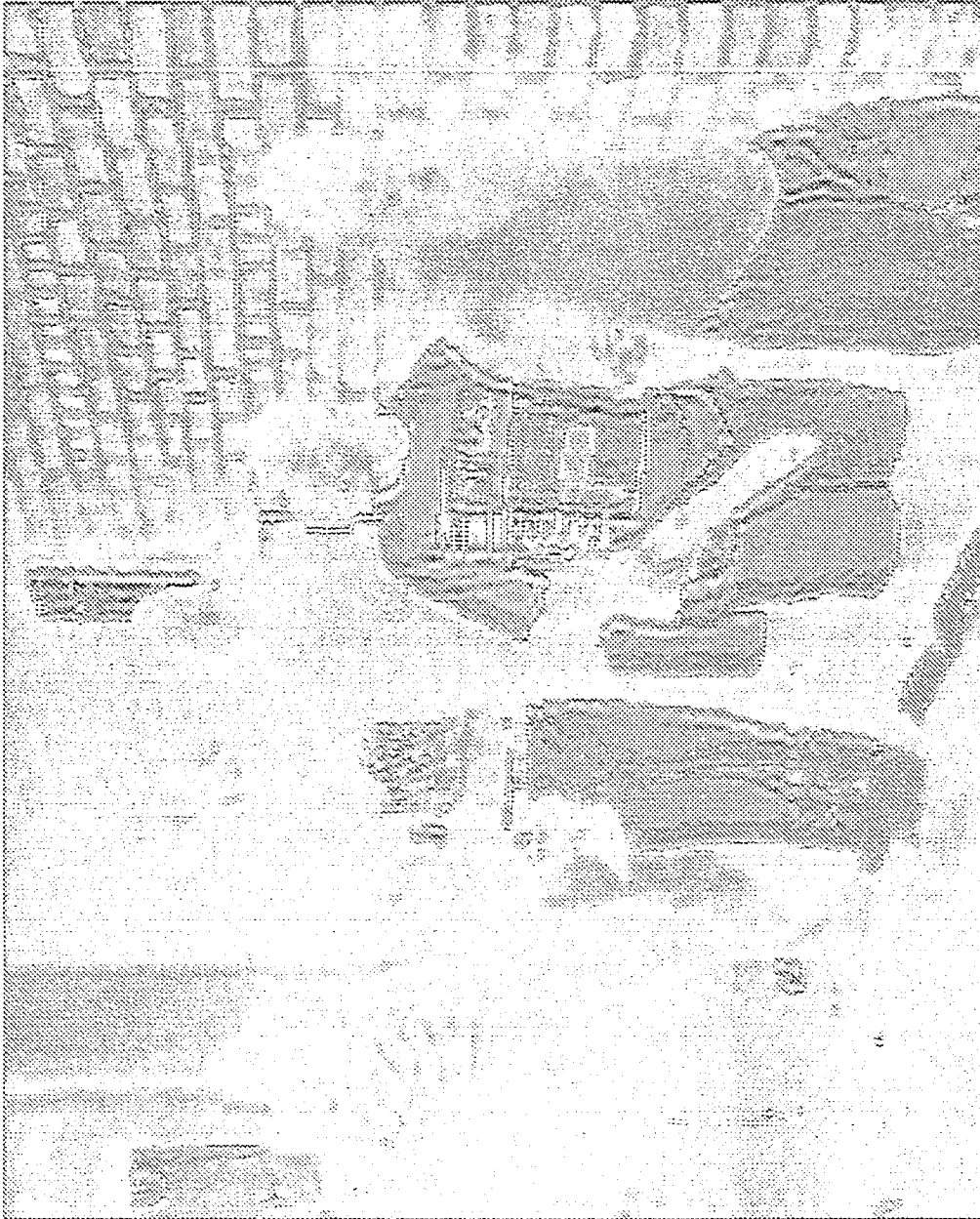
Visual #9: Sketch of Rape Suspect



Visual #10: Urban Hi-Rise



Visual #11: Policeman During Day



**Visual #12: Drug Arrest - Black Undercover Officers
Escorting Young Black Males**



Visual #13: Woman in Laundromat



Visual #14: Black Police Officers at Night

APPENDIX 4

QUESTIONNAIRE - VIEW & HEAR AND VIEW-ONLY TREATMENTS

TELEVISION NEWS STUDY

Please take a moment to think about the news stories you have just seen, and write down (in a few words) as many of the pictures you remember seeing in the stories.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

1

You are now going to see several pictures from the news stories you watched a few minutes ago. For each one, write down what comes to mind when you see the picture.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

Please answer the following questions. All of your responses will be anonymous.

