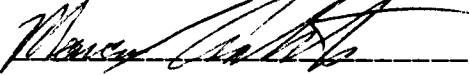


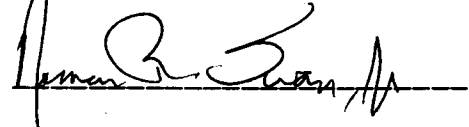
To the Graduate Council:

I am submitting herewith a dissertation written by Kina S. Mallard entitled "Media Use and Fear of Flying: A Cultivation Study." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of PhD with a major in Communications.


Michael Singletary, PhD, Major Professor

We have read this dissertation
and recommend its acceptance:





Accepted for the Council:


Associate Vice Chancellor
and Dean of The Graduate School

MEDIA USE AND FEAR OF FLYING:
A CULTIVATION STUDY

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Kina Steed Mallard

August 1991

DEDICATION

This dissertation is dedicated to my father

James Steed, Jr.

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ABSTRACT

For three decades cultivation research has dominated the field of mass communication. Scholars continue to debate whether or not the mass media cultivates an individual's perceptions of social reality. Much of this research has examined fictional television content, crime/adventure, soap operas and drama. Few cultivation studies have looked at the factual content of news.

This study, a survey of 181 adults, explores the relationship between TV media-use and perceptions about flying. Specifically, this dissertation tests TV news-use and fear of flying and TV news-use and estimates about flying.

Tests of the hypotheses posited in this dissertation reveal that TV news-use is not significantly related to respondents' fear of flying or their estimates about flying. These findings are consistent with previous cultivation research examining the news genre of television.

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CHAPTER I

INTRODUCTION

Among the streams of communication research, studies of the cultivation hypothesis have been the most prolific. The concept of cultivation, that television helps create social reality, represents a swing back to the modified powerful effects model of communication. Cultivation theory is intuitively pleasing; it is reasonable to expect that exposure to TV produces some type of effect for heavy TV consumers.

The idea that the mass media, through selective presentations and the emphasis of certain themes, create impressions among their audiences was originated first by Melvin DeFleur in 1966. DeFleur posited that since individual behavior is usually guided by cultural norms (or the actor's impressions of what the norms are) with respect to a given topic or situation, the media would then serve indirectly to influence conduct. DeFleur called his theory "cultural norms theory."

The term "cultivation theory" was coined by George Gerbner, who never acknowledged DeFleur's cultural norms theory. Gerbner began researching cultivation theory in 1967-68 as a government-sponsored investigation of television violence under the auspices of the National Commission on the Causes and Preventions of Violence.

Society was concerned about the amount of violence on television and Gerbner's research was one of the administration's responses to the concern. Gerbner's studies continued for the Surgeon General's Scientific Advisory Committee on Television and Social Behavior and the National Institute of

Mental Health and the American Medical Association (Gerbner, Gross, Jackson-Beeck, Jeffries-Fox & Signorielli, 1978).

Cultivation theory argues that exposure to TV messages produces “cultivation” or the teaching of a common world view, common roles, and common values. Gerbner found that heavy television viewers respond differently from light viewers on questions such as “What percent of the world’s population lives in the U.S.?” and “During any given week, what are your chances of being involved in some type of violence?”

Although early cultivation research focused on the effect of viewing violent TV programs on one’s perception of the world as a mean and violent place, other researchers began to extend Gerbner’s theory to include the investigation of specific genres of programs and their effects on other perceptions, attitudes, and beliefs.

George Gerbner writes: “Television is a centralized system of storytelling. It is part and parcel of our daily lives. Its drama, commercials, news, and other programs bring a relatively coherent world of common images and messages into every home” (Gerbner et al., 1986, in Perspectives in Mass Communication Research).

According to Gerbner (1972): “Cultivation analysis asks what common assumptions, points of view, images and associations the message systems tend to cultivate in large and heterogeneous communities and what the implications are for public policy” (p. 156).

Although Gerbner acknowledges the importance of different genres of television programs in cultivating world images, most cultivation studies have used total television viewing as the predictor variable. Only in the last few

years have studies investigated certain content types as predictors of “television bias” (Hawkins and Pingree, 1981b).

Slater and Elliott (1982) note that if media do play an important role in the formation of our “social reality,” then the substance of that exposure must be important. And Hughes (1980) states that what people watch may be as important as how much they watch. Ogles (1985) suggests that a more fruitful approach might be to examine the effects of specific types of content, such as cartoons, soap operas, and news.

PURPOSE OF THE STUDY

This study is concerned with the effects of viewing one specific type of content, news. The purpose of this study is two-fold:

- 1) The researcher will investigate the relationship between amount of television news viewed and respondents' estimates of air crashes and fatalities from air crashes in 1990.
- 2) The researcher will investigate the relationship between amount of television news viewed and respondents' fear of flying.

RATIONALE OF THE STUDY

Hawkins and Pingree (1980) suggest that separate examinations of the cultivation effects of various types of content should provide more convincing tests of the cultivation hypothesis. They note that a primary approach for going beyond the simple acquisition of information starts with the hypothesis

that information obtained from the mass media is used by the individual to construct a conception of social reality that presumably guides further information processing and behavior.

They further suggest that because cultivation effects claim to involve individuals' perceptions of the world they live in, news presentations might well be even more important than entertainment in building up one's notion about the world (p. 198).

Adoni et al.(1984) acknowledge the news gap in cultivation research. When Adoni and his colleagues examined the cultivating of social reality from news-viewing, all existing studies investigated the role of television in the process of the construction of reality by focusing on entertainment (fictional) contents. Although their 1984 study extended investigations to the cultivating of news, subsequent research has virtually ignored this important television genre.

Although leading cultivation researchers agree that studying the effects of news is important for cultivation theory, studies testing the cultivation hypothesis have stayed away from news as a predictor variable. The genre of news needs to be explored further.

Fisher (1985) argues that the world is a set of stories which must be chosen among to live the good life in a process of continual recreation (p. 75). He believes that individuals construct their personal stories by choosing among the stories told in the world at large.

Vincent et al. (1989) note that men use an innate sense of "narrative fidelity" to judge the validity and personal utility of each (news) story by comparing it against their personal experiences (p. 3). In other words, the

narrative of news stories “becomes a means of understanding the social world” (Barkin & Gurevitch, 1987, p. 5).

Several authors assert that news stories have the power to guide social construction of reality (Fisher, 1985; Bormann, 1985; and Bennett & Edelman, 1985). Vincent, et. al., (1989) chose airline crashes as the unit of analysis for their study examining the relationship of narrative theory and disasters covered by major network news. This researcher has chosen to examine air crashes for the same reasons posited by Vincent et al. (1989):

First, air crashes are sufficiently important that lengthy narratives are constructed by television journalists to report them. Many routine events do not receive such coverage.

Second, air crash stories report a clear disruption of social reality and suggest the need for reassessing the safety of flying.

Third, the events which surround air crashes typically are inherently dramatic, involving life and death situations, heroic actions, fatal and fateful decisions, and unforgettable visual images.

Fourth, it is likely that air crash stories could provide material for the construction of modern myths. Air crashes involve events and actions which can be reconstructed by journalists so that they encourage reflection about the nature of the world and the role of human beings (pp. 4-5).

Results of the study reveal that air disaster stories provide compelling accounts of highly dramatic events. Indeed, most stories elicit powerful audience responses but are filled with stereotypic images. The authors write, “There are powerful images depicting the stark realities of the tragedy. The camera grinds away as it records one harsh scene after another. Powerful emotional reactions are evoked as we see shots of twisted, burning aircraft

wreckage; stunned friends, relatives, and observers; and low-level officials desperately trying to cope with the confusion” (p. 21).

The research of Vincent, et al., further revealed that news about air crashes may serve to perpetuate naive beliefs about the safety of air travel, but “typical coverage of plane crashes is unlikely to spark any public outcry against the airline industry or create a panic in which flying is avoided” (p. 23). According to their findings, coverage usually offers reassurance.

Based on previous research and the nature of television news, it is important to examine news as an independent variable of the cultivation hypothesis.

The remainder of this dissertation is organized as follows: Chapter II, the literature review, traces the evolvement of cultivation theory including Gerbner’s contributions, criticisms of Gerbner’s work and his theory, responses to the criticisms and refinements of the cultivation hypothesis, recent cultivation research and cultivation and news. A brief review of the television news-user concludes the chapter. Chapter III, the methods and procedures, discusses the research design, variables under investigation, hypotheses to be tested, the sample, and the survey instrument. Chapter IV discusses the analysis and results of this dissertation and chapter V gives conclusions and implications for further research.

CHAPTER II

LITERATURE REVIEW

THE SOCIAL CONTRUCTION OF REALITY

In the most general sense, social reality is formed when information is given the same status as the direct observation of physical reality (McLeod & Chaffee, 1972). Walter Lippmann wrote in 1922 that the world that we have to deal with politically is out of reach, out of sight, out of mind. It has to be explored, reported, imagined (p. 284). Lippmann further proposed that because the real world is too big and too complex to experience directly, man reconstructs the world to make it simpler and more manageable. Lippmann posited that the public responds not to actual events in the environment but to a pseudo-environment or, as he described it, "the pictures in our heads."

These "pictures" are often created by media. He wrote:

For the real environment is altogether too big, too complex, and too fleeting for direct acquaintance. We are not equipped to deal with so much subtlety, so much variety, so many permutations and combinations. And although we have to act in that environment, we have to reconstruct it on a simpler model before we can manage it (p. 11).

Lippmann noted that although the creation of the pseudo-environment allowed man to more efficiently process the vast amount of information presented by the real world, as well as to indirectly experience parts of the world that he had no direct acquaintance with, two major problems arose. First, the indirect experience that man shared with his pseudo-environment

was taken to be no different than his direct experience with the real environment. Second, while man's behaviors are responses to their pseudo-environments, the consequences of his behaviors occur in the real environment.

Therefore, because for man indirect experience is equivalent to direct experience, and because man's behaviors are determined from such experience, should the direct experience be false or distorted, then man's behavior is shaped by false or distorted information. The construction of man's social reality depends largely on the verity of his indirect experience with the real world, an indirect experience provided in large part by the media (Carveth, p. 33).

McLeod and Chaffee (1972) expand on the notion of the individual's construction of social reality. They describe social reality in terms of general "approaches" or "mental sets" toward situations that precede social interactions. In this sense, social constructions of reality refer to individuals' orientations toward the world, based partly on past experiences and actual observations, and partly on information individuals obtain from interpersonal channels or from mass communication. Social reality can be thought of as internalized, learned expectations derived from past experiences and from information (Ogles, 1987).

Smythe (1954) writes that reality refers to the body of knowledge, or to put it less ambiguously, the flow of representations of the human condition that appear on television. He adds that program material is a group of symbols which serve as a medium of exchange between the mass media and the audience. The audience takes program content and molds it in the image of their individual needs and values. In so doing they use not only the explicit

layer of meaning in the content but also latent or contextual dimension of meaning.

Three major realms of social reality are identified by Berger and Luckmann (1967): objective, subjective, and symbolic. Objective social reality refers to the real world as perceived by the senses. This involves what we actually see, hear, taste, touch, and smell.

Subjective social reality is internalized notions about the real world. It is the process by which individuals learn to derive meaning from objective reality, involving our thoughts and feelings about what we perceive by the senses.

Symbolic social reality is a subset of objective social reality in that symbols are products of society with associated historical meanings. In considering television's influence on social reality, what is being determined is its influence on a person's frame of reference, or social reality. Television, with its repetitiveness and consistency of content and characterization, has the potential to shape an individual's social reality.

The emphasis on the construction of social reality as an effect of mass communication is relatively new. The past two decades have spawned effects research in the area of "cultivation." Cultivation theory was initiated by George Gerbner of the Annenberg School of Communication at the University of Pennsylvania in 1967. The theory is still at the forefront of communication research and has probably received more research attention than any other communications topic.

CULTIVATION THEORY

Gerbner's theory, which he calls the cultivation of dominant image patterns, posits that the reality that is portrayed on television "affects" or "shapes" the individual's perceptions of reality. For Gerbner, these "effects" of communications are not primarily what they make us "do," but what they contribute to the meaning of all that is done—a more fundamental and decisive process.

The major assumption underlying cultivation is that television fills a role of generating myth and substituting ritual in the society, guiding people in constructing rules for behavior in the culture. Gerbner and Gross (1976) write:

We begin with the assertion that television is the central cultural arm of American Society. It is an agency of the established order and as such serves primarily to extend and maintain rather than to alter, threaten, or weaken conventional conceptions, beliefs, and behaviors. Its chief cultural function is to spread and stabilize social patterns, to cultivate not change but resistance to change. Television is a medium of socialization of most people into standard roles and behaviors. Its function is, in a word, enculturation (p. 175).

Gerbner believes that television content—unlike the content of print and film media, which he says are diversified—is stereotypical and incongruent with the observable, measurable world. He holds that the discrepancy between television content and the "real world" results in two separate realities: the reality associated with what people see on television, and the reality people encounter on a daily basis. Which reality guides an individual's orientation to the world depends, to a great degree, on the amount of

television to which that person exposes him or herself. Gerbner et al. (1978) contend that

television is the chief creator of synthetic cultural patterns for the most heterogeneous mass publics in history, including large groups that have never before shared in any common public message systems. The repetitive pattern of television's mass-produced messages and images forms the mainstream of the common symbolic environment that cultivates the most widely shared conceptions of reality (p. 178).

