THE EFFECT OF FILMING A TELEVISION NEWS SOURCE BY VERTICAL CAMERA ANGLE, HORIZONTAL CAMERA ANGLE, AND SOURCE EYE - CONTACT ON SOURCE CREDIBILITY AND AUDIENCE ATTITUDES TOWARD THE TELEVISED MESSAGE

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY
HAYES LEONARD ANDERSON

1973

This is to certify that the

thesis entitled

THE EFFECT OF FILMING A TELEVISION NEWS SOURCE BY VERTICAL CAMERA ANGLE, HORIZONTAL CAMERA ANGLE, AND SOURCE EYE-CONTACT ON SOURCE CREDIBILITY AND AUDIENCE ATTITUDES TOWARD THE TELEVISED MESSAGE

presented by

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has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Communication

Major professor

Date 12-20-73

O-7639

ABSTRACT

THE EFFECT OF FILMING A TELEVISION NEWS SOURCE BY VERTICAL CAMERA ANGLE, HORIZONTAL CAMERA ANGLE, AND SOURCE EYE-CONTACT ON SOURCE CREDIBILITY AND AUDIENCE ATTITUDES TOWARD THE TELEVISED MESSAGE

By

Hayes Leonard Anderson

This study investigated whether or not a film camera's point-of-view could create various non-verbal assertions which affect viewer evaluation of the person filmed and his message. Attributes pertaining to camera angle and eye-contact factors were derived from the aesthetic literature of television and film. These attributes were then related to their possible effects on audience perception of source credibility and visual pleasingness, as well as comprehension of the delivered message, attitude toward the message topic and the news story as a televised news event.

Three experiments were conducted, with the camera being manipulated with respect of three vertical angles, three horizontal angles, and source eye-contact. In each experiment the same news story, consisting of a news source delivering a one-minute statement, was used as the experimental message. Two-hundred and seventy-eight college students were used as subjects. Analysis of variance indicated that the manipulated

variables resulted in significant differences in perceptions of the source and message on five of eight criterion variables.

The manipulated variables had no detectable influence on subjects' perceptions of the Qualification and Safety dimensions of source credibiltiy. However, the experimental variable, vertical camera angle, strongly influenced the perceived Dynamism of the news source. Where vertical camera angle was manipulated, subjects tended to rate the source higher on Dynamism when filmed by a camera positioned at eye-level than by high or low vertical camera angles.

An interaction of horizontal camera angles and eye-contact affected perceptions of source Pleasantness. The biggest effect was when the camera acted as an indirect observer, i.e., source had no eye-contact. Subjects considered the picture most pleasant when the source was looking off to the left side of the television screen. On the other hand, when source's eyes were pointed toward the right hand side of the television screen, subjects gave negative ratings on Pleasantness. When there was eye-contact and the source looked directly into a camera 30-degrees to his right or when he looked directly into the camera in front of him the picture was rated as Pleasant. When he looked directly into a camera 30-degrees to his left the Pleansantness rating was neutral.

Effects of the manipulated variables on Comprehension of verbal information were inconclusive. The main effect of eye-contact was found to significantly affect Comprehension in one experimental situation, but not in another.

Attitude ratings toward the message topic were more favorable when the camera was pointing down at the source (High Vertical Angle), positioned directly in front of him, and he was looking into the lens than when the camera was pointing up toward the source (Low Vertical Angle). When the source did not have eye-contact with the camera a more favorable Attitude was produced when the camera pointed up toward the source than when it pointed down. The level camera angle did not produce a great deal of difference in Attitude, regardless if the source had eye-contact.

Subjects gave more positive ratings to how Interesting they perceived the news story to be when the source was filmed by a camera positioned at a high vertical angle. The low vertical angle resulted in a more negative rating.

The results of this study indicate that viewers perceived the perspective provided by camera angles and reacted to them in a definite manner. Camera angles can provide an implicit cue about a communicator, and have a subsequent effect on the menaing of the message.

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A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Communication

1973

ACKNOWLEDGMENTS

So many offices and individuals assisted in this study it is not possible to name them all.

Professor Leo Martin, who was chairman of my committee at the time of his death, provided guidance, assistance and encouragement during my doctoral studies. He was also primarily responsible for my entering the Communication doctoral program at Michigan State University and my entering the profession of teaching.

The present chairman of my committee, Dr. Verling C. Troldahl, who provided encouragement, as well as his excellent guidance and assistance during the development and completion of this study, and made it a very worthwhile learning experience for me. The encouragement of the other committee members, Dr. Colby Lewis, Dr. Kenward Atkin, Dr. J. Allen Beegle, and Dr. Randall Harrison, is deeply appreciated.

The faith, patience, understanding, and encouragement of my wife Marilyn, son Kenneth, and daughter Laura to complete my doctoral studies.

My fellow colleagues on the faculty of the Department of Telecommunications and Film, California State

University, San Diego, will never fully realize the profound way they helped me in achieving completion of this study.

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CHAPTER I

BACKGROUND AND HYPOTHESES

Introduction

The past twenty years have seen television become available in more than 96 percent of the homes throughout America.[1] During these same two decades, Americans have increasingly turned to television as their principal and most trusted source of news and information.[2] Information sources, especially those in positions of public trust, have willingly and deliberately used news and information programs, not only to inform the public about their activities, but also to convince the public of the rightness of their decisions.

Few news sources ever pause to consider that the audience may be receiving visual cues that are leaving the impression that the speaker is insincere, or that he does

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[1] Television Factbook, 1971-72 edition, No. 41 (Washington: Television Diegest, Inc.), p. 71-a.

[2] Burns W. Roper, "Emerging Profiles of Television and Other Mass Media: Public Attitudes 1959-1967" (New York: Television Information Office, 1967); Gary A. Steiner, The People Look at Television (New York: Alfred A. Knopf, 1963), p. 228.

not know what he is talking about. Yet there is clear evidence that this has happened.[3]

Although the image of a news source is communicated by a number of factors, such as the general appearance of the source, his dress, and his facial expressions, at least part of the image is a function of the television medium itself. In part this image is portrayed by the objective, built-in elements of the medium, such as camera angle, lighting, juxtapositions of film shots and sounds, contexts, and relative size.

In considering how the objective elements of visual style in television can limit or enhance the viewer's perceptions, there appears to be widespread ignorance of how the medium conveys information. Few people, including those working in television, comprehend how the message is communicated to the receiver. Notably lacking are studies examining television and film production techniques by rigorous scientific research. Generally, television news cameramen and directors make decisions as to how to position the camera in relation to a person making a newsworthy statement in terms of intuition and standard conventional practices for shooting news film or the

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[3]Edward W. Chester, Radio, Television and American Politics (New York: Sheed and Ward, 1969); Robert MacNeil, The People Machine (New York: Harper & Row, 1968); Joe McGinniss, The Selling of the President 1968 (New York: Trident Press, 1969); Dan Nimmo, The Political Persuaders (Englewood, N.J.: Prentice-Hall Inc., 1970); Richard Nixon, Six Crises (Garden City, N.J.: Doubleday, 1962); Gene Wyckoff, The Image Candidates (New York: The Macmillan Co., 1968).

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television studio presentation.[4] While aesthetic literature in film and television production suggests that the angle at which the camera is aimed at a subject will communicate certain non-verbal cues which can have an effect upon audiences reactions, there has been very little empirical research upon which to predict these effects.

The question of the effects of camera angling has serious ramifications in the area of television news reporting. As the viewing public rarely has a chance to directly confront news sources, its only knowledge of that source may be dependent on how the medium reveals him. In many television news reports, due to time requirements and physical limitations, the source is seen for a few moments and from one point-of-view. If each camera angle does contain non-verbal cues affecting audience perceptions of the source, then how a cameraman encodes his message will have an effect on the results of the total message.

The problem this study addresses itself to is: Can a filming camera's angle or angles in relation to a source create various non-verbal assertions which affect viewer evaluations of that source and message?

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[4]Leo Willette, ed., So You're Gonna Shoot Newsfilm (Ashville, N.C.: Inland Press, Inc., 1960); Irving E. Fang, Television News (New York: Hastings House, Publishers, 1968).

Theoretical Formulation

The idea that source "images" are affected by occurrences during the process of communication is not a new one.[5] The message itself, its delivery and other factors could enhance or diminish the perceived character of the source. This is consistent with a view of communication as a process involving the interaction and mutual influence of source, message, and channel in the responses of the communication receiver. Much of the research by Osgood, Suci, and Tannenbaum supports the view that source image will be affected by a number of variables during the communication process.[6]

Communication research which has investigated the interaction of various elements in oral communications indicates that some factors other than the source's previous reputation and explicit persuasive message can affect audience responses. Andersen and Clevenger cite studies which indicate that groups of listeners can be influenced by speaker variables, and tend to be less sensitive to message variables such as quality of evidence, reasoning, and organization.[7]

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[5] David K. Berlo, The Process of Communication (New York: Holt, Rinehart and Winston, 1960).

[6] Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning (Urbana: University of Illinois Press, 1957).

[7] Kenneth E. Andersen and Theodore Clevenger, Jr., "A Summary of Experimental Research in Ethos," Speech Monographs, 30 (1963), 59-78.

Bettinghaus[8] directly investigated the interaction of the elements of the oral communication situation. Basing his study on the congruity principle that individuals tend to balance their perceptions into an attitudinally consistent structure, he hypothesized that in an oral speaking situation the listeners' attitudes toward the speaker will be related to his post-speech attitudinal position. In this study subjects were presented with speakers who had "effective" and "ineffective" delivery. In addition, two speeches were prepared for each speech topic, a "strong" version and a "weak" version, in terms of arguments, reasoning, organization, and conclusion. His findings indicated that "effective" speech delivery caused greater shifts in attitude toward the speaker than did the "ineffective" mode. There was an indication that listeners could not differentiate very clearly between the "strong" speech treatment and the "weak" treatment. Bettinghaus therefore reached the tentative conclusion: "The shift toward congruity in the oral communication situation seems to be determined more by the listener's attitude toward the speaker than by the listener's attitude toward the speech topic."[9]

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[8]Erwin P. Bettinghaus, "The Operation of Congruity in an Oral Communication Situation," Speech Monographs, 28 (1961), 131-142.

[9]Ibid., p. 142.

Numerous other studies have also indicated that the personal demeanor of the speaker can affect receivers' perceptions and attitudes toward him. Greenberg and Tannenbaum,[10] and Bettinghaus and Preston,[11] have conducted studies which indicate that speakers who sound unsure of what they are saying tend to be judged nonauthoritative. Atwood[12] and King[13] both report studies which show that when a message is judged to be high in credibility, but the personal manner of the speaker is not, receivers lower their impressions of the speaker rather than the content.

Other studies indicate that even irrelevant and subjective aspects of communication can alter receivers' perceptions of the speaker. Many of the factors which seem to lead to these perceptions are non-verbal cues available during the communication act. Non-verbal cues about the character of a speaker have been shown to come from such factors as speaker posture, body position,

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[10] Bradley S. Greenberg and Percy H. Tannenbaum, "Communicator Performance under Cognitive Stress," Journalism Quarterly, 39 (1962), 169-178.

[11] Erwin P. Bettinghaus and Ivan L. Preston, "Dogmatism and Performance of the Communicator under Cognitive Stress," Journalism Quarterly, 41 (1964), 399-402.

[12] Erwin L. Atwood, "Effects of Source and Message Credibility on Writing Style," Journalism Quarterly, 43 (1966), 90-94.

[13] T. R. King, "An Experimental Study of the Effects of Ethos upon the Immediate and Delayed Recall of Information," Central States Speech Journal, 17 (1966), 22-28.

physical distance, eye contact, and degree of body angle.[14] Other cues which have been identified are amount of head nodding, the frequency of verbal reinforcers, the length of communication, the frequency of speech disturbance, the facial expressions, and the amount of gesture and body movement.[15]

These studies point out that a message is made up of distinctive stimulus elements--of individual signs or cues. These evolve from the verbal and non-verbal content, the context, and the treatment given to the message. However, it is possible that a stimulus complex or a single stimulus element within the communication act may serve to predispose a particular interpretation or meaning of the total stimulus pattern, i.e., the message, or some segment of this stimulus pattern other than itself.

Tannenbaum has defined this as an "indexing process," which occurs when a message part serves to

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[14] Albert Mehrabian, "Significance of Posture and Position in the Communication of Attitude and Status Relationships," Psychological Bulletin, 71 (1969), 359-372.

[15] C. David Mortensen, Communication: The Study of Human Interaction (New York: McGraw-Hill Book Company, 1972), pp. 209-252; Albert Mehrabian, "Communication Length as an Index of Communicator Attitude," Psychological Reports, 17 (1965), 519-522; Albert Mehrabian, "Influence of Attitudes from Nonverbal Communication in Two Channels," Journal of Consulting Psychology, 31 (1967), 284-252; H. M. Rosenfeld, "Approval-seeking and Approval-inducing Functions of Verbal and Nonverbal Responses in a Dyad," Journal of Personality and Social Psychology, 4 (1966), 597-605; H. M. Rosenfeld, "Instrumental Affiliative Functions of Facial and Gestural Expressions," Journal of Personality and Social Psychology, 4 (1966), 65-72.

selectively sensitize a particular perception of the message by producing a particular reaction over all other possible reactions.[16] In other words, a stimulus or stimulus complex may act as a set of cues within a message and exercise a more profound effect than the cue potential of all other stimuli composing the message, and leads to the evoking of a different meaning to the communication than the one intended by the communicator. In television such a situation may occur when a political candidate tries to convince the public of his good physical and mental health while the studio lighting creates shadows that, when picked up to cameras, produces an image of ill-health, resulting in audience disbelief of the candidate's proposition and a lowering of his credibility. Whether or not the encoding style of a photographic device, such as a camera, can have an effect on audience perceptions of a person is another question.

Little research is available regarding the encoding effect of photographic devices. Studies which have been done suggest that the expressive representation of pictorial communication are not arbitrary and do appear to have associations independent of the content. Tannenbaum and Fosdick found that photographed models illuminated by a

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[16]Percy H. Tannenbaum, "The Indexing Process in Communication," Public Opinion Quarterly, 19 (1955), 292-302.

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light from a 45-degree angle were judged more favorably than were models illuminated from three other lighting angles.[17] Shoemaker found viewers did assign different evaluations to photographed models according to the vertical camera angle from which they were pictured.[18]

It seems to be the case that in film communication the content cannot be represented without an implication of expressive meaning, formed by the camera angle. If camera angles contain certain non-verbal connotations, then the meaning of the content of a shot[19] appears to exist, at least in part, in its visual expression.

Through the use of camera angles the audience may be positioned anywhere, to view anything from any angle, at the discretion of the cameraman. To describe the intended shot to other members of the production, the cameraman or director specifies the size of shot, the vertical height of the camera, subject angle, the objective

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[17] Percy H. Tannenbaum and James A. Fosdick, "The Effect of Lighting Angle on the Judgment of Photographed Subjects," Audio-Visual Communication Review, 8 (1960), 253-262.

[18] David Shoemaker, "An Analysis of the Effects of Three Vertical Camera Angles and Three Lighting Ratios on the Connotative Judgments of Photographs of Three Human Models" (unpublished doctoral dissertation, Indiana University, 1964).

[19] The term "shot" is defined in this study as a continuous view of a subject filmed by one camera without interruption.

or subjective camera-subject relationship, and other special pictorial considerations which affect the content and nature of the final image.

Aesthetic literature on film and television suggests that the manner in which the camera is used will affect the emotional and psychological reaction of viewers to what they see and the amount of attention devoted to the content.[20] In addition the aesthetic literature indicates that each camera angle may inherently contain non-verbal cues affecting connotations about the subject pictured. It is implied in this literature, for instance, that a camera angle shooting upwards at a person imparts a meaning of power to the image, while an angle shooting downward tends to emphasize the weakness of the person.

While the viewpoint provided by a camera is not the complete message in and of itself, it may contribute to differences between ways in which different non-verbal stimuli make symbolic assertions about source attributes. Depending on the horizontal and vertical angles selected by the cameraman or director, some assertions may be communicated more effectively, and some other may be less effectively

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[20] Joseph V. Mascelli, The Five C's of Cinematography (Hollywood, Calif.: Cine/Graphic Publishers, 1965), p. 11.

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communicated. It may be possible that manipulation of these elements can lead to changes of viewer perceptions and therefore changes in the evaluation of a source.

Whether such expressive elements as camera angle can project associations independent of context and content when they are related to verbal information from the sound track is a central issue in film communication. It can be argued that words signify certain attributes, while the related pictures signify other attributes. However, it cannot be assumed that words or pictures, when laterally juxtaposed, retain their intended meanings.[21] It is implied in film literature that picture and word seem to qualify each other at least as much as do succeeding words, succeeding pictures, or succeeding sound effects.[22]

In television news, many stories, especially those involving abstract ideas, are presented by showing talking faces before the camera, rather than actions and events.[23] Where a news source is the only visual content being shown in a short film segment, the accompanying shot or shots may not be necessary for understanding the content. Even though the verbal communication is synchronized with shots

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[21]Siegfried Kracauer, Theory of Film (New York: Oxford University Press, 1960), p. 111.

[22]Calvin Pryluck, "Structural Analysis of Motion Pictures as a Symbol System," Audio-Visual Communication Review, 16 (1968), 372-402.

[23]Sir William Haley, "News and Documentaries on U.S. Television," in M. Barrett, ed., The Alfred I. du Pont - Columbia University Survey of Broadcast Journalism 1968-1969 (New York: Grosset and Dunlap, Inc., 1969), pp. 59-63.

of the speaker, the two channels can present independently different meanings. In such a situation where the meaning of the words is not dependent on the visual channel, the evaluation of the source may be altered by the picture. The expressive elements of the camera compositional pattern may signify a larger number or stronger evaluative attributes about the source than the audio attributes. Conversely, the verbal treatment of the message may signify greater content than the picture relating to these words.

Certain camera compositional arrangements may not contain any non-verbal cues which are more meaningful then the verbal content. In such a situation the laterally juxtaposed visual would not attract attention to any attributes in the communication situation that would have to be considered by receivers.

In other instances the compositional pattern may create perceptions of attributes which do not parallel the verbal statements but bear on matters not included in them. Perhaps the viewpoint provided by the camera angle is so unusual or unexpected by the viewers that it is difficult for them to relate to the source as they find their attention drawn away from the specific subject to the abnormality of the shot. In certain other cases a camera angle may be interpreted by viewers as meaning the source is a hypocrite who does not really mean what he is saying. Or his appearance, as structured by the

camera angle, complements his words, stimulating the viewer to increase his evaluation of the source and the inherent significance of the content.