1. How much time did you spend watching television yesterday?

2. During an average week, how much time do you spend watching television?

3. During an average week, how much time do you spend watching television news?

4. During an average week, how much time do you spend watching local television news? (For example, King 5 News with Jean Emerson and Barry Judge).

5. Think about your television viewing habits over your entire life. Would you say your viewing has been:
(Circle your response)
- | | | | | | | |
|--------------------|---|---|----------|---|---|--------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Extremely
light | | | Moderate | | | Extremely
heavy |
6. When you're watching television news and stories about crime are reported, how much attention do you pay to them?
- | | | | | | | |
|------------------------|---|---|-----------------------|---|---|---------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| No attention
at all | | | Moderate
attention | | | A great
deal of
attention |
- ___ Not applicable, I don't watch television news.

7. Complete the following sentence:
Crime in the Seattle area is
___ less serious than local TV news says it is.
___ about as serious as local TV news says it is.
___ more serious than local TV news says it is.

3

8. Complete the following sentence:
Crime in the United States is
___ less serious than national TV news says it is.
___ about as serious as national TV news says it is.
___ more serious than national TV news says it is.
 9. Have you ever been the victim of a violent crime?
___ Yes ___ No
 10. Do you know anyone personally who has ever been the victim of a violent crime?
___ Yes ___ No
 11. How likely do you think it is that you will be mugged or seriously assaulted within the next year?
- | | | | | | | |
|----------------------|---|---|----------------------|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not at all
likely | | | Moderately
likely | | | Extremely
likely |
12. How likely do you think it is that your residence will be broken into within the next year?
- | | | | | | | |
|----------------------|---|---|----------------------|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not at all
likely | | | Moderately
likely | | | Extremely
likely |
13. How likely do you think it is that you will have something stolen from you within the next year?
- | | | | | | | |
|----------------------|---|---|----------------------|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not at all
likely | | | Moderately
likely | | | Extremely
likely |
14. How likely do you think it is that the average person will be assaulted or robbed on a metro bus during the daytime?
- | | | | | | | |
|----------------------|---|---|----------------------|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not at all
likely | | | Moderately
likely | | | Extremely
likely |
15. How likely do you think it is that the average person will be assaulted or robbed on a metro bus at night?
- | | | | | | | |
|----------------------|---|---|----------------------|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not at all
likely | | | Moderately
likely | | | Extremely
likely |

4

16. How safe do you think it is for children who are not supervised by an adult to play in a local park during the daytime?
- 1 2 3 4 5 6 7
Extremely Moderately Not at all
safe safe safe
17. How safe do you think it is for the average person to walk alone in downtown Seattle during the daytime?
- 1 2 3 4 5 6 7
Extremely Moderately Not at all
safe safe safe
18. How safe do you think it is for the average person to walk alone in downtown Seattle at night?
- 1 2 3 4 5 6 7
Extremely Moderately Not at all
safe safe safe
19. How safe do you think it is for the average person to walk in downtown Seattle with another person at night?
- 1 2 3 4 5 6 7
Extremely Moderately Not at all
safe safe safe
20. How often do you lock the doors to your home, even when you're at home or leaving for a short time?
- 1 2 3 4 5 6 7
Never About half Always
the time
21. How often do you lock the windows and screens to your home, even when you're at home or leaving for a short time?
- 1 2 3 4 5 6 7
Never About half Always
the time
22. When parking a vehicle, how often do you lock the doors?
- 1 2 3 4 5 6 7
Never About half Always
the time
- ___ Not applicable, I don't drive.