Operationally, Gerbner believes that for any existing groups of individuals divided at the median on television use, the half that watches more television will tend to report perceptions of reality that are consistent with televised presentations, and the half that watches less television will tend to report perceptions of reality as reflected in "real life" situations based on archival data such as crime statistics.

Gerbner links cultivation to amount of television consumed—the independent variable or predictor variable is "amount." But he also pays considerable attention to specific types of televised content, notably violence. Due to public interest and government funding for research in the area of violence, most of the early cultivation studies have focused on violent television content.

Other researchers quickly saw merit in Gerbner's propositions and extended Gerbner's research, branching away from the central concept of violence to examine numerous other related variables, leading to the predominance of the theory today. Studies have shown a link between television viewing and attitudes about doctors (Volgy and Schwarz 1980), sexism (Volgy and Schwarz, 1980); Gerbner and Signorielli, 1979; Rothschild, 1979; Morgan, 1980), family values and structures (Pingree et

al., 1981; Morgan and Harr-Mazar, 1980; Harr-Mazar, 1990), beliefs about older people (Gonzalez, 1979; Gerbner and Signorielli, 1979; Gerbner et al., 1980a), perception of population illness (Robertson et al., 1979), attitudes about criminal justice (Haney and Manzolari, 1980), and perceptions of affluence (Fox and Philliber, 1978).

Research conducted by Hawkins and Pingree (1981) concerns how social reality effects occur. They write that the cultivation of social reality has generally been treated sociologically, so that the psychological processes responsible for the sociological effects are generally summed up as "learning." They asked the question "how does cultivation work, anyway?" and discovered that five processes may be involved:

- (1) information-processing abilities and cognitive-structural constraints
- (2) critical awareness of and approach to television
- (3) direct experience or other sources providing confirmation or disconfirmation of television's messages
- (4) social-structural influences
- (5) effects identified with specific content and selective viewing instead of habitual viewing of television in general (p. 351).

Each of these are discussed in detail in the following section.

Information processing abilities

Hawkins and Pingree asserted that cultivation research needs to expand on the notion of "learning" to more particular understandings of the processes involved. For example, is IQ an important fact in determining one's ability to process television messages? Achievement and comparisons across age

groups might provide insight as to what goes on as television influences social reality.

Critical attention to television

A second set of hypotheses has to do with viewers' attitudes toward television and critical weighing of television messages. Involvement with viewing and the relevance of what is viewed need to be controlled in order to determine whether they lead to greater effects of viewing. Hawkins and Pingree write that what may be important is not attitudes toward television, but what they might indicate about the "activity" with which people watch television. It may be that "inactive" viewing is necessary for social reality effects, or that "active" viewing inhibits the influence (p. 354).

Hawkins and Pingree recognize that even if television influences the construction of social reality, it does not do so in a vacuum. They write that viewers have their own experience, other mass media, friends, family, and their beliefs as filters for television's images. These factors may form conditions for television influence in at least three ways:

First, for any given television message, some minimum degree of *confirmation* from real-world experience, other sources, or even pre-existing beliefs about social reality may be necessary to validate the television message; below that minimum threshold, the relationship between viewing and beliefs may be attenuated or absent.

Second, messages different from those of television coming from a heavily used or relied-on source could provide sufficient *disconfirmation* that the amount of exposure to television becomes less relevant or even irrelevant.

Third, Gerbner et al. (1980) suggest that for some social reality beliefs, television's portrayals both form and match the *mainstream* of beliefs. Many population subgroups share these beliefs for some reasons and the amount of television viewed adds little; but for divergent population subgroups, the extent of viewing becomes important, with the beliefs of heavy viewers in the divergent group converging on the population mainstream (pp. 355-356).

The nature of social groups surrounding the individual may make a difference in television's influence. One study by Rothschild (1979) suggests that increased social interaction in groups provides a rich set of alternative information that may counteract television's messages. Family intervention was also seen to influence television's influence in a study conducted by Gross and Morgan (1982).

Specific Viewing

The last process listed by Hawkins and Pingree concerns the type program viewed and the manner in which it is viewed. Gerbner et al. posited two key assumptions of cultivation research:

(1) commercial television, unlike other media, presents an organically composed total world of interrelated stories (both drama and news) produced to the same set of market specification.

(2) television audiences (unlike those for other media) view largely nonselectively and by the clock rather than by the program. Television viewing is a ritual, almost like religion, except that it is attended to more regularly (p.180).

Hawkins and Pingree argue each of these assumptions. First, content analyses have not been reported by program type and if people vary in their mix of viewing different types of programs, then content differences would make for differential influence across types of television content. Second, they assert that habitual television watching itself (as an unmeasured third variable) cannot be posited to account for the content-specific relationships, since research has found that comedy-viewing and news-viewing are much more weakly or even negatively related to social reality (p. 360).

Robert Hawkins and Suzanne Pingree summarize much of the early research in 1982. Early projects operated under the assumption that although

the television world seemed realistic, it contains systematic distortions and biases, such as more violence than in real life; underrepresentation of women, minorities, the young and the old; and exaggerated relationships between various forms of success and sex, age, and occupation.

Hawkins and Pingrees' summary covers 24 different samples, 48 separate published and unpublished papers, and 12 independent researchers and research groups. Most of the research (Gerbner & Gross, 1973, 1974, 1976, 1980; Gerbner et al., 1977, 1979a, 1979b, 1980a, 1980b, 1980c, 1981; Doob and Macdonald, 1979; Neville, 1981) centered on those aspects of television associated with violent content of television, including fearfulness (usually of walking alone at night), interpersonal mistrust, and perceived prevalence of violence.

Briefly, their summary reveals that most cultivation studies show evidence for a link between television viewing and social reality. However, the question remains, "Is the relationship real, or is it an artifact of some third variable?" This summary of research conducted prior to 1982 shows that relationships between viewing and demographic measure of social reality closely linked to television content appear to hold despite controls.

Much of the research conducted since 1982 has sought to refine the theory by responding to criticisms of Gerbner's work and to extend cultivation research by examining dependent variables other than mistrust and fear and by focusing on aspects of television programming other than violence.

A. CRITICISMS OF CULTIVATION RESEARCH

Early criticisms of Gerbner's work centered on his content analysis of prime-time network television. Coffin and Tuchman (1972-73) found two major discrepancies between Gerbner and other studies. First, Gerbner excluded 26% prime-time programs, and second, the violence definitions included the coding of humorous violence, accidents and acts of nature.

After the publication of Profile No. 8, CBS researcher Blank (1977) criticized Gerbner et al. on several grounds including 1) violence definition was too broad and unclear, 2) single incidents are counted as multiple acts, and 3) one week sample is not representative of the entire TV season.

Newcomb (1978) joins the bandwagon of criticism. He asserted that Gerbner's research demonstrated rigid distinctions between humanistic and scientific questions. He notes that the violence definition is actually a symbol and should be understood by the characters. He complains that there were procedural problems with the viewer's perception of violence versus Gerbner's definition.

Gerbner and Gross (1979) responded to the criticisms stating that 1) television is not considered unique works of craftsmanship but as assembly-line drama, 2) the current definition is unambiguous and would be more problematic if it changed perspective and 3) the soundness of the test is confirmed by its validity and the reliability of the definition and results.

In a debate published in 1980, Hughes agreed with Gerbner's findings of the Cultivation Analysis but has problems with his methodology. Two problems are cited: (1) variables of age, sex and education are not controlled

simultaneously and (2) these variables are not all the possibilities; certain other variables are related to watching television.

One of the most outspoken of the researchers who resist the cultivation hypothesis is Paul Hirsch. Hirsch (1980) reanalyzed Gerbner's data and found fault with the coding, categorization, and statistical analyses of Gerbner's work.

∠ Hirsch criticizes the constraint of variance imposed by Gerbner's use of a median split to partition survey respondents into "heavy" and "light" viewing subgroups. The median split creates problems because of the incompatibility of results from survey to survey. A light viewer in one survey (based on splitting television use at the median) might be a heavy user in another survey. >

Hirsch further criticized the marginal size of the associations between exposure and beliefs (Hirsch, 1980). Measurement of differential effects, however, is inherently problematical since virtually everyone is exposed to television. The only alternative is to compare degrees of exposure. Thus, Gerbner contends that small though consistent correlations between exposure and social perceptions in accord with the message of television represents a socially significant media effect. Without a base-line measure of zero exposure, it cannot be known to what extent cultivation has altered the perceptions of so-called "light" viewers.

Further criticisms include the fact that when control variables are introduced inconsistencies, null and marginal or interpretively ambiguous relationships have been reported by some researchers (Doob & MacDonald, 1979; Hirsch, 1980a, 1980b, 1981; Hughes, 1980; Stevens, 1980a, 1980b; Wober, 1978). However, Hawkins and Pingree (1980) note that there still

exists enough congruence in the findings for the cultivation hypothesis to retain some plausibility (Cook et al. 1983; Comstock 1982; Hawkins & Pingree, 1980).

Wober (1978) tests the cultivation hypothesis on a British sample. Wober claims that his method—combining two questions into a security scale—is more powerful than Gerbner's procedure of comparing single question results against weight of viewing. Even with a more powerful measure, Wober finds no evidence of the paranoid effect of television on British viewers. Wober states two explanations for his results: "One is that what may be true in America is not true in Britain, for which difference it will be useful to explore the reasons. The second is that the Gerbner thesis has still not been demonstrated convincingly in America, and the effect exists neither there nor in Britain (p. 320).

In a 1981 article, Hawkins and Pingree acknowledge a number of articles that criticize the cultural indicators research program and particularly tests of the cultivation hypothesis. Their article criticizes cultivation theory by examining some of the basic assumptions as posited by Gerbner et al. (1979). They examined, for example, Gerbner's contention that commercial television, unlike other media, presents an organically composed total world of interrelated stories (both drama and news) produced to the same set of market specification. Also, that television audiences (unlike those for other media) view largely nonselectively and by the clock rather than by the program. Television viewing is a ritual, almost like religion, except that it is attended to more regularly (p. 180).

Hawkins and Pingree divide the first assumption into two subassumptions: 1) uniformity of messages and 2) the interrelated nature of

TV's symbolic messages. The two authors observe that even for the symbolic messages of violence, where work is most advanced, the reported frequency of violence does vary by network, time of day, and type of program. Other researchers have found differences in areas other than violence across types of content (for example, Turow, 1974; Tuchman, Kaplan & Davids, 1978).

The second subassumption, the interrelated nature of TV's symbolic messages, is also called into question. Hawkins and Pingree argue that if all viewers get the same symbolic messages, then the only variable for consideration is amount of exposure to these messages. The authors warn that it is a mistake to overlook the implications of different formulas for patterns of action and thus symbolic messages. They write:

And if differences in patterns of action do exist between types of programs, and if these mesh with any other patterns of viewing, then quite different cultivations can occur within a single population, and total television viewed is not the only independent variable. In fact, it could even be a nonmeaning-ful average. A heavy viewer could be selective enough to watch mostly crime adventure programs, getting an entirely different view of the world than a heavy viewer of family drama or situation comedies, although he watches the same amount of total television (p. 292).

Hawkins and Pingree add that while viewing certainly has a large habitual element, ratings differences and the prominence of television listings and program descriptions in print media argue for some forms of selectivity (p. 292).

In response to their own criticisms of these sub-assumptions of cultivation theory, Hawkins and Pingree (1981) conducted a study to test the assumptions. They surveyed 1,280 children in Perth, Australia, and asked the parents of the children to complete a viewing diary. The questionnaire was lengthy and contained items assessing a variety of opinions, media beliefs and

habits, and knowledge. Included in the questionnaire were items that probed the extent of the children's television bias in their beliefs about violence in society and general meanness in the world.

The results of the study presented evidence that challenges the assumptions. They find that the implication of isolating different cultivation relationships for different types of television content is that the symbolic messages about mean world and violence in society vary from content type and are not uniform across commercial television.

The study also shows that breakdowns by content type are more useful than the less meaningful measures of total viewing. They write:

The evidence here suggests that content types may be an important level of analysis for cultural indicators research. The formulas and conventions of the different content types—the strife and heroes of crime adventure, the misunderstandings and embarrassments of comedy, the grasping idiocy and chance of game shows, the event-centered definitions of news—all may cultivate different views of the world (p. 299).

The authors find much to question in the two assumptions laid out by the cultural indicators group. Although a large part of viewing some content types does reflect habit, they believe that others seem much more selected, and some (e.g., cartoons) certainly contain both habit and selection. They write that it has been a misnomer to call these assumptions at all; they are related, empirically testable hypotheses.

B. REFINING CULTIVATION THEORY

Several researchers have addressed the criticisms of Hughes, Hirsch, and others. Their efforts have helped focus and refine cultivation theory.

George Gerbner was one of the first to respond to criticism and refine the theory he proposed. The most important reformulation is "mainstreaming". Gerbner describes mainstreaming as a commonality of attitudes among heavy viewers of television in demographic groups whose light viewers hold divergent attitudes. Therefore, heavy viewers of television, who are immersed in the mainstream of the television world, should all tend to have the same perception of the real world regardless of their educational or income levels. Conversely, light viewers, who are not in the mainstream, are expected to exhibit a variety of beliefs about the world.

