THE EFFECTS OF COURTROOM CAMERAS ON VERBAL BEHAVIOR:
AN ANALYSIS OF SIMULATED TRIAL WITNESS TESTIMONY
IN COURTROOMS USING TELEVISION CAMERAS

By

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Donald Lewis Shores, Jr.

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This study investigated the effects of the presence of a television camera on the content of trial witness testimony. The primary reason for conducting this study was to begin providing a sound factual base for decision-making concerning the psychological effects of cameras in the courtroom. Specifically, this inquiry investigated possible effects of the television camera's presence on the ability of witnesses to present cogent testimony.

Testimony was obtained from 58 college-aged subjects during a simulated trial situation using an actual courtroom. The testimony was analyzed to determine the type-token ratio, mean word length, average word frequency of the first 100 words of each subject's testimony, the total adjusted length of the testimony, and the ratio of trivial

words used to the total number of words used by each subject. Using three independent variables (the camera situation, communication apprehension scores, and vocabulary scores), an analysis of covariance revealed no statistically significant differences among the dependent variables between subjects testifying with the television camera in the courtroom and those testifying without the camera present.

However, significant ($p < .05$) main effects were found between vocabulary and average word frequency ($p < .04$), and between communication apprehension and total adjusted testimony ($p < .001$). A significant interaction effect ($p < .04$) existed between the camera situation and communication apprehension for the average word frequency of subjects.

A self-report instrument completed by subjects after testifying in the courtroom indicated no-camera subjects perceived more distractions (10 of 26) in the courtroom while testifying than camera-condition subjects (9 of 32). Four individuals mentioned the television camera as a source of distraction.

This research and analysis led to the following conclusions:

1. The television camera alone has no significant effect on the lexical diversity of witness testimony.
2. An interaction of the camera situation with an individual's personal level of communication apprehension significantly affects that person's pattern of repeating words while testifying in the courtroom.
3. A person's normal level of communication apprehension significantly affects his/her length of testimony. Individuals possessing higher levels of communication apprehension presented longer testimony than individuals with lower communication apprehension scores.

CHAPTER I

INTRODUCTION

After more than 60 years, the legal debate continues over the use of cameras in the courtroom. As this deliberation continues, social scientists recognize that television viewing occupies a significant part of the lives of our country's citizens. A recent national poll (Roper, 1979) indicated people in the United States rely on television for most of their news and information. In the same vein, United States Supreme Court Chief Justice Warren Burger in the majority opinion in Richmond Newspapers, Inc. v. Virginia (1980) recognized the decline in firsthand observation of courtroom trials and an increasing reliance of citizens on the media to acquire information about legal proceedings. Justice Burger stated that this reliance on media in one sense "validates the media claim of functioning as surrogates for the public" (pp. 5012-5013).

Nevertheless, a strong argument articulated by the Supreme Court in Estes v. Texas (1965) provided the basis for prohibiting cameras in many state courts because of the undeveloped technology of broadcasting and the public's

lack of familiarity with broadcasting. Later in a report to the Florida Supreme Court, Circuit Judge Paul Baker (1977) indicated he perceived a change in the public's view of broadcasting:

The day has indeed arrived when television is commonplace in our daily lives. Technical advances over the last ten years have made equipment less obtrusive than during Estes and the majority of the media personnel have come to view their role as the conscience of the community with greater responsibility. (p. 14)

In the 1980's, a second argument appears to constitute the primary cause for delay in implementing courtroom camera coverage--a fear of the possible psychological effects of the camera on trial participants. The abstractness of this argument makes rebuttal difficult. In Chandler v. Florida (1980) attorney Joel Hirschhorn emphasized to the court that "common sense" and "human nature" require the striking down of the Florida rule allowing cameras in the courtroom (Associated Press, Gainesville Sun, November 13, 1980, p. 1A). Hirschhorn's "common sense" plea, in addition to his lack of supporting evidence, underscores the need for research to ascertain what the psychological effects of cameras in the courtroom actually are, if such effects indeed exist.