5

23. When driving a vehicle, how often do you lock the doors?
- 1 2 3 4 5 6 7
Never About half Always
the time
- ___ Not applicable, I don't drive.
24. When going out after dark, how often do you go with someone else because of concern about crime?
- 1 2 3 4 5 6 7
Never About half Always
the time
- ___ Not applicable, I don't go out after dark.
25. When going out after dark, how likely is it that you will avoid certain areas because of concern about crime?
- 1 2 3 4 5 6 7
Not at all Moderately Extremely
likely likely likely
- ___ Not applicable, I don't go out after dark.
26. Do you own a gun?
- ___ Yes ___ No
27. Have you ever taken a self-defense class?
- ___ Yes ___ No
28. How much impact do you think police patrols have on crime prevention?
- 1 2 3 4 5 6 7
No impact Moderate A significant
at all impact impact
29. Of all reported crimes, what percent do you think are solved? In other words, in what percent do you think police make an arrest?
- _____ percent
30. What is your gender?
- ___ Female ___ Male

31. What is the highest level of education you have completed?
- | | |
|---|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> College grad |
| <input type="checkbox"/> High school grad | <input type="checkbox"/> Some graduate work |
| <input type="checkbox"/> Some college | <input type="checkbox"/> Master's degree or Ph.D. |
32. What is your age?

33. What race or ethnicity are you? (optional)
- | | | |
|---|--|------------------------------------|
| <input type="checkbox"/> African American | <input type="checkbox"/> Asian American | <input type="checkbox"/> Caucasian |
| <input type="checkbox"/> Hispanic | <input type="checkbox"/> Native American | <input type="checkbox"/> Other |
34. Have you lived in the United States all or most of your life?
- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|
35. What area or neighborhood do you live in most of the year?

Thank you for taking part in this study.

QUESTIONNAIRE - NO-VIEW TREATMENT (INTRODUCTORY PAGES ONLY)

TELEVISION IMAGES STUDY

You are going to see a series of still frames that have been made from television broadcasts. For each one, write down what comes to mind when you see the picture.

1. _____
2. _____
3. _____
4. _____
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15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

APPENDIX 5
CODING SCHEME FOR VISUAL RECALL

VISUAL RECALLED

- 01=ANCHOR PERSON
- 02=REPORTER ON THE SCENE
- 03=SOUND BITE--MALE AUTHORITY
- 04=SOUND BITE--FEMALE AUTHORITY
- 05=SOUND BITE--MALE NON-AUTHORITY
- 06=SOUND BITE--FEMALE NON-AUTHORITY
- 07=RIVER SCENE (TWO SIMILAR SHOTS)
- 08=POLICE NEAR RIVER
- 09=DELIBERATELY MISSING
- 10=PARKING LOT & BUILDING EXTERIOR
- 11=SHROUDED BODY IN FIELD
- 12=SHROUDED BODY CARRIED ON STRETCHER
- 13=MEN STANDING BESIDE VAN
- 14=PHOTO OF VICTIM
- 15=GRAPHIC - SHERIFF'S DEPARTMENT PHONE NUMBER
- 16=SURVEILLANCE VIDEO (FOUR SIMILAR SHOTS)
- 17=GRAPHIC - TRANSIT CRIMES
- 18=POLICE CARS OUTSIDE BOARDED BUILDING AT NIGHT
(2 SIMILAR SHOTS)
- 19=BOARDED BUILDING AT NIGHT
- 20=POLICE AT CRIME SCENE AT NIGHT
- 21=CHALK MARK & BLOOD (2 SHOTS)
- 22=BLACK OFFICER AT CRIME LINE
- 23=POLICE STANDING TOGETHER AT NIGHT
- 24=BUILDING & CARS AT NIGHT W/CRIME SCENE RIBBON
- 25=BLOODY CLOTH
- 26=BACK OF POLICEMAN LOOKING TOWARD HOUSE, CRIME
SCENE
- 27=POLICE AT DISPATCH DESK (3 SHOTS)
- 28=POLICE AT DISPATCH DESK, CLOSE-UP OF HAND
- 29=GRAPHIC - SUSPECT'S DESCRIPTION (2 SHOTS)
- 30=WOMAN IN LAUNDROMAT
- 31=WOMAN AND CHILD IN LAUNDROMAT
- 32=PISTOL CLOSE-UP (IN MAN'S HAND)
- 33=ELDERLY PEOPLE WALKING ON STREET DURING DAY
- 34=POLICE OFFICE OUTSIDE DURING DAY (2 SHOTS)
- 35=PEOPLE OUTSIDE HI-RIDE (4 SHOTS)
- 36=ADDRESS ON BUILDING-CLOSE-UP
- 37=2 BLACK WOMEN WALKING OUTSIDE DURING DAY
- 38=HI-RISE
- 39=BLACK MEN IN HANDCUFFS LED BY BLACK
PLAINCLOTHES
- 40=SOUND BITE, MAN WITH GUN
- 50=GENERAL BUILDING
- 51=GENERAL POLICE
- 52=GENERAL PEOPLE
- 53=GENERAL CRIME
- 54=BLOOD
- 55=YELLOW CRIME RIBBON