Even though it is assumed in the aesthetic literature on film and television that visual compositional patterns formed by camera angles in some determinate fashion constrain or facilitate the communication of an intended message, empirical evidence of such effects is lacking. Some filmmakers feel that the meaning of a particular camera angle develops out of the film's situational context. Others imply that each camera angle may contain dramatic and psychological overtones which can influence audience involvement and reaction to the event depicted. There has been little systematic investigation into whether or not each specific camera angle contains non-verbal connotations. If it is possible to identify how camera angles affect certain content elements, then conceivably those responsible for the manipulation of the photographic instruments would be able to better predict the consequences of visual compositional patterns used in relaying their messages.

Based on the concepts expounded in the aesthetic literature of film and television, research dealing with communication source variables, and non-verbal communication, the following propositions are developed. These propositions, however, are not explicit hypotheses so

much as they are bases for developing hypotheses. Specific experimental hypotheses will be presented later.

1. Camera angles can create non-verbal cues about content attributes independently of that content.

2. Each camera angle has a coding relevance which affects perceived meanings of the content of a shot.

3. Camera angles which emphasize non-verbal cues of positive attributes will result in more positive evaluations of that content by receivers than camera angles which do not form such cues.

4. Camera angles which emphasize non-verbal cues of negative attributes will result in more negative evaluations of the content than camera angles which do not contain such cues.

5. Camera angles which do not contain any strong perceptual cues about attributes will have no effect on audience evaluations of the content.

Independent Variables

In an audio-visual mass communication medium such as television, part of the communication process which influences the perception of a source by receivers is the viewpoint provided by the camera. The picture on the screen is limited and affected by the cameraman's or director's selection of what is seen and how the camera is positioned. Various viewpoints can be selected from which to photograph a subject. The camera can be angled so the subject is viewed from the side or the front; from a viewpoint looking up at the subject, looking down, or

at the same eye level as the subject. At the same time, it is possible to fill the screen with the subject's face or reveal the entire body. The camera can be arranged to act as the eyes of the viewer as when the person on-screen looks into the lens to set up a performer-viewer eye-to-eye relationship. Or, the camera can present an "objective" viewpoint; the audience views the event as sideline observers and the person on-screen never looks directly into the lens.

There is general agreement and standards of practice in news filming regarding image size and its effects. The literature on filming news suggests that, when the presentation of the news source is short in duration, a close-up image will provide a clearer view and faster recognition than a shot covering more area.[24] However, there is little standardization and understanding of possible effects with regard to camera angle and the establishment of eye-contact or no eye-contact with the camera by a news source.

Eye Contact

"Subjective" and "objective" camera-subject angles refer to whether the subject establishes eye-contact or no eye-contact with the camera. A "subjective" relationship exists when the subject looks directly into the lens.

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[24]Mascelli, The Five C's of Cinematography, p. 61.

Aesthetic literature assumes that this angle establishes an eye-to-eye contact with the viewer, who then becomes the direct receiver of the person speaking on the screen. An "objective" angle exists when the performer does not look directly into the lens, and consequently does not establish eye-contact with the viewer. It is felt that such a relationship places the viewer as a bystander on the sidelines, eavesdropping on an interaction between the performer on the screen and some unseen audience.

Aesthetic literature in film and television notes that in dramatic presentations a character in the screen play can seem to become more forceful and attract more attention from the viewer when he looks directly into the lens. Lewis states:

> As a general rule, a speaker's words will seem more forceful to the degree they are directed towards camera. Thus, by changing from a balanced two-shot to reverse over-shoulder shots of an arguing couple, one can move the television viewer into the field of fire, so to speak, so that each character's emotion impinges on him more directly and forcefully.[25]

Mascelli indicates that when the person on camera looks directly into the lens, he develops a direct relationship with the viewer, on a person-to-person basis, and by doing so generates greater attention and attraction from the viewer.[26] He goes on to note that the objective angle is less involving since it is an impersonal point of view.

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[25]Colby Lewis, TV Director/Interpreter (New York: Hastings House, Publishers, 1968), p. 145.

[26]Mascelli, The Five C's of Cinematography, p. 14.

Whether a news source, seen in isolation, can achieve the same kind of effects by looking directly into the camera when he is making a statement has not been empirically verified. It may be that when a news source is stationary and does not express himself with gestures, by looking into the lens, allowing the viewer to see more directly changes in his facial expression, the scene will become more animated resulting in a higher interest level, and he will seem more dynamic. If eye-contact with the camera does affect viewer attention and attraction to a message, it becomes an important variable for a source who is seen only for a short duration, if he is to communicate his message most effectively.

Research dealing with eye-contact has been mainly conducted in the area of interpersonal communication. Little research has been done dealing directly with the question of eye-contact and its effects on receivers' interest, attention, and comprehension of a message. The little research that has been conducted indicates that eye-contact between a source and receiver is a non-verbal cue that can influence perceptions and attitudes.[27] Studies which have been conducted indicate that eye-contact influences receivers' liking for the communication situation, willingness to continue the interaction, as well as

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[27]Mortensen, Communication: The Study of Human Interaction, pp. 237-247.

attitudes toward the communicator.[28] Other research has implied that lack of eye contact from a source may lead to a lack of interest in the communication situation.[29]

Some mass media practitioners, educators, and researchers have speculated that eye-contact with the camera by a source can increase learning. Research dealing with instructional television has not been able to arrive at a conclusive finding regarding eye-contact effects on learning. Chu and Schramm, in reviewing this research, point out that these studies were carried out with students, who were accustomed to focusing on the lecturer.[30] Thus the effect of eye-contact might not have been as pronounced as it would have been with other audiences.

Vertical Camera Angle

Vertical camera angle relates to whether the camera is positioned below the eye level of the subject, or at eye level, or above eye level. A high angle shot is any shot in which the camera is tilted downward to view the subject. In a level camera shot, the subject is viewed at his eye-level; there is neither a downward nor upward

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[28]Phoebe Ellsworth and J. Merrill Carlsmith, "Effects of Eye Contact and Verbal Content on Effective Response to a Dyadic Interaction," Journal of Personality and Social Psychology, 10 (1968), 15-20.

[29]Mortensen, Communication: The Study of Human Interaction, p. 246.

[30]Goodwin C. Chu and Wilbur Schramm, Learning from Television: What the Research Says (Washington: National Association of Educational Broadcasters, 1967), pp. 35-37.

tilt of the camera. A low angle shot is any shot in which the camera is tilted upward to view the subject.

Very little research has been conducted dealing with the effects of these three camera angles on audience perceptions of a source and his message. Studies which have been done are inconclusive.[31] However, aesthetic literature on film and television imply such angles can project non-verbal cues which are related to source attribute factors used by receivers in judging source credibility. It is suggested that a low angle shot makes subjects appear authoritative, competent, dynamic, determined, dignified, and even benevolent.[32] It is anticipated by these same writers that a high camera angle should produce negative cues, and an eye-level camera will carry no special significance.

Other writers are not willing to make the same assertions. Mascelli notes that an eye-level camera, while possibly not being as pictorially interesting or dramatic as high or low angles, presents the most normal and natural appearance of the subject.[33] He points out that, even in

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[31]Robert K. Tiemens, "Some Relationships of Camera Angle to Communicator Credibility," Journal of Broadcasting, 14 (1970), 483-490.

[32]Gerald Millerson, The Technique of Television Production (New York: Hastings House, Publishers, 1968), p. 235; Ernest Lindgren, The Art of the Film (New York: The Macmillan Co., 1963), p. 118; Edward Stasheff and Rudy Bretz, The Television Program (New York: Hill and Wang, 1962), p. 61; Robert Turnbull, Radio and Television Sound Effects (New York: Rinehart and Co., 1951), pp. 162-163.

[33]Mascelli, The Five C's of Cinematography, pp. 35-37.

no-eye contact situations, a person filmed from above eye-level results in a downward angle shot of the top of the head, half-closed eyelids and a distorted viewpoint, whereas a low angle generally causes people to loom up in the picture because they are recorded with a broad base and a diminishing perspective. He suggests that, especially when taking a close-up shot, the best camera position is from the eye-level of the person photographed. In this way, the subject is on an eye-to-eye level with the camera lens. If the camera is higher or lower, the subject must look up or down to look into the lens. The resulting expression on the subject is distorted, and may discourage the viewer from relating to him.[34]

Horizontal Camera Angle

A third camera angling factor involves placing the camera directly in front of the subject so his shoulders are parallel to the camera or placing the camera at a diagonal angle to the horizontal plane of the subject's shoulders. It is generally felt that by positioning the camera at a diagonal angle of thirty to forty-five degrees to the direction the subject's shoulders are facing, a more aesthetically pleasing three-dimensional effect is created on television's two-dimensional surface.[35] It is

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[34] Ibid., p. 189.

[35] Ibid., p. 34.

also implied in the aesthetic literature that the diagonal lines created by a forty-five or thirty degree angle position engenders a sense of activity, informality, and excitement.[36]

A camera which is parallel to the direction the subject's shoulders are facing (i.e., a head-on shot) seems to project an image which is more static, less interesting, and more formal than a diagonal angle.[37]

Camera Angle-Plus-Angle

A fourth camera angling variable is created when the subject is filmed by an interaction of horizontal and vertical camera angles. Mascelli refers to such a camera position as an "angle-plus-angle" shot, which is filmed with a camera at a 45-degree or 30-degree side angle with respect to the horizontal plane of the subject's shoulders, and tilted either vertically upward or downward.[38] Aesthetic literature implies that the angle-plus-angle shot records the greatest number of subject facets; delivers the most forceful linear perspective; and produces a three-dimensional effect.[39] A three-dimensional effect presents the subject in the most realistically solid manner and attracts greater

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[36]Millerson, The Technique of Television Production, p. 250.

[37]Ibid., p. 253.

[38]Mascelli, The Five C's of Cinematography, pp. 44-49.

[39]Ibid.

attention and interest than a flat, two-dimensional straight-on shot. Therefore, it is proposed that such angling will result in more attention.

Dependent Variables

Literature on television and film production relate three primary functions for the visual treatment of a shot.[40] The first function is to reveal the subject. Secondly, a shot needs to attract the attention and engage the emotional involvement of the viewer. The third function is to convey the intended information in such a way as to assure its proper reception and maximum impact.[41] Accordingly, three factors during a news source's televised communication can be affected by camera angle compositional patterns: the viewer's visual attitude toward the content, comprehension of the content (both visual and oral), and perceptions of source credibility.

As a receiver cannot always directly verify against reality the truth of a statement or report made by a news source on television, the best he can do is to decide if he can believe the maker of the statement. Research has consistently shown the importance for a source to establish

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[40] Arthur Knight, The Livelist Art (New York: The Macmillan Co., 1957), pp. 62-68; Kracauer, Theory of Film, pp. 27-40; Ralph Stephenson and J. R. Debrix, The Cinema as Art (Baltimore: Penguin Books, 1965), pp. 46-47.

[41] Fang, Television News, pp. 68-75; Maury Green, Television News: Anatomy and Process (Belmont, Calif: Wadsworth Publishing Co., 1969), pp. 88-94.

a high degree of credibility. There is a considerable body of research evidence indicating that the more credibility the communication receiver perceives the source to have, the more likely the receiver is to accept the transmitted information.[42]

The term "credibility" refers to "images" receivers hold towards a message source. This image is largely evaluative and general. The scientific meaning of the term relates to what receivers perceive to be the characteristics of a source. The image is the result of interactions between source-related attributes and perceived attributes held by receivers.[43] While early research on credibility viewed it as something a source possessed, and as a single, unitary variable, more recent investigations have found it to be based on multiple factors that, when organized by receivers, produces a total impression of a source.[44]

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[42]Carl Hovland, Irving Janis, and Harold Kelley, Communication and Persuasion (New Haven: Yale University Press, 1953), pp. 254-270; David K. Berlo, James B. Lamert, and Robert J. Mertz, "Dimensions for Evaluating the Acceptability of Message Sources," Public Opinion Quarterly, 33 (1969-70), pp. 563-576; James B. Lemert, "Dimensions of Source Credibility," paper presented to the Association for Education in Journalism, Lincoln, Nebraska, August 1963; Andersen and Clevenger, "A Summary of Experimental Research in Ethos," Speech Monographs, 30 (1963), 59-78.

[43]Mortensen, Communication: The Study of Human Interaction, p. 143.

[44]Berlo, Lemert, and Mertz, "Dimensions for Evaluating the Acceptability of Message Sources"; Levert "Dimensions of Source Credibility."

Research indicates there are numerous dynamic aspects of a communication situation which may affect a source's credibility. Some studies have shown that credibility can vary according to the topic under consideration and the source's perceived qualification to speak on the topic.[45] Even though similarity of attitude towards a topic between source and receiver, and receiver expectations about the source prior to the actual communication, can affect impressions of credibility,[46] these attitudes can change during the communication situation. Research indicates that the factors receivers utilize in defining credibility do not remain fixed or static.

During the communication act cues become available which can lead to receivers changing their evaluations of the source. Miller and Hewgill found that as source's presentation becomes hesitant and nonfluent, audience evaluations are revised.[47] Sereno and Hawkins found that even moderate variations in delivery altered impressions

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[46] David Byrne, "Interpersonal Attraction and Attitude Similarity," Journal of Abnormal and Social Psychology, (1961), 713-715; Kenneth K. Sereno and C. David Mortensen, eds., Foundations of Communication Theory (New York: Harper & Row, 1970).

[47] Gerald Miller and Murray Hewgill, "Effects of Variations in Nonfluency on Audience Ratings of Source Credibility," Quarterly Journal of Speech, 50 (1964), 36-44.

towards a speaker.[48] Thompson compared credibility ratings of Thomas E. Dewey before a speech with those recorded afterwards, and found that students raised their evaluations of Dewey as a public speaker but did not change their opinions significantly concerning his ideas and acceptability as a candidate.[49] Brooks and Scheidel found that only a few moments of attending to a communication are required to alter impressions of a given source.[50] These studies, and other studies dealing with non-verbal factors,[51] indicate that connotations of a source's credibility is dependent in the individual factors or stimuli constituting the total message.

While such studies have found that a variety of factors affect perceptions of source credibility, a number of studies indicate that some factors do operate in predictable ways across a range of situations, speakers,

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[48]Kenneth K. Sereno and George Hawkins, "The Effects of Variations in Speakers' Nonfluency upon Audience Ratings of Attitude towards the Speech Topic and Speakers' Credibility," Speech Monographs, 34 (1967), 58-64.

[49]Wayne Thompson, "A Study of the Attitude of College Students Toward Thomas E. Dewey Before and After Hearing Him Speak," Speech Monographs, 16 (1949), 125-134.

[50]R. D. Brooks and T. M. Scheidel, "Speech as Process: A Case Study," Speech Monographs, 35 (1968), 1-7.

[51]See research outlined on page 5 and n. 14 and 15, p. 5.

and audiences.[52] The most careful investigation of source credibility has been done by Berlo, Lamert, and Mertz.[53] Working from the premise that source credibility is a set of perceptions by the receiver, they found, through factor analysis, three dimensions, or factors, which people use in judging the credibility of various sources. These dimensions, which are relatively independent of one another, are Safety, Qualification, and Dynamism.[54]

The factors which are an index to source credibility on the Safety dimension reflect general personality traits as perceived by the receiver. Safety dimension comprises the general faith and trust placed in a source because of his perceived "friendliness," "honesty," "kindness," etc.[55] A given safe source may not have been rated high on each

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[52]Andersen and Clevenger, "Summary of Experimental Research in Ethos," pp. 198-199; Berlo, Lemert, and Mertz, "Dimensions for Evaluating the Acceptability of Message Sources;" T. R. King, "An Experimental Study of the Effect of Ethos upon the Immediate and Delayed Recall of Information," Central States Speech Journal, 17 (1966), 22-28; J. L. Whitehead, "Factors of Source Credibility," Quarterly Journal of Speech, 54 (1968), 59-63.

[53]Berlo, Lemert, and Mertz, "Dimensions for Evaluating the Acceptability of Message Sources."

[54]Ibid., p. 574.

[55]Erwin P. Bettinghaus, Message Preparation: The Nature of Proof (Indianapolis: The Bobbs-Merril Co., 1966), p. 91.

of these words, but he would have been rated high on a majority of these words from the groups of subjects.[56]

The Qualification dimension consists of words denoting the impression receivers have of a source's competency for the topic with which he is associated. A source rated high on qualification would be perceived as "trained," "experienced," "qualified," "informed," "authoritative," etc.[57] Qualification is specific competence in a certain topic and seems to be a less general trait than Safety.

The Dynamism dimension relates to words concerning presentation and appearance. It relates to how much "aggressiveness," "activity," "energy," "boldness," etc., the source is perceived to possess. Dynamism is the least stable of the three factors; receivers appear to utilize it in some situations and not others.[58] Berlo indicates that it is a meaningful dimension and can be conceived as an intensifier of the other dimensions.[59]

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[56] W. G. Bennis in Interpersonal Dynamics. Essays and Reading on Human Interaction (Homewood, Ill.: Dorsey, 1964), p. 217 indicates that attitudes of trust may only grow in confidence, i.e., be of high intensity, after a series of interactions between interactants. Therefore, one could predict that first encounters with an unknown source will result in neutral or low positive ratings of Safety.

[57] Bettinghaus, Message Preparation, p. 91.

[58] Berlo, Lemert, and Mertz, "Dimensions for Evaluating Acceptability of Message Sources," pp. 575-576.

[59] Ibid.

Generally it would seem that the visual portrayal of the source would only affect the Dynamism dimension, with the remaining two dimensions being affected by topic, verbal content, and source reputation. However, no bases have been established in research for the exact actecedents of credibility, i.e., the kinds of situations or behaviors during the communication act which lead to variations in ratings of a source on each dimension.[60] Therefore, it may be possible that camera angling variables can affect receivers' evaluation of a source, even if they constitute nothing more than being intensifiers of other factors used in judging the source.

Research has not found that the perceived low or high credibility of a source affects receivers' interest in the communication or comprehension of factual information.[61] In fact, Kellman and Hovland found significantly better recall of factual material when the message was given by a neutral source.[62] They suggest that receivers' affective responses may have adversely influenced the amount of

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[60]Lemert, "Dimensions of Source Credibility," p. 23.

[61]Hovland, et al., Communication and Persuasion, pp. 37-39; Elihu Katz and Jacob J. Feldman, "Who Won the Kennedy-Nixon Television Debates?" in Kenneth E. Anderson and Howard H. Martin, eds., Speech Communication (Boston: Allyn and Bacon, Inc., 1968), p. 301.