Purpose

The conflicts between our country's lawyers and judges and members of the news media as they interpret issues related to the Constitutional concepts of fair trial and free press comprise a classic clash involving these two elements of our Federal Constitution's Bill of Rights. The first amendment's guarantee of press freedom and the sixth amendment's assurance of the defendant's right to a fair, public trial appear to collide in the controversy concerning the use of cameras (both still and television) in the courtroom (Fatzer, 1979, p. 232). The assumption that the mere presence of cameras "could deny the defendant the constitutional right to a fair trial" (Graham, 1978, p. 546) lies at the center of the debate regarding the use of cameras in the courtroom.

Since the 1930's, members of the legal community in discussing the courtroom behavior of trial participants, have emphasized the possibility of constraining psychological effects being caused by the presence of still and/or television cameras. The Dean of the Harvard Law School, Erwin Griswold (1962), suggested that even if the noise and disturbance elements of courtroom cameras could be completely controlled "there would still remain the

fact of broadcasting and televising, and the inevitable psychological impact which arises from that fact" (p. 617).

U.S. Supreme Court Justice William Douglas (1960) echoed Griswold's concern as he also alluded to the factor of "staged performance" as a possible detriment caused by the presence of courtroom cameras:

It is the fact of photography, the fact that the intrusion is present, the fact that all the principals to the trial-- judge, witness, lawyer, jury--are "on stage" which is inescapably distracting from the task at hand. It is the fact that these participants are made actors which is dangerous and disturbing.
(p. 7)

Other members of the legal profession have expressed concern that cameras recording judicial proceedings might impair the ability of the witness to respond. U.S. Supreme Court Justice Tom Clark in the majority opinion in Estes v. Texas (1965) wrote that the "impact upon a witness of the knowledge that he is being viewed by a vast audience is simply incalculable" (Gillmor, 1974, p. 457). The possible outcomes mentioned by Clark could be collectively categorized as distortion. Agreeing with this classification, Griswold (1962) feared the presence of cameras would cause a measurable difference in participant output and "an inevitable interference with the administration of justice" (p. 617).

While various claims could be conjectured, methodical investigation is needed to determine what effects cameras have on witnesses. Approaching the courtroom scene as a communication situation, we find the circumstances promote a continuing interaction among the participants in the situation. The witness comprises one vital element in the trial process (Hirschhorn, 1979, p. 30; Pryor, Strawn, Buchanan, and Meeske, 1979, p. 22; Tongue & Lintott, 1980, p. 792); the lawyers, the judge, the jury members, and other court officials are the other parties filling specific roles. It is the witness, however, who must enter the unfamiliar environment of the courtroom, swear to tell the truth, and then respond to inquiries from competing advocates in the controversy. As many jurists have stated, cameras could possibly change or even distort the continuing interactions in the courtroom. The problem lies in the discovery and the objective measurement of this possible distortion, if it does exist.

This dissertation reports the findings of a study designed to quantify the effects of a courtroom television camera on the ability of the witness to present cogent testimony. By the observation of witness testimony in a controlled, experimental environment and the analysis of

the testimony for relative complexity, the study begins the process of quantifying the effects of a television camera on the witness's ability verbally to express ideas.

The complexity of the communication process makes particular demands of research conducted in this particular communication situation. Viewing the trial as a communication situation, we observe countless variables interacting. With the scope of this inquiry limited to the witness's communication behavior, this study initiated investigation of a single component or participant in the trial process. The factors affecting even this one component could comprise a long list. For the purposes of this study three specific factors received attention: The effects of the presence of a television camera in the courtroom on the witness's ability to present testimony; on the witness's anxiety about communicating; and on the witness's ability to use language (vocabulary).

Historical Background of the Current Controversy

The Bruno Hauptmann trial in 1935 prompted the American Bar Association seriously to consider the potentially obtrusive nature of courtroom media coverage (White, 1979, p. 4). The arrest and trial of Hauptmann for the

kidnapping of the Charles Lindbergh baby provided the news media sufficient incentive to enter the courtroom and report directly to the public. The sensational nature of the trial encouraged intense competition among members of the media to provide the most complete, realistic coverage. The large number of media personnel present for the trial (approximately 700 news reporters and over 100 photographers) presented the court with the problem of controlling media persons' movements during the trial to prevent obtrusive interference in the trial proceedings (White, 1979, p. 4).