56=GENERAL CORPSE
57=JOURNALIST
70=COMMENT ON VISUALS IN GENERAL
80=MURDER CHROMA KEY
81=RAPE CHROMA KEY
82=PHILADELPHIA GRAPHIC
83=CENTRAL LOCK-UP
96=SHOT DIDN'T EXIST
97=CORPSE--WRONG STORY
98=CAN'T TELL WHICH SHOT THE RESPONDENT MEANS
99=MISSING

APPENDIX 6
RESPONSE IDENTIFICATION CODING
SHOT #1: RURAL RIVER SCENE

- 01 RURAL RIVER, PARK, WITH BRIDGE AND PEOPLE
- 02 PEOPLE SEARCHING, SEARCH, INVESTIGATION
- 03 POLICE SEARCHING, RECOVER BODY
- 04 BODY, BODY FOUND
- 06 VICTIM DEAD (DEAD GIRL, COUNTRY DANCER'S BODY, DANCER
WHO WAS KILLED)
- 07 VICTIM ALIVE (DANCING, USE HER NAME)
- 08 MURDER SCENE, DEATH SCENE, CRIME SCENE
- 10 THE ASSAULT, THE CRIME, THE DEATH (MURDERED, RAPED,
THROWN OFF, STRANGLED, VIOLENT ATTACK)
- 12 A GANG
- 13 NATURE HIKE, PEACEFUL, CAMPING
- 14 RETIREMENT HOME, MONASTERY
- 16 NEWS STORY
- 17 WRONGDOING, UP TO SOMETHING, PERVERT IN PARK
- 18 GREEN RIVER
- 19 CAMPUS

- 25 PERSONAL COMMENT, ABSTRACT COMMENT
. HOW CAN SOMEONE KILL LIKE THAT?
. CURIOSITY, CONTEMPLATION

SHOT #2: PARKING LOT & NEW WEST BUILDING

- 01 PARKING LOT & NEW WEST BUILDING
- 02 A DANCE CLUB, DANCE HALL, BAR
- 03 PLACE WHERE FEMALE VICTIM SEEN, WAS DANCING, WENT WITH PARENTS, EMPLOYED
- 04 DANGEROUS AREA, "SHADY" PLACE
- 05 VICTIM DANCING, ALIVE
- 06 CONVENIENCE STORE, GROCERY STORE, SUPERMARKET, SHOPPING
- 07 DRIVING OFF, LEAVING, BEING TAKEN AWAY
- 08 AMERICAN CARS, CAR PROBLEM, USED CAR DEALER, USED CAR SALESPEOPLE
- 10 RURAL--IN THE COUNTRY, SOUTH/SOUTHWEST
- 11 MISC. (AVOIDANCE, IN THE MORNING)
- 12 BOWLING
- 13 ROBBERY, ROBBERY STORY, BURGLARY
- 14 ALCOHOL, DRINKING
- 15 CRIME SCENE

- 25 COMMENT:
. WHAT IS "NEW WEST?"

SHOT #3: MEN CARRYING BODY ON STRETCHER

- 01 MEN CARRYING BODY ON STRETCHER, TAKING BODY AWAY, BODY
FOUND
- 02 ACCIDENT, DROWNING
- 03 MURDER VICTIM, SOMEONE KILLED
- 04 DEAD GIRL, SLAIN GIRL (MENTION OF ASSAULT OR PERSON)
- 06 MURDER SCENE, CRIME SCENE, MURDER, CRIME
- 07 DEATH
- 08 COMMENTS:
. DON'T LIKE THAT
. IT HAPPENS AGAIN
. VICTIM SAME AGE AS RESPONDENT
. DON'T TRIP
. U.S. HIGH CRIME RATE
- 10 MENTION POLICE, OFFICIALS (POLICE FOUND, POLICE TAKING
AWAY, INVESTIGATION)
- 11 VICTIM FOUND NEAR THERE, IN RIVER
- 12 MOTHER'S SOUND BITE - "JUST NORMAL PEOPLE, DOESN'T
HAPPEN TO US"
- 13 GREEN RIVER KILLER OR MURDERS
- 17 UNSURE--ACCIDENT, MURDER?
- 18 MISC.: NIGHTCLUB SCENE
NEWS STORY
GEOLOGISTS