[62]Herbert Kelman and Carl Hovland, "Reinstatement of the Communicator in Delayed Measurement of Opinion Change," Journal of Abnormal and Social Psychology, 48 (1951), 327-335.

information learned, and that both the positive and negative sources were responded to with greater affect than the neutral one. An emotional reaction to the source may focus attention upon him and interfere with attending to and comprehending his information.

The extent to which a communication is effective in achieving its purpose depends in part on the extent to which the content is attended to, understood, and remembered. Attention is an important variable in communication; some individuals might generally fail to be influenced by a communication because of lack of ability to direct and sustain attention. If no attention is given to the stimulus, comprehension and acceptance will not occur; if comprehension proves too difficult, attention may be withdrawn.

Research has not specified the exact bases upon which people decide whether or not to attend a given message. It is hypothesized that the best indices for predicting attention are the perceived interest, utility, and enjoyment in the message by the individual.[63] However, research in perception has found that properties of external stimulation, such as a visual pattern, can influence the motivation and direction of an individual's attention.

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[63]Jonathan L. Freedman and David O. Sears, "Selective Exposure," in Leonard Berkowitz, ed., Advances in Experimental Social Psychology, II (New York: Academic, 1965), pp. 57-97.

Studies by Berlyne have found that certain types of visual patterns can attract and hold attention longer than others.[64] Reactions to a visual stimulus pattern include ones determined by properties of the stimulus elements, by relations between stimulus elements, and by groupings of stimulus elements. Experiments have shown that when these properties are arranged so they form novel, surprising, incongruent, or complex visual patterns, they are liable to attract more attention.[65]

Berlyne, in his research on perception, found that when a discrepancy occurs between perceptions and expectations, or a visual pattern contains novel qualities, a viewer's level of interest increases.[66] A novel stimulus pattern can possess familiar elements or qualities in a combination or arrangement that had not been experienced; it may be new with respect to the total experience or may not have been encountered within the last few minutes. Berlyne states, "We are indifferent to things that are either too remote from our experience or too familiar.

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[64] D. E. Berlyne, "Curiosity and Exploration," Science, 153 (1966), 25-33.

[65] D. E. Berlyne, "Conflict and Information-Theory Variables as Determinants of Human Perceptual Curiosity," Journal of Experimental Psychology, 53 (1957), 399-404; "The Influence of Complexity and Novelty in Visual Figures on Orienting Responses," Journal of Experimental Psychology, 55 (1958), 289-296.

[66] D. E. Berlyne, "Novelty and Curiosity as Determinants of Exploratory Behavior," British Journal of Psychology, 41 (1950), 68-80.

A relatively slight variation in a familiar pattern has a unique stimulating character."[67]

Berlyne and Peckham also found that subjects assign connotative meanings to visual patterns.[68] Subjects rated simple patterns, whose meaning could be perceived rather easily, or patterns which presented some challenge that could be easily resolved by "making sense" of them and had very little uncertainty as to the information they contained, generally higher on the evaluative and potency dimensions of Osgood's Semantic Differential than complex patterns. Complex patterns, on the other hand, were rated higher on the activity dimension. These simple patterns, which possessed something like "stability," "coherence," or "clarity of organization," were rated more "pleasing" than highly complex patterns.

The research by Berlyne generally supports Tannenbaum's concept of the "indexing process." A person perceives very little unless an event occurs which attracts his attention and forces itself upon his consciousness. He then concentrates on this event and endeavors to perceive it clearly. If a particular stimulus cue or cue combination within the message structure somehow raises the

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[67] D. E. Berlyne, Conflict, Arousal, and Curiosity (New York: McGraw-Hill, 1960), p. 21.

[68] D. E. Berlyne and S. Peckham, "The Semantic Differential and Other Measures of Reaction to Visual Complexity," Canadian Journal of Psychology, 20 (1966), 125-135.

threshold of attention for that message, then it has served to influence its potentiality for effect.

However, visual cues, or patterns, can also hinder the proper reception of a message even if they are highly attention arousing. A visual pattern which is too discrepant from viewer expectations or completely novel from experience can become confusing or distracting.[69] This can result in negative connotations towards the pattern, and possibly its content.

Berlyne points out that whenever a stimulation coming from a particular visual pattern or stimulus is "introduced," "intensified," or "prolonged," there is an increased interest and duration of perception.[70] In addition, he proposes that if attention to a given stimulus is prolonged, the perceptual response will have a high vividness, and therefore the "perceptual response-produced stimulus," connotative meaning of the content and experience, will have a high intensity. Whenever stimulation coming from a source is intensified or prolonged, there is a rise in the receiver's intake of information from that source.

Interest and attractiveness of objects or persons play an important part in the direction of attention,

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[69]Berlyne, Conflict, Arousal, and Curiosity, p. 23.

[70]D. E. Berlyne, Structure and Direction in Thinking (New York: John Wiley and Sons, 1965).

amount of comprehension, and the evaluation of them. The visualization of the object or person created by camera angling variables can potentially communicate non-verbal cues to receivers which will affect the amount of interest and attractiveness.

Hypotheses

Research has shown that receivers' perceptions of a source, attitude toward the message, and comprehension of that message, are affected by numerous factors during the communication act. If the various camera compositional patterns project the non-verbal cues about the subject as implied in the aesthetic literature, then audience perceptions and attitudes will be affected. In the case of a news story presentation on television, how the cameraman positions his camera in relation to the news source can affect viewers reactions to him and to his message. The question that needs to be answered: Just how does each camera angle and eye-contact factor, and their interaction, affect audience perceptions and attitude toward the source and the content of a news story over television?

The following experimental hypotheses are stated in an effort to provide some insight into these relationships and to guide the research in this study.

Credibility

There have been a number of studies indicating that the presence of absence of eye-contact with a source affects receivers' attitudes towards the source. This research stems from the premise that the eyes are the most expressive area by which observers perceive non-verbal communicated cues as to the attitude of the source.[71] Such factors as the perceived sincerity of a speaker, the degree of judged potency, and person's mood have all been linked to the pattern of eye-contact.[72]

These findings result from interpersonal communication situations. Tankard, using photographs, found that persons looking straight ahead into the camera were perceived as more active, stronger, more interested, and secure than persons looking away from the camera.[73] There

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[71]Randall P. Harrison, "Pictic Analysis: Toward a Vocabulary and Syntax for the Pictoral Code, with Research on Facial Communication" (unpublished Ph.D. dissertation, Michigan State University, 1964).

[72]M. Argyle, The Psychology of Interpersonal Behavior (Baltimore: Penguin, 1967); Albert Mehrabian, "Orientation Behavior and Nonverbal Attitude in Communication," Journal of Communication, 17 (1967), 324-332; M. Cobin, "Response to Eye-Contact," Quarterly Journal of Speech, 68 (1962), 415-418; E. Exline, E. Gottheil, A. Paredes, and D. Winkemeire, "Gaze Direction as a factor in the Accurate Judgment of Nonverbal Expression of Affect," Proceedings of the 76th Annual Convention of the American Psychological Association, 3 (1968), 415-416.

[73]James W. Tankard, Jr., "Effects of Eye Position on Person Perception," Perceptual and Motor Skills, 31 (1970), 292-302.

has not been any research directly dealing with effects of eye-contact on source credibility when the source is presented in an audio-visual mass medium.

Some writers of aesthetic literature in film and television feel there is a direct relationship. Maury Green states that eye-contact with the camera by a news source is interpreted by viewers as "evidence of honesty and truthfulness; any failure to meet the eye squarely is subconsciously interpreted, rightly or wrongly, as evidence of evasiveness or shiftiness."[74] Other writers imply that the performer who maintains good eye-contact becomes more trustworthy, more believable and more authoritative to the audience.[75]

These effects relate to the factors of source credibility found by Berlo, Lemert, and Mertz.[76]

The following experimental hypotheses are stated in relation to source credibility and eye-contact.

H_1: A news source who maintains eye-contact with the camera will be perceived as more "safe" than a source without eye-contact.

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[74]Green, Television News: Anatomy and Process, p. 198.

[75]Desmond Davis, The Grammar of Television Production (New York: The Macmillan Co., 1960), p. 51; William G. Mitchell, "Non-Verbal Signs Affect Program Message," N.A.E.B. Journal, 23 (1964), 8-17.

[76]Berlo, Lemert, and Mertz, "Dimensions of Evaluating the Acceptability of Message Sources," p. 573.

H_2: A news source who maintains eye-contact with the camera will be perceived as more "qualified" than a source without eye-contact.

H_3: A news source who maintains eye-contact with the camera will be perceived as more "dynamic" than a source without eye-contact.

While aesthetic literature on film and television makes some definite assertions about the effects of the various vertical camera angles, there is no clear indication from research as to how such angles might affect perceptions of source credibility. However, some research and theorizing has been done in the area of non-verbal communication of attitude-towards-audience, and subsequent effects on audience perceptions, which are pertinent to this area. Hall has attempted some categorization of these communications, which he calls "proxemics."[77] Mehrabian, in his research on speaker posture and positioning, uses the term "immediacy" to describe these non-verbal cues. He defines immediacy as the degree of directness of perceived interaction by a receiver from a communicator.[78] Greater immediacy is hypothesized to correspond to more positive attitudes towards the communicator, and that these attitudes are somewhat arrived at from communicator body position cues which are either stationary or moving.

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[77]Edward T. Hall, "A System for the Notation of Proxemic Behavior," American Anthropologist, 65 (1963), 1003-1026.

[78]Albert Mehrabian, "Orientation Behaviors and Nonverbal Attitude Communication;" "Significance of Posture and Position in the Communication of Attitude and Status Relationships," Psychological Bulletin, 71 (1969), 359-372.

Utilizing a conceptualization similar to those of Hall and Mehrabian, James used a set of photographs depicting various pictured postures from which his experimental subjects were to interpret the attitude being expressed.[79] His findings suggest that a forward lean communicates a relatively positive attitude, and the communicator is perceived as being more attentive and self-assured. James also found that a backward lean communicated a more negative attitude, and the communicator was perceived as refusing to communicate or wanting to withdraw. It may be possible that vertical camera angles could create perceptions of such body positions, resulting in similar receiver attitudes toward the source. Perceptions of a backward lean by the source may be communicated by a camera positioned below the eye-level of the source, looking upward, if, as Mascelli notes, such an angle records people with a broad base and a diminishing perspective.

Mehrabian, using face-to-face communication, found results similar to those of James.[80] His receivers perceived a more negative attitude when the communicator was leaning backward than when he was in a forward leaning position. One of the problems inherent in studies dealing with body and head orientation is that the effects of such orientations have been confounded with eye-contact. Greater

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[79]W. T. James, "A Study of the Expression of Bodily Posture," Journal of General Psychology, 7 (1932), 405-437.

[80]Albert Mehrabian, "Inference of Attitudes from the Posture, Orientation, and Distances of a Communicator," Journal of Consulting and Clinical Psychology, 32 (1968), 296-308.

degrees of eye-contact with a receiver tend to be associated with a more direct orientation of the head, and body. However, results of studies in this area have been somewhat consistent, making it reasonable to assume such position cues have effects on receivers.

Aesthetic literature on film and television implies that a low vertical camera angle projects perceptions of source attributes which are similar to attributes Berlo, Lemert, and Mertz found as factors by which receivers judge source credibility. It is possible that such an angle can structure viewpoints which affect perceptions of immediacy. Generally, a high vertical camera angle is projected as forming negative perceptions of source credibility attributes. However, it is suggested in the literature of film and television that when a source is shown in close-up, both points-of-view distort the subject. In such an instance an eye-level camera position may be perceived as a more natural viewpoint, even if it does not project any attributes about a source which can affect perceptions of credibility.

In connection with the effects of vertical camera angle of perceptions of source credibility, the following experimental hypotheses are stated:

H_4: A news source filmed by a low vertical camera angle will result in perceptions of more <u>safety</u> for that source.

H_5: A news source filmed by a low vertical camera angle, will result in perceptions of more qualification for that source.

H_6: A news source filmed by a low vertical camera angle, compared with an eye-level and high vertical camera angle, will result in perceptions of more dynamism for that source.

There is no clear indication from either aesthetic literature or research to indicate how a camera positioned directly in front of the source, parallel to the direction of his shoulders, or at a diagonal angle of 30-degrees from the direction his shoulders are facing, might affect perceptions of source credibility. Berlo, Lemert, and Mertz identified that perceived credibility is partially judged according to such attributes as calmness, sincerity, boldness, frankness, and aggressiveness.[81] A more calm, formal, and dignified appearance by a source created by a camera directly in front of him may create greater feelings of trust. Mehrabian, in his research on immediacy, found that the more directly a communicator's body (i.e., shoulders) were oriented towards the receivers a more positive attitude was perceived.[82]

Even though statements made in the aesthetic literature of film and television indicate a parallel camera position may be more static and therefore less interesting

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[81]Berlo, Lemert, and Mertz, "Dimensions for Evaluating the Acceptability of Message Sources," pp. 568-569.

[82]Mehrabian, "Inference of Attitude from the Posture, Orientation, and Distance of a Communicator," pp. 296-308.

than a diagonal angle, theoretical considerations and research findings lead to the following hypotheses for horizontal camera angling:

H_7: A news source filmed by a camera directly in front of him, compared to a camera positioned at a 30-degree side angle, will result in perceptions of more safety for that source.

H_8: A news source filmed by a camera directly in front of him, compared to a camera positioned at a 30-degree side angle, will result in perceptions of more qualification for that source.

H_9: A news source filmed by a camera directly in front of him, compared to a camera positioned at a 30-degree side angle, will result in perceptions of more dynamism for that source.

If the horizontal and vertical camera angles can produce non-verbal cues singly, it is possible that an interaction of these cues will create stronger effects. Relating to the implied attributes of each camera angle previously stated, the following experimental hypotheses are formed regarding interactions of horizontal and vertical camera angles on perceptions of source credibility.

H_{10}: A news source filmed by a camera directly in front of him and at a low vertical camera angle, compared to all other combinations of camera angles, will result in perceptions or more safety for that source.

H_{11}: A news source filmed by a camera directly in front of him and at a low vertical camera angle, compared to all other combinations of camera angles, will result in perceptions of more qualification for that source.

H_{12}: A news source filmed by a camera direcly in front of him and at a low vertical camera angle, compared to all other combinations of camera angles, will result in perceptions of more dynamism for that source.

Source Pleasantness

Research by Berlyne on visual patterns found that the compositional arrangement by which an object, or person, is portrayed can create different evaluations of the object's "pleasantness" by observers. Such evaluations were closely correlated with observers willingness to continue interaction with the object shown. Compositional patterns which produced the highest evaluations of "pleasantness" were those which presented some challenge to observers to define its meaning or substance, but could be easily resolved. The pattern created a slight arousal or stimulation of interest but contained cues which the observer could utilize quickly in defining the object or its meaning.

From Berlyne's theory that visual stimuli containing clarity and little uncertainty as to its information will be evaluated positively, and will not be distracting, and from research and theory indicating that eye contact is associated with more positive general attitudes toward the communicator, the following experimental hypothesis is stated:

H_{13}: A news source who maintains eye-contact with the camera will be perceived as more pleasant than a source without eye-contact.

If a low vertical camera angle creates perceptions of immediacy and corresponding positive attitudes towards the source, and the resulting visual pattern has an unique stimulating effect, then the visual experience, and the source, will be rated more pleasant.

H_{14}: A news source filmed by a low vertical camera angle will be perceived as more pleasant than a source filmed by either an eye-level or high vertical camera angle.

Research by Mehrabian indicates that a moderately direct body orientation (i.e., shoulders turned slightly at an angle), by a communicator communicates a feeling of "pleasantness."[83] This finding corresponds to the assumption by Mascelli that the three-dimensional modeling of a person, created by a camera at a 45-degree or 30-degree diagonal angle from the direction the subject's shoulders are facing, is more aesthetically pleasing. Also, this diagonal angle effect may relate to Berlyne's findings of the pleasantness of a simple, but slightly novel pattern.

H_{15}: A news source filmed by a camera positioned at a 30-degree side angle will be perceived as more pleasant than a source filmed by a camera positioned directly in front of him.

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[83]Mehrabian, "Inference of Attitude from the Posture, Orientation, and Distance of a Communicator," pp. 296-308.

It follows from Berlyne's research and theories that a camera compositional pattern which provides the greatest novelty, suprisingness, and complexity in arrangement of contours within the pattern will receive a higher level of attention.[84] Berlyne also indicates that if the pattern is too novel, discrepant, or complex perceivers may have difficulty in coming to a congruent connotation regarding the pattern's meaning. It is possible, if viewers do not perceive the pattern as a natural or probable viewpoint of the subject, their attention will draw away from the content to the abnormality of the camera position.

Even though a low vertical angle and a diagonal horizontal angle may by themselves create a slight stimulating effect, the interaction of the two angles may produce more varied contours within the visual pattern than what is normally expected by viewers. In such instances, the visual pattern will become distracting and evaluation of "pleasantness" will be lower. Therefore, in relation to the interaction of vertical camera angle and horizontal camera angle the following hypothesis is stated:

> H_{16}: A news source filmed by a camera at a 30-degree horizontal side angle and at eye-level will be perceived as more pleasant than a source filmed by any other combination of camera angles.

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[84]Berlyne, "The Influence of Complexity and Novelty in Visual Figures on Orienting Responses," pp. 289-290; Conflict, Arousal and Curiosity, pp. 20-25; "Curiosity and Exploration," pp. 25-33.

Comprehension

While research has yet to establish adequately the effect of eye-contact on learning, it does indicate that eye-contact between a communicator and receiver results in greater interest and attention by the receiver. Considering this effect, and the proposition from aesthetic literature that a speaker's words seem more forceful if directed towards the camera, it is reasonable to assume there will be higher comprehension of verbal facts when a source maintains eye-contact with the camera. Therefore, in relation to eye-contact, the following experimental hypothesis is formed:

H_{17}: A viewer watching a news source who looks directly into a camera with eye-contact will have higher comprehension of verbal facts from the news story than a viewer watching a news source lacking eye-contact.

Reflecting on Berlyne's theory of a novel or discrepant visual pattern being distracting, it follows that if low and high camera angles do attract attention to visual cues they may distract from total concentration of the verbal content. Whereas an eye-level camera, communicating no special cues, may allow higher attention to verbal content. If such a camera angle projects the most normal and natural appearance of the subject, there should not be any novel or discrepant viewpoints from viewer expectations to create distractions, therefore allowing more comprehension of information.

H_{18}: A viewer watching a news source filmed by an eye-level camera angle will have higher comprehension of verbal facts from the news story than a viewer watching a news source filmed by a low or high vertical camera angle.

In terms of the horizontal camera angles, a straight-on camera angle should present less novelty and surprise for receivers, and therefore less visual distractions and higher attention to verbal content.