Subsequently, the American Bar Association explored the possible repercussions of the presence of the media in the courtroom and in 1937 adopted Canon 35 as one of its Canons of Judicial Ethics (Aspen, 1978, p. 82). Canon 35 forbade the taking of photographs in the courtroom or the broadcasting of trial proceedings. The ABA edict stated that such reporting was "calculated to detract from the essential dignity of the proceedings, degrade the court and create misconceptions with respect thereto in the mind of the public" (Gillmor, 1974, p. 452). In 1952, the ABA amended Canon 35 to include television coverage as well (Wolf, 1978, p. 419).

Pressure from media representatives for a relaxing of Canon 35 resulted in a 1955 Texas experiment in which live proceedings of a murder trial were televised to the public (White, 1979, p. 5). Following the experiment, the Texas Bar Association declined to endorse Canon 35. The next year, the Colorado Supreme Court began a series of hearings examining the use of cameras and their effects in the courtroom. Thus in 1956, Colorado replaced Canon 35 with a rule allowing camera coverage of trials (Wolf, 1978, p. 419).

Events in Texas and Colorado began to erode support for Canon 35, or at least raise a reasonable doubt about its desirability. The decade of the 1950's closed with Colorado, Oklahoma, and Texas allowing cameras to cover judicial proceedings at the discretion of the judges and the media, and at least twelve other states reporting use of cameras in isolated cases or as common practice (White, 1979, p. 6).

The 1965 review of the Billie Sol Estes case by the U.S. Supreme Court slowed the progress of courtroom camera coverage. The Court reviewed Estes' 1962 swindling conviction and ruled that televising a state criminal trial was a denial of due process (Wolf, 1978, pp. 420-421).

The courtroom scene during the Estes trial was graphically described to the Supreme Court: Cables and wires "snaked across the courtroom floor," microphones "beamed at the jury box and counsel table," yielding the conclusion "that the activities of the television crews and news photographers led to considerable disruption" (Gillmor, 1974, p. 454).

In its Estes decision the Supreme Court outlined at least four ways televised trials could cause unfairness. In the majority opinion, Justice Tom Clark enumerated these areas of concern:

(1) The potential impact of television on the jurors is perhaps of the greatest significance. . . . The conscious or unconscious effect that this [trial notoriety] may have on the juror's judgment cannot be evaluated. . . . [I]t is practically impossible to assess the effect of television on jury attentiveness, . . . and new trials plainly would be jeopardized in that potential jurors will often have seen and heard the original trial when it was telecast.

(2) The quality of testimony in criminal trials will often be impaired. The impact upon a witness of the knowledge that he is being viewed by a vast audience is simply incalculable.

(3) A major aspect of the problem is the additional responsibilities the presence of television places on the trial judge.

(4) Finally, we cannot ignore the impact of courtroom television on the defendant. Its presence is a form of mental--if not physical--harassment, resembling a police line-up or the third degree. . . . A defendant on trial for a specific crime is entitled to his day in court, not in a stadium, or a city or nationwide arena. (Gillmore, 1974, pp. 456-458)

Although the high court essentially banned camera trial coverage in reversing the Estes decision, Justice John Harlan in his concurring opinion spoke optimistically about the future development of camera technology and the public's acclimation to the presence of television cameras which could prompt a rehearing of the issue.