The mainstreaming effect of television is a convergence of views among heavy viewers in various social subgroups. These persons' views would be divergent in the absence of television, or based on factors and social forces associated with subgroup membership alone (Ogles, 1985) Michael Morgan (1986) describes mainstreaming as the role that television, as a cultural medium, plays in reducing social differentiation.

Gerbner and his associates (1982) examined the "mainstreaming" process and the relationship of TV viewing to political beliefs. They found that heavy TV viewers held a moderate position on the political spectrum regardless of political party affiliation, or relevant demographic measures.

Michael Morgan examines the "mainstream effect" in a 1986 study and finds some evidence that it exists. Consistent with Gerbner's assertions, Morgan finds greater homogeneity among heavy viewers from nine diverse geographic regions than was found among light viewers from the same regions.

Gerbner's second theoretical refinement, resonance, refers to "special cases" when reality and the world of television converge (e.g., heavy viewing

of violent television content by persons residing in high-crime neighborhoods). When such conditions occur, individuals are said to get a "double dose" of messages which in turn enhances cultivation. Gerbner proposes that in the Doob and Macdonald study (1979), that the heavy viewers of TV who lived in the high crime area may get a "double dose" of a view of a mean and violent world. TV functions to reinforce a heavy viewer's direct experience with his/her environment.

Jackson-Beeck and Sobal (1980) summarized the demographics and social world of "heavy" viewers of television (and of television violence) in general. They reported that when television exposure is measured continuously (that is, measured in hours and minutes), it is significantly correlated with sex, race, age, income, and education (which, it would seem should be used as control variables in cultivation analyses).

Their study further finds that women watch more than men, nonwhites watch more than whites, the very old and the very young watch more than the middle-aged, middle-income persons watch more than the very poor or the very rich, and college graduates watch less than persons with less formal education. The authors conclude that heavy viewers, who are already removed from the demographic average, are the very ones most likely to be cultivated toward the attitudinal average associated with heavy television use. But, these not-so-average heavy viewers of television tend to view themselves as average middle-class citizens (Ogles, 1987). Gerbner refers to this phenomenon as the mythical norm of the middle class (Gerbner et al., 1986).

Weaver and Wakshlag (1986) tested Gerbner's concept of "resonance" by exposing three groups of subjects to crime-related television programming and testing them for signs of anxiety. The first group had been actual victims

of crime (and according to Gerbner's "double dose" theory, should have exhibited the greatest level of anxiety), while the second had known people who were victimized, and the third group had no real-life exposure to crime. This last group should have exhibited the weakest signs of anxiety, according to resonance theory.

However, it was this last group who were the most anxious, and those who had been actual victims of crime were the least anxious. The researchers find no evidence to support resonance.

Hirsch (1981b) questions these reformulations, calling them ambiguous, untestable, and irrefutable. But Cook et al. (1983) state that the mainstreaming hypothesis is more credible (though more modest) than Gerbner's earlier, global assertions about cultivation.

James Potter's research (1986) relates three dimensions of perceived television reality (magic window, instruction, and identity) to the cultivation hypothesis. He finds positive correlations between respondents' beliefs in a mean and violent world and their 1) perceptions of television as a magic window on reality (see Hawkins, 1977), 2) use of television for instruction, and 3) identification with characters on television. More research needs to be conducted relating these three dimensions.

Slater and Elliott (1982) find that perceived law enforcement program realism—not amount of law enforcement programming viewed—is correlated with adolescents' acceptance of televised portrayal, their understanding of law enforcement, and their image of societal safety.

Ogles (1987) observes that these findings suggest that viewers use specific information they learn from watching television as an intermediate step in inferring generalized beliefs about the world. Hawkins, Pingree, and

Adler (1987) test this process hypothesis; however, they do not find empirical evidence of a learning effect.

Ogles and Hoffner (1987) expose male participants to either two or five commercially released R-rated films over a one- or two-week period.

Compared to the two-film condition and a no-film control group, participants in the five-film condition reported significantly higher estimates of the likelihood of personal crime victimization. Ogles writes "This finding is intriguing, since most (but not all) of the violence in the films was directed toward women. The participants may have processed more deeply the events in which victims of violence were similar to themselves (that is, men)" (Ogles, 1987, p. 46).

Michael Morgan (1986) explores the relationship between heavy television viewing and the reduction in the diversity of traditional regional cultures in the United States. He finds that the outlooks of heavy viewers from different geographic regions tend to be more homogeneous compared to those who watch less television.

Zemach and Cohen (1986) examine the differential perceptions of men and women as they appear on television as an example of symbolic reality and the way they are perceived in social reality. They find a marked tendency to regard symbolic reality as more stereotypic than social reality in most of the traits, roles, and occupations examined.

Potter and Change (1990) test five different operationalizations of television exposure in terms of their relative abilities to predict cultivation. Their study compares total exposure to television with four alternative operationalizations of television viewing: exposure to types of programs, program-type exposure under controls for total viewing, proportional

exposure among show types, and weighted proportion. The results of this study showed that the concept of viewing dominance appears to be a better predictor of cultivation at the program type level than at the more general level of balance between television viewing and nonviewing. In sum, "...it is less important to know whether television viewing dominates one's time than it is to know what program types dominate one's viewing, regardless of his or her total viewing time" (p. 330).

Sparks and Ogles (1990) examine the use of the construct "fear of crime" or "fear of victimization" as measured in several cultivation studies (Doob & MacDonald, 1979; Gerbner & Gross, 1976). They argued that "fear of victimization" or "fear of crime" is conceptually distinct from likelihood of victimization. Most studies, they assert, measured likelihood of victimization, not fear.

Sparks and Ogles further conclude that there is a conceptual distinction to be made between items that measure fear of crime and items that measure probability of criminal victimization. They argue that the results of cultivation might vary considerably depending upon the dependent variable.

The criticisms of Hirsch and others and the refinements of Gerbner have motivated recent cultivation researchers to explore other areas of cultivation. Recent research has included testing specific genres of television programs, employing other data-gathering methods other than the survey method, and exploring the process of cultivation.

C. RECENT RESEARCH

Most cultivation research has followed Gerbner's bias of exploring the relationship of television viewing and fear of victimization or perception of crime; however, few studies have found results that support the cultivation hypothesis.

Studies have revealed that television alone is not responsible for shaping one's social reality. Other variables come into play. For example, Doob and MacDonald (1979) find that high crime rates are much more significant in relationship to people's fear than the amount of television they watch. Additionally, that fear encourages them to stay indoors and watch more television. Therefore, people who already have a scary picture of the world become heavy viewers.

The two replicate Gerbner's results that heavy viewers are more likely to be afraid of their environment, but after they control for the actual incidence of crime in the neighborhood, the relationship disappears. They conclude that television itself is not the direct cause of people's fear of being crime victims.

Weaver and Wakshlag (1986) divided survey respondents into three groups: those who had direct personal experience with crime (they had been victims), those who had interpersonal experience with crime (they knew someone who had been victimized), and those who had experienced crime exclusively via the media. Correlations between crime-related anxiety were significant only for respondents who reported that their experience with crime was limited to media depictions.

Furthermore, Gerbner's "resonance" reformulation is not supported by these data, since knowledge of a friend or relative who had been victimized

did not amplify television's impact on respondents' perceptions of personal vulnerability (Ogles, 1987).

Bryant, Carveth and Brown (1981) find qualified support for the cultivation hypothesis in an experimental test of the hypothesis. Results show that heavy viewers of typically violent television fare are more likely to perceive the world as "a mean place" when compared to light viewers, but this relationship is even stronger for those viewers who see a diet of programming featuring endings in which the criminal is not depicted as being brought to justice.

Hawkins and Pingree (1981) also find an overall relationship between the amount of TV viewing and a view of the world as "a mean place," but only certain genres of TV programming correlate significantly with such perceptions. Their conclusion led others to test specific genres of programs as their independent variable rather than overall television viewing.

Wakshlag, Vial and Tamborini find some support for the existence of a cultivation effect in a 1983 study. After inducing a sense of anxiety in subjects by forced exposure to a crime documentary, the subjects were given a list of movie descriptions and asked to select the ones they wished to watch. A significant number of the films selected bore descriptions of justice triumphing over crime. The researchers acknowledge some cultivation effect, but admit that they can offer no reasons as to why the selections were made.

In a related study, Tamborini, Zillmann and Bryant (1984) exposed male and female undergraduates to four experimental television conditions: justice-depicting, injustice-depicting, crime documentary, and an episode of *The Love Boat* that served as the control condition. The justice-depicting and injustice-depicting conditions were two differently edited versions of a movie

made for television. Although the authors state that the crime documentary portrayed factual information about real-life social conditions dealing with crime, it was not clear whether these portrayals depicted justice or injustice.

Measures of anxiety and perceptions of crime were made immediately following exposure and after a three-day delay. The researchers find that subjects in the injustice condition were more anxious immediately following exposure, but the effect dissipated after a three-day delay. Perceptions of crime victimization after the three-day delay were higher only for the documentary condition. Although Tamborini et al. admit that television affects crime estimates, they argue that these effects are limited by the dimensional structure of perceptions of crime and safety (e. g., personal- vs. societal-level, urban vs. rural). They reject the cultivation explanation of their findings (Ogles, 1987).

Donna Rouner (1984) explores the construct of active television viewing and the cultivation hypothesis. She defines active television viewing as cognitive and affective orientations and evaluations relative to specific TV content.

Rouner's study concentrates on how a process variable such as active television viewing might elaborate a conventional model of television viewing behavior, such as cultivation or uses and gratifications.

Telephone interviews were conducted with 163 respondents in Dane County, Wisconsin. Questions related to frequency of viewing, how much attention was paid to what was viewed, how much viewers talked with men and with women about TV shows, and how much they cared about characters on TV.

Her findings result in an active television viewing model with two dimensions. A Cognitive Activity construct includes the indicators of paying attention to the personal qualities of the characters, paying attention to characters' appearance, and paying attention to the story line. An Affective/Behavior construct was comprised of talking with women and with men about TV shows and caring about television characters.

Rouner concludes that it is possible that cognitive activity is more relevant than affective/behavioral activity in countering exaggerated or distorted TV information because affective/behavioral activity may simply be too emotionally involving. She further suggests that it is possible that a major content, or genre, effect is operating, and viewers are more likely to exercise different types of active TV viewing depending on the type of show being watched. She writes, "More active TV viewing of certain distorted TV messages, perhaps content one is least familiar with, might be a condition for the strongest negation of the cultivation hypothesis" (p. 174).

James Weaver and Jacob Wakshlag (1986) find the relationship between fear and television viewing to be based on 1) a person's experience with crime; 2) the type of programming viewed; and 3) the context of the perception of vulnerability to crime being considered. The work of Hawkins and Pingree (1981) and Weaver and Wakshlag (1986) bring into focus the importance of specifying the genre of programming watched. Several studies have included genre of program as an independent variable.

One genre explored by cultivation research is the soap opera. Rouner (1984) finds that cultivation differences among adults, who are similar in cognitive processing abilities, may depend on whether they in fact possess television images actively, not merely whether they are capable of doing so.

Based on the findings of Pingree, Starlett, and Hawkins (cited in Rouner, 1984) that soap opera "fans" are less affected by soap opera content than are general viewers, Rouner suggests that the low-involvement (i.e., ritualistic) viewing by general viewers, compared to more active (i.e., instrumental) viewing by fans, may lead to enhanced cultivation effects. Her empirical findings imply that active viewing might mitigate television's influence on constructions of social reality.

Buerkel-Rothfuss and Mayes (1981) tested for a correlation between soap opera viewing and level of self-esteem. Their research finds no difference between the cultivation effects exhibited among the high and low self-esteem groups of day-time serial viewers. However, their study does show that college students who are heavy viewers of soaps make higher estimates of doctors, lawyers, divorced people, illegitimate children, and criminals in the population than lighter viewers make.

Carveth and Alexander (1985) replicates the Buerkel-Rothfuss and Mayes study. Their study looks at how viewing motivation affects the cultivation process, suggesting that the result of viewing might be closer tied to why people watch TV than to the amount they watch. The results indicate that exposure and motivation interact to explain the cultivation process and that those who watch soaps because they want to be involved in an undemanding activity most clearly exemplify the cultivation process. They conclude:

the cultivation effect appears to be strongest when the motives for viewing are ritualistic (enjoyment, boredom) rather than instrumental (reality, exploration, character, identification). This suggests that individuals who frequently and ritualistically select the soap opera

genre, and perhaps television viewing in general, as an undemanding³² activity, may be more vulnerable to television messages (p. 270).

A 1990 article by Elizabeth M. Perse reports a replication and extension of previous research that investigated the contribution of soap opera viewing motives to cultivation. Perse surveyed 313 college student soap opera viewers. Contrary to passive viewing assumption of cultivation theory, Perse finds that viewers with an instrumental motive for watching the soaps tended to be more vulnerable to cultivation effects.

The genre of commercials is explored by Alexis Tan (1979). Tan conducted the first experimental investigation of the cultivation hypothesis in which he examined the genre of commercials. Tan showed Texas high school female subjects television commercials for beauty products (experimental group) or products that did not mention beauty themes (control group). He finds that, compared to the control group, subjects exposed to the beauty commercials rate physical beauty to be more important for personal happiness and to be "popular with men." Tan interprets these results as support for the cultivation hypothesis.