H_{19}: A viewer watching a news source filmed by a camera directly in front of him will have higher comprehension of verbal facts from the news story than a viewer watching a news source filmed by a camera positioned at a 30-degree side angle.

The interaction of vertical and horizontal angles which are the least novel and distracting, and allowing the greatest attention to the verbal message, should be the combination of eye-level vertical angle with the camera positioned directly in front of the source.

H_{20}: A viewer watching a news source filmed by a camera positioned directly in front of him and at eye-level will have higher comprehension of verbal facts from the news story than a viewer watching a news source filmed by all other combinations of camera angles.

Attitudes Toward Message

In addition to affecting perceptions of the news source and comprehension of verbal information, it is also possible that compositional patterns can affect the favorability of viewers' attitudes towards the topic, how

interesting they perceive the story to be, and their evaluations of the news story's importance. How viewers respond to these three factors can affect the intended reception and impact of the story as designed by the news agency, as well as the news source.

From the research on attitude formation and credibility, it follows that if the source is perceived as more credible and there are general positive attitudes towards him, and if the message draws viewer attention, there should be more favorable attitudes towards the topic and the message generally. Exline and Eldridge found that a message was perceived and judged as being more favorable when it was associated with more eye-contact than when presented with less eye-contact.[85]

In relation to eye-contact and audience attitudes towards the message topic, its interestingness, and its importance the following hypotheses are stated:

H_{21}: A viewer watching a news source who looks directly into a camera with eye-contact will have a more positive attitude towards the topic than a viewer watching a news source lacking eye-contact.

H_{22}: News source eye-contact with the camera, compared with no eye-contact, will result in viewers evaluating the news story to be more interesting.

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[85] R. Exline and C. Eldridge, "Effects of Two Patterns of Speaker's Visual Behavior Upon the Perception of the Authenticity of his Verbal Message," paper presented at the meeting of the Eastern Psychological Association, Boston, April 1967.

H_{23}: News source eye-contact with the camera, compared with no eye-contact, will result in viewers evaluating the news story to be a good story to include in the newscast.

In terms of the vertical camera angle, if a low camera angle creates perceptions of more credibility for the source, and the resulting visual pattern is more stimulating, then the message should receive more positive evaluations.

H_{24}: A viewer watching a news source who is filmed by a low vertical camera angle will have a more positive attitude towards the topic than a viewer watching a news source filmed by either a eye-level or high vertical camera angle.

H_{25}: A news source filmed by a low vertical camera angle, compared with an eye-level and high vertical camera angle, will result in viewers evaluating the news story to be more interesting.

H_{26}: A news source filmed by a low vertical camera angle, compared with an eye-level and high vertical camera angle, will result in viewers evaluating the news story to be a good story to have included in the newscast.

If a camera positioned directly in front of the source projects a stronger credibility perception, and allows more attention to the verbal content, it may also promote a more positive evaluation of the message. With regards to the effects of horizontal camera angles on receiver attitudes toward the message, the following experimental hypotheses are advanced:

H_{27}: A viewer watching a news source filmed by a camera directly in front of him will have a more positive attitude towards the topic than a viewer watching a news source filmed by a camera positioned at a 30-degree side angle.

H_{28}: A news source filmed by a camera directly in front of him, compared to a camera positioned at a 30-degree side angle, will result in viewers evaluating the news story to be more interesting.

H_{29}: A news source filmed by a camera directly in front of him, compared to a camera positioned at a 30-degree side angle, will result in viewers evaluating the news story to be a good story to include in the newscast.

The following hypotheses are stated in connection with the interaction effects of vertical camera angles and horizontal camera angles on viewer evaluations of the message.

H_{30}: A viewer watching a news source filmed by a camera directly in front of him and at a low vertical camera angle will have a more positive attitude towards the topic than a viewer watching a news source filmed by any other combination of camera angles.

H_{31}: A news source filmed by a camera directly in front of him and at a low vertical camera angle, compared to all other combinations of camera angles, will result in viewers evaluating the news story to be more interesting.

H_{32}: A news source filmed by a camera directly in front of him and at a low vertical camera angle, compared to all other combinations of camera angles, will result in viewers evaluating the news story to be a good story to include in the newscast.

CHAPTER II

METHODOLOGY

Since not much is known about how camera positioning affects viewers' perceptions of the "image" of a news source delivering a televised statement, and viewers' attitudes toward that story, this study was designed as an exploratory experiment. Three different experiments were conducted to test the experimental hypotheses stated in the previous chapter. Techniques for manipulating the camera positioning factors related to the news source in order to test each hypothesis will be described below for each experiment.

General Research Design

For all experiments, the same news source was filmed delivering the same statement according to the different camera angle experimental conditions. This resulted in fourteen different visual versions of the experimental message. Each experimental message was then embedded into an excerpt of a local television newscast, containing three other news stories, and a newscast anchorman, that were held constant for all versions. This resulted in a total of fourteen different newscast presentations.

In all experimental conditions, the experimental news source delivered the same sixty-second statement concerning the need by AMTRAK, the federally subsidized corporation which runs the passenger train service in the United States, for increased federal aid (Appendix I).[1] The news source was introduced by the newscast anchorman as Richard Long, a lawyer for the National Association of Railroad Passengers, who was in San Diego for a conference on mass transportation. The newscast anchorman's lead-in comment just before the film clip of Mr. Long was shown stated, "Mr. Long was asked why he feels Congress should increase the level of federal aid for AMTRAK." The entire anchorman's introduction ran thirty-seconds in length.

The news source was videotaped using a monochrome Image Orthicon camera, with a 90mm lens, positioned four feet from him. This created a "close-up" shot in that he was framed from the armpits to the top of his head. A close-up shot, such as this is generally used in television news filming when the presentation of the source is short in duration. It is also suggested in news filming that when using a close-up, without an establishing shot preceeding it, the background whould be rather non-descriptive, to avoid distractions. As there was no shot

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[1]The script for the AMTRAK statement was made available by Dr. Verling C. Troldahl from a study he is conducting on television news at Michigan State University.

which established where the news source was physically located, whether he was standing or sitting, and if anyone was physically present with whom he was talking, he was filmed against a wood panel wall.

Care was taken to assure that all versions were alike in all elements, except for the manipulation of camera angles and direction of eye-contact with camera. In all conditions the source kept his shoulders directly parallel to the camera positioned in front of him. When the source established eye contact with the lens of a camera positioned to the left or right of the camera directly in front of him, his shoulders would remain parallel to the camera directly in front of him and he turned only his head towards the required camera. The source's body and head position was established before viewers saw him on the screen. During his presentation the source did not change his position; he maintained eye and head direction throughout the scene as perscribed by the experimental condition. The source was instructed to deliver the news story statement in a conversational manner being neither too emotional nor too monotonous, and not to display an emotional or disinterested facial expression. The source did not make any gestures with his hand or arms, but kept them at his sides.

In all newscast presentations the experimental news story was preceded by two filmed news stories (Appendix II).[2] Both stories were introduced and narrated by the newscast anchorman. The first film story, one-minute and thirty-seven seconds in length, dealt with the work of a local V.F.W. chapter to obtain a passenger bus for a children's special care center. The film portion of the story contained general action shots of junior units of the women's auxiliary of the V.F.W. chapter clipping coupons and stacking them. No one person was singled out in the film, nor did anyone shown on the film make any statements. The second news story reported on a scuba divers instructors clinic conducted at a local beach by the National Association of Skin Diving Schools. This story ran thirty-seven seconds in length. Film consisted of general shots of instruction and equipment, and beach scenes. As with the prior film, no one individual was emphasized and nobody made any statement on film. Following the experimental news story was a filmed news story on an award given by the San Diego Kiwanis Club to a local high school student for his heroism in saving the life of an automobile accident victim. This story ran thirty-seven seconds in length. Film showed the banquet crowd, a medium

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[2]The three news film stories used to make up the newscast were provided by the KOGO-TV News Department, Time-Life Broadcasting, San Diego, California.

close-up of the person who was to receive the award, and a wide shot of the award being presented. Again no one was seen on camera speaking during the film portion. All three of these news stories had been used by a local television station in its newscast during the week preceding the experiment.

The newscast anchorman was a newscaster from the same local station from which the three filmed news stories were obtained. He was anchorman for their 11:00 PM weeknight newscasts. The news set and manner of presentation of the anchorman duplicated that which was used by the local station. He was seen from a camera positioned directly in front of him, and at eye level. He stood behind a news desk, with a flat, neutral colored wall behind him. The camera framed the top of the desk, which was about waist high on the anchorman, to just above the top of his head. He used a script and looked down at it and up towards the camera in the standard practice of television news reporters. At the end of each introduction to a film story, the newscast anchorman shifted his head, from a direction looking straight ahead into the camera, slightly to the right as a cue the film was about to be shown. This is a technique used by the local station when going into a film story.

Subjects and Procedures

Two hundred and seventy-eight undergraduate students from sixteen different sections of an introductory speech course at California State University, San Diego, served as subjects. This course is required of all students at the University and represents a cross section of the student population.

Due to difficulties in scheduling, each section had to be handled as an intact group. The intact groups were unequal in size. Each group was randomly assigned to a treatment condition or to serve as one of two control groups.

In one control condition, no message was presented and subjects filled out the comprehension multiple choice items of the questionnaire and attitude scales towards train travel. This control group was used to test whether or not an information gain does occur due to the experimental message.

As not all sections of the speech class were situated in a classroom equipped to receive close-circuit television, all experimental groups watched the newscast in the same television viewing room. This room is not a classroom. It is used by the University's public broadcasting station and closed-circuit television instructional staff for private showing of television programs. It is equipped as a small theater, with a 24-inch television

set. At the beginning of their normal class period, subjects were asked to report to this room.

Subjects were told by the experimenter that the Department of Telecommunications and Film was conducting research into different ways of putting together a local television newscast, and that we would like to show them an excerpt from a local television news program. Immediately following the television presentation, subjects filled out the questionnaire.

The experiment was run over a period of four days.

Manipulated Independent Variables

Experiment I

This experiment was designed to test the experimental hypotheses relating to the effects of vertical camera angling, and the hypotheses relating to eye-contact.

Definitions.--"Low Vertical Camera Angle," is defined as placing the camera's shooting lens at a height seven inches below the eye-level of the news source. "Level Camera Angle," is defined as placing the camera's shooting lens at exactly the same height as the eye height of the news source. "High Vertical Camera Angle," is defined as placing the camera's shooting lens at a height seven inches above the eye level or height of the news source. With regard to the eye-contact factor: "Eye-Contact," is defined as when the source looks directly into the camera's shooting lens regardless if the camera

is low, level or high on the vertical angle. "No Eye-Contact," is defined as when the news source turns his head in such a direction that he is not looking into the camera lens. He looks away from the camera at an angle of 30-degrees to the side of the camera. In such a condition, the source, keeping his shoulders perpendicular to the camera directly in front of him, turns his head 30-degrees to his right and keeps his head level.

Holding the camera's horizontal position constant so the camera is directly in front of the source, the combination of independent variables produces a 3x2 factorial design with the resulting matrix:

FIGURE 1.--Design of Experiment I.

	Vertical Camera Angle		
Eye Contact	High	Level	Low
Eye-Contact	1	3	5
No Eye-Contact	2	4	6

The above matrix results in the following experimental scenes as shown by the corresponding numbers within the above matrix:

Scene 1: High vertical camera angle and eye-contact.

Scene 2: High vertical camera angle and no eye-contact.

Scene 3: Level camera angle and eye-contact.

Scene 4: Level camera angle and no eye-contact.

Scene 5: Low vertical camera angle and eye-contact.

Scene 6: Low vertical camera angle and no eye-contact.

Experiment II

This experiment was designed to test the experimental hypotheses relating to the effects of horizontal camera angling, and the experimental hypotheses relating to eye-contact.

Definitions.--"Front Horizontal Camera Angle," is defined as placing the camera in front of the source so the taking lens is parallel to the direction that the source's shoulders are facing. "Side Thirty-Degree Angle," is defined as placing the camera at an angle 30-degrees to the side of the direction that the source's shoulders are facing. This 30-degree angle can be to the right or left side of the source. "Eye-Contact," is defined as when the source looks directly into the camera lens regardless of where the camera is located. When the source establishes eye-contact with either camera positioned to the side, he keeps his shoulders facing the camera directly in front of him and turns only his head towards the prescribed side camera. "No Eye-Contact," is defined as

when the source looks away from the camera at a 30-degree diagonal angle regardless of where the camera is located. If the shot is from a camera at a side 30-degree angle the source will be looking in the same direction his shoulders are facing. If the shot is from a camera at the "front horizontal angle" he turned his head thirty-degrees towards the right side.

Holding the camera's vertical height at exactly the same height as the eye-level of the source of all conditions, the combination of independent variables produces a 3x2 factorial design with the resulting matrix:

FIGURE 2.--Design of Experiment II.

	Horizontal Camera Angle		
Eye Contact	30° Right	Front	30° Left
Eye-Contact	1	3	5
No Eye-Contact	2	4	6

The above matrix results in the following experimental scenes, as shown by the corresponding numbers within the above matrix:

Scene 1: A 30-degree right side angle and eye-contact.

Scene 2: A 30-degree right side angle and no eye-contact.

Scene 3: A front angle and eye-contact.

Scene 4: A front angle and no eye-contact.

Scene 5: A 30-degree left side angle and eye-contact.

Scene 6: A 30-degree left side angle and no eye-contact.

The experimental hypotheses relating to eye-contact with the camera were tested in these first two experiments.

Experiment III

This experiment tested the hypotheses concerning the effects of combining vertical and horizontal camera angles. In this experiment, the source maintained eye-contact with the camera for all conditions.

Combining the three vertical camera angles, as defined in Experiment I, with the three horizontal camera angles, as defined in Experiment II, resulted in a 3x3 factorial design with the resulting matrix:

FIGURE 3.--Design of Experiment III.

		Horizontal Camera Angle		
		30° Right	Front	30° Left
Vertical Camera Angle	High	1	2	3
	Level	4	5	6
	Low	7	8	9

The above matrix results in the following experimental scenes, as shown by the corresponding numbers within the above matrix:

Scene 1: High vertical camera angle and a 30-degree right side camera angle.

Scene 2: High vertical camera angle and a front camera angle.

Scene 3: High vertical camera angle and a 30-degree left side camera angle.

Scene 4: Level camera angle and a 30-degree right side camera angle.

Scene 5: Level camera angle and a front camera angle.

Scene 6: Level camera angle and a 30-degree left side camera angle.

Scene 7: Low vertical camera angle and a 30-degree right side camera angle.

Scene 8: Low vertical camera angle and a front camera angle.

Scene 9: Low vertical camera angle and a 30-degree left side camera angle.

Criterion Variables

Credibility

To determine subjects perceptions of the credibility of the source, four seven-step scales were used for each

of the three main dimensions of source credibility. Selection of a scale was based on the requirement that each scale selected for a factor be maximally loaded on that factor and minimally loaded on the other factors.[3] Scales were also selected on the basis of relevance to the concept being judged.

Scales used for the Safety factor were: "safe-dangerous," "openminded-closedminded," "honest-dishonest," and "friendly-unfriendly." Scales used for the Qualifaction factor were: "trained-untrained," "experienced-inexperienced," "informed-uninformed," and "qualified-unqualified." Scales used for the Dynamism factor were: "frank-reserved," "extroverted-introverted," "colorful-dull," and "aggressive-meek." The scale order was rotated both with respect to sequence and polarity.

These scales were scored so that most favorable response possible was assigned a score of +3 and the most unfavorable response possible a score of -3. The center scale, or "neutral" position, was assigned a score of 0. A subject's factor score was obtained by summing his responses across the four scales used to measure each of the dimensions of credibility.

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[3]David K. Berlo, James Lemert, and Robert Mertz, "Dimensions for Evaluating the Acceptability of Message Sources," Public Opinion Quarterly, 33 (1969-70), 563-576.

Pleasantness

A seven-step scale (pleasant-unpleasant) was used to determine subject's perception of the pleasingness of the pictured source. This was incorporated in connection with Berlyne's concept of the "pleasingness" of a simple, straight-forward visual pattern. Scoring and determination of differences between experimental versions were handled in the same manner as the credibility factors.

Comprehension

Comprehension of facts of the message was measured by administering a seven-question multiple choice quiz on facts contained in the AMTRAK experimental message. The questions required subjects to recall facts given in just about each sentence spoken by the news source and to make comparisons of facts between sentences (Appendix III).[4] An example of the multiple choice comprehension questions is:

> How do the subsidies given by the U.S. government to the airlines and to AMTRAK compare?
>
> ____much more subsidies for airlines
> ____a little more subsidies for airlines
> ____about the same
> ____a little more subsidies for AMTRAK
> ____much more subsidies for AMTRAK

Possible comprehension scores ran from 0, for no correct answers, to 7 for all correct answers. The quiz

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[4]Some of the questions used for comprehension measurement were obtained from research on television news being conducted by Dr. Verling C. Troldahl, Department of Communication, Michigan State University.

was administered to the control group who did not receive any message, and the control group who received only the audio portion of the newscast, as well as the experimental groups after each had viewed their assigned version of the newscast. Comprehension gain resulting from hearing and seeing the news story was considered as the difference between means of the experimental and control group who did not hear the message. Comprehension differences from different versions of the televised news story were the differences in mean scores of those who viewed the various experimental versions.

Topic Attitude

After viewing the televised news story subjects attitudes were measured by six opinion items (Appendix III).[5] These items related to the attitudes of subjects toward travel by airplane and passenger trains, and the need to keep passenger trains operating. These opinion items were made up of three statments positive towards travel by airplanes and three statements positive toward train travel and maintaining passenger trains. Subjects were asked to indicate if they agreed or disagreed with the statement on three scales: "agree," "neutral, don't know," and "disagree." An example of a statement positive towards

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[5]Topic attitude items used in this study were obtained from research on television news being conducted by Dr. Verling C. Troldahl, Department of Communication, Michigan State University.

airplanes is: "Either planes or trains are alright, but I prefer to fly." An example of a statement positive towards trains is: "I wish there were more cross-country passenger trains in the United States."

An "agree" response on statements positive towards trains was assigned a score of +1, the "neutral" response a score of 0, and the "disagree" response a score of -1. An "agree" response on statements positive toward airplanes was assigned a score of -1, the "neutral" response a score of 0, and the "disagree" response a score of +1. Therefore, a score of +6 would indicate a possible maximum favorable attitude towards the speaker's position, and a score of -6 would indicate the maximum unfavorable attitude towards his topic position.