Finally, we should not be deterred from making the constitutional judgment which this case [Estes] demands by the prospect that the day may come when television will have become so commonplace an affair in the daily life of the average person as to dissipate all reasonable likelihood that its use in our courtrooms may disparage the judicial process. (Gillmor, 1974, p. 460)

In his Estes majority opinion, Justice Clark also indicated cameras might find a place in the courtrooms of the future:

It is said that the ever-advancing techniques of public communication and the adjustment of the public to its presence may bring about a change in the effect of telecasting upon the fairness of

criminal trials. But we are not dealing here with future development in electronics. Our judgment cannot be rested on the hypothesis of tomorrow but must take facts as they are presented today. (Gillmor, 1974, p. 458)

The 1970's witnessed the acknowledgment of the potential value of the electronic media in courtroom trial situations even though restrictions remained intact. In August, 1972, the American Bar Association replaced Canon 35 with Canon 3A(7) of the new Code of Judicial Conduct (Wolf, 1978, p. 421). The new canon continued the ban on photographing and broadcasting trial proceedings but recognized the positive uses of audio and videotaping for presentation of evidence, maintaining court records, and educating lawyers and judges (Kornblum, 1973; Miller and Fontes, 1979; and Miller, Bender, Florence and Nicholson, 1974). Proponents of camera courtroom coverage have tried almost yearly further to relax the restrictions of Canon 3A(7). Even so, as late as February, 1979, the ABA House of Delegates rejected any change in the canon (White, 1979, p. 7).

By early 1981, the following thirteen states, by judicial decision, allowed still and television camera coverage of courtroom proceedings on a permanent basis:

Alabama, Alaska, Colorado, Florida, Georgia, Montana, New Hampshire, New Jersey, North Dakota, Tennessee, Texas, Washington, and Wisconsin (Carter, 1981, pp. 52-86). In addition, sixteen states now allow courtroom cameras on an experimental basis: Arkansas, Arizona, California, Idaho, Iowa, Louisiana, Maryland, Massachusetts, Minnesota, Nevada, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, and West Virginia (Carter, 1981, pp. 87-123, 128).

At the present time, these eight states are either studying or considering the possibilities of allowing cameras in the courtroom: Kentucky, Michigan, Missouri, Nebraska, Oregon, Rhode Island, Utah, and Virginia (White, 1979, pp. 27-32). Two states have recently declined to change existing rules forbidding cameras in the courtroom. The Illinois Supreme Court denied a petition by the state's News Broadcasters Association to allow courtroom broadcasting in May, 1978 (White, 1979, p. 27). North Carolina journalists had their petitions for relaxed photography restrictions turned down in 1961 and 1969 (White, 1978, p. 29).

The courts forbid photography in the courtrooms of Delaware, Hawaii, South Carolina, Maine, and Wyoming. Experts in those states foresee no change in the policy

regarding use of cameras in the courtroom in the near future. The only state with no rule forbidding courtroom cameras, Mississippi, has no courtroom cameras by orders of various state judges (White, 1979, p. 33).

Currently, the prevailing guideline for controlling cameras in the courtroom is Canon 3A(7) of the American Bar Association's Code of Judicial Conduct. The canon states:

A judge should prohibit broadcasting, telecasting, recording, or taking photographs in the courtroom and areas immediately adjacent thereto during sessions of court or recesses between sessions, except that the judge may authorize:

(a) the use of electronic and photographic means for the presentation of evidence, for the perpetuation of a record, or for other purposes of judicial administration;

(b) the broadcasting, televising, recording, or photographing of investigative, ceremonial, or naturalization proceedings;

(c) the photographic or electronic recording and reproduction of appropriate court proceedings under the following conditions:

(i) the means of recording will not distract participants or impair the dignity of the proceedings;

(ii) the parties have consented and the consent to being depicted or recorded has been obtained from each witness

appearing in the recording and reproduction;

(iii) the production will not be exhibited until after the proceeding has been concluded and all direct appeals have been exhausted; and

(iv) the reproduction will be exhibited only for instructional purposes in educational institutions. (Wolf, 1978, p. 421)

The responsibility of whether to allow cameras in the courtroom has been shifted back to the individual states by the U.S. Supreme Court's ruling in Chandler v. Florida (1981). In that case two Miami, Florida, policemen contended that television coverage of their trial denied them the right to a fair trial. They argued that the mere presence of cameras had an adverse effect on trial participants thus preventing a fair trial.