Paul Delva, Don Pratt, and Robert Ogles (1991) explore the impact of frequent viewing of television programs on socially desirable perceptions about racial integration. The three researchers held random telephone interviews with 101 of the metropolitan area of a major Midwestern city. Survey questions were grouped into three categories: demographic information, viewing measures and items pertaining to racial integration.

Delva et al. find that some television genres are associated with positive perceptions of racial integration more than others. The viewing of game shows, talk shows, soap operas, and situation comedies was most often correlates with positive perceptions of racial integration. On the other hand,

news, sports, and crime and police programs are not significantly correlated with perceptions of racial integration. Results suggest that television does contribute to social perceptions about racial integration in America.

Television's portrayal of disasters is examined in Wober and Gunter's 1985 study. They find overall positive correlations between television viewing and perceived risk of death from lightning, flooding, and terrorist bomb attacks. They conclude that those people who, for whatever reason, have a greater fear of flooding are those who watch more soap operas and other dramatic material. On the other hand, they conclude that it would be difficult to argue that watching these programs makes people fear flooding, since flooding is not frequently portrayed on soap operas and televised drama.

D. NEWS AND CULTIVATION THEORY

Several communication studies confirm that pictures make information transmission more rapid, realistic, and accurate than is possible in purely verbal messages (Burgoon, 1978; Lewis, 1984; Pryluck, 1976). Additional studies indicate that visuals forge emotional bonds between viewers and what they view. Printed or spoken messages excel in providing story background, context, and explanation; pictures make audiences care about an issue and the people involved in it (Lau & Sears, 1986). Burgoon (1980) asserts that the realism presented by television pictures enhances the credibility of news reports. 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. /

These findings—that television news pictures are powerful, enhance credibility, and present realism—suggest that newscasts could cultivate social realities in their viewers.

Levy writes, “Since print news, even using still pictures and graphics, can never completely capture the actual happening, one might expect people in the television age to have a better grasp on reality than ever before (p. 152). /

News, the focus of this dissertation, has been examined in three cultivation studies. Adoni, Cohen, and Mane (1984) examine three aspects of television news and their relationships to perceptions of social conflict. They assert that television news tends to 1) simplify conflicts by concentrating on events and not on processes leading to events, 2) intensify conflicts by presenting only the more intense moments of conflict, and 3) present conflicts as incidents soon to be resolved rather than as permanent clashes of interests. /

Adoni et al. found that Israeli adolescents were able to differentiate between social reality and television reality. Furthermore, the amount of exposure to television news was found to be unrelated to their abilities to make this differentiation. This conclusion is inconsistent with Gerbner's findings for prime-time dramatic television programming. Adoni et al. write:

Our findings suggest that young people are able to consciously differentiate between what they learn from television and what they learn from direct experience...In our research, the amount of exposure to television news was found to be unrelated to the ability to differentiate between the different “realities” (p. 47).

Skogan and Maxwell (as reported in Slater and Elliott, 1982) surveyed over 1,300 subjects in three major American cities and reported that neither the viewing of television news nor “cops and robbers” programs were related to fear of crime. Their study examined the relationship of TV exposure and

perceptions about law enforcement. The authors predicted that television is influential in developing images of reality but that its influence is mediated by other factors, particularly direct experience. They write that to attempt to understand one without considering the other as a possible influence risks considerable error.

Their study found that direct experience provided statistically significant predictors. The data suggested that young people whose experience with the police has resulted in some form of detention are less likely than the other students in the sample to see their environment as a relatively safe one.

Slater and Elliott (1982) note that television represents only one of the many potential sources of information about a phenomenon. It is most likely to be effective, and support the cultivation model, where alternative sources of information are lacking. Direct experience with a phenomenon *must* moderate the influence of the television image on the subject's social reality.

They conclude that adequate predictive models and eventually models aimed at explanation must rely on multivariate analysis techniques, particularly those allowing the integration of other sources of reality formation and maintenance, such as direct experience.

The third news study was conducted by O'Keefe and Reid-Nash in 1987. The study investigated the impact of attention to television and newspaper crime news on public perceptions, attitudes, and behaviors pertaining to crime.

Using a two-wave panel survey of metropolitan-area adults, O'Keefe and Reid-Nash find evidence that individuals who pay greater attention to televised news about crime are more fearful of crime and are more concerned about protecting themselves from being victimized. From their study they

conclude that it appears more likely that attention to televised crime news leads to increased fear and concern, rather than that the already more fearful and concerned become more attentive. Greater attention to crime news in newspapers, on the other hand, was unrelated to fear of crime.

They write, "...there is no indication that overall television viewing, or viewership of crime dramas, has any impact on people's fear of crime, perceptions of its extent, or attitudes about self-protection" (p. 158).

However, their findings for television crime news do provide narrow support for the cultivation hypothesis, assuming that it can be applied to one specific television content area.

These three studies suggest that more research needs to be done examining the effect of news-viewing and the cultivation of social reality. The following section will discuss who the news-user is in an effort to better understand the process of news cultivation.

THE TELEVISION NEWS-USER

In 1971, John Robinson conducted a study examining the audience for national TV news programs. The data used in Robinson's study came from television viewing diaries collected by the W. R. Simmons organization from a national probability sample of persons 18 years and older. The diaries were kept by 6,834 viewers for various two week periods in 1969. The findings of Robinson's study can be summarized as follows:

- / - on an average weekday, 25 percent of adult men and 22 percent of adult women reported watching one of the three national news programs. /

- among white women and among black men and women, college graduates were 80 percent more likely to watch news than high school dropouts, whereas among white men they watched 20 percent less.

- when news programs were on their set, 80 percent of men claim to be paying "full attention," but for women the figures are closer to 60 percent.

- 53 percent of the population did not watch a single evening news show over the two-week diary period.

More recent research conducted by CBS Marketing Division shows that the news-viewer is likely to be over 40 years old. Jaffe writes in *Television/Radio Age* that a recent comparison reveals that the combined ratings of viewers in their 40s to network news shows is 43% higher than that of viewers in their 30s (p. 34).

Simmons Market Research Bureau supplied computer runs showing the ratio of viewing to varied primetime program categories by 50-plus viewers indexed to all adults. The '88 Simmons figures show that the documentary/news category ranked highest with an index figure of 124. This means that older viewers spent 24% more time watching such programs than the average adult (Jaffe, p. 36).

Although advertisers "sell" the idea that the average news-viewer is older and highly educated, Barwise & Ehrenberg (1988) finds there is little difference in program choices among demographics. They write, "One might have imagined that viewers of a 'light drama' such as *Dallas* would differ markedly in their program choices from those of a news or public affairs 'information' program such as the *McNeil-Lehrer Report*. But this hardly occurs" (p. 27). Their study found that all respondents tend to spend much the same proportions of the viewing time on light entertainment (about 15%), sport (about 9%), and news (9%).

Mark Levy went beyond demographics in his examination of the TV news audience. Levy examined "the audience experience," that is, the subjective meaning of news-watching for the average American.

Levy writes, "For many in the (TV news) viewing audience, the socially constructed reality presented by television news is their prime, indeed preferred, source of information about the world in which they live" (p. 1).

Levy conducted his study in Albany County, New York. He collected two kinds of data. First, transcripts were made of tape recorded focused group discussions held with 24 people who watched television news nearly everyday. The purpose of the focus group was three-fold: to gain an early sense of what television news-watching might mean to people, to discover items for inclusion in a planned survey, and to obtain data which could be used to enrich and expand our understanding of the survey results.

Next, data were collected by means of a questionnaire. The questionnaire was administered in personal interviews with a sample of 240 adults chosen from 40 randomly selected housing clusters. Six interviews were conducted in each "cluster."

Levy's findings are important for this study. The audience experience with TV news is often cited as a major example of a mass media audience at its most active. As commonly conceptualized, the term "active" implies that, within the constraints of available media content, individuals choose the messages to which they will expose themselves, that their decisions are motivated by goals which are self-defined, and that "active" participation in the communication process limits and conditions the effects of the mass media (Bauer, 1971).

Levy found that many TV news-viewers are “actively” oriented to the news. They consciously choose between competing newscasts, arrange their schedules to be near a television set at news time, and pay close, albeit selective, attention to the program.

For most viewers, the news experience is perceived as generally useful and gratifying. For many, news informs—or at least, they believe it does. Viewers watch the news with varying degrees of interest and attention, finding its content sometimes salient and sometimes irrelevant, sometimes useful and sometimes incomprehensible.

Levy’s research showed that people watch the news for various reasons. It provides some audience members with the opportunity to exercise their critical capacities, provides others with raw materials for sociability and serves to reassure while it informs. Many people also find television news entertaining.

News-watching also has its place among the individual’s sources of need-satisfaction. Levy writes, “Instances of high drama aside, television news on a daily basis offers many viewers an experience which, when absent, is missed” (p. 25). A recent example of the news-viewer “missing” newscasts occurred when CNN stopped continuous coverage of America’s involvement in the Middle East crisis. Many Americans reported depression and loneliness when their viewing routine was altered.

CHAPTER III

METHODS AND PROCEDURES

RESEARCH DESIGN

This research project was designed to test cultivation theory and the effects of heavy news-viewing. Intuitively, it would seem that heavy news-users would overexaggerate what they see on the news. Specifically, that they would overestimate air crashes and the number of people who die in air crashes. Also, according to previous cultivation research, heavy news-users should be more fearful of flying than average or low news-users.

To test these assumptions, a self-administered survey was designed. The survey method was chosen for several reasons. First, the length of the survey made telephone administration impossible. Likewise, the cost of return postage and follow-up procedures would have made the survey very expensive to mail. Finally, personal interviews were considered. However, it was determined that this procedure would have taken too much time and more manpower resources than were available for this study.

The questionnaire was constructed to gather demographic information concerning and information concerning the respondents' beliefs and cognitive awareness of flying, and to assess the degree of direct and indirect information they have. The questionnaire was designed to provide data relevant to the major hypotheses of the study.

Analysis of variance (ANOVA) was used to test for significant differences between the means. The independent and dependent variables are described in the following sections.

HYPOTHESES

The following hypotheses will be tested in this study:

H1: Heavy TV-news users will have higher levels of fear than light TV news-users..

Rationale: Gerbner and his associates (1981a, 1981b) propose that “resonance” should occur when a given feature of the television world is most congruent with the social circumstances of the viewers. They argue that in these cases, heavy viewers receive a ‘double dose’ of messages, and the interaction ‘resonates’ and amplifies television’s impact. (Signorielli, 1982, p. 170).

However, the opposite effect could also occur. Heavy exposure to television news and personal or interpersonal experience could serve to reduce anxieties. Zillmann (1980) in a study of violence on television noted that such fare also typically features the ultimate triumph of justice (Dominick, 1978). He argued that television distorts social “reality” in the other direction. By trivializing crime, repeated exposure diminishes the impact of previous experiences and alleviates the victim’s worries (Weaver & Wakshlag, 1986). This “mainstreaming” suggests that news viewing and perceptions of flying would be related negatively with individuals with direct flying experience.

H2: Heavy TV news-users will give higher estimates than light TV news-users.

Rationale: Slater and Elliott (1982) find that television is influential in developing images of reality, but that its influence is mediated by other factors, particularly direct experience.

H3: Infrequent fliers will show higher levels of fear than frequent fliers.

Rationale: It is expected that for those respondents who have only mediated experience with flying the dramatic, repetitive television images of plane crashes, victims, and heroes would cultivate fear of flying shaped largely by the images portrayed by the medium (Gerbner, 1980, p.3).

H4: Frequent fliers will estimate differently than infrequent fliers.

Rationale: Although previous literature does not address the question of "different" estimates, it is likely that the frequent flier would combine knowledge from both direct experience and indirect experience. Therefore, because he has more information on which to base his estimate, the frequent flier should estimate differently than the infrequent flier.

INDEPENDENT VARIABLES

Two independent variables were examined in this study. The first is degree of direct information which is defined in cultivation literature as

amount of personal involvement or experience (apart from mediated experience) a person has.

Hawkins and Pingree (1981) posit that cultivation involves five processes: information processing abilities and cognitive-structural constraints, critical awareness of and approach to television, direct experience or other sources providing confirmation or disconfirmation of television messages, social-structural influences and effects identified with specific content and selective viewing instead of habitual viewing of television in general. These processes are discussed in detail in the literature review.

One of these processes, direct experience or other sources providing confirmation or disconfirmation of television messages, is one of the independent variables in this study. Hawkins and Pingree write, "Viewers have their own experience, other mass media, friends, family, and their beliefs as filters for television images" (p. 355).

This researcher is concerned with the influence of direct (personal experience, experiences of family and friends, and beliefs) and indirect experience (mediated experience, both broadcast and print) on the construction of social reality. The degree of direct information (or experience) is defined as the degree to which an individual's perception of an object or event is based upon knowledge gathered from personal experience with, involvement in, or non-mediated observation of an object or event (Slater, 1977).

In this study the degree of direct information from personal experience is operationally defined as the number of times a person has flown in the last five years. Respondents circled the number of times they had flown in the last five years. This variable, personal experience, was called PERSCAT for purposes of statistical analysis.

The second independent variable, degree of indirect information, is the degree to which an individual's perception of an object or event is based upon knowledge gathered from mediated representations of the object or event (Carveth, 1985).