Evaluation of News Story

A question was used which asked subjects to indicate their attitude toward having the AMTRAK news story in the newscast. Their attitude towards the news story was determined by their rating on two seven-step scales: "good-bad," and "interesting-uninteresting."

These scales can be viewed as "evaluative" factors of general connotative meaning as found by Osgood, Suci, and Tannenbaum.[6] As such, they are used to obtain connotative

[6]Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning (Urbana: University of Illinois Press, 1957), pp. 53-55.

evaluations of the news story as presented in each experimental condition. Scoring of these scales and determination of differences between experimental versions were handled in the same manner as the credibility factors.

Sample Description Variables

Media Usage

Various studies have indicated that the media habits of people can possibly affect their attitudes towards content presented by a medium. These studies indicate a tendency for the trust a person assigns to a medium to be related to his perference for that medium, and to a lesser degree, related to the time he spends with that medium.[7]

To obtain indices of subjects preferences and uses of the news media, each respondent was asked to indicate: 1) amount of time spent reading a daily newspaper; 2) how often he watches television news programs; and 3) listening to radio programs.

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[7]Bruce H. Westley and Werner J. Severin, "Some Correlates of Media Credibility," Journalism Quarterly, 41 (1964), 325-335; Richard F. Carter and Bradley S. Greenberg, "Newspaper or Television: Which Do You Believe?" Journalism Quarterly, 42 (1965), 29-34; Bradley S. Greenberg, "Media Use and Believability: Some Multiple Correlates," Journalism Quarterly, 43 (1966), 665-670; James B. Lemert, "Two Studies of Status Conferral," Journalism Quarterly, 43 (1966), 25-33; "Status Conferral and Topic Scope," Journal of Communication, 19 (1969), 4-13; James B. Lemert and Karl J. Nestvold, "Television News and Status Conferral," Journal of Broadcasting, 14 (1970), 491-497.

Demographic Variables

To determine the nature of the sample, demographic information was obtained from each respondent pertaining to: 1) sex; 2) age; 3) amount of time employed; 4) academic course load; 5) marital status; and 6) with whom they live.

Statistical Procedures

A factorial design was used in conducting these experiments in order to be able to evaluate the combined effects of two experimental variables that were used simultaneously on each dependent variable. This is especially important in research concerning a mass medium, such as television, where the message involves numerous independent variables affecting numerous dependent variables.

Data were analyzed by a multiple-factor analysis of variance. This statistical method analyzes the main effects of each measured independent variable and interaction effects of these independent variables on each dependent variable.

The null hypothesis tested by the factorial analysis of variance is that the population mean is the same for all conditions, and that the differences among corresponding treatment populations means are the same for all cells.

Each experimental design calls for an equal number of observations per cell (experimental condition), however the completed experiment did not have an equal number of

observations in all cells. The cells were unequal due to the problem of having to work with intact groups which were unequal in size. Therefore, for each experiment the cells were made equal by randomly discarding the excess observations.

The level of significance for all experiments was set at the .05 level.

CHAPTER III

RESULTS

Characteristics of the Sample

The 278 college students comprising the sample for this study completed a questionnaire which collected demographic information on the subjects (see Appendix III). These items were used as a basis for describing the sample.

Ninety-five percent of the sample were enrolled in twelve units or more of course work at the university, with the remaining five percent in school on a part-time basis, as shown in Table 1. In addition to their course work, forty-seven percent were employed in a job at least part of the time.

In general, the subjects tended to be between eighteen and twenty-four years old, with sixty-five percent of the subjects falling into the twenty-one to twenty-four year age group. The sample was fairly evenly divided between males and females.

As might be expected with college students, over half of the subjects lived away from their immediate family. Fourteen percent lived alone, while forty-two percent were

TABLE 1.--Demographic variables for sample.

	Percentage
Age in Years	
under 18	7
18 - 20	27
21 - 24	65
25 - 34	1
Sex	
Male	52
Female	48
Marital Status	
single	90
married	9
divorced/separated	1
Residency	
live with parents	33
live with relatives	2
live alone	14
live with non-relatives	42
live with spouse and dependent children	3
live with spouse only	6
Credit Units of Course Work	
1 - 11 units	5
12 - 17 units	92
18 or more units	3
Hours Employed	
not employed	53
1 - 25 hours per week	34
26 - 40 hours per week	13
	N=278

living with others who were not related to them. However, thirty-five percent of the subjects lived with their parents or relatives.

Thus it seems that the subjects used in this study tended to be relatively older college students, and were somewhat independent of direct parental control.

Under represented in the sample were married persons, constituting only nine percent of the subjects.

As the sample seems to be rather young, in comparison with the total population, and living somewhat on their own, it may seem that they would have little interest in attending to the news content of the mass media. However, as Table 2 shows, this is not the case.

Generally, better than half of the subjects attend to the news content of the mass media on a daily basis. They seem to be interested in events of the world. It also seems that the majority of the subjects have experience in utilizing all the mass media available to them for news reports.

Newspapers seem to be the primary daily medium for news information utilized by the subjects. Eighty-eight percent of the sample indicated that they spend some time each day reading a newspaper, with fifty-three percent spending from thirty to forty-five minutes each day with a newspaper. Radio receives the next highest percentage in terms of usage, with seventy-three percent of the sample

TABLE 2.--Media usage.

	Percentage
Time Spent Reading Daily Newspapers (in minutes)	
0	12
5 - 15	26
30 - 45	53
60 - 90	8
120 or more	1
Frequency of Watching TV News Programs	
once a day	25
almost every day	24
once or twice a week	26
less often	25
Frequency of Listening to Radio Programs	
three or more times a day	36
once or twice a day	37
every other day	13
less often	14
	N=278

attending to that medium each day. Television is the lowest in terms of daily attendance, and does not seem to be as important a daily source of news information as newspapers or radio. Only twenty-five percent of the sample indicated that they watched a television news program each day, and twenty-four percent watch almost every day. Fifty-one percent indicated that they watch television news programs only once or twice a week or less often.

In general, these media usage figures do correspond with the findings of other studies which have included subjects ranging in these age groups, and educational level. It seems that the subjects are interested in news, and utilize all three media fairly frequently for news information.

Experimental Findings

In this study three variables were manipulated in relation to their effects on audience perceptions of a news source presented in a television newscast and the message. However, it was not financially feasible to study all three variables in every combination. Therefore, three different experiments were designed which studied two manipulated variables at a time. In all three experiments the same eight effect variables were studied.

The clearest way to present all these data would be to report on one effect at a time, showing how it was affected in all three experiments.

Source Credibility

In the three experiments, subjects rated the news source on three dimensions of credibility. A two-factor analysis of variance was used to test the effects of each of the two manipulation variables used in each experiment upon each credibility dimension.

"Safety" Credibility.--In Experiment I the factors of vertical camera angle and eye-contact were manipulated. H_4 predicted that a low vertical camera angle would result in perceptions of more safety for the source than a high or eye-level camera angle. It was also predicted in H_1 that the source by maintaining eye-contact with the camera would be perceived as being more safe than when he did not have eye-contact. Table 3 shows the mean ratings of the source for cells formed by the two variables Vertical Camera Angle and Eye-Contact. Table 4 shows the two-factor analysis of variance used to test the effects of each of the two manipulated variables upon the criterion variable. Scores on "Safety" credibility, as measured, varied from a +12 to a -12.

TABLE 3.--Mean safety ratings of source for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye Contact	High	Level	Low	
Eye Contact	+1.3	+1.8	+2.1	+1.7
No Eye Contact	+1.4	+2.1	+0.2	+1.2
	+1.3	+1.9	+1.2	Overall Mean=+1.5

TABLE 4.--Experiment I: analysis of variance summary table for dependent variable: "safety."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	8.33	2	4.17	.37	.69
Eye-Contact	5.65	1	5.65	.49	.48
Interaction	21.00	2	10.50	.93	.40
Error	816.46	72	11.34		

Table 4 shows that neither of the main factors achieved the acceptable level of significance. Therefore, H_1 and H_4 are not confirmed.

The effectof Eye-Contact factor, as stated in H_1, was also tested in Experiment II, along with the Horizontal Camera Angle factor. H_7 predicted that a source filmed by a camera directly in front of him would result in perceptions of more "safety" than if he was filmed from a 30=degree side angle. Table 5 shows the mean ratings of the source on the "safety" dimension for cells formed by the two variables horizontal camera angle and eye-contact. The results of the two-factor analysis of variance of each of the manipulated variables upon the criterion variable are shown in Table 6.

TABLE 5.--Mean safety ratings of source for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30^{o} Right	0^{o} Front	30^{o} Left	
Eye-Contact	+0.8	+1.9	+0.1	+0.9
No Eye-Contact	0.0	+1.4	+1.3	+0.9
	+0.4	+1.7	+0.7	Overall Mean=+0.9

TABLE 6.--Experiment II: analysis of variance summary table for dependent variable: "safety."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	29.02	2	14.51	1.36	.26
Eye-Contact	0.01	1	0.01	0.00	.97
Interaction	19.77	2	9.88	.92	.39
Error	959.69	90	10.66		

The analysis shows that the main effect of Horizontal Camera Angle, and Eye-Contact are not significant and so H_1 and H_7 are not confirmed.

Experiment III tested H_{10} that the angle-plus-angle effect of having a camera directly in front of the source and at a low vertical camera angle would result in perceptions of more "safety" than any other combination of camera angles.

Table 7 shows the mean ratings of the source on the "Safety" dimension for cells formed by the two manipulated variables and Table 8 shows the results upon the criterion variable in Experiment III.

TABLE 7.--Mean safety ratings of source for horizontal camera angle and vertical camera angle.

	Horizontal Camera Angle			
Vertical Camera Angle	30° Right	0° Front	30° Left	
High	+0.3	+1.4	+0.3	+0.7
Level	+1.1	+2.1	+3.2	+2.14
Low	+0.6	+2.2	+1.8	+1.5
	+0.7	+1.9	+1.8	Overall Mean=+1.4

TABLE 8.--Experiment III: analysis of variance summary table for dependent variable: "safety".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	37.00	2	18.50	1.40	.25
Vertical Camera Angle	46.33	2	23.17	1.75	.18
Interaction	23.81	4	5.95	.45	.77
Error	1546.07	117	13.21		

As shown in Table 8 neither of the main factors, nor the interaction of these factors achieved an acceptable level of significance. Therefore, H_{10} was not confirmed.

A control group, who only heard the message by the news source, mean rating on Safety dimension was +0.4. However, the differences between the experimental video groups and the audio only control group are not attributable to the three manipulated variables.

"Qualification" Credibility.--The effects of vertical camera angles and eye-contact with the camera by the news source on viewer's perceptions of him on the Qualification dimension were tested in Experiment I. H_2 predicted that by maintaining eye-contact with the camera the source would be perceived as more "qualified" than when he did not have eye-contact. It was also predicted in H_5 that the news source being filmed by a low vertical camera angle, compared to the other vertical camera angles, would result in perceptions of more "qualification" for that source. Table 9 shows the mean Qualification ratings for cells formed by the two variables Vertical Camera Angle and Eye-Contact. Table 10 shows the results of the two-factor analysis of variance used to test the effects of each of the manipulated variables upon the dependent variable. Scores on "Qualification" Credibility, as measured, varied from a +12 to -12.

TABLE 9.--Mean qualification ratings of source for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye-Contact	High	Level	Low	
Eye-Contact	+4.9	+5.7	+4.3	+4.9
No Eye-Contact	+5.3	+5.5	+2.8	+4.5
	+5.1	+5.6	+3.6	Overall Mean=+4.7

TABLE 10.--Experiment I: analysis of variance summary table for dependent variable: "Qualification".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	56.33	2	28.17	1.53	.22
Eye-Contact	3.28	1	3.28	.18	.67
Interaction	12.33	2	6.17	.33	.72
Error	1328.92	72	18.46		

As shown in Table 10 the differences between the sample means were not statistically significant. Therefore, H_2 and H_5 were not confirmed.

Mean Qualification ratings of the source by subjects who received the experimental versions formed by manipulation of horizontal camera angle and eye-contact in Experiment II are shown in Table 11. The results of a two-factor analysis of variance used to test the effects of each manipulated variable upon the dependent variable are shown in Table 12.

TABLE 11.--Mean qualification ratings of source for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30° Right	0° Front	30° Left	
Eye-Contact	+6.3	+6.2	+3.9	+5.4
No Eye-Contact	+3.7	+5.1	+5.1	+4.6
	+5.0	+5.6	+4.5	Overall Mean=+5.0

TABLE 12.--Experiment II: analysis of variance summary table for dependent variable: "Qualification".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	22.58	2	11.29	.62	.54
Eye-Contact	15.84	1	15.84	.87	.35
Interaction	57.00	2	28.50	1.57	.21
Error	1637.31	90	18.19		

The analysis shows that the main effect of Vertical Camera Angle was not significant at the .05 level. Therefore, H_8, which predicted that a news source filmed by a camera directly in front of him, compared to a camera positioned at a 30° side angle, would result in perceptions of more qualification, was not supported.

The analysis also shows that the main effect of Eye-Contact was not significant at the .05 level. Therefore, the results of Experiment II, as those of Experiment I, did not support H_2.

Experiment III tested the possible interaction effects of horizontal camera angles and vertical camera angles upon perceptions of the source's "qualification." Table 13 shows the mean Qualification ratings for cells formed by the two variables Horizontal Camera Angle and Vertical Camera Angle. The results of a two-factor analysis of variance used to test the effect of each of the manipulated variables on the dependent variable are shown in Table 14.

TABLE 13.--Mean qualification ratings of source for horizontal camera angle and vertical camera angle.

	Horizontal Camera Angle			
Vertical Camera Angle	30° Right	0° Front	30° Left	
High	+5.4	+4.6	+4.1	+4.7
Level	+6.1	+6.1	+4.5	+5.6
Low	+4.1	+4.7	+5.7	+4.8
	+5.2	+5.2	+4.7	Overall Mean=+5.0

Table 14 shows that the main effects of Horizontal Camera Angle and Vertical Camera Angle were not significant. Also the interaction effect of these two factors failed to reach an acceptable level of significance. Therefore, H_{11}

which predicted that a source filmed by a camera directly in front of him and at a low vertical camera angle, compared to all other combinations of camera angles, would be perceived as more qualified was not confirmed.

TABLE 14.--Experiment II: analysis of variance summary table for dependent variable: "Qualification".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	6.39	2	3.19	.17	.84
Vertical Camera Angle	20.11	2	10.05	.53	.59
Interaction	47.65	4	11.91	.63	.63
Error	2199.71	117	18.80		

"Dynamism" Credibility.--On the Dynamism dimension, differences in mean Dynamism ratings as the vertical camera angle was changed were found to be significant. Table 15 shows the mean Dynamism ratings for cells formed by the two dependent variables in Experiment I, Vertical Camera Angle and Eye-Contact. The results of a two-factor analysis of variance used to test the effects of the two manipulated variables on the dependent variable are shown in Table 16. Scores on "Dynamism" Credibility, as measured, varied from a +12 to a -12.

TABLE 15.--Mean dynamism ratings of source for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye-Contact	High	Level	Low	
Eye-Contact	-0.5	+1.7	-1.2	0.0
No Eye-Contact	+1.8	+1.8	-1.3	+0.7
	+0.6	+1.7	-1.3	Overall Mean=+0.4

TABLE 16.--Experiment I: analysis of variance summary table for dependent variable: "Dynamism".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	120.10	2	60.05	3.27	.04*
Eye-Contact	10.78	1	10.78	.59	.45
Interaction	21.64	2	10.82	.59	.56
Error	1321.69	72	18.36		

*Significant at .05 level.

The analysis shows that the main effect of Vertical Camera Angle is significant. However, as Table 15 shows, the difference in perceptions of source Dynamism is not attributable to the low vertical camera angle as predicted. H_6 predicted that a low vertical camera angle would produce perceptions of more Dynamism for the source than high and level vertical camera angles. Of the three experimental conditions, the low vertical camera angle resulted in the

most negative perceptions with a mean rating of -1.3. The level camera angle produced the highest ratings on Dynamism with a mean rating of +1.7. The mean rating for the high vertical camera angle was +0.6.

Differences in mean Dynamism ratings for the variable Eye-Contact were not significant. Therefore, H_2 which predicted that the source by maintaining eye-contact with the camera would be perceived as more "dynamic" then when he did not have eye-contact was not confirmed.

In Experiment III, where the variable Vertical Camera Angle was also manipulated along with the variable Horizontal Camera Angle, perceptions of source Dynamism were found to be affected by where the camera was positioned on the vertical plane. Table 17 shows the mean ratings for the source on the Dynamism dimension in Experiment III, and Table 18 reports the results of the two-factor analysis of variance.

TABLE 17.--Mean dynamism ratings of source for horizontal camera angle and vertical camera angle.

	Horizontal Camera Angle			
Vertical Camera Angle	30^{o} Right	0^{o} Front	30^{o} Left	
High	-2.1	-0.7	+0.1	-0.9
Level	+1.5	+2.6	-0.1	+1.3
Low	-2.1	-0.7	-0.9	-1.2
	-0.9	+0.4	-0.3	Overall Mean=-0.3

TABLE 18.--Experiment III: analysis of variance summary table for dependent variable: "Dynamism".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	33.48	2	16.73	.86	.42
Vertical Camera Angle	157.90	2	78.95	4.07	.02*
Interaction	69.33	4	17.33	.89	.47
Error	2269.64	117	19.40		

*Significant at .05 level.

In Experiment III the treatment mean for the low vertical camera angle was -1.2 whereas for the high vertical camera angle it was -0.9, and for the level camera angle it was +1.3, the reverse of what was hypothesized. Results of both Experiment I and Experiment III indicate that the level camera angle view, regardless of where it is positioned on the horizontal plane and whether or not the source establishes eye-contact with the camera, produces the highest ratings on Dynamism, and the low vertical camera angle results in lower ratings.

The analysis shows that the combination of the variables Horizontal Camera Angle and Vertical Camera Angle was not significant. Therefore, H_{12} which predicted that a source filmed by a camera directly in front of him and at a low vertical camera angle, compared to all other

combinations of camera angles, would result in perception of more "dynamism" for that source was not confirmed.

The analysis also shows that the differences in mean Dynamism ratings as the horizontal camera angle was changed are not significant. H_9 which predicted that a source filmed by a camera directly in front of him, compared to a 30-degree side angle view, would result in perceptions of more "dynamism" was not supported.

In Experiment II the main effects of Horizontal Camera Angle and Eye-Contact variables were not significant and so H_9 and H_3, as in the other two experiments, were not supported. Table 19 shows the mean ratings for the source on the Dynamism dimension in Experiment II and Table 20 reports the results of the two-factor analysis of variance.