The Supreme Court ruled that the appellants had presented insufficient evidence to support their claim of the inherent negative effect of television trial coverage. Chief Justice Burger wrote in the majority opinion:

No one has been able to present empirical data sufficient to establish that the mere presence of the broadcast media inherently has an adverse effect on that [the trial] process. (Chandler v. Florida, 1981, p. 4146)

Justice White, who dissented in Estes supported an overturning of the Estes decision and voiced his doubts about the inherent prejudicial nature of televising trials:

I am unwilling to assume or conclude without more proof than has been marshalled to date that televising criminal trials is inherently prejudicial even when carried out under properly controlled conditions. (Chandler v. Florida, 1981, pp. 4148-4149)

Reacting to the Chandler decision, Washington legal reporter Lyle Denniston (1981) commented that "Chandler thus may stand, at this point, only for the idea that states may allow television to come into court, but have no constitutional duty to permit cameras" (p. 21). The Chandler decision allows the states to decide if cameras should be present in their courtrooms and it allows individual judges wide discretion in limiting the camera's access to trials (Denniston, 1981, p. 20). Although this decision (Chandler) may be a step forward for the news media, the Supreme Court refused to allow an absolute right of access to media cameras. Thus, in 60 years of debate the courts have approved a tenuous privilege to the media allowing cameras to photograph and televise judicially approved and designated courtroom trial situations.

Review of Relevant Literature

This study's focus on witness testimony calls for a review of the literature dealing specifically with the effects of television cameras on trial witnesses. Because of the public nature of courtroom proceedings, at least two other bodies of literature relate to this study: The effects of videotaping on the oral performance and attitudes of speech students, and the effects of communication apprehension on verbal behavior.

Since little research has been completed assessing the effects of cameras on the performance of witnesses, it seems logical to investigate related environments where the effects of cameras can be studied. With the increased educational use of videotaping, researchers have studied the effects of videotaping on students. One such group was beginning speech students at the collegiate level in classes featuring oral presentations before audiences. The review of the research on videotaping that follows reveals experimental results relative to the study of witnesses' verbal behavior in the courtroom.

As a second consideration, an often mentioned effect of the camera's presence on witnesses in the courtroom is nervousness or stage fright. An examination of the

literature dealing with the phenomenon of communication apprehension discloses discussion of verbal behaviors generally attributed to individuals in apprehension arousing situations. The courtroom, with its robed judge and carefully controlled aura of decorum and solemnity, could be considered an apprehension arousing situation. Thus, to make a specific observation, some witnesses' verbal behaviors may be the result of apprehension due rather to the courtroom setting than to the presence of a camera. First, therefore, research pertaining to witness testimony will be reviewed; this will be followed by a review of research on the two related topics cited previously.

Witness Testimony

As mentioned earlier in this study (p. 6), television camera coverage of witness testimony became a specific concern of the legal profession in 1952, when the American Bar Association amended Canon 35 of the Code of Judicial Conduct to exclude television cameras from the courtroom and added a phrase indicating the electronic media's potential to "distract the witness in giving his testimony" (Graham, 1978, p. 546). In a speech to the Colorado Law School, Supreme Court Justice Douglas (1960) enumerated some of the areas of concern related to witness testimony:

Will not a witness' recollection of the facts in favor of the defendant be colored by the publicity and public sentiment? Again, even if a witness' recollection is unaffected, will not the fact that his testimony is broadcast make him reluctant to fully state the facts in favor of the defendant, in the face of adverse public sentiment? (pp. 7, 8)

Justice Clark in Estes specifically mentioned witness testimony (see page 9 of this study) as one of four areas of interest regarding televised trials (Gillmor, 1974, pp. 456-458). Judge Baker in his report on camera coverage of the Florida v. Zamora (1977) trial shared Justice Clark's concern, but labeled that concern "misplaced" when directed solely toward the broadcast media. Baker (1977) suggested that sensational trials are usually reported "in greater detail on the printed page" than in radio or television broadcasts (p. 15).