Subjects responded to several questions concerning their media use. These questions measured both electronic and print media use. Respondents were asked to recall how much time they had spent on an average weekday with each of the following media: magazines, radio, network TV, and cable TV. Additional questions asked how many newspapers they read each day and how much time was spent reading the newspaper.

A second measure of television use asked the respondent to check the television programs he/she had watched at least once in the past seven days. This section was divided into days of the week with prime-time programs from TV Guide.

This section was followed by several questions to determine the amount of cable viewing by each respondent. A separate item was provided for CNN and CNN Headlines.

Measures of overall media use, use of the print media and radio news showed no significance when tested with the dependent variables and were therefore omitted from this study. In the final analysis, the responses of questions regarding news viewing, that is, amount of time spent watching CNN, CNN Headlines, and the network news, were combined to create a TV news-viewing variable. This variable was measured indirect (mediated) experience. Respondents were divided into two groups: high and low TVnews-users.

Statistical analysis of the media-use variables showed that none of the variables were significant when tested with the dependent variables. The researcher then combined three TV news-use variable, watch CNN, watch headline news and watch network news into one independent variable called TVNEWCAT.

DEPENDENT VARIABLES

The two dependent variables were 1) estimates of plane crashes and plane crash fatalities and 2) fear of flying. The first dependent variable, estimate, was measured by the respondents' response to the questions, "What is your best estimate of the number of commercial airline crashes that occurred in the last 12 months?" and "What is you best estimate of the number of people who were killed in commercial airline crashes in the past 12 months?" range of choices was provided for the respondents. The responses was ranked as either high or low when compared with actual percentages of plane crashes and plane crash fatalities as reported by the National Transportation Safety Board.(See Appendix B). The two estimate measures were called ESTKILL and ESTCRASH for purposes of testing.

Fear of flying, the second dependent variable, was operationally defined by building an index of fear. Respondents were asked several questions relating to fear to determine their levels of fear. The responses to the following items were combined to determine an overall fear level:

On a scale of 1-7, with 1 being the least afraid and 7 being the most afraid, check how afraid you are

a. when you fly or when your closest relative flies that the plane will crash. ^{4 6}

b. when your spouse or close relative flies, he/she will be killed and you will be left alone.

c. when your spouse or close relative flies, he/she will be killed and you will suffer financially.

d. when your spouse or close relative flies, your children might be left with only one parent.

e. when you fly the airline will lose your luggage.

f. when you fly your plane will be hijacked.

In addition to these items, respondents were asked to check their level of fear to several items. These items included being alone, snakes, doctors, death, heights and airplanes among others. Respondents checked the appropriate level of fear: Not at all, a little, much, very much and terror. Points were added to each subject's overall fear index if he/she checked much (3 pts.), very much (4 pts.), or terror (5 pts.) for fear of airplanes.

Factor analysis was used to determine which items were related. All of the items concerned with death factored together. These included fear that spouse would be killed and respondent would be left alone, fear that spouse would be killed and children would be left without parents, and the two measures of overall fear of flying (see Table III-1). These variables were combined to create one variable that was used to measure the respondent's fear of flying. The sample was divided into a high fear group and a low fear group. The term used for this variable was FLYFRCAT.

Table III-1

Rotated Factor Pattern/Fear Variables

	Factor1	Factor2	Factor3
Fear of dying in a crash	0.77058	0.25434	0.23384
Fear of other parent dying	0.75444	0.18965	0.19705
Fear of spouse dying	0.73285	0.41089	0.30457
Precaution measure of fear	0.72332	-0.00634	-0.21680
Fear of being hijacked	0.31113	0.77491	0.18351
Total anxiety measure	-0.04921	0.20575	0.81844
Fear of flying measure	0.32716	-0.15416	0.77852

DEMOGRAPHIC VARIABLES

The questionnaire contained standard questions regarding sex, age, marital status, race, religion, educational status, occupation, and annual income. A demographic profile of the sample is found in Chapter IV, Results.

SAMPLE

In this study, the survey sample was drawn from five different populations: faculty and staff from Emory and Henry University, Emory, Virginia and Bluefield College, Bluefield, Virginia; faculty and staff at Beardsley Middle School, Knoxville, Tennessee; a Mothers of Preschoolers group; and a women's Bible study group. To ensure that the sample included frequent fliers, 59 surveys were completed at the Memphis and Las Vegas airports. A total of 205 questionnaires were completed. Of this total, 181 were used in the analysis.

STRUCTURE OF THE QUESTIONNAIRE

Appendix A contains a copy of the final survey instrument used in this study. In order to obtain information to test the hypotheses in this study, three distinct sets of items were required.

Part I consisted of 17 statements designed to measure respondents' use of the mass media. Statements requested such information as types of mass media the respondent used and how much time was spent with each type.

Part II of the survey addressed the dependent variables fear of flying and estimates about flying. This section contained 12 statements designed to measure respondents' fears and procure estimates about air crashes and air crash fatalities.

Part III requested standard demographic information. Where possible, response categories for such variables as age, income, and education were devised to correspond with the categories used by the U.S. Census.

In addition to the demographics mentioned above, respondents were also asked about the following characteristics: 1) gender, 2) marital status, 3) number of children, 4) religion, and 5) occupation.

The questionnaire was in booklet format and was seven pages long. The survey took approximately 15 minutes to complete. The introduction to the questionnaire stated that participation is voluntary; refusal to participate will involve no penalty, and the subject may withdraw or discontinue participation at any time without penalty.

ADMINISTRATION OF THE SURVEY

A pretest of the questionnaire was conducted at the Virginia Association of Broadcast Educators winter meeting. A total of 14 faculty members from various universities in Virginia completed the questionnaire. Their insight and comments were used to refine and restructure parts of the questionnaire.

Data collection for this study was conducted from March 3 to March 22, 1991. By the end of the data collection phase a total of 205 surveys was collected. Surveys returned with missing values were omitted. Likewise, surveys in which the respondent and the respondent's spouse or close relative had not flown in the last five years were omitted.

One hundred and eighty-one usable surveys were thus procured. This sample size was within the original range proposed for this study, and was deemed more than adequate for the majority of the statistical analyses to be performed upon the data.

After the data were collected, responses were input by this researcher using SAS. A data file was ready for examination by the first week of May

1991. Entries in this file were hand-checked against the original surveys. Input errors were subsequently corrected, and the data were then ready for analysis.

Chapter IV will discuss the procedures used to assess reliability and validity of this study, present the statistical analyses conducted for this study and explain the results of the study.

CHAPTER IV

ANALYSIS AND RESULTS

ANALYSIS

A. RELIABILITY AND VALIDITY ASSESSMENT

Several measures were used to enhance the reliability of the survey instrument. First, internal consistency was ensured by including more than one statement to examine each variable. These multiple measures of each variable could be compared to check reliability of the responses. In addition, reliability was attempted by careful wording and revision of each question. The pre-test provided the researcher with valuable insight into the wording of each statement.

Four types of validity were assessed for the questionnaire. The first of these was face validity, which has been described as “the quality of an indicator that makes it seem a reasonable measure of some variable” (Babbie, 1979, p. 578). To ensure that appropriate questions were being asked to examine each variable, several cultivation and fear studies were consulted.

The second type of validity assessed for Part I was content validity. Content validity addresses the issue of whether “the substance or content of (the) measure is representative of the content or the universe of content of the property being measured” (Kerlinger, 1986, p. 417). This type of validity is different from face validity; it is with the intent that the measures included are not only measuring what one hopes to measure, but that these variables are

relevant to the study at hand. To ensure content validity, Kerlinger notes that expert judges should evaluate the relevance of each item. To enhance the content validity of this survey, several colleagues assessed the relevance of each variable and each measure.

To examine how many salient fear factors existed in the data, the SAS factor analytic procedure was employed. Orthogonal rotation was chosen as the measure to yield the final pattern solution. This rotation showed that all fear measures concerned with death factored together (See Table III-1). These four "fear of death" factors were combined into one variable called "fly fear category." The other fear measures were omitted from this study.

Also with respect to validity, the statements used in this survey were fairly standard measures of media use and demographic characteristics. To aid in the construction of valid measures, other surveys measuring these constructs (such as other cultivation studies and the U.S. Census) were consulted. Thus, a comprehensive and clearly worded set of questions was ensured.

B. ANALYSIS OF THE DATA

The Statistical Analysis System (SAS) (Barr, Goodnight, Sall & Helwig, 1976) was used to process and analyze the data. Tests used in analyzing the data were analysis of variance (ANOVA) (Kerlinger, 1973) T-test and correlation analysis. In addition, factor analysis was employed to create the fear index.

RESULTS

A. DESCRIPTIVE STATISTICS

Table IV-1 presents the demographic characteristics of the respondents:

1) Age: Most of the respondents were between 25 and 64 years old. In fact, almost 66 percent of the respondents were between 25 and 44.

2) Sex: The majority (61.9%) of the sample was female.

3) Marital Status: Over three-fourths (76.8%) of the sample was currently married. About 13 percent of the sample had never been married and 9.9 percent of the sample were separated, widowed, or divorced.

4) Number of Children: The majority of the sample had from one to three children (67.9%), although 27.1 percent had no children.

5) Household Income: Although the sample was relatively young, respondents tended to have high household incomes. Eighty-two percent of the sample reported an income of \$25,000+ a year.

6) Education: Almost fifty percent (49.7%) of the sample had completed college work beyond the bachelor's degree. Considering that the sample consisted of college faculty, this finding is not too surprising. Almost fifteen percent (14.9%) held college degrees and 23.8 percent had completed from one to four years of college. Only two percent of the sample did not have a high school diploma.

7) Profession: More than half (61.4%) of the respondents reported occupations in the management/professional or teaching fields. In addition, 19.3 percent of the sample indicated an "other" occupation.

8) Religion: The majority of the respondents (70.2%) were protestant. Less than 5 percent marked "no religion."

Table IV-1

Demographic Profile of the Sample

	Frequency	Percent
<u>Sex</u>		
Male	69	38.1
Female	112	61.9
<u>Marital</u>		
Married	139	76.8
Never been married	23	12.7
Separated/Widowed/Div.	18	9.9
<u>Education</u>		
1-3 years of high school	2	1.1
High School diploma	19	10.5
1-4 years of college	43	23.8
College diploma	27	14.9
Work beyond bachelors	90	49.7
<u>Number of Children</u>		
	49	27.1
1	34	18.8
2	54	29.8
3	35	19.3
4	3	1.7
5	1	0.6
6	2	1.1
7	0	0.0
8	1	0.6
9	2	1.1

Table IV-1 (cont.)

	Frequency	Percent
<u>Income</u>		
Under \$14,999	13	7.2
15 - 19,999	6	3.3
20 - 24,999	10	5.5
25 - 34,999	39	21.5
35 - 49,999	40	22.1
50+	70	38.7
<u>Occupation</u>		
Management	47	26.0
Technical	18	9.9
Precision, Prod., Craft, Repair	2	1.1
Farming/Forestry/Fishing	0	0.0
Operator/Fabricator/Laborer	2	1.1
Service	7	3.9
Teacher	64	35.4
Retired	4	2.2
Other	35	19.3
<u>Age</u>		
20-24	10	5.5
25-34	59	32.6
35-44	60	33.1
45-54	29	16.0
55-64	19	10.5
65-74	2	1.1
over 75	2	1.1
<u>Religion</u>		
Catholic	2	1.1
Protestant	127	70.2
Other	24	13.3
Jewish	0	0.0
No religion	6	3.3

In summary, the “typical” respondent appears to be female, between the ages of 25 and 44, upper-income, college-educated, married, and with at least one child.

B. TESTS OF HYPOTHESES

All hypotheses were tested using analysis of variance (ANOVA):

H1: Heavy TV-news users will have higher levels of fear than light TV news-users..

As shown in Table IV-1, there is no significant difference between these two groups. Thus, hypothesis 1 finds no support in the data.

H2: Heavy TV news-users will give higher estimates than light TV news-users.

As shown in Table IV-2 and IV-3, there is no significant difference between these two groups for either estimate variable, estimate of number of people killed and estimate of number of crashes. Hypothesis 2 can not be supported with 95% confidence.

H3: Infrequent fliers will show higher levels of fear than frequent fliers.

The third hypothesis tests whether infrequent fliers will have higher levels of fear than infrequent fliers. As shown in Table IV-4, the analysis of variance is significant at $p < .05$ level. Examining the means shows that infrequent fliers are significantly more fearful than frequent fliers; infrequent

Table IV-1

Analysis of Variance of Fear of Flying
by News-Viewing

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	Signif of <u>F</u>
TV News Use	0.1134450	1	0.1334450	0.60	.4386

Table IV-2
 Analysis of Variance of Estimate of Air Crashes
 by TV News-Viewing

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	Signif of <u>F</u>
TV News Viewing	0.5972566	1	0.5972566	0.42	0.515

Table IV-3

Analysis of Variance of Estimate of People Killed in Air Crashes
by TV News-Viewing

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	F	Signif of F
TV News Viewing	20.849190	1	20.849190	2.49	0.117

Table IV-4
Analysis of Variance of Fear of Flying
by Direct Experience*

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	Signif of <u>F</u>
Direct Experience	1.0463992	1	1.0463992	5.72	0.0178

* Significant at level $p < .05$

Mean for infrequent flyers	1.32258
Mean for frequent flyers	1.17045

fliers have a mean of 1.32 and the mean of frequent fliers is 1.17. Thus, hypothesis 3 is supported by the data.