SHOT #4: SURVEILLANCE VIDEO

- 01 SURVEILLANCE VIDEO OF BLACK MAN
- 03 SUSPECT
- 04 ROBBER, ROBBERY, HOLD-UP
- 06 BLACK ROBBER
- 07 BLACK SUSPECT
- 08 CRIMINAL, SHOPLIFTER, CRIME
- 10 MURDER, MURDERER
- 11 BAD PERSON, SHADY CHARACTER
-
- 15 COMMENTARY:
 . BLACK MEN ALWAYS ROB, WHY BLACK?
 . TENSE RACE RELATIONS
 . POVERTY MAKES PEOPLE DO BAD THINGS
 . SCARY, GUILTY
 . STUPIDITY
 . SCUZZY
 . CAUGHT ON TAPE
-
- 16 FOCUS ON LOCATION: 7-11 STORE, OPERATING ROOM
- 17 LIKE A MOVIE, TV SHOW

SHOT #5: POLICE CAR AT NIGHT OUTSIDE BOARDED BUILDING

- 01 POLICE CAR AT NIGHT OUTSIDE BOARDED BUILDING
- 02 FOCUS ON POLICE: WHERE THEY ARE, WHAT THEY'RE DOING
- 05 VIOLENT CRIME: KILLING, MURDER, STABBING, SHOOTING
- 08 FIGHT OVER A WOMAN, LOVE QUARREL, DOMESTIC DISPUTE,
DOMESTIC VIOLENCE
- 10 RESIDENCE OF VICTIM
- 13 CRIME SCENE, MURDER SCENE, CRIME
- 15 CRIME BY PREGNANT FEMALE SUSPECT
- 16 LOW-INCOME, POOR NEIGHBORHOOD
- 17 DRUGS, DRUG RELATED
- 18 CERTAIN LOCATION NAMED
- 19 HIGH CRIME RATE, INNER CITY
- 20 SOMETHING HAPPENED, "TROUBLE"
- 21 "COPS" SHOW
- 23 MISC.: HOME HEALTH CARE

- 25 COMMENT:
. DON'T LIKE BUILDING

SHOT #6: POLICE AT NIGHT ON STREET WITH YELLOW RIBBON

- 01 POLICE AT NIGHT ON STREET WITH YELLOW RIBBON
- 02 CRIME SCENE (PLACE OF SHOOTING, MURDER, RAPE)
- 03 PLACE BODY FOUND
- 04 POLICE DISCUSSING SOMETHING/INVESTIGATING CRIME
- 05 MURDER, DRUGS, CRIME, VIOLENCE
- 06 THE VICTIM
- 07 PHILADELPHIA
- 10 PREGNANT WOMAN SUSPECT
- 11 SOMETHING HAPPENED, TROUBLE, ACTIVITY
- 12 MISC. LOCATIONS: AIRPORT, PARTY AT PARK
- 13 GANGS
- 14 CAR ACCIDENT, DRUNK DRIVER

- 25 OPINION:
 - . LACK OF POLICE WHEN NEEDED
 - . SO MANY POLICE DOING NOTHING
 - . DANGER, DECISIONS
 - . WHY SO MANY CRIME SHOTS?
 - . EMERGENCY
 - . ROWDY
 - . CHAOS

SHOT #7: CHALK MARK OUTLINE AND BLOOD

- 01 CHALK MARK OUTLINE AND BLOOD
- 02 BODY, DEAD PERSON
- 03 CRIME VICTIM, MURDER VICTIM
- 04 CRIME SCENE, MURDER SCENE
- 05 SHOOTING BY PREGNANT WOMAN
- 06 GANG VIOLENCE
- 07 POLICE
- 08 TV SHOW MURDER SHOT
- 10 SCENE FROM ANOTHER STORY
- 11 DEATH
- 12 MURDER, SHOOT-OUT, VIOLENT CRIME, DRUGS
- 13 NY STREETS, PHILADELPHIA
- 14 FRIEND WHO WAS SHOT
- 15 OTHER:
 - . A CHILD'S DRAWING
 - . RIVER, CROCODILE
 - . CROP CIRCLES
 - . PEACE
 - . FLOOD
 - . MAP