In a survey of Florida attorneys during that state's year-long experiment with cameras in the courtroom, Buchanan, Pryor, Meeske, & Strawn (1979) listed some of the attorneys' concerns. These included fears that a witness might alter testimony "concerning matters he believes very unpopular," or that a witness might hesitate to give testimony which "tends to contradict a fact testified by a greater number of witnesses" (p. 35).

Early experiments. Court officials in Waco, Texas, conducted what may have been the first courtroom test of cameras in 1955. Following the camera-recorded murder trial, Judge D. W. Bartlett stated that he had observed no grandstanding by either reporters or witnesses. Bartlett noted that cameras distracted no more than a court reporter (Blashfield, 1962, p. 432). Apparently, officials conducted no formal survey to ascertain the effect of the cameras on participants.

Beginning in 1956, Colorado allowed cameras in state courts. Although no controlled experiments or surveys were conducted, State Supreme Court Justice Frank Hall (1962) reported six years later that the court could detect no witnesses being distracted in presenting testimony and that "no witness has been heard to complain" (p. 1121).

The circuit court system in Washtenaw County, Michigan, in 1961, installed a closed-circuit television system in one of the county's courtrooms and broadcast the proceedings to students at the University of Michigan Law School. The circuit judge involved in the experiment reported nothing about the process had "been observed to be distracting to a witness or any other participant in a court proceeding" (Blashfield, 1962, p. 429).

A December, 1974, Washington state experiment allowed the installation of cameras in one courtroom and explained to all trial participants the nature of the experiment. The proceedings were taped for later closed circuit viewing. Following the trial, an informal survey indicated witnesses had not been disturbed, distracted, or interfered with in giving their testimony. Most of the witnesses reported not even noticing the use of still cameras. They also acknowledged not being "conscious of the operation of the TV equipment while waiting to testify or while testifying" (Blonk, 1974, p. 18).

An attorney involved in that Washington experiment "felt the witnesses might have reacted differently if they had not been advised by an attorney that the TV was not live" (Blonk, 1974, p. 18). Thus the size of the receiving audience as perceived by the witness may affect responses to the cameras.

Recent experiments. A Nevada district court allowed a Las Vegas television station to tape an attempted murder case in 1976 (State v. Solorzano, 92 Nev. 144). The television station set up two cameras in the courtroom with all other broadcasting equipment placed in an

adjoining room. Following the trial, television station personnel interviewed participants and reviewed the taped record of the trial and discovered no irregular behavior:

There is no indication from the Solorzano record of any of the detrimental behavior modification--strutting, playing to the camera, embarrassment, witness intimidation, politicking, or general foolishness --which the Estes court had so firmly asserted would befall televised trials. (Goldman, 1978, p. 2040)

The defense attorney in the Solorzano case told interviewers after the trial that in his opinion the videotaping "had no visible adverse effect on the jurors, judge, witnesses, attorneys, or most important, Xavier Solorzano" (Goldman, 1978, pp. 2262-2263). The prosecutor in the case reiterated the defense attorney's remarks and praised the positive effects of videotaping:

The psychological effect upon jurors, witnesses, and attorneys was positive. I did not detect anything which would suggest that the presence of the cameras was an unduly inhibiting influence or that it produced a cavalier--showboating type--response in anyone. On the contrary, the ever-present cameras were conducive to better preparation by attorneys, increased attentiveness by jurors, and improved articulation by witnesses. (Goldman, 1978, p. 2264)

During the internationally-televised Florida murder trial of Ronney Zamora in 1977, Judge Baker (1977) reported

no problems regarding witness testimony, especially in the areas of concern mentioned by Justice Clark in Estes (p. 15). Baker described the press as having "policed themselves beautifully! I have no complaints with the press whatsoever" (Knopf, 1977, p. 23). After admitting to a reporter his initial misgivings about camera coverage of the trial, Baker said "The press has gotten a lot more sophisticated since then [Hauptmann]. I never made a request that was argued with, or not complied with" (Knopf, 1977, p. 23). A similar response resulted from a one-trial experiment in Ohio in 1978, in which the judge in the case reported no perceptible "posing or acting for the camera. . . . However, one witness acknowledged that the possibility of being on television made him more nervous" (Wolf, 1978, p. 427).