TABLE 19.--Mean dynamism ratings of source for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30° Right	0° Front	30° Left	
Eye-Contact	+0.8	+2.6	-0.9	+0.8
No Eye-Contact	-0.1	+1.1	-0.2	-0.1
	+0.3	+1.3	-0.5	Overall Mean=+0.4

TABLE 20.--Experiment II: analysis of variance summary table for dependent variable: "Dynamism".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	56.33	2	28.17	1.29	.28
Eye-Contact	19.26	1	19.26	.89	.35
Interaction	39.08	2	19.54	.90	.45
Error	1954.06	90	21.71		

The mean on Dynamism for a control group who only received the audio portion of the source's message was +1.5. The difference between the video groups and the control group in their perceptions of the source's Dynamism may be somewhat attributable to the manipulation of the vertical camera angle. However, as the overall mean in Experiment II, where only the horizontal camera angle and eye-contact factors were manipulated, was +0.4 it is possible that the difference between video groups and control group is the result of factors other than those manipulated in the three experiments.

Source Pleasantness

In the three experiments, subjects indicated their perceptions of the source's "Pleasantness" on a seven-step bi-polar scale. The most favorable rating was a score of +3, with the center (neutral) position on the scale recorded as 0, and the least favorable rating a -3.

Table 21 shows the mean ratings for the source on Pleasantness in Experiment I where the variables Vertical Camera Angle and Eye-Contact were manipulated and Table 22 reports the results of the two-factor analysis of variance.

TABLE 21.--Mean pleasantness ratings of source for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye-Contact	High	Level	Low	
Eye-Contact	+0.3	+0.5	+0.1	+0.3
No Eye-Contact	+0.9	+0.6	+0.2	+0.6
	+0.5	+0.5	+0.2	Overall Mean=+0.4

TABLE 22.--Experiment I: analysis of variance summary table for dependent variable: "Pleasantness".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	2.07	2	1.04	.68	.51
Eye-Contact	1.55	1	1.55	1.01	.32
Interaction	1.10	2	.55	.36	.70
Error	110.31	72	1.53		

Table 22 shows that the main effect of Vertical Camera Angle was not significant. Therefore, H_{14} which predicted a source filmed by a low vertical camera angle, compared to the other vertical camera angles, would be perceived as more "pleasant" was not supported. The results shown in Table 22 indicate that whether or not the source maintains eye-contact with the camera has no significant effect on viewer perceptions of his "pleasantness" and so H_{13} was not supported.

Experiment II also tested the main effect of Eye-Contact along with Horizontal Camera Angle. Table 23 shows the mean ratings for the source on Pleasantness in Experiment II and Table 24 reports the results of the two-factor analysis of variance.

TABLE 23.--Mean pleasantness rating of source for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30° Right	0° Front	30° Left	
Eye-Contact	+0.6	+0.6	-0.1	+0.4
No Eye-Contact	-0.3	+0.5	+0.8	+0.3
	+0.1	+0.5	+0.4	Overall Mean=+0.3

TABLE 24.--Experiment II: analysis of variance summary table for dependent variable: "Pleasantness".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	2.27	2	1.13	.83	.44
Eye-Contact	.04	1	.04	.03	.86
Interaction	13.14	2	6.57	4.83	.01*
Error	122.50	90	1.36		

*Significant of .05 level.

As Table 24 indicates, the main effect of Eye-Contact was not significant and so H_{13}, as in Experiment I, was not supported. The results also show that the main effect of Horizontal Camera Angle was not significant. H_{15} which predicted that a camera positioned at a 30-degree side angle would result in the source being perceived as more "pleasant," compared to a camera positioned directly in front of him, was not supported.

Even though no hypothesis was advanced pertaining to the possible interaction effects of Horizontal Camera Angle and Eye-Contact the results of Table 24 shows that such an interaction was significant. Therefore, it seems that the placement of the camera at a side diagonal angle of 30-degrees in relation to the horizontal plane of the source's shoulders is related to audience perceptions of

source Pleasantness. However, the kind of effect depends on whether or not the source establishes eye-contact with the camera. Where the source establishes eye-contact with a camera positioned 30-degrees to his right, ratings on Pleasantness are more positive (+0.6), than eye-contact with a camera 30-degrees to his left (-0.1). Where the source does not have eye-contact with the camera, being seen from an angle 30-degrees to the left results in higher ratings on Pleasantness (+0.8) then from a camera 30-degrees to the source's right side (-0.3).

H_{16} which predicted that the source filmed by a combination of a camera at a 30-degree side angle and at a level vertical angle would result in perceptions of more "pleasantness," compared to all other combinations of the factors Horizontal Camera Angle and Vertical Camera Angle, was tested in Experiment III. Table 25 shows the mean ratings for the source on Pleasantness in Experiment III, and Table 26 reports the results of the two-factor analysis of variance.

The results of Table 26 show that the interaction between Horizontal Camera Angle and Vertical Camera Angle was not statistically significant and so H_{16} was not supported. Experiment III did not support H_{14} and H_{15} as the main effects were not statistically significant.

TABLE 25.--Mean pleasantness ratings of source for horizontal camera angle and vertical camera angle.

Vertical Camera Angle	Horizontal Camera Angle			
	30° Right	0° Front	30° Left	
High	+0.5	+0.3	+0.1	+0.3
Level	+0.6	+0.6	+0.6	+0.6
Low	0.0	+0.1	0.0	0.0
	+0.4	+0.3	+0.2	Overall Mean=+0.3

TABLE 26.--Experiment III: analysis of variance summary table for defendent variable: "Pleasantness".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	0.59	2	0.29	.17	.84
Vertical Camera Angle	6.87	2	3.44	1.97	.14
Interaction	.79	4	.19	.11	.98
Error	204.28	117	1.75		

Comprehension of Message

Comprehension was measured by administering a seven-question multiple choice quiz on facts contained in the statement made by the experimental news source. Possible comprehension scores thus ran 0-7. The mean quiz score for the control group which did not receive any message

was 1.1, means for the groups which saw the televised experimental message were 4.3, 4.5, and 4.3, and for an audio only control group 4.4. These mean comprehension scores demonstrates that one of the initial conditions of the experiment had been met, namely that subjects exposed to the experimental message did gain information about the message's topic.

In Experiment I, H_{17} predicted that a viewer watching a news source who maintained eye-contact with the camera, compared to a source lacking eye-contact, would have higher comprehension of verbal facts from the source's message. In addition, H_{18} predicted that viewers watching a source filmed by an eye-level camera, compared to all other vertical camera positions, would have a higher comprehension of verbal facts from the source's message. Table 27 shows the mean comprehension scores for cells formed by the two variables Vertical Camera Angle and Eye-Contact, and Table 28 shows the results of the two-factor analysis of variance.

As Table 28 shows none of the main effects were significant and so H_{17} and H_{18} were not supported.

H_{17} was also tested in Experiment II, along with H_{19} which predicted that a viewer watching a source filmed by a camera directly in front of him would have higher comprehension of verbal facts from that source's message then a viewer watching a source filmed by a camera

TABLE 27.--Mean comprehension scores of message for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye-Contact	High	Level	Low	
Eye-Contact	3.8	5.0	3.9	4.2
No Eye-Contact	4.1	4.2	4.6	4.3
	4.0	4.6	4.3	Overall Mean=4.3

TABLE 28.--Experiment I: analysis of variance summary table for dependent variable: "comprehension."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	4.92	2	2.46	.69	.50
Eye-Contact	.01	1	.01	.003	.95
Interaction	8.10	2	4.05	1.15	.32
Error	254.31	72	3.53		

positioned at a 30-degree side angle. Table 29 shows the mean comprehension scores for cells formed by the two variables Horizontal Camera Angle and Eye-Contact, and Table 30 reports the results of the two-factor analysis of variance.

Table 30 shows that the differences in mean comprehension scores for the Eye-Contact Factor are significant. Looking at the treatment mean scores on comprehension in Table 29 indicates that when the source maintained eye-contact with the camera higher comprehension of the message

TABLE 29.--Mean comprehension scores of message for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30° Right	0° Front	30° Left	
Eye-Contact	4.4	5.1	4.9	4.8
No Eye-Contact	3.7	4.7	3.7	4.0
	4.1	4.9	4.3	Overall Mean=4.5

TABLE 30.--Experiment II: analysis of variance summary table for dependent variable: "Comprehension."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	12.02	2	6.01	2.05	.13
Eye-Contact	14.26	1	14.26	4.85	.03*
Interaction	2.89	2	1.45	.49	.61
Error	264.31	90	2.94		

*Significant at .05 level.

resulted (4.8) than when there was an absence of eye-contact (4.0) as predicted in H_{17}. However, in Experiment I this effect was not found to be significant. Still it seems that the no eye-contact situation distracted subjects from concentration on the verbal message more than when the source maintained eye-contact.

Table 30 also shows that the main effect of Horizontal Camera Angle was not significant and so H_{19} was not supported.

H_{20} which predicted that a source seen by a combination of a camera positioned directly in front of him and at eye-level would result in viewers achieving higher comprehension scores than when the source was seen by any other combination of camera angles was tested in Experiment III. Also tested in this experiment were H_{18} and H_{19}. Table 31 shows the mean comprehension scores for cells formed by the two variables Horizontal Camera Angle and Vertical Camera Angle, and Table 32 reports the results of the two-factor analysis of variance.

TABLE 31.--Mean comprehension scores of message for horizontal camera angle and vertical camera angle.

Vertical Camera Angle	Horizontal Camera Angle			
	30^{o} Right	0^{o} Front	30^{o} Left	
High	3.8	3.9	4.6	4.1
Level	4.4	5.1	4.6	4.7
Low	3.7	3.9	5.1	4.2
	3.9	4.3	4.8	Overall Mean=4.3

TABLE 32.--Experiment III: analysis of variance summary table for dependent variable: "comprehension."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	14.62	2	7.31	2.25	.11
Vertical Camera Angle	8.33	2	4.17	1.28	.28
Interaction	9.90	4	2.48	.76	.55
Error	379.14	117	3.24		

In Experiment III none of the main effects were significant and neither was the interaction of these factors and so H_{18}, H_{19} and H_{20} were not supported.

Attitude Toward Topic

For the dependent variable of Attitude a score of +6 indicated the maximum favorable attitude towards the speaker's position by the subjects, a "neutral" response a score of 0, and a score of -6 indicated the maximum unfavorable attitude toward his topic position. Mean attitude score for the control group which did not receive any message, but filled out the attitude scales, was -0.4. The control group who only heard the source had a mean score which fell at the neutral point on the scale. Overall means in the three video groups were +0.3, +0.2, and +0.4.

As the means do not appear to differ from each other, it would seem that the message did not produce a great deal of positive attitude towards the news source's topic. This indicates that the topic was not highly ego involving for the subjects as they remained rather neutral towards traveling and maintaining national train service. However, there were some attitudinal differences between experimental groups which can be attributed to the three independent variables.

Table 33 shows the mean Attitude scores for Experiment I where the variables Vertical Camera Angle and Eye-Contact were manipulated. Table 34 reports the results of the two-factor analysis of variance.

TABLE 33.--Mean attitude scores towards topic for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye-Contact	High	Level	Low	
Eye-Contact	+1.9	-0.5	-0.5	+0.3
No Eye-Contact	-0.1	0.0	+1.3	+0.4
	+0.9	-0.2	+0.4	Overall Mean=+0.4

TABLE 34.--Experiment I: analysis of variance summary table for dependent variable: "Attitude."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	17.33	2	8.67	1.89	.16
Eye-Contact	.21	1	.21	.04	.83
Interaction	49.33	2	24.67	5.40	.007*
Error	329.08	72	4.57		

*Significant at .05 level.

H_{21} predicted attitude scores would be higher for a source who maintained eye-contact with the camera compared to the no eye-contact condition. It was also predicted in H_{24} that attitude scores would be higher when the source was filmed by a low vertical camera angle compared to the other vertical camera angles. Table 34 shows the main effects of Vertical Camera Angle and Eye-Contact were not significant and so the hypotheses were not supported.

The analysis shows that an interaction effect was significant. The simple means shown in Table 32 indicate the direction of the interaction between the manipulated variables: Vertical Camera Angle and Eye-Contact. When the source establishes eye-contact with the camera at a high vertical camera angle, a more effective attitude towards the topic was obtained than with eye-contact in relation to

the other two vertical camera angles. Where the source did not establish eye-contact with the camera, a low vertical camera angle produced a more positive attitude towards the topic than the other two vertical camera angles.

Table 35 shows the mean Attitude scores for Experiment II where the variables Horizontal Camera Angle and Eye-Contact were manipulated. Table 36 reports the results of the two-factor analysis of variance.

TABLE 35.--Mean attitude scores towards topic for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30° Right	0° Front	30° Left	
Eye-Contact	+1.1	-0.2	+0.5	+0.4
No Eye-Contact	-0.2	+0.4	-0.1	0.0
	+0.4	+0.1	+0.2	Overall Mean=+0.2

TABLE 36.--Experiment II: analysis of variance summary table for dependent variable: Attitude.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	2.02	2	1.01	.24	.79
Eye-Contact	3.76	1	3.76	.90	.35
Interaction	15.65	2	7.82	1.87	.16
Error	376.49	90	4.18		

Table 36 shows that the interaction of the manipulated variables was not significant. The main effect of Eye-Contact was not significant and so H_{21} was not supported in this experiment. H_{27} predicted that a camera positioned directly in front of the source would result in a more positive attitude score towards the topic then when the source was filmed by a camera positioned at a 30-degree side angle to the source. This did not occur.

Experiment III manipulated the variables Horizontal Camera Angle and Vertical Camera Angle. It tested H_{30} which predicted that a source filmed by a combination of a camera positioned directly in front of him and at a low vertical angle would result in a more positive attitude towards his topic then any other combination of camera angles. Table 37 shows the mean Attitude scores for the two variables in Experiment III, and Table 38 reports the results of the two-factor analysis of variance.

TABLE 37.--Mean attitude scores towards topic for horizontal camera angle and vertical camera angle.

	Horizontal Camera Angle			
Vertical Camera Angle	30° Right	0° Front	30° Left	
High	+0.5	+1.8	-0.5	+0.6
Level	+0.9	+0.1	+0.2	+0.4
Low	+0.8	-0.9	+0.7	+0.2
	+0.7	+0.3	+0.2	Overall Mean=+0.4

TABLE 38.--Experiment III: analysis of variance summary table for dependent variable: "Attitude."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	7.11	2	3.56	.88	.41
Vertical Camera Angle	3.87	2	1.94	.48	.62
Interaction	59.94	4	14.98	3.70	.007*
Error	473.79	117	4.05		

*Significant at .05 level.

Even though Table 39 shows that the interaction of horizontal camera angles and vertical camera angles was significant, the prediction of H_{30} was not supported. Means for the simple effects of horizontal camera angle and vertical camera angle interaction on Attitude, as shown in Table 37, show that when the camera is directly in front of the source (0^{o}) Front Horizontal Angle) a high vertical camera angle results in a more positive attitude towards the topic than a low vertical camera angle. Attitude score for the high vertical camera angle/0^{o} front horizontal camera angle had a mean of +1.9 whereas the low vertical camera angle/0^{o} front horizontal camera angle version had a mean of -0.9. This was the reverse of what was predicted. In fact, if the camera is set at a low vertical angle, a more positive

attitude towards the topic is obtained if the camera is positioned at a 30-degree side angle than if the camera is directly in front of the source. The 30-degree side angles in combination with the low vertical angle had means of +0.8 and +0.7 where as the 0^{o} front horizontal angle in combination with the low vertical angle resulted in a mean of -0.9. With a camera positioned at the same height as the source's eye-level there seems to be very little difference in attitudes towards the topic regardless if the camera was directly in front of the source, or shifted to the right or left side at a 30-degree angle.

The main effects of Horizontal Camera Angle and Vertical Camera Angle were not significant and so H_{24} and H_{27}, as in the other experiments, were not supported in Experiment III.

Attitudes Toward The News Story

Subjects were asked to indicate their attitudes towards having the experimental television news story included in the newscast on two seven-step bi-polar scales: "interesting-uninteresting," and "good-bad." The most positive attitude on each scale was scored as a +3, the "neutral" position 0, and the most negative rating was scored as a -3.

"Good" Evaluation

The "good-bad" scale can be viewed as the subjects' evaluations as to their perceptions of the news story's importance. Experiment I tested the effects of the manipulated variables of Vertical Camera Angle and Eye-Contact upon the dependent variable. Mean "good-bad" ratings for cells formed by the two variables are shown in Table 39 and the results of the two-factor analysis of variance are shown in Table 40.

TABLE 39.--Mean "good-bad" evaluations of news story for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye Contact	High	Level	Low	
Eye-Contact	+1.0	+0.9	+0.8	+0.9
No Eye-Contact	+0.5	+0.8	+0.5	+0.6
	+0.7	+0.8	+0.6	Overall Mean=+0.7

TABLE 40.--Experiment I: analysis of variance summary table for dependent variable: "good-bad".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	.69	2	.35	.19	.82
Eye-Contact	2.17	1	2.17	1.22	.27
Interaction	.49	2	.24	.14	.87
Error	128.00	72	1.78		

H_{23} predicted that when the source maintained eye-contact with the camera, viewers would evaluate his story to be a better story to include in the newscast than when he did not have eye-contact with the camera. H_{26} predicted that a more positive evaluation of the story would occur when the source was filmed by a low vertical camera angle than when he was filmed by the other vertical camera angles. Results did not support the hypotheses. None of the factors were found to be significant.

The mean "Good-Bad" ratings of the news story as the variables Horizontal Camera Angle and Eye-Contact were manipulated in Experiment II are shown in Table 41. The results of the two-factor analysis of variance are shown in Table 42.

TABLE 41.--Mean "good-bad" evaluations of news story for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30^{o} Right	0^{o} Front	30^{o} Left	
Eye-Contact	+1.0	+1.0	+0.5	+0.8
No Eye-Contact	+0.1	+0.4	+0.6	+0.4
	+0.6	+0.7	+0.6	Overall Mean=+0.6

TABLE 42.--Experiment II: analysis of variance summary table for dependent variable: "good-bad".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	.52	2	.26	.17	.84
Eye-Contact	4.59	1	4.59	3.05	.08
Interaction	4.19	2	2.09	1.39	.25
Error	135.44	90	1.50		

Differences in mean "Good-Bad" evaluations of the news story as the horizontal camera angle was changed were not significant. Therefore H_{29} which predicted there would be a difference was not supported. Also the main effect of Eye-Contact was not significant and so H_{23} was not supported.