- 25 COMMENT:
 - . VIOLENT, BLOODY DEATH
 - . END OF ONE MORE LIFE
 - . TIRED OF SEEING CRIME
 - . SEEN TOO OFTEN ON NEWS
 - . FEAR
 - . SENSELESS VIOLENCE

SHOT #8: PISTOL HELD BY PERSON IN T-SHIRT

- 01 PISTOL HELD BY PERSON IN T-SHIRT
- 02 DANGER, DANGEROUS
- 03 INCREASE IN GUN SALES (INFO FROM AUDIO TRACK)
- 04 WOMEN, PEOPLE BUYING GUNS
- 05 FEAR, FEAR OF RAPIST, FEAR OF VIOLENT CRIME
- 06 GUN SOLD TO SUSPECT
- 07 GUN SHOP, OPERATOR SHOWING GUN, PAWN SHOP
- 08 CASUAL DISPLAY
- 10 RAPE STORY, RAPIST
- 11 PEOPLE WANTING PROTECTION, PROTECTION
- 12 DRUG DEALERS
- 14 POLICE SHOWING WEAPONS, BUY-BACK PROGRAMS, WEAPONS
SEIZED, EVIDENCE, CRIME WEAPON
- 13 PERSONAL VIEWS
 - . WHITE MEN USUALLY RAPIST
 - . I WANT ONE
 - . MY GUN IS BIGGER
 - . DOES HE HAVE THE BRAIN TO USE IT?
- 15 GUNS & KIDS, SCHOOLS, YOUTH
- 16 GUN CONTROL, RIGHT TO BEAR ARMS, EASY GUN LAWS, NRA
- 19 MURDER, CRIME, VIOLENCE
- 20 OTHER:
 - . WATER GUN
 - . NEWS CLIP

SHOT #9: SKETCH OF RAPE SUSPECT WITH DETAILS

- 01 SKETCH OF RAPE SUSPECT WITH DETAILS
- 02 COMMITTED FIVE RAPES, RAPED 12-YEAR-OLD (INFO FROM AUDIO TRACK)
- 03 SEARCH FOR RAPIST
- 04 RAPE STORY
- 06 FUGITIVE, CRIMINAL, RAPIST
- 07 SUSPECT WHO RAPED LAUNDROMAT PATRON
- 08 VICTIM
- 10 RAPE, CRIME
- 11 TV PROGRAM
- 14 OTHER

- 25 PERSONAL COMMENTS
 - . MENTALLY UNSTABLE
 - . MADE RESPONDENT THINK OF SOMEONE DRAWING LOOKS LIKE
 - . DOESN'T LOOK LIKE RAPIST, EVERYDAY MAN
 - . KILL
 - . MEAN, LIAR
 - . NEVER FIND HIM
 - . BE ON THE LOOKOUT
 - . HORRIFYING, SCARY
 - . DEGRADATION OF SOCIETY
 - . GUILTY
 - . WATCH OUT FOR HIM

SHOT #10: OUTSIDE HI-RISE

- 01 OUTSIDE HI-RISE, PEOPLE
02 THE KILLER
03 THE ELDERLY VICTIM WHO WAS STABBED, MURDERED
04 THE CRIME, NO MENTION OF VICTIM
05 BUILDING WHERE VICTIM LIVED
08 HATE CRIME, KKK MURDER (CODE THIS ONLY IF MAJOR MENTION)
10 ELDERLY RELATIVE WHO WAS ALSO KILLED
11 NORMAL NEIGHBORHOOD, NOWHERE, ANYWHERE
12 MALL ENTRANCE, SHOPPING
13 WEALTH
14 WORK, BUSINESS
15 SUBWAY ENTRANCE, TRAIN STATION
16 ANOTHER CITY, CITY, DOWNTOWN
17 STUDENTS, CLASSES
18 RESTAURANT, HOTEL, BANK, HOSPITAL, NIGHT CLUB, APT.
19 POVERTY, PROJECTS
20 OTHER:
 . VACATION, LUNCH
21 SENIOR CITIZEN'S HOME, ELDERLY