H4: Frequent fliers will estimate differently than infrequent fliers.

The last hypothesis tests whether frequent fliers news-users will estimate differently than infrequent fliers. The analysis of variance for both estimate variables, estimate of people killed and estimate of number of crashes, showed no difference between these two group means. Thus, as shown in Table IV-5 and IV-6, Hypothesis 4 is unsupported.

Table IV-5

Analysis of Variance of Estimate of Air Crashes
by Direct Experience

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	Signif of <u>F</u>
Direct Experience	0.16938157	1	0.168938157	1.21	0.2728

Table IV-6

Analysis of Variance Table of Estimate of People Killed in Air Crashes
by TV News-Viewing

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	Signif of <u>F</u>
TV News-Viewing	20.849190	1	20.849190	2.49	0.116

Appendices E1-E6 show the effect of other variables when added to the model. In Table Appendix E-1 it is interesting to note the p value of the TV news viewing variable. Although the value ($p > .09$) does not reach the specified 95 percent confidence level, it does suggest that there might be some effect of TV news viewing on the estimate of people killed in air crashes.

Again, Appendix E-2 shows the significance ($p < .05$) of personal experience on fear of flying. Respondents with more experience flying tend to be more fearful of the experience.

T-Tests on demographic data reveal several differences between demographic groups. (Tables IV -7- IV-15).

According to the results of the T-tests, men have more personal experience with flying, but women show the greatest fear of flying.

Younger respondents are more afraid of flying than older respondents. This fear is probably the lack of experience. As shown in Table IV-10, respondents under the age of 35 have less experience than those over 35.

College graduates watch more news than those who did not attend or did not graduate from college. Graduates from college also have slightly more experience flying.

The results of T-tests revealed several differences between the means of white collar workers and blue collar workers or retired respondents. First, blue collar workers have higher estimates of the number of air crashes and the number of people killed in air crashes than white collar workers. Second, blue collar workers are more fearful of flying than white collar workers.

Table IV-7
T-Test Procedure
Flying Experience by Sex

SEX	N	MEAN
Male	69	7.75362319
Female	112	4.91964286

$p = .0001$

Table IV-8
Fear of Flying by Sex

SEX	N	MEAN
Male	69	1.11594203
Female	112	1.33035714

$p = .0004$

Table IV-9
Fear of Flying by Age

AGE	N	MEAN
<19 - 34	69	1.34782609
35 - >75	112	1.18750000

p < .05

Table IV-10
Flying Experience by Age

AGE	N	MEANS
<19 -34	69	4.84057971
35 - >75	112	6.71428571

$p = .0111$

Table IV-11
TV News Viewing by Education

EDUCATION	N	MEAN
No college graduate	72	1.09722222
College graduate	109	1.22018349

p <.05

Table IV-12
Flying Experience by Education

EDUCATION	N	MEAN
No college graduate	72	5.19444444
College graduate	109	6.53211009

$p = .0690$

Table IV-13
Estimate of Number of Air Crashes
by Occupation

OCCUPATION	N	MEAN
White Collar	136	1.79411765
Blue Collar	43	2.25581395

$p < .05$

Table IV-14
Estimate of People Killed in Air Crashes
by Occupation

OCCUPATION	N	MEAN
White Collar	136	4.74264706
Blue Collar	43	5.83720930

$p = .0517$

Table IV-15
Fear of Flying by Occupation

OCCUPATION	N	MEAN
White Collar	136	1.19117647
Blue Collar	43	1.44186047

$p = .0040$

Table IV-16
Personal Experience by Occupation

OCCUPATION	N	MEAN
White Collar	136	6.27205
Blue Collar	43	5.11628

$p < .05$

CHAPTER V

CONCLUSIONS

Research on the extent to which media content affects perceptions of social reality among audience members has become rich and diversified in the last 20 years. While the initial cultivation hypothesis arguing for a sweeping social reality effect for television exposure has been largely repudiated, it turned a great deal of attention to some of the more subtle processes that may be involved, particularly those contingent upon media content differences. This study was concerned with the media content of news and the cultivation of fear of flying and estimates about flying.

Each weekday evening, tens of millions of Americans watch the news on television. For many in the viewing audience, the socially constructed reality presented by television is their prime, indeed preferred, source of information about the world in which they live. Or so it would seem.

The purpose of this dissertation has been to examine the relationship between television and social reality. Specifically, the relationships of television news viewing, personal experience, fear of flying and estimates about flying were examined. An adult sample was surveyed for their television news viewing behavior, the personal experience with flying, their estimates about flying, and their level of fear of flying.

Results of the one-way analysis of variance revealed the following major findings:

1. Indirect information, as operationalized by news-viewing, has no significant relationship with the fear and estimate variables ($p < .05$).
2. Direct information, as operationalized by the number of times an individual has flown in the last five years, was significantly related to fear of flying ($p < .05$) but was not significantly related to the estimate variable. These findings support those of Carveth (1985) and Slater (1977) that direct experience rather than television viewing is related to views about the outside world.

EXPLANATION OF FINDINGS

Hawkins and Pingree (1980) write that because cultivation effects claim to involve individuals' perceptions of the world they live in, news presentations might well be even more important than entertainment in building up one's notion about the world. However, the data collected in this study failed to prove that heavy news-viewing significantly influences the way one perceives flying. At first this finding seems incongruent with much of the body of cultivation research. However, upon closer examination, this is not the case. This researcher reviewed the literature and found explanations for nonsignificance based on Hawkins' and Pingree's five processes involved in cultivation, Gerbner's definition of cultivation, and specific elements unique to the news genre.

Hawkins' and Pingree's (1981) five processes that influence cultivation provide insight into the findings of this study.

First, processing abilities involve "learning." Hawkins and Pingree suggest that IQ may be an important factor in one's ability to process

messages. This study did not measure IQ; however, the overall education level of respondents was well above average with almost 50 percent having completed work beyond the college degree. One can assume that a highly educated respondent would employ more astute cognitive processing skills and be a more critical receiver of television messages than a less educated respondent.

Critical attention to television, Hawkins and Pingree's second processing ability, also helps to clarify the results of this study. Critical attention refers to the viewers' attitudes toward television and critical weighing of television messages. Hawkins and Pingree suggest that what may be important is not attitudes toward television, but "activity" with which people watch television. They suggest that "active" viewing inhibits the influence.

According to Bauer (1971), the term "active" implies that, within the constraints of available media content, individuals choose the messages to which they will expose themselves, that their decisions are motivated by goals which are self-defined, and that "active" participation in the communication process limits and conditions effects of the mass media. News-viewers are more likely to choose to watch the news and to be motivated by self-defined goals.

The third processing ability offered by Hawkins and Pingree is experience. Experience, used as one of the independent variables of this study, also serves as one of the best explanations for the results of the study. Of the 181 completed surveys, 84.5 percent of the respondents had flown at least once in the last five years. Over 50 percent had flown five times or more in the last five years—an average of once a year. The personal/direct

experience of the respondents in this survey is atypical of the general population.

According to Hawkins and Pingree, the respondents' direct experience would either serve to confirm their personal experience or disconfirm it. In the case of disconfirmation, the amount of mediated experience becomes less relevant or even irrelevant.

Other cultivation researchers agree that direct experience must be considered in the cultivation equation. Carveth asserts that the construction of man's social reality depends largely on the verity of his indirect experience with the real world, an indirect experience provided in large part by the media (p. 33).

McLeod and Chaffee (1972) claim that social construction of reality refers to individuals' orientations toward the world, based partly on past experiences and actual observations, and partly on information individuals obtain from interpersonal channels or from mass communication. Further, Ogles (1987) adds that social reality can be thought of as internalized, learned expectations derived from past experiences.

Since the sample in this study consisted primarily of persons who had flown, their direct experience with flying was probably greater than their TV news (or indirect) experience.

Social structure, the fourth processing ability, may have also contributed to the findings of this researcher. Rothschild (1979) suggests that increased social interaction in groups provides a rich set of alternative information which may counteract television's messages. Not only did the sample consist of highly educated persons, it also included a large number of professionals. Over 60 percent of the sample reported occupations in the

management/professional or teaching fields. It is reasonable to assume that these professionals' peer groups include frequent fliers who might influence their perception of flying.

The final processing ability, specific viewing, also lends explanation to the study's findings. News, a genre that has been given little attention in cultivation research, is different from other types of programming. One of the essential assumptions of cultivation theory is that the audience receives repetitive images that help to shape their view of reality. Quarantelli writes:

there are no clear themes about the visual imagery used by television disaster reporters, as have been developed about depictions as events such as violence, war scenes, pornography and sexual behavior. The use of mass media to deliver personal messages at emergency times, while observed both in Japan and in the United States, has not been examined either in terms of functions or content (p. 15).

According to Gerbner's definition, messages are presented in repetitive patterns. When the heavy TV news-viewer watches CNN continuously to learn more about a specific air crash, the repetitive image is usually the same, the same pictures of the crash shown again and again. However, when the heavy crime or action/adventure viewer watches crime/drama shows repeatedly, the images of the criminals have common characteristics, but are usually the same criminals. Thus, the news genre may not present the kind of repetitive images necessary for cultivation to occur.

Further, although media pictures of real air crashes tend to be dramatic and powerful, perhaps they are not as exaggerated as the crimes and violence presented on fictional shows.

Gerbner's definition further posits that mediated experience is incongruent with one's personal experience. He writes that the repetitive

pattern of television's mass-produced messages and images form the mainstream of the common symbolic environment. This study questions whether the images of plane crashes presented on the news are really congruent with reality.

Another explanation arises from the difference between being involved in a crime and flying. Fear of crime is possibly perceived as more threatening than flying. When one chooses to travel by air, the decision is a thoughtful one. The passenger is in control and has time to prepare and plan. However, when one is victimized by a criminal, the act is unplanned and the victim has no control over the situation.

One of the weaknesses of this study is that the sample is not representative of the general population. Respondents in this study are upper income, highly educated and hold jobs in the management/professional or teaching fields. A more random sample might have yielded different results. However, it is important to note that while this study's sample was not representative of the entire population, it is probably representative of those who are frequent fliers. The results of this study should not be generalized to the entire population, but are most likely representative of those who fly.

A second weakness of this study is the estimate measures. The measures of estimate of air crashes and estimate of people killed in air crashes asked the respondent to recall figures from the past 12 months. It is problematic to ask people to differentiate between crashes that happened in the last 12 months and those that happened one or even two years ago.

The findings in this study are consistent with other cultivation studies concerning the news genre. Adoni et al. (1984) found that Israeli adolescents were able to differentiate between social reality and television reality.

Furthermore, the amount of exposure to television news was found to be unrelated to their abilities to make this differentiation.

Skogan and Maxwell (as reported in Slater and Elliottt, 1982) found that direct experience provided statistically significant predictors, but television news viewing was not a significant predictor. These findings are consistent with the findings of this study.

The results of this research further confirm the conclusions of Vincent et al. (1989) conclusions that typical coverage of plane crashes is unlikely to spark any public outcry against the airline industry or create a panic in which flying is avoided (p. 23).

IMPLICATIONS FOR FUTURE RESEARCH

Cultivation theory states that the mass media is capable of creating certain themes, images and impressions that help create an individual's social reality. The results of this study reveal that cultivation effects may not be present in news-viewing.

While many studies have found significance between amount of television viewed, specifically crime/adventure programming, and fear of victimization, no studies designed to test the news genre have found significant results.

More research needs to be done exploring the effects of cultivation on different television genres, especially news. Different news topics could be explored. For example, does heavy television news-viewing cultivate apathy toward topics such as the homeless, the AIDS crisis, and the war on drugs.

Other types of disasters, for example, earthquakes, volcano eruptions, and tornados, could be explored.

Different segments of news should be examined. Do news segments such as the weather and health news change viewers' perceptions of reality?

Other types of disasters should be studied. For example, TV news might have a stronger influence on the viewers' fear of tornados, hurricanes, or floods.

Also, news-viewers perceptions of other countries could be investigated. For example, do viewers perceive all Latin American countries to be involved in drug trade? Are all of the third-world countries' children dying of starvation?

Blumler (1984) suggests that audience members' roles within certain social contexts should be studied relative to different types of media, for example, whether individuals are active or passive when confronting a medium as a fan, expert, explorer, escapee, etc. The concept of the "active" audience member needs to be measured and tested in relation to the cultivation hypothesis.

The full process involved in the individual's construction of social reality needs further attention. For example, the relationship of direct experience and indirect (mediated) experience on the cultivation effect is far more complex than what is put forth by Gerbner and his associates. Research should focus on the presence and impact of direct experience on the cultivating of social perceptions.

Another method to test cultivation research is experimental research. Given the problems of respondents' trying to recall estimates about plane crashes, an experimental testing of the hypotheses posited in this dissertation

might yield different results. One type experiment would involve showing the subjects actual videotapes of air crash coverage from archives at Vanderbilt University. After the subject had viewed the news broadcast, the survey used in this study could be administered. This treatment would serve to aid the subject's memory and assist them in their estimations.

Previous cultivation research has examined unplanned effects of media use. Violent programs do not seek to instill paranoia in the minds of the viewer. A different direction for cultivation research is to investigate the influence of planned media campaigns, such as the fight to save the environment, on the cultivation of world views.