The mean "Good-Bad" ratings of the news story as the variables Horizontal Camera Angle and Vertical Camera Angle were manipulated in Experiment III are shown in Table 43. The results of the two-factor analysis of variance are shown in Table 44.

Differences in mean "Good-Bad" evaluations of the news story as the horizontal and vertical camera angles were changed were not significant. H_{32} which predicted that an interaction effect between horizontal and vertical camera angles would result in a significant difference in evaluations of the news story was not supported.

TABLE 43.--Mean "good-bad" evaluations of news story for horizontal camera angle and vertical camera angle.

Vertical Camera Angle	Horizontal Camera Angle			
	30° Right	0° Front	30° Left	
High	0.0	+0.9	+0.6	+0.5
Level	+1.1	+0.9	+0.7	+0.9
Low	0.0	+0.9	+0.4	+0.4
	+0.4	+0.9	+0.6	Overall Mean=+0.6

TABLE 44.--Experiment III: analysis of variance summary table for dependent variable: "good-bad".

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	5.90	2	2.95	1.60	.20
Vertical Camera Angle	5.19	2	2.59	1.41	.24
Interaction	7.62	4	1.90	1.04	.39
Error	215.00	117	1.84		

"Interestingness" Evaluations

Experiment I tested the effects of the manipulation of the variables Vertical Camera Angle and Eye-Contact upon viewers evaluation of the news story's "Interestingness." Table 45 shows the mean "Interestingness" ratings for the two variables and Table 46 reports the results of the two-factor analysis of variance.

TABLE 45.--Mean interestingness evaluation of news story for vertical camera angle and eye-contact.

	Vertical Camera Angle			
Eye-Contact	High	Level	Low	
Eye-Contact	+0.7	-0.1	-0.5	0.0
No Eye-Contact	+0.8	-0.2	-0.5	0.0
	+0.7	-0.2	-0.5	Overall Mean=0.0

TABLE 46.--Experiment I: analysis of variance summary table for dependent variable: "interestingness of news story."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Vertical Camera Angle	20.95	2	10.47	3.76	.03*
Eye-Contact	.05	1	.05	.02	.89
Interaction	.18	2	.09	.03	.97
Error	200.77	72	2.79		

*Significant at .05 level.

Table 46 shows that the differences in mean "Interestingness" ratings as the vertical camera angle was changed are significant. H_{25} predicted that the source being filmed by a low vertical camera angle, compared to the other vertical angles, would result in viewers evaluating his news story to be more "interesting." This did not occur. In

fact, "interesting" ratings for the low vertical camera angle versions had a mean of -0.5 where as for the high vertical camera angle versions it was +0.7 and for the level camera angle versions it was -0.2, the reverse of what was hypothesized.

The analysis shows that the main effect of Eye-Contact was not significant. Therefore, H_{22} prediction that the source by maintaining eye-contact with the camera, compared to no eye-contact, would result in viewers evaluating the news story to be more "interesting" was not supported.

Experiment II tested the effects of the manipulation of the variables Horizontal Camera Angle and Eye-Contact upon the dependent variable: Perceived Interestingness of the News Story. Table 47 shows the mean "Interestingness" ratings for the two variables and Table 48 reports the results of the two-factor analysis of variance.

TABLE 47.--Mean interestingness evaluation of news story for horizontal camera angle and eye-contact.

	Horizontal Camera Angle			
Eye-Contact	30° Right	0° Front	30° Left	
Eye-Contact	+0.1	+0.4	+0.2	+0.2
No Eye-Contact	-0.4	-0.3	+0.8	0.0
	-0.2	0.0	+0.5	Overall Mean=+0.1

TABLE 48.--Experiment II: analysis of variance summary table for dependent variable: "interestingness of news story."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	8.08	2	4.04	1.79	.17
Eye-Contact	1.26	1	1.26	.56	.46
Interaction	7.58	2	3.79	1.68	.19
Error	202.31	90	2.25		

Differences in mean "Interestingness" ratings of the news story as the horizontal camera angle was changed were not significant. Therefore, H_{28} which predicted there would be a difference was not supported. Also as the main effect of Eye-Contact was not significant, as in Experiment I, H_{22} was not supported in this experiment.

The effect of combinations of the factors Horizontal Camera Angle and Vertical Camera Angle upon viewers evaluation of the news story's "Interestingness" was tested in Experiment III. H_{31} predicted that a news source filmed by a combination of positioning a camera directly in from of him and at a low vertical camera angle, compared to all other combinations of camera angles, would result in viewers evaluating the news story to be more "interesting." Table 49 shows the mean "Interestingness" ratings of the news story for cells formed by the two variables and Table 50 reports the results of the two-factor analysis of variance.

TABLE 49.--Mean interestingness evaluation of news story for horizontal camera angle and vertical camera angle.

Vertical Camera Angle	Horizontal Camera Angle			
	30° Right	0° Front	30° Left	
High	0.0	+0.8	+0.6	+0.5
Level	+0.2	+0.7	+0.1	+0.4
Low	-0.6	-0.5	-0.1	-0.4
	-0.1	+0.4	+0.2	Overall Mean=+0.1

TABLE 50.--Experiment III: analysis of variance summary table for dependent variable: "interestingness of news story."

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Horizontal Camera Angle	5.57	2	2.78	1.01	.36
Vertical Camera Angle	19.19	2	9.59	3.49	.03*
Interaction	4.95	4	1.23	.45	.77
Error	321.71	117	2.74		

*Significant at .05 level.

The analysis shows that the main effect of the Horizontal Camera Angle, and the interaction of this factor with Vertical Camera Angle, are not significant and so H_{28} pertaining to the effect of horizontal angles and the interaction hypothesis are not supported.

However, as in Experiment I, the manipulation of vertical camera angles was found significant in affecting evaluations of the news story's "Interestingness." In Experiment III, "interesting" ratings for the low vertical camera angle versions had a mean of -0.4, where as for the high vertical camera angle versions it was +0.5 and for the level camera angle versions +0.4. These means were in the same order as those reported in Table 47 for Experiment I.

The results of both Experiment I and III show that the viewers' evaluations as to how interesting they found the experimental news story was affected by the positioning of the camera at a high vertical camera angle and a low vertical camera angle. Viewers found the news story to be more interesting when the camera was positioned at a high vertical camera angle than at the other two vertical camera angles. As the vertical height of the camera became lower they found the news story to be less interesting. Viewers reacted negatively towards the interestingness of the news story when the camera was looking upward towards the source from a low vertical camera angle.

The possible meanings of the significant differences found in this chapter will be discussed in the next chapter.

CHAPTER IV

SUMMARY, DISCUSSION AND CONCLUSIONS

Introduction

This study was designed as an exploratory experiment. It investigated whether the encoding style of certain horizontal and vertical camera angles could have an effect on audience perceptions of a television news source and his message. In addition, it also investigated whether eye-contact with the camera by the news source would have any effect on audience perceptions.

Little research is available regarding the encoding effects of television and film camera angles, and studies done in relation to eye-contact with the camera are inconclusive. Therefore, various attributes pertaining to each camera angle and eye-contact factor were derived from the aesthetic literature on television and film. These attributes were then related to their possible effects on audience perception of the various dimensions of source Credibility and visual Pleasingness, as well as Comprehension of the delivered message, Attitudes toward the message topic and the news story as a televised news event.

Summary of Hypothesis Testing

Of the thirty-two experimental hypotheses which were formulated to guide the research, only one hypothesis was partially confirmed. In Experiment II, where the factors of eye-contact and horizontal camera angle were manipulated, the main effect of eye-contact on Comprehension of the verbal information in the message was significant. H_{17} was confirmed. It predicted that subjects who viewed the news source while he maintained eye-contact with the camera would have higher mean scores on Comprehension than subjects who were exposed to the same news source when he did not have eye-contact with the camera.

The effects of eye-contact on Comprehension must be looked at as being tentative. In Experiment I, where the factor of eye-contact was manipulated along with vertical camera angles, the main effect of eye-contact on Comprehension was not significant. Thus it seems that, in one experimental situation when the source established eye-contact with the camera, he generated more Comprehension of his message content then when he did not establish eye-contact. However, the non-significant results in the other experimental situation indicates that the effect does not hold for all conditions. It may be that the implied effect of eye-contact on Comprehension depends on other factors pertinent to the communication situation.

The failure to confirm the experimental hypotheses leads one to conclude that each camera angle and eye-contact variable does not alone contain non-verbal cues which affect viewer connotations about the pictured subject. It may be, as indicated by Berlyne, that reactions to a visual stimulus pattern include ones determined by properties of the stimulus elements, by relations between stimulus elements, and by groupings of stimulus elements in connection with the experience, expectations and perceptions of the perceiver. Therefore, it may be that a camera angle or an eye-contact variable cannot project associations independently of the context and content of the communication situation.

Significant Findings

Even though the study failed to confirm the experimental hypotheses, analysis of variance indicated that the manipulated variables produced significant differences in perceptions of the source and message on four other criterion variables. Half of the significant effects were due to the interaction of factors. In an exploratory study, where there has not been much empirical evidence to specifically guide the development of hypotheses, such findings are not surprising. The hypotheses were developed from opinions on camera angle and eye-contact effects described in the aesthetic literature on television and film.

Pleasantness

One interaction of variables was found to affect the evaluation of a source's Pleasantness. Experimental hypotheses were based on Berlyne's theory that the compositional arrangement by which a person is portrayed can create different evaluations of the person's "pleasantness." As he notes, this evaluation depends on whether the compositional pattern contains cues from which the observer can easily define the substance or the meaning of the stimulus pattern. From other research and theory indicating that eye-contact is associated with more positive general attitudes toward the communicator, it was speculated that eye-contact would result in evaluations of more source "pleasantness."

There was an interaction affect between the horizontal-angle variable and eye-contact. When the source's eyes were pointed toward the left side of the television screen, he had positive ratings on Pleasantness. On the other hand, when the source's eyes were pointed toward the right hand side of the television screen, respondents gave negative ratings on Pleasantness. In both of the above instances no eye-contact was involved, because the source was looking thirty degrees away from the camera. When there is eye-contact, and the source looks directly into the camera to his right or when he looks directly into the camera in front of him the picture is rated as Pleasant. When he looks directly to the camera on his left the Pleasantness rating

is about neutral. The biggest effect was when there was no eye-contact. When the camera acted as an indirect observer the respondent considered the picture most pleasant when the source was looking off to the left.

Attitudes

Two different combinations of variables significantly influenced respondents attitude ratings toward the message topic. In the first case, it was found that, when the camera was pointing down at the source, and he was looking into the lens a more favorable attitude was produced toward the topic than if the camera was pointing up toward the source. However, when the source did not have eye-contact with the camera, a more favorable Attitude was produced when the camera pointed up toward the source than when it pointed down. The level camera angle did not produce a great deal of difference in Attitude, regardless if the source had eye-contact.

When vertical camera angle was compared with horizontal camera angle, the strongest influence on Attitude was observed when the camera pointed straight at the source and the camera pointed down at the source. When the camera pointed up at the source a strong negative influence occurred. These findings were obtained when eye-contact occurred in both manipulations. The amount of effect in this experiment was the strongest of any of the three

experiments. The level camera angle did not produce a great deal of differences on Attitude regardless of the camera's location on the horizontal plane.

Credibility

Our measure on attitudes dealt with influences on the message topic. An attempt was also made to test the message's influence on respondent perceptions of the message source. The message had no detectable influence on respondent perceptions of the Qualification or Safety of the source.

The experimental variables strongly influenced the perceived Dynamism of the message source. Aesthetic literature on film and television implies that vertical camera angles can project non-verbal cues which are used by receivers in judging the source. In the two experiments where vertical camera angle was manipulated, viewers' tended to perceive the source filmed by a camera positioned at eye-level to be more "frank," "extroverted," "colorful," and "aggressive" in his appearance than when perceived by the high or low vertical camera angles. This finding was directly the opposite from what was predicted in the

be by the viewers. It was predicted that a low vertical camera angle would be a "novel" perceptual pattern by Berlyne's definition, which would result in more positive evaluations of the news story's general Interestingness. However, results indicate this was not the case. In the two experiments where the vertical camera angle factor was manipulated, the pattern of effects was in the smae direction. Regardless of whether the source established eye-contact with the camera or not, and where the camera was located on the horizontal plane, when the camera pointed down at the source, subjects rated the news story to be more Interesting. When the camera looked up at the source, more negative ratings resulted, i.e., it was rated more "uninteresting."

Possible Limitations of the Study

One must always keep in mind the type of message and type of subjects used in a study when generalizing the results to other types of television messages, and to different populations.

The 278 college students comprising the subjects for this study were primarily single, in their early twenties, had achieved some college education, and dependent or parental support. Therefore, they are not respresentatives of the general adult population in our society. The sample was also not representative of the general adult

population in their use of the mass media for news information. The sample seemed to be highly interested in obtaining news information from the mass media, and utilized newspapers, television, and radio on a fairly heavy basis for news information. Of the three mass media, the subjects seemed to rely more on newspapers for their news information than the electronic media.

The higher educational level of the sample, and their high interest in news and utilization of the mass media for that information, may have made them more aware of media reporting styles then the general population. They may be more perceptive and critical of news-presentation styles.

The type of message which was used in this study was limited in scope. As in any exploratory experiment, controls must be employed in order to insure that the observed effects are attributable to the manipulated variables and not to some other factors. Control implies the act of simplifying the communication situation by eliminating or neutralizing all but those factors which can be observed conveniently in a single study. For sufficient control, and due to budget problems, only two factors at a time could be handled in one experiment. In a medium such as television, which can present a vast range of sources, in many different contexts, through numerous encoding styles, it is impossible to design one study, with sufficient controls,

which can be generalized over the entire medium. All any one researcher can do is to try his best. What can be obtained from one study situation are approximations of the effects of the manipulated variables, which can then be studied in connection with different variables in further research.

For sufficient control in the present exploratory study, it was necessary to restrict the type of communication act which was studied. In this study, all experimental conditions consisted of a single communication situation--an unknown source, identified only by occupation (lawyer), making a statement which may have been of low ego involvement for the subjects. The experimental message and visualization of the source ran for only one-minute. This story was seen as the third news story in a series of four filmed news stories presented to the subjects as an excerpt of a local television newscast. An anchorman from a local commercial television station introduced each story.

The magnitude of the camera angles used in this study, especially the vertical angles, was restricted from what is potentially possible. In order to not overly dramatize the perceived vertical angle, the camera was positioned seven inches below the eye-level of the news source for the low vertical angle, and conversely set at seven inches above eye-level for the high vertical angle.

The camera was set at a distance of four feet from the news source and used a 90mm lens. Vertical angles set at a lower and higher level may be more noticeable and result in entirely different responses from the viewers. In reference to the present study, it may be that as the camera moves farther away from the news source, the viewer is less likely to notice the vertical camera angles, as these angles become less acute.

Subjects viewed the experimental newscast in a twenty-seat theater. Such a viewing location may induce more attention, less distractions, and restrictive choice in exposure than what would be found in a home viewing situation. Therefore, the viewing conditions under which the experiment took place may have contributed to more prominent effects than what could be expected from the same manipulation of the variables in a different viewing situation.

Generalizability

As the topic used for the experimental news story in this study was not a student-bound topic, there is no reason to believe that it cannot be generalized to other kinds of receivers. The topic dealt with the financial needs of the federally operated passenger railroad system. It was a straight factual message, containing a one-sided argumentative structure as to why Congress should increase the funding for AMTRAK. The presentational style of the

story was typical of many local television presentations involving statements of abstract ideas, which usually involve showing a talking face before the camera, rather than actions and events. In many television presentations (e.g., news reports, editorials, rebuttals to editorials, commercial messages) due to time requirements, and production or physical limitations, the person presented on the screen is seen for only a few moments and from one point-of-view. It is common in television, especially in news reporting, that the viewer is exposed to a spokesman that is unknown to him, who is only seen for a few minutes, and the situation or context in which the statement is being made is not explicitly shown.

It is possible that the visualization utilized in the experiment raised a question in the subjects' minds as to the authenticity of the news story. The novelty of the various camera angles used in certain versions may have produced connotations that the news story had been structured or tampered with by the experimenter. However, the significant results obtained on various measures with respect to the manipulated variables makes this particular explanation somewhat doubtful.

The significant differences which were obtained and trends in the data suggest very strongly that anyone watching a televised news source, reacts to the way in which the

source is filmed as well as his appearance and the content of the message. The subjects were not passive respondents to the non-verbal stimuli formed by manipulation of the camera angle factors and the eye-contact variable. Rather, they did perceive such stimuli and reacted to them, even though the source was unknown to them and they only saw him for a few moments. In this study, viewers did employ definable dimensions of recognition in perception of what might be characterized as "messages" encoded in the language of "camera angles." The camera can lead to positive or negative perceptions of the person seen by viewers, depending where it is positioned.

It seems that manipulation of camera angles can create changes in viewer perceptions and therefore changes in the evaluation of a source. However, the proposition that each camera angle inherently contains non-verbal stimulus cues which affect perceptions in a certain manner does not seem tenable. Rather it seems to be related to the communication situation, the combination of camera compositional factors employed, and the criterion variable being affected. For example, the results of this study indicate that viewers' perceptions as to how "safe," "openminded," "honest," and "friendly" (Safety dimension of Credibility), the source appeared to be were not affected by manipulation of horizontal camera angles, vertical camera angles, and

source eye-contact with the camera. In addition, how "trained," "experienced," "informed," and "qualified" (Qualification dimension of Credibility) the source was perceived to be were not affected by the same manipulated variables. However, manipulation of vertical camera angles did affect significantly viewer perceptions as to how "frank," "extroverted," "colorful," and "aggressive" (Dynamism dimension of Credibility) the source appeared to be while delivering his message. Results indicate that an eye-level vertical camera angle produced the highest mean ratings on Dynamism, and a camera pointed up toward the source resulted in the most negative ratings.

While we need to know more about how the visual perspective provided by the camera angle factors result in perceptions of non-verbal cues which affect viewers' connotations of the source and message, the empirical support for its existence which has been presented in this study suggests it is an important phenomenon. Therefore, as the visual perspective provided by the camera angle seems to provide non-verbal cues which viewers do utilize in their perceptions of a source and message, it becomes important for a television practitioner to understand this effect in order to be a more effective mass communicator.

Implications

The television director, news editor, and cameraman should constantly remember when selecting shots of an information source that the audience is going to react to the message depending on the perspective from which the source is filmed. It is not so much that certain camera angles inherently contain implicit attributes, but rather how they lead to viewers' perceiving the pictured source's attributes in a given situation. In a situation where an information source is to be seen in a close-up shot, with no explicit visual cues being provided as to whom he is addressing, other then the viewing audience, practitioners should probably consider the expectations and norms by which viewers conduct interpersonal interactions.