25 OTHER COMMENTS
 . BLACKS HAVE HIGH CRIME RATE
 . NICE DAY
 . SOMEONE IMPORTANT IN BUILDING
 . RELATE TO TV SHOW
 . SAFETY IN NUMBERS
 . NO SMOKING
 . METAL DETECTORS
 . KILLER LEAVING BUILDING

SHOT #11: ONE POLICEMAN OUTSIDE DURING DAY

- 01 A POLICEMAN OUTSIDE DURING DAY
- 02 INTERPRETATION OF WHAT POLICEMAN IS DOING
- 08 TYPE OF POLICE--NY, OFFICER JOE, ITALIAN, RESPONSIBLE,
ETC.
- 10 SECURITY GUARD, SECURITY
- 11 APARTMENT BUILDING, OTHER LOCATION
- 12 WOMAN WHO WAS KILLED
- 13 HATE CRIME
- 14 PEOPLE ON THE STREET
- 15 REPORTER INTERVIEWING POLICE
- 16 CRIME
- 17 PROTECTION
- 18 INFO FROM AUDIO "FOUND BY SON"
- 19 PARADE

- 25 COMMENT:
 - . WHAT'S HE DOING?
 - . COMMUNITY
 - . MORE OFFICERS DOING NOTHING
 - . BORING JOB
 - . MUST FEEL HOT
 - . SAFETY V INSECURITY
 - . "BIG BROTHER"

SHOT #12: BLACK MEN, SOME WITH GUNS, OTHERS HANDCUFFED

- 01 BLACK MEN, SOME WITH GUNS, OTHERS HANDCUFFED
- 02 DRUG RELATED: BUST, RAID, ARREST, DEALER, POSSESSION
- 03 ARREST, GENERIC
- 05 POLICE AS MAIN FOCUS OF RESPONSE
- 06 MENTION OF BLACKS WITH MORE DETAIL THAN IN 01
- 10 CRIME
- 11 A GANG, GANGS
- 12 SEGREGATION, RACISM
- 13 INNER CITY KIDS, STREET KIDS
- 14 A LINE (CONCERT, LUNCH, ETC.)
- 16 PEOPLE WITH PROBLEMS, OUTLAWS, BAD GUYS
- 17 CERTAIN LOCATION NAMED
- 18 YOUTH
- 19 ROWDY PEOPLE, VIOLENCE, BRAWL
- 22 GUNS

- 25 PERSONAL COMMENTS:
 - . CAN'T TELL OFFICERS FROM PRISONERS
 - . LAST NEWS RESPONDENT WATCHED
 - . MORE YOUNG BLACK MALES SELLING DRUGS
 - . FEEL SORRY FOR THEM
 - . YOUNG-LOOKING COP WITH GUN
 - . GET THOSE GUYS, PUT THEM AWAY

SHOT #13: WOMAN IN LAUNDROMAT

- 01 WOMAN IN LAUNDROMAT
- 02 WOMAN, WOMEN, CONCERNED, SCARED OF RAPIST
- 03 LOW INCOME WOMEN, POOR, POVERTY
- 04 RAPE STORY
- 05 WOMAN WHO LOCKS HER WINDOWS AT NIGHT, WOMEN IN NEIGHBORHOOD
- 06 RAPE, WOMEN RAPED
- 07 AREA WHERE SUSPECT AT LARGE, WHERE CRIME OCCURRED
- 08 HOUSEWIFE
- 10 WITNESS
- 11 MISC: PUBLIC PROPERTY, SCHOOL, LIVE ALONE

- 25 COMMENT:
 - . GLAD I DON'T HAVE TO WASH AT A LAUNDROMAT
 - . WHY LAUNDROMAT FOR RAPE STORY?
 - . BORING
 - . HOT
 - . FIRE VICTIMS RESORT TO LAUNDROMATS
 - . CONFUSED