Finally, replication of previous cultivation research is necessary. With inconsistent findings in the literature, it is important to replicate and expand existing research.

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APPENDICES

APPENDIX A
SURVEY

APPENDIX A

Survey

To the participant: Participation in this survey is voluntary. There is no penalty for refusal or withdrawal. You will remain anonymous. Do not write your name or give any other identifying information. Returning the completed questionnaire will be regarded as your consent. Thank you for your participation.

Part I We are very interested in your use of the mass media and your personal concerns. Please respond to each section as accurately as possible.

1. Some people watch news frequently and some are not able to watch the news. If you watch the news, please check the national news programs you watch, if any. Also indicate the number of times per week you watch each program.

☐ CNN ☐ 1 time ☐ 2-4 times ☐ 5-7 times
☐ more than 7
☐ CNN Headlines ☐ 1 time ☐ 2-4 times ☐ 5-7 times
☐ more than 7
☐ CBS/ABC/NBC
☐ National News ☐ 1 time ☐ 2-4 times ☐ 5-7 times
☐ more than 7
☐ Other. Please specify _____
☐ I do not watch the news.

2. How many times a week do you read a daily newspaper, if any? _____ times a week. (If 0, skip to question 8).

3. Please check the number of newspapers you read each day
☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 or more

4. How many different papers do you read weekly? _____.

5. Which sections of the newspaper are the most important to you. Please rank the three most important sections of the newspaper

☐ front page	☐ editorial page	☐ lifestyle
☐ comics	☐ sports page	☐ local news
☐ national news	☐ business page	☐ stock market
☐ classified ads		☐ reports

6. When you read the newspaper, how much time do you spend? _____

7. How many newspapers did you read yesterday? _____

8. Please check the news magazines you read each week?

☐ U. S. News and World Report ☐ Newsweek
☐ National Review ☐ Time
☐ Other. Please specify _____
☐ I don't read a news magazine on a weekly basis.

9. On the average weekday, about how much time do you spend with the following?

	Magazines	Radio Network	TV Cable TV (CBS,NBC,ABC)
No time	_____	_____	_____
1-15 min.	_____	_____	_____
16-30 min.	_____	_____	_____
31-45 min.	_____	_____	_____
46 min-1 hr	_____	_____	_____
1-2 hrs.	_____	_____	_____
2-3 hrs.	_____	_____	_____
4-5 hrs.	_____	_____	_____
5 + hrs.	_____	_____	_____

10. Please check the television programs you watched at least once in the past 7 days:

Monday

☐ CBS News (Rather)
☐ ABC News (Jennings)
☐ NBC News (Brokaw)
☐ Evening Shade
☐ Major Dad
☐ Murphy Brown
☐ Designing Women
☐ Trials of Rosie O'Neill
☐ Davis Rules
☐ Good Sports
☐ MacGyver
☐ Fresh Prince
☐ Monday Night Movie
☐ Blossom

Wednesday

☐ CBS News (Rather)
☐ ABC News (Jennings)
☐ NBC News (Brokaw)
☐ 48 Hours
☐ Unsolved Mysteries
☐ Wonder Years
☐ Growing Pains
☐ Jake and the Fatman
☐ Night Court
☐ Doogie Howser

Tuesday

☐ CBS News (Rather)
☐ ABC News (Jennings)
☐ NBC News (Brokaw)
☐ Tuesday Night Movie
☐ Matlock
☐ Who's the Boss?
☐ Rescue 911
☐ In the Heat of the Night
☐ Davis Rules
☐ Roseanne
☐ Coach
☐ Eddie Dodd
☐ In the Heat of the Night
☐ Law & Order

Thursday

☐ CBS News (Rather)
☐ ABC News (Jennings)
☐ NBC News (Brokaw)
☐ Cosby
☐ Different World
☐ Cheers
☐ Wings
☐ L A Law
☐ PrimeTime Live
☐ Thursday Night Movie

☐ Dear John
☐ Anything but Love
☐ WIOU
☐ Quantum Leap
☐ Equal Justice

☐ Top Cops
☐ Father Dowling
☐ Knots Landing
☐ Twin Peaks

Friday

☐ CBS News (Rather)
☐ ABC News (Jennings)
☐ NBC News (Brokaw)
☐ Hunter
☐ Full House
☐ Family Matters
☐ Perfect Strangers
☐ Baby Talk
☐ 20/20
☐ Dark Shadows
☐ Hunter
☐ Guns of Paradise
☐ Dallas
☐ Friday Night Movie
☐ True Detectives

Saturday

☐ CBS News
☐ ABC News
☐ NBC News
☐ Saturday Night Movie
☐ Golden Girls
☐ Empty Nest
☐ Carol & Company
☐ Down Home
☐ Hee Haw
☐ Amen
☐ Shannon's Deal
☐ Young Riders

Sunday

☐ CBS News
☐ NBC News
☐ Murder, She Wrote
☐ Sunday Night Movie
☐ Expose
☐ Funniest People

☐ ABC News
☐ 60 Minutes
☐ Life Goes On
☐ Real Life with Jane Pauley
☐ Funniest Home Video
☐ Super Bloopers & Practical Jokes

11. Please check the following FOX Network programs that you watched over the past seven days.

☐ 21 Jumpstreet
☐ Parker Lewis
☐ Get a Life
☐ Good Grief
☐ Missing/Reward
☐ Hidden Video
☐ Cops
☐ America's Most Wanted
☐ Simpsons
☐ Beverly Hills, 90210

☐ True Colors
☐ In Living Color
☐ Married with Children
☐ Comic Strip Primetime
☐ Harry and the Hendersons
☐ Yearbook
☐ Tales of the Darkside
☐ Against the Law
☐ Babes

12. On an average weekday, how much time do you spend watching cable channels: WTBS, WGN, USA, A&E, Discovery, Family Channel, Lifetime, Nickelodeon, TNN, MTV, ESN, TNT and USA (Do not include CNN, CNN Headlines, the Weather Channel or Premium Channels).

_____ 0 time _____ 30 mins. _____ 1 hr. _____ 1 1/2 hrs. _____ 2 hrs.
 _____ 2 1/2 hrs. _____ 3 hrs. _____ 3 1/2 hrs. _____ 4 hrs. _____ 4 1/2
 hrs. _____ 5 hrs. _____ more than 5 hrs.

13. On an average weekday, how much time do you spend watching premium cable channels (HBO, Disney, Showtime, Cinemax)?

_____ 0 time _____ 30 mins. _____ 1 hr. _____ 1 1/2 hrs. _____ 2 hrs.
 _____ 2 1/2 hrs. _____ 3 hrs. _____ 3 1/2 hrs. _____ 4 hrs. _____ 4 1/2
 hrs. _____ 5 hrs. _____ more than 5 hrs.

14. On an average weekday, how much time do you spend watching CNN or CNN Headlines?

_____ 0 time _____ 30 mins. _____ 1 hr. _____ 1 1/2 hrs. _____ 2 hrs.
 _____ 2 1/2 hrs. _____ 3 hrs. _____ 3 1/2 hrs. _____ 4 hrs. _____ 4 1/2
 hrs. _____ 5 hrs. _____ more than 5 hrs.

15. Check the following programs that you watch on an average weekday:

_____ Donahue _____ Joan Rivers _____ Regis & Kathy Lee _____ Oprah
 _____ A Current Affair _____ Entertainment Tonight _____ Jeopardy!
 _____ Wheel of Fortune _____ Family Feud _____ Inside Edition

16. On an average weekday, how much time do you spend watching PBS (MacNeil, Lehrer, Business Report, Special PBS Programming)?

_____ 0 time _____ 30 mins. _____ 1 hr. _____ 1 1/2 hrs. _____ 2 hrs.
 _____ 2 1/2 hrs. _____ 3 hrs. _____ 3 1/2 hrs. _____ 4 hrs. _____ 4 1/2
 hrs. _____ 5 hrs. _____ more than 5 hrs.

17. On an average weekday, how much time do you spend listening to the news on the radio? (Include PBS-Morning Edition and All Things Considered).

_____ 0 mins. _____ 1-14 mins. _____ 15-29 mins.
 _____ 30-44 mins. _____ 45 mins.-1 hr. _____ 1-2 hrs.
 _____ 2-3 hrs. _____ over 3 hrs.

Part II. Please respond to the following items as accurately as possible.

1. What is your best estimate of the number of commercial airline crashes that occurred in the last 12 months? Check one response.

_____ 0 _____ 1-5 _____ 6-10 _____ 11-20 _____ 21-30 _____ 31-40
 _____ 41-50 _____ 51-60 _____ 61-70 _____ 71-80 _____ 81-
 90 _____ 91-100 _____ 101-150 _____ 151-200 _____ Over 200.

2. When you (or your spouse or close relative) flies, which of the following do you do? Please check all that apply. (If you never fly and no one in your immediate family flies, please skip to question 11).

☐ take out flight insurance'	☐ make out a will
☐ practice meditation or hypnosis	☐ pray for safety
☐ take along a good luck charm	☐ read the safety card
☐ find out what model plane it is	☐ fly to less busy hubs
☐ ask for a seat in the safest part of the plane	☐ check the weather
☐ take medication for nerves	☐ drink alcohol
☐ cry when you say good-bye to family	☐ fly during the day
☐ give flight info. to friend or family	☐ call on arrival
☐ always fly with friend or relative	☐ bargain with God
	☐ none of the above

3. Please check the number of times you have flown in the past five years:

☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
☐ 6	☐ 7	☐ 8	☐ 9	☐ 10	
☐ 11-15	☐ 16-20	☐ more than 20			

4. Please check the number of times your spouse or closest relative have flown in the past five years:

☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
☐ 6	☐ 7	☐ 8	☐ 9	☐ 10	☐ 11-15
☐ 16-20	☐ more than 20.				

5. On a scale of 1-7 with 1 being the least afraid and 7 being the most afraid, check how afraid you are when you fly or when your closest relative flies that the plane will crash?

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

6. Using the same scale (1= least afraid; 7= most afraid), how afraid are you that when your spouse or close relative flies, he/she will be killed and you will be left alone?

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

7. Using the same scale (1=least afraid; 7= most afraid), how afraid are you that when your spouse or close relative flies, he/she will be killed and you will suffer financially?

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

8. Using the same scale (1=least afraid; 7=most afraid), how afraid are you that when your spouse flies, your children might be left with only one parent? (If you don't have children, skip to question 10).

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

9. Using the same scale (1=least afraid; 7=most afraid), how afraid are you that when you fly the airline will lose your luggage.

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

10. Using the same scale (1=least afraid; 7=most afraid), how afraid are you that your plane will be hijacked when you fly?

☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

11. What is your best estimate of the number of people who were killed in commercial airline crashes in the last 12 months:

_____ 0 _____ 1-50 _____ 51-100 _____ 101-150 _____ 151-200
 _____ 201-300 _____ 301-400 _____ 401-500 _____ 501-600
 _____ 601-700 _____ 701-800 _____ 801-900 _____ 901-1000
 _____ 1000-2000 _____ over 2000

12. Do you believe the number of air crashes has increased or decreased over the past two years? _____ increased _____ decreased

Part III Please check your level of fear for each of the following items.

	Not at all	A Little	Much	Very Much	Terror
Being alone	_____	_____	_____	_____	_____
Strangers	_____	_____	_____	_____	_____
Speaking before a group	_____	_____	_____	_____	_____
Snakes	_____	_____	_____	_____	_____
Airplanes	_____	_____	_____	_____	_____
Doctors	_____	_____	_____	_____	_____
Making mistakes	_____	_____	_____	_____	_____
Deep water	_____	_____	_____	_____	_____
Illness or injury to loved ones	_____	_____	_____	_____	_____
Thunderstorms	_____	_____	_____	_____	_____
Death	_____	_____	_____	_____	_____
Mental illness	_____	_____	_____	_____	_____

Part IV For the following, please check the appropriate blanks.