Other than post-trial interviews with trial participants, the first widely-publicized survey research appeared after the one-year Florida experiment (July 4, 1977 through June 30, 1978). Researchers from the University of Central Florida administered questionnaires to participants immediately following five trials in 1977-78. The researchers obtained responses from only nine witnesses. Of the witnesses who chose to respond, two out

of nine perceived the television cameras had inhibited testimony. None of the witnesses perceived adverse effects from still cameras (Pryor, Strawn, Buchanan, & Meeske, 1979, p. 22).

In response to questions concerning fairness of camera coverage to witnesses, Pryor's survey found just less than 50% (59 of 119) of the respondents felt camera coverage was fair to witnesses. The witnesses themselves split evenly in their responses to the question of fairness: Three reported TV coverage fair to witnesses, three reported coverage unfair, and three were uncertain of fairness (Pryor et al., 1979, p. 23).

A related study in 1978, regarding the Florida experiment conducted by the same investigators surveyed 247 of the state's attorneys. Of the attorneys responding to the survey, 39% (96 individuals) had experienced camera trial coverage. Over one-half the attorneys (125) felt television cameras had no adverse effect on witnesses, while more than two-thirds (164) of the respondents said still cameras had no adverse effect on testimony (Buchanan et al., 1979, p. 35).

Although a majority of the attorneys in Buchanan's (1979) survey observed no adverse effects on witnesses, those attorneys with over twenty years' experience "were

almost unanimous in their agreement" that cameras adversely affected witnesses (p. 35). One prosecuting attorney said "Some witnesses were reluctant to put themselves in a bad light. Several were afraid for their own safety or that of their families" (Buchanan et al., 1979, p. 35).

Buchanan et al. (1979) concluded that although most attorneys responding to the survey did not view cameras as "procedurally disruptive," many did express "concern about juror distraction and the effects of live camera coverage on witnesses' testimony" (p. 36). However, attorneys who had experienced cameras in the courtroom were less negative toward camera use than were attorneys without courtroom camera experience.

The Supreme Court of Florida administered a survey in July, 1978, to assess the attitudes of non-judicial participants in the one-year experiment. Forty-four percent of the witnesses (654 of 1,500) contacted responded to the survey (A Sample Survey of Attitudes, 1978, Appendix A). All respondents reported being "slightly" or "moderately" aware of the cameras' presence in the courtroom. Almost 40% of the witnesses perceived the presence of the cameras made them feel "slightly more

responsible for their actions" (Florida Code of Judicial Conduct, 1979, p. 156). More than 80% of the witnesses felt slight distraction or no distraction by the cameras' presence. The cameras' presence slightly to moderately affected almost 40% of the witnesses' perception of the trial's importance. Court personnel (84%) and attorneys (85%) perceived the presence of the cameras to affect the "flamboyancy" of witnesses not at all or slightly. They (66% of the court personnel and 57% of the attorneys) did feel that witnesses were slightly inhibited by the presence of the cameras (Florida Code of Judicial Conduct, 1979, p. 156).

The Wisconsin Supreme Court appointed an eleven-member committee to monitor and evaluate the use of audio and visual equipment in the courtroom during a one-year experiment beginning April 1, 1978. The evaluation committee used trained court observers to report on trial proceedings using cameras and to interview trial participants.

The Wisconsin court observers reported no cases of objectionable distraction by media representatives. Through interviews the observers discovered some judges and attorneys who felt witnesses may have experienced

more nervousness due to cameras in the courtroom but the majority felt the quality of the testimony was undamaged (Report of the [Wisconsin] Supreme Court Committee, 1970, pp. 11, 19, 30, 41, 54, 57). At least three interview respondents observed that initial witness apprehension subsided or vanished during the process of testifying (pp. 20, 39, 47). Two trial participants expressed opinions about the cameras' positive influence on witnesses (pp. 16, 21).