Credibility

The importance of such considerations can be seen in reference to the findings of this study on perceptions of the source's Dynamism. These findings support Mascelli's proposition that when shooting a person in close-up, even in situations of no eye-contact, the most normal and natural projection of the person, and therefore the best camera position, is at eye-level.[1] Results of this study indicate that more positive perceptions of the source's Dynamism

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[1]Joseph V. Mascelli, The Five C's of Cimematography (Hollywood, Calif.: Cine/Graphic Publishers, 1965), p. 14.

resulted from the eye-level camera position regardless of where the camera was situated on the horizontal plane. While these findings are also in support of his suggestion that a low camera angle pointing up to the source can result in negative reactions, they tend not to be supportive of the same reaction to a high vertical camera angle.

The reactions to the vertical camera angles on Dynamism may have resulted from viewers' expectation as to the appropriate orientation between a communicator and receiver during a communication act. Research by Mehrabian and Sommer indicates that the orientation of a communicator towards his receivers are non-verbal cues which do affect attitudes toward the communicator.[2] A number of studies in this area have found that a close distance between communicator and receiver is associated with more positive attitudes, but that usually people of equal status interact closer than people of unequal status.[3] In all experimental situations, the source was seen in a close-up shot, which corresponds to the viewpoint described by Mehrabian for an intimate personal interaction. Camera angles which allowed the receivers to be at an equal level or to look down at

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[2]Albert Mehrabian, "Significance of Posture and Position in the Communication of Attitude and Status Relationships," Psychological Bulletin, 71 (1969), 359-372; Robert Sommer, "Small Group Ecology," Psychological Bulletin, 67 (1967), 145-151.

[3]K. B. Little, "Personal Space," Journal of Experimental Social Psychology, 1 (1965), 237-247; Albert Mehrabian, "Inference of Attitude from the Posture, Orientation, and Distance of a Communicator," Journal of Consulting and Clinical Psychology, 32 (1968), 296-308; David F. Lott and Robert Sommer, "Seating Arrangements and Status," Journal of Personality and Social Psychology, 7 (1967), 90-95.

the source produced perceptions of more immediacy and positive feelings during the interaction. However, when the source was looking down at the viewers, more negative reactions occurred toward the source.

Interestingness

Vertical camera angles were found to be the primary factor in affecting viewers' perceptions as to how Interesting they perceived the news story to be. Viewers found the news story to be less Interesting when the source was filmed by a camera angled to look upward, regardless of where the camera was located on the horizontal plane and whether the source established eye-contact. Again, it seems that in such a close interaction situation, the receivers do not like to be looked down upon, regardless of whether the eye-contact is explicit or not. Of the three vertical camera angles, the camera pointed down toward the source resulted in higher evaluations of the news story's Interestingness than the eye-level camera position. This would seem to be caused by the slight novelty of the high angle over the normal viewpoint provided by the level camera angle. However, a camera positioned to look down at the source by not violating the expected norm of the interaction situation, was rated positively instead of negatively.

Attitudes

Vertical camera angles were also found to affect viewers Attitudes toward the message topic. Negative attitudes apparently resulted from a low vertical camera angle when the camera was directly in front of the source and he looked into the camera. More positive attitudes were produced by the camera at eye-level and high vertical angles when accompanied by eye-contact and the frontal position. As indicated in Chapter I, the theoretical basis of the research dealing with "immediacy," seems to support these particular finding more than any of the other concepts. Thus the normal or novel angles, by not violating the viewers connotations of appropriate distance and orientation relationships between interactants, produced more positive attitudes. It may have been that the low camera angle, when the source established eye-contact with it, violated this expectancy and by doing so resulted in negative Attitudes. It may be that the low vertical camera angle in this situation makes the source appear to be forcing an opinion upon the receivers.

The results also point to an effect which is a divergence from the consistent effects found throughout the study. The low vertical camera angle did produce more positive Attitude ratings towards the topic when the other factors of eye-contact and horizontal camera angle differentiated it from the norms cited for intimate interactions between source and receiver. When the camera was positioned

directly in front of the source and at a low vertical angle, more positive attitudes occurred when the source did not establish eye-contact with the camera then when the source had no eye-contact with the level and high vertical cameras at the same frontal position. The low vertical angle also resulted in more positive attitudes when the camera was at a thirty degree side angle then the high and level angled cameras at this position. It may be that, since the perspective provided by low camera angle is not the expected viewpoint for the intimate relationship, the viewers did not find this combination of horizontal camera angle and low vertical camera angle to be as negative when they perceived that the source was directing his attention elsewhere or was not directly confronting them.

Comprehension

There is also a tentative indication in these results to support the implications from interpersonal communication that eye-contact between a communicator and receiver results in greater interest and attention, and may lead to higher Comprehension of information. However, eye-contact factor was found to be a significant variable in affecting Comprehension in only one of the two experiments where it was manipulated. As the means on Comprehension did not vary greatly for any of the experimental groups it would seem that manipulation of the variables may not have a direct affect on viewers Comprehension of the information contained in the verbal part of the message.

Pleasantness

The measurement of perceptions of source Pleasantness was based on Berlyne's findings that a compositional pattern which presented some challenge to observers to define its meaning or substance, but could be easily resolved was rated to be more "pleasant" than "unpleasant." This concept was along the line of findings by Mehrabian that a communicator communicates a feeling of "pleasantness" when his shoulders were turned slightly at an angle to his receivers, but he still maintained eye-contact with them.[4] In fact Mascelli proposed that a three-dimensional modeling of a person, created by a camera at a diagonal angle of at least thirty degrees from the direction the subject's shoulders are facing, would be more aesthetically pleasing then a direct frontal angle. As noted earlier, perceptions of source Pleasantness were significantly affected by a combination of horizontal camera angle and eye-contact. The implications from the direction of the interaction would seem to make such Pleasantness ratings dependent on the screen direction in which the televised source was looking. When the source is shot from a diagonal angle the receivers find the visualization to be more Pleasant when he is looking towards the left side of the screen, than when he is looking towards the right side of the screen. However, this effect needs to be investigated further before

[4]Mehrabian, "Inference of Attitude from the Posture, Orientation, and Distance of a Communicator."

any implications can be formed, as no significant differences were found between the two side horizontal angles in relation to their effects on ratings of Pleasantness when they were manipulated along with the vertical angles.

As the results of this study do demonstrate that the effects of the camera point-of-view does project that meaning which receivers perceive to be communicated, writers of the aesthetic literature on film and television should try more to qualify their proposition regarding the effects of camera angles. While most of the literature notations about camera angles stem from fictional drama experiences and conventions, it seems that they cannot be generalized over to a factual-presentation type of message. The meaning of a camera angle in one type of situation can be dysfunctional in a different context. Therefore, this writer would suggest that the best approach to explaining the use of camera angles in the aesthetic literature would be to approach their effects in terms of the psychological and social determinants of behavior. This however, may be difficult to accomplish until further research is done to determine how the various encoding techniques of cameras, as well as other tools utilized in television presentations, affect audiences.

Future Needed Research

It is recommended that the effects of camera angle and eye-contact factors on image of the source and attitudes toward the message be further investigated. Specifically, it is recommended that this study be replicated, utilizing different sources, contextual situations, more ego-involving topics, and different television production factors.

Results of this study show that the vertical camera angle factor did affect respondents' perception of the source. However, the experimental news source was unknown to the subjects. If the source had been known to the respondents prior to the message, someone like their U.S. Congressman or Senator, their perceptions of his credibility may have reduced the effects of camera angles. The effects of camera angles on a known source should be investigated.

Research indicates that how ego-involving the topic is for the receivers has a direct effect on the way they evaluate the communicator. In this study, if a more ego-involving topic had been used, e.g., statement about the dangers of pre-marital sex, the effects of the manipulated variables might have been different. The effects of camera angles and eye-contact factors on the image of a source when his message pertains to strong held attitudes should be studied.

The effects of camera angle and eye-contact manipulations may be reduced if the source is filmed by a camera at a greater distance from him than the four foot distance used in this study. Mortensen, Mehrabian, Little, and others who have done research into "immediacy" effects on interpersonal interactions, suggest such an effect may occur. They hypothesize that the distance between interactants can affect interpretations of what is said and done. What would be the effects on viewers' perceptions of the source and his message if the variables manipulated in this study were combined with a shot which framed the source from his waist to the top of his head? From such a distance, at what degree of an angle must the camera be before viewers notice the resulting source position on the screen and assign connotations to its portrayal of the source?

Would the camera angle and eye-contact factors have the same effects as found in this study if the opening shot of that source established an explicit situational context for the communication act? If the opening shot of the news source's appearance established him talking with a news reporter in a particular setting, would a succeeding close-up shot involving the camera angle and eye-contact factors affect perceptions of the source?

There is a need to empirically study the factors of television production and how they act as implicit non-verbal cues which affect the total message. This

study has only scratched the surface. But it does suggest that how the factors of television production are utilized can affect receivers perceptions of other factors in the total message. More research needs to be done. Due to the cost of doing research on television, as well as the vast range of messages and production technique variables, it is only feasible to study two variables at a time. However, only through such research will it ever be possible to know just how the medium of television actually communicates.

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APPENDIX A

EXPERIMENTAL NEWS STORY

Video	Audio
LIVE	ANCHORMAN: A conference of Southern California rapid transit planners was held today in the Civic Auditorium. Richard Long, a lawyer for the National Association of Railroad Passengers, spoke to the conference about the future development of AMTRAK. AMTRAK is the federally subsidized corporation which now runs all passenger trains in the United States. Mr. Long was asked why he feels Congress should increase the level of federal aid for AMTRAK.
FILM SOF	RICHARD LONG: Last year, Congress gave AMTRAK 40 million dollars to set up a government-subsidized corporation to run the railroads. It does not seem fair to loyal railroad passengers, because, at the same time, Congress granted 530 million dollars to air travel just for aviation projects controlled by FAA.

Video	Audio
	Another point I want to make... railroad rights-of-way already in existence can handle virtually unlimited amounts of traffic. In Manhattan, New York, for example, existing railroad terminals can handle about 850 thousand passengers per year per acre of land used. In the same area, airport terminals can handle only about five-thousand passengers per year. Most important, I think... During the past 10 years, accidents on railroads have killed only 10 persons per year per million passenger miles travelled. Airlines, on the other hand, have averaged about 30 persons killed per million passenger miles flown.

APPENDIX B

TELEVISION NEWS STORIES

Video	Audio
VFW COUPON COLLECTION	
LIVE	ANCHORMAN: The Junior Units of the Women's Auxiliary of the Mission Valley VFW... are busily involved in a monumental task. They are up to their ears in cardboard coupons for the second time... and loving every minute of it.
FILM SIL/1:21	Four of the 17 members in the unit worked for a while today...trimming ...trimming...and trimming up coupons removed from products sold by General Mills. For two million... 200 thousand of the little coupons ...these girls can obtain a 66 passenger bus... A 1972 model... for... Starlight Center in Chula Vista. The center works with children needing special care. Last year...the group...collected one point 8 million coupons and helped the San Diego Kidney foundation obtain a Dialysis Machine.

Video	Audio
	Such projects must be approved by the company in writing...and there is a deadline. The little seals... must be clipped...counted into stacks of 100...and packaged in thousands...then shipped to Minneapolis. This particular project must be completed by October first.
	Pat Thomas...who is the adult adviser for the girls unit...says the Department of Motor Vehicles has been most helpful...in serving as a collection point throughout the country...where people can stop and contribute coupons to the cause.
	The unit...which has members ranging from six to sixteen years...worked a total of 4-thousand hours on the project...by the first of this year.
	But if you have to be clipped...I can't think of a better way to have it happen.

Video	Audio
SCUBA DIVERS	
LIVE	ANCHORMAN: Nearly 100 scuba diving instructors from fifteen states and Canada are attending a refresher course this week in San Diego.
FILM SIL/25	The "Instructors Clinic" was held today in Kellogg Park at La Jolla Shores. The scuba instructors are learning advanced methods of training to earn certificates as diving instructors from the National Association of Skin Diving Schools. Employees of the San Diego Divers Supply are teaching the course. The reason behind the course is to standardize scuba training programs and establish professional standards for diving instructors.

Video	Audio
MORAL FIBER AWARD	
LIVE	ANCHORMAN: The San Diego Kiwanis Club presented its 64th Moral Fiber Award today during a luncheon at the El Cortez Hotel.....
FILM SIL/30	This time the award went to 15-year-old Steve Patton, a student at Horace Mann Junior High. Steve was honored for his successful efforts in stopping a run-a-way car and then bringing aid to the injured owner of the car. The presentation was made by Frank Price Chairman of the Moral Fiber Award Committee... The actions of young Patton impressed the police department to the extent that Chief Ray Hoobler sent him a citizens letter of commendation.

APPENDIX C

QUESTIONNAIRE

C1
C2_____Study Number
C3

C4
C5_____Subject Number
C6

C7
C8_____Film Number

C9_____Card Number

This research is concerned with different ways of putting together a local television news program, and how each method will affect the viewers of the news program. Now that you have viewed an excerpt of a local news program, we would like to ask you to fill out this questionnaire. This will give us some assessment of your reaction to the news program.

Below are statements some people have made about airplanes and passenger trains. For each statement, tell whether you agree or disagree with it, then indicate how strongly you feel about your opinion on that topic.

10. Either planes or trains are alright, but I prefer to fly.
_____agree
_____neutral, don't know
_____disagree

11. I just don't like to fly!
_____agree
_____neutral, don't know
_____disagree

12. I can't imagine every taking a passenger train anywhere.
_____agree
_____neutral, don't know
_____disagree

13. We gotta keep our passenger trains.
_____agree
_____neutral, don't know
_____disagree

14. Airplanes are the only way to travel.
_____agree
_____neutral, don't know
_____disagree

15. I wish there were more cross-country passenger trains in the United States.
_____agree
_____neutral, don't know
_____disagree

Below are some questions about the news story dealing with AMTRAK: Put an "X" before the answer you think most correct:

16. Last year, Congress allocated to AMTRAK:
_____ 10 million dollars
_____ 40 million dollars
_____ 80 million dollars
_____100 million dollars

17. Mr. Long stated in the newscast that he believes Congress' failure to adequately subsidize AMTRAK is not fair to:
_____corporations shipping articles too large for air shipment
_____individuals who do not like to fly
_____loyal railroad passengers concerned about adequate service
_____railroad employees who are paid less than airline employees

18. How do the subsidies given by the U.S. government to the airlines and to AMTRAK compare?
_____much more subsidies for airlines
_____a little more subsidies for airlines
_____about the same
_____a little more subsidies for AMTRAK
_____much more subsidies for AMTRAK

19. Railroad rights-of-way already in existence can handle:
_____limited amounts of additional passenger traffic
_____moderate amounts of additional passenger traffic
_____unlimited amounts of additional passenger traffic

20. The number of passengers per year (per acre of land used) that can be handled on land occupied by railroad stations in Manhatten, New York, was compared with the same statistic for airports. Which of the following best reflects what was stated:

_____railroad terminals can handle many times more passengers per acre
_____railroad terminals can handle somewhat more passengers per acre
_____railroad and airline terminals can handle about the same number per acre
_____airline terminals can handle somewhat more passengers per acre
_____airline terminals can handle many times more passengers per acre

21. During the past ten years, on a basis of number of deaths per million passenger miles travelled, railroads have been:

_____somewhat safer than airlines
_____three times safer than airlines
_____ten times safer than airlines
_____forty times safer than airlines

22. During the past 10 years how many passengers per year per million miles travelled have been killed by airline accidents:

_____10
_____20
_____30
_____40

Now we would like to have you do something different. You heard comments from Richard Long, a lawyer for the National Association of Railroad Passengers, who spoke about the needs of AMTRAK. There are many ways you can judge this news source. Let's take the interesting-uninteresting ratings as an example. Look at the following rating scale

interesting___:___:___/___/___:___:___uninteresting

First, you should decide which of the words on the two sides of the scale best describes the lawyer.

Suppose you decide the lawyer is more "interesting" than "uninteresting." You would then put your "X" mark in one of the three spaces between the center space and the word "interesting."

You would show how interesting you consider the lawyer by how close you put your "X" mark to the word "interesting."

If you consider the lawyer more "uninteresting" than "interesting," you would put your "X" mark somewhere on the other side of the middle space...depending upon how "uninteresting" you considered him.

If you consider the lawyer to be neutral on the scale, both sides of the scale equally associated with the lawyer, or if the scale is completedly irrelevant, unrelated to the lawyer, then you should place your "X" mark in the middle space.

Place your "X" mark in the middle of spaces, not on the boundaries. Never put more than one "X" mark on a single scale. Be sure you mark every scale—do not omit any.

Starting on this page and the following pages we would like you to rate Mr. Long, who was seen in the third news story talking about AMTRAK, on this type of scale.

RICHARD LONG, RAILROAD LAWYER

23. safe___:___:___/___/___:___:___dangerous

24. untrained___:___:___/___/___:___:___trained

25. frank___:___:___/___/___:___:___reserved

26. close-minded___:___:___/___/___:___:___opened-minded

27. experienced___:___:___/___/___:___:___inexperienced

28. introverted___:___:___/___/___:___:___extroverted

29. honest___:___:___/___/___:___:___dishonest

30. uniformed___:___:___/___/___:___:___informed

31. colorful___:___:___/___/___:___:___dull

32. unfriendly___:___:___/___/___:___:___friendly

33. qualified___:___:___/___/___:___:___unqualified

34. aggressive___:___:___/___/___:___:___meek

35. pleasant___:___:___/___/___:___:___unpleasant

What is your opinion about having the AMTRAK story in the newscast?

36. uninteresting___:___:___/___/___:___:___interesting

37. good___:___:___/___/___:___:___bad

38. Finally...we'd like to ask you a few questions about you as a person...
On an average day, about how many minutes do you spend reading daily newspapers?
_____minutes

39. About how often do you watch televsion news program?
_____at least once a day
_____almost every day
_____once or twice a week
_____less often

40. About how often do you listen to radio programs?
_____three or more times a day
_____once or twice a day
_____about every other day
_____less often

41. SEX _____Female
_____Male

42. What is your (approximate) age?
_____Under 18
_____18-20
_____21-24
_____25-34
_____35-44
_____45-54
_____Over 54

43. How many hours per week are you employed in a job?
_____hours per week

44. How many credit units of course work are you presently enrolled for?
_____credit units

45. Are you now:
_____single
_____married
_____divorced/separated
_____widowed

46. With whom do you live:
_____live alone
_____with parents
_____with relatives
_____with non-relatives
_____spouse and dependent children
_____spouse only