1. Are you: Male _____ Female _____

2. Are you: Never been married _____ Married _____
 Separated/Widowed/Divorced _____

3. How many children do you have? _____

4. Which of the following categories is closest to your age?

Under 19 years old	_____	20-24 years old	_____
25-34 years old	_____	35-44 years old	_____
45-54 years old	_____	55-64 years old	_____
65-74 years old	_____	over 75	_____

5. Which of the following best describes your annual household income?

Under \$14,999	_____	\$15,000 - 19,999	_____
\$20,000 - 24,999	_____	\$25,000 - 34,999	_____
\$35,000 - 49,999	_____	\$50,000+	_____

6. What is your religion?

Catholic _____ Protestant _____ Jewish _____ Other _____
No Religion _____

7. What is your current occupation?

Managerial/Professional _____	Service _____
Technical/Sales/Administrative support _____	Teacher _____
Precision production, craft and repair _____	Retired _____
Farming/Forestry/Fishing _____	Other _____
Operator/Fabricator/Laborer _____	

APPENDIX B

AIR CRASHES FROM APRIL 1990 TO APRIL 1991

AIR CRASHES FROM APRIL 1990 TO APRIL 1991*

<u>DATE</u>	<u>CITY</u>	<u>AIRCRAFT</u>	<u>OPERATOR</u>	<u>FATALITIES</u>
05/11/90	Washington, DC	Boeing B-737	United Airline	0
06/07/90	Atlanta, GA	Douglas DC9-31	Eastern Air	0
06/21/90	Atlanta, GA	Douglas DC-9-51	Eastern Air	0
06/21/90	Charleston, SC	Boeing 727-281	USAIR, Inc	0
06/29/90	Chicago, IL	McDonnell Douglas	Midway Airlines	0
07/04/90	Denver, CO	Aerospatiale	Continental	0
07/18/90	Fort Meyers, FL	Boeing 727-223	American Airlines	0
07/22/90	Kinston, NC	Boeing 737-200	USAIR, Inc	0
07/25/90	Panama City, FL	Dehavilland	Eastern Metro	0
07/27/90	Bharu, Malaysia	McDonnell Douglas	World Airways	0
07/28/90	New York NY	De Havilland	Pan Am Express	0
08/03/90	Coeur D'Arlene	McDonnell Douglas	United Airlines	0
08/09/90	Corpus Christi, TX	Boeing 737-300	Southwest	0
08/10/90	Chicago, IL	Airbus	Northwest Air	0
08/12/90	Paris, France	Airbus Ind.	Pan Am World	0
08/12/90	Belgrade, MT	Boeing 727-224	Continental Air	0
08/21/90	Los Angeles, CA	Boeing 737-322	United Airlines	0
08/27/90	Los Angeles, CA	Boeing 747-422	United Air	0
09/09/90	New York, NY	Boeing 727-231	Trans World	0
09/19/90	Denver, CO	Boeing 727-200	United Airlines	0
09/28/90	Detroit, MI	Boeing 727-200	Northwest Air	0
10/03/90	Atlantic Ocean	McDonnell Douglas	Eastern Airlines	1
10/29/90	Columbus, OH	McDonnell Douglas	US AIR	0
11/06/90	San Juan, PR	Aerospatiale	Executive Air	0
11/11/90	Atlanta, GA	Fokker B.V.	US AIR	0
11/26/90	St Thomas, VI	Aeorspatiale	Executive Air	0
12/03/90	Detroit, MI	McDonnell Douglas	Northwest Air	8
12/05/90	Detroit, MI	Boeing 727-200	Northwest Air	0
12/14/90	Denver, CO	British Aerospace	Air Wisconsin	0
12/19/90	Colorado Spgs, CO	Boeing 727-100	Continental Air	0
01/03/91	Des Moines, IA	Boeing 727-223	American Airlines	0
01/07/91	Kansas City, MO	Boeing 737-300	United Airlines	0
01/18/91	Chicago, IL	British Aerospace	Air Wisconsin	0
1/20/91	Minneapolis, MN	Boeing 727-200	Northwest Air	0
1/25/91	Indianapolic, IN	Boeing 727-200	American Air	0
2/01/91	Los Angeles, CA	Boeing 737-300	US AIR	22
2/13/91	Dutch Harbor, AK	Boeing 737-200	MARKAIR	0
3/02/91	Chicago, IL	Short Brothers	Simmons Air	0
3/03/91	Colorado Sprgs, CO	Boeing 737-291	United Airlines	25
3/23/91	Buffalo., NY	Boeing 727-222	United Airlines	0

Total air crashes: 41

Total Fatalities: 56

APPENDIX C
MEANS BY DEMOGRAPHICS

Means by Demographics

	<u>Direct Experience</u>	<u>Indirect Experience</u>	<u>Estimate of Air Crashes</u>	<u>Estimate of Fatalities</u>	<u>Fear of Flying</u>	
<u>Education</u>						
College Grad:	6.53211	1.22018	1.93577	4.81651	1.22935	
No College Grad:	5.19444	1.09722	1.84722	5.20833	1.27777	
<u>Occupation</u>						
White Collar	6.27205	1.76470	1.79411	4.74264	1.19117	
Blue Collar	5.11628	1.13953	2.25581	5.83720	1.44186	
<u>Sex</u>						
Male	7.75362	1.23188	1.98652	5.00000	1.11594	
Female	4.91964	1.13392	1.86607	4.95535	1.33035	
<u>Age</u>						
<19 - 34	4.84058	1.11594	1.94202	5.44927	1.34782	
35 - >75	6.71429	1.20536	1.87500	4.67857	1.18750	
<u>Religion</u>						
Protestant	1.83696	1.85810	2.29166	5.33333	1.88806	C

APPENDIX D
FREQUENCY TABLES

Estimation of People Killed in Air Crashes:
Frequency of Responses

<u>Category</u>	<u>Frequency</u>	<u>Percent</u>
1 - 50	17	9.4
51 - 100	23	12.7
101-150	24	13.3
151-200	16	44.2
201-307	34	18.8
321-400	27	14.9
401-500	11	6.1
501-600	4	2.2
601-700	14	7.7
701-800	3	1.7
801-900	4	2.2
901-1000	2	1.1
1001-2000	0	0.0
over 2000	2	1.1

Estimation of Air Crashes:
Frequency of Responses

<u>Category</u>	<u>Frequency</u>	<u>Percent</u>
1 - 5	88	48.6
6 -10	50	27.6
11-20	29	16.0
21-30	7	3.9
31-40	3	1.7
41-50	2	1.1
51-60	2	1.1

Degree of Fear of Flying:
Frequency of Response

<u>Category</u>	<u>Frequency</u>	
<u>Percentage</u>		
High Fear	45	24.9
Low Fear	136	75.1

TV News-Viewing:
Frequency of Response

Category	Frequency	
Percentage		
High	58	32.0
Low	123	68.0

Personal Experience with Flying*
Frequency of Response

<u>Category</u>	<u>Frequency</u>	
<u>Percentage</u>		
0 times	28	15.5
1	18	9.9
2	20	11.0
3	8	4.4
4	9	5.0
5	10	5.5
6	12	6.6
7	6	3.3
8	6	3.3
9	2	1.1
10	13	7.2
11-15	18	9.9
16-20	7	3.9
more than 20	24	13.3

* In last five years

APPENDIX E
ANALYSIS OF VARIANCE TABLES

General Linear Models Procedure

Dependent Variable: ESTKILL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	50.835901	10.167180	1.21	0.3062
Error	175	1470.025977	8.400148		
Corrected Total	180	1520.861878			
	R-Square	C.V.	Root MSE	ESTKILL Mean	
	0.033426	58.28805	2.8983	4.9724	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PERSCAT	1	21.848804	21.848804	2.60	0.1086
TVNEWCAT	1	23.408973	23.408973	2.79	0.0968
FLYFRCAT	1	0.412673	0.412673	0.05	0.8248
COLGRAD	1	5.157528	5.157528	0.61	0.4344
SEX	1	0.007923	0.007923	0.00	0.9755

Source	DF	Type III SS	Mean Square	F Value	Pr > F
PERSCAT	1	24.952027	24.952027	2.97	0.0866
TVNEWCAT	1	19.242540	19.242540	2.29	0.1320
FLYFRCAT	1	0.330068	0.330068	0.04	0.8431
COLGRAD	1	5.087497	5.087497	0.61	0.4375
SEX	1	0.007923	0.007923	0.00	0.9755

General Linear Models Procedure

Dependent Variable: FLYFRCAT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1.1590639	0.3863546	2.09	0.1027
Error	177	32.6530908	0.1844807		
Corrected Total	180	33.8121547			
R-Square		C.V.	Root MSE	FLYFRCAT Mean	
0.034280		34.39899	0.4295	1.2486	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PERSCAT	1	1.0463922	1.0463922	5.67	0.0183
TVNEWCAT	1	0.0780600	0.0780600	0.42	0.5162
COLGRAD	1	0.0346117	0.0346117	0.19	0.6654

Source	DF	Type III SS	Mean Square	F Value	Pr > F
PERSCAT	1	0.9735385	0.9735385	5.28	0.0228
TVNEWCAT	1	0.0610394	0.0610394	0.33	0.5659
COLGRAD	1	0.0346117	0.0346117	0.19	0.6654

General Linear Models Procedure

Dependent Variable: ESTKILL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	105.68514	17.61419	2.15	0.0502
Error	170	1392.29226	8.18995		
Corrected Total	176	1497.97740			
	R-Square	C.V.	Root MSE	ESTKILL Mean	
	0.070552	57.10714	2.8618	5.0113	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PERSCAT	1	20.393578	20.393578	2.49	0.1164
TVNEWCAT	1	20.006640	20.006640	2.44	0.1199
FLYFRCAT	1	0.110472	0.110472	0.01	0.9077
JOBCAT	1	42.345111	42.345111	5.17	0.0242
RELIGCAT	1	1.614955	1.614955	0.20	0.6576
AGECAT	1	21.214385	21.214385	2.59	0.1094

Source	DF	Type III SS	Mean Square	F Value	Pr > F
PERSCAT	1	29.140909	29.140909	3.56	0.0610
TVNEWCAT	1	14.156019	14.156019	1.73	0.1904
FLYFRCAT	1	3.280262	3.280262	0.40	0.5277
JOBCAT	1	35.027920	35.027920	4.28	0.0401
RELIGCAT	1	0.253358	0.253358	0.03	0.8606
AGECAT	1	21.214385	21.214385	2.59	0.1094

General Linear Models Procedure

Dependent Variable: ESTCRASH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	12.523011	2.504602	1.81	0.1142
Error	171	237.205803	1.387168		
Corrected Total	176	249.728814			
R-Square C.V. Root MSE ESTCRASH Mean					
		0.050146	61.49477	1.1778	1.9153

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PERSCAT	1	1.5536283	1.5536283	1.12	0.2914
TVNEWCAT	1	0.8975274	0.8975274	0.65	0.4223
FLYFRCAT	1	0.4533007	0.4533007	0.33	0.5683
JOB CAT	1	6.4770777	6.4770777	4.67	0.0321
RELIGCAT	1	3.1414768	3.1414768	2.26	0.1342

Source	DF	Type III SS	Mean Square	F Value	Pr > F
PERSCAT	1	2.5012918	2.5012918	1.80	0.1811
TVNEWCAT	1	0.5899889	0.5899889	0.43	0.5152
FLYFRCAT	1	0.0039778	0.0039778	0.00	0.9574
JOB CAT	1	5.5889306	5.5889306	4.03	0.0463
RELIGCAT	1	3.1414768	3.1414768	2.26	0.1342

General Linear Models Procedure

Dependent Variable: FLYFRCAT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	3.1626124	0.5271021	2.97	0.0087
Error	172	30.5245385	0.1774682		
Corrected Total	178	33.6871508			
	R-Square	C.V.	Root MSE	FLYFRCAT Mean	
	0.093882	33.66397	0.4213	1.2514	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PERSCAT	1	1.0559664	1.0559664	5.95	0.0157
TVNEWCAT	1	0.0876309	0.0876309	0.49	0.4832
COLGRAD	1	0.0228791	0.0228791	0.13	0.7200
AGECAT	1	0.6989690	0.6989690	3.94	0.0488
RELIGCAT	1	0.1638756	0.1638756	0.92	0.3379
SEX	1	1.1332914	1.1332914	6.39	0.0124

Source	DF	Type III SS	Mean Square	F Value	Pr > F
PERSCAT	1	0.3379472	0.3379472	1.90	0.1694
TVNEWCAT	1	0.0125319	0.0125319	0.07	0.7908
COLGRAD	1	0.0314648	0.0314648	0.18	0.6742
AGECAT	1	0.3311899	0.3311899	1.87	0.1737
RELIGCAT	1	0.1848935	0.1848935	1.04	0.3088
SEX	1	1.1332914	1.1332914	6.39	0.0124

General Linear Models Procedure

Dependent Variable: ESTCRASH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	4.0347414	0.6724569	0.47	0.8289
Error	174	248.1752033	1.4262943		
Corrected Total	180	252.2099448			
	R-Square	C.V.	Root MSE	ESTCRASH Mean	
	0.015998	62.83834	1.1943	1.9006	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PERSCAT	1	1.6938157	1.6938157	1.19	0.2773
TVNEWCAT	1	0.7187829	0.7187829	0.50	0.4787
FLYFRCAT	1	0.6388048	0.6388048	0.45	0.5042
COLGRAD	1	0.4005327	0.4005327	0.28	0.5968
SEX	1	0.1905309	0.1905309	0.13	0.7152
AGECAT	1	0.3922744	0.3922744	0.28	0.6006

Source	DF	Type III SS	Mean Square	F Value	Pr > F
PERSCAT	1	1.7682835	1.7682835	1.24	0.2671
TVNEWCAT	1	0.7885968	0.7885968	0.55	0.4581
FLYFRCAT	1	0.6476152	0.6476152	0.45	0.5013
COLGRAD	1	0.4296623	0.4296623	0.30	0.5838
SEX	1	0.2606029	0.2606029	0.18	0.6696
AGECAT	1	0.3922744	0.3922744	0.28	0.6006

VITA

Kina Steed Mallard was born in Knoxville, Tennessee on July 17, 1959. She attended elementary and junior high schools in Knoxville City Schools and graduated from Central High School in June, 1977. The following September she entered Middle Tennessee State University and in December, 1981 received the Bachelor of Arts in Speech and Theatre. She entered The University of Tennessee, Knoxville in January, 1982 and in June, 1983 received the Master of Arts degree in Speech Communication. She reentered The University of Tennessee, Knoxville in June 1987 and in August 1991 received a Doctor of Philosophy degree in Communications.

Kina Mallard is presently employed as Chair of the Communication Arts Department at Union University in Jackson, Tennessee. She is married to Michael Mallard and has two daughters, Kaylen and Amelia.