SHOT #14: GROUP OF BLACK COPS AT NIGHT

- 01 GROUP OF BLACK POLICE OFFICERS AT NIGHT
- 03 POLICE AT CRIME SCENE, CRIME SCENE
- 05 POLICE AND DESCRIPTION OF THEIR ACTION
- 07 MURDER, SERIOUS CRIME, CRIME, VIOLENCE
- 10 SERIOUS INCIDENT, BAD SCENE, BODY FOUND
- 11 LOCATION MENTIONED
-
- 25 PERSONAL COMMENTS
- . REFRESHING TO SEE A LOT OF BLACK POLICEMEN
 - . WHY ALL BLACK?
 - . WHY ALL NEEDED?
 - . WHAT ARE THEY DOING?
 - . CONFUSION, UNEASINESS
 - . MORE COPS STANDING AROUND DOING NOTHING
 - . SELLOUTS
 - . POLICE POWER
 - . AIMLESS

APPENDIX 7
CONTROL TESTS FOR GENDER AND KNOWLEDGE OF VICTIM

PERCENT OF FEMALES AND MALES WHO RECALLED EACH OF 12 VISUALS

Visual	View & Hear Treatment Group		View-Only Treatment Group	
	F (N=33)	M (N=12)	F (N=24)	M (N=8)
Anchor Person	27	33	58	38
Reporter	33	50	38	13
Female Sound Bite	79	83	67	63
Male Sound Bite	49	50	38	75
Rural River	42	58	54	38
Parking Lot	36	33	8	25
Body on Stretcher	24	33	33	75
Photo of Victim	36	17	33	25
Robbery Surveillance Video	61	25	54	75
Chalk Body Outline	46	50	38	63
Hi-Rise	52	58	33	50
Drug Arrest	91	67	88	63

PERCENT OF RESPONDENTS WHO SAID THEY KNOW A VICTIM OF CRIME
WHO RECALLED EACH OF 12 VISUALS

Visual	View & Hear Treatment Group (N=45)	View-Only Treatment Group (N=32)
Anchor Person	13	50
Reporter	39	30
Female Sound Bite	87	65
Male Sound Bite	57	45
Rural River	52	50
Parking Lot	44	15
Body on Stretcher	22	55
Photo of Victim	30	35
Robbery Surveillance Video	43	60
Chalk Body Outline	48	50
Hi-Rise	56	30
Drug Arrest	83	80

PERCENT OF FEMALES AND MALES WHOSE CONSTRUCTED MEANINGS
FOCUSED ON CRIME FOR EACH OF 14 VISUALS

Visual	Female (N=73)	Male (N=45)
Rural River	64	50
Parking Lot	39	21
Body on Stretcher	56	73
Robbery Surveillance Video	84	64
Police Car & Building at Night	70	75
Police in Street at Night	72	73
Chalk Body Outline	74	64
Pistol	44	40
Sketch of Rape Suspect	83	64
Hi-Rise	41	30
Policeman Outdoors During Day	55	48
Drug Arrest	75	65
Woman in Laundromat	37	27
Group of Black Police Officers at Night	72	51

PERCENT OF FEMALES AND MALES WHO ARE
HEAVIER AND LIGHTER VIEWERS

Treatment Group	Gender	TV Yesterday		TV Weekly		News Weekly		Local News Weekly	
		L	H	L	H	L	H	L	H
Total Sample	F (N=73)	69	32	55	45	53	47	56	44
	M (N=45)	58	42	51	49	51	49	69	31
View & Hear	F (N=33)	70	30	58	42	55	46	55	46
	M (N=12)	58	42	50	50	42	58	42	58
View Only	F (N=24)	63	38	46	54	46	54	54	46
	M (N=8)	38	63	38	63	38	63	75	25
No View	F (N=16)	75	25	63	38	63	38	62	38
	M (N=25)	64	36	56	44	60	40	80	20

PERCENT OF HEAVIER AND LIGHTER VIEWERS
WHO ARE FEMALE AND MALE

Treatment Group	Gender	TV Yesterday		TV Weekly		News Weekly		Local News Weekly	
		L	H	L	H	L	H	L	H
Total Sample	F (N=73)	66	55	64	60	63	61	57	70
	M (N=45)	34	45	37	40	37	39	43	30
View & Hear	F (N=33)	77	67	76	70	78	68	78	68
	M (N=12)	23	33	24	30	22	32	22	32
View Only	F (N=24)	83	64	79	72	79	72	68	85
	M (N=8)	17	36	21	28	21	28	32	15
No View	F (N=16)	43	31	42	35	40	38	33	55
	M (N=25)	57	69	58	65	60	63	67	46

Vita

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