The California Supreme Court began a one-year camera-in-the-courtroom experiment from June 1, 1980, to July 1, 1981, and enlisted a Sacramento law firm to assess the effects of the camera coverage on the performance of courtroom participants. The Vice-President of that law firm, Charles Doolittle, outlined the areas of concern regarding witnesses in a letter to this researcher:

(1) There is the question of witnesses coming forward or not coming forward because of camera presence. That is, an individual may be "scared off" because of camera coverage, or a witness may surface because they [sic] became aware of the trial through electronic media.

(2) The question of presentational ability is being researched by our project. Are witnesses nervous in front of cameras to the extent that their

testimony is impaired? Is there a problem with telling the truth or the whole truth because of camera presence?

(3) Are witnesses reluctant to participate again in court processes because of their experience in front of the cameras? (Doolittle, 1980, p. 1)

Although incomplete, preliminary findings of the California study indicate a minimal level of witness distraction due to camera presence. However, witnesses have generally voiced three types of concerns:

(1) Apprehension about subsequent editing of their testimony by the broadcast media;

(2) A feeling that some harm might come to them because of their broadcast testimony, either reputational, professional, financial, or physical; and

(3) An undefined feeling of distraction and apprehension about the presence of the camera, that is, a fear of its unknown effects. (Doolittle, 1980, p. 2)

Hoyt (1977) has conducted the only controlled experiment purporting to examine the effects of the camera on a person's ability to answer questions. Using college students and an informational film, Hoyt attempted to quantify the effects of an obtrusive camera, a hidden camera, and no camera on the length, detail, and correctness

of subject responses to factual questions. The study revealed that subjects in the obtrusive camera situation talked longer when responding, waited less time before speaking, and used more words in their answers than subjects in either of the other conditions (hidden camera or no camera). Findings also indicated that the testimony of subjects in the obtrusive camera situation contained significantly more correct information than subjects in the other two conditions. Hoyt's findings appear to corroborate a 1967 court opinion concerning the openness of the courtroom:

The public notice of judicial proceeding tends to improve the quality of testimony, first by producing in a witness' mind a disinclination to falsify, and second, by securing the presence of other non-parties who may be able to furnish testimony to contradict falsifiers. (Loewen, 1978, p. 512)

Although a controlled experiment, Hoyt's study failed to provide control for important variables affecting the subjects' responses. Certain subjects may have possessed larger vocabularies than others and may have experienced varying degrees of apprehension; either or both of these factors could have affected their responses. Another factor that might have contaminated the results concerned

the population of student subjects. All of the subjects were enrolled in a course pertaining to the study of mass media and society. Mass media students could have been more familiar with and more positively disposed toward the presence of the camera. Hoyt's study also did not place subjects in a courtroom setting.

In summary, the research findings in the area of camera effects on witness testimony consist primarily of self-report survey studies. Many of the responses are personal estimations and speculations about contexts in which no variables were experimentally controlled. Studies reveal some self-reported instances of witness distraction or inhibition attributed to the presence of cameras in the courtroom. Considered wholly, the survey results tend to disprove, or at least provide scant support for, the concerns enumerated in the Estes opinion.

The results of methodical surveys to date include a relatively small number of witness responses compared to the responses from judges, attorneys, jury members, and other court personnel. Pryor's Florida survey secured responses from only nine witnesses. Although the Florida Supreme Court survey obtained responses from 654 witnesses, the witness response rate of only 44% was the lowest

return rate of any participant category. So even though the results of these surveys may appear favorable toward camera coverage, in terms of its effects on witnesses, a relatively small population provides the basis for these results.

The only available experimental results imply productive, desirable, positive effects when persons answer questions in the presence of cameras. Subjects responding in the camera condition appeared to provide more correct, detailed, and accurate information in answering questions than subjects in the no-camera condition.

Effects of Videotaping on Speech Students

Although experimental and survey findings have provided limited data on the effects of cameras in the courtroom, research with cameras in educational settings provides information about the effects of cameras on students making oral presentations in the classroom. The public testimony of a courtroom witness differs from the oral presentation of a speech student, yet certain similarities exist: Both student and witness are verbalizing in a "public" setting; both may be unfamiliar with the presence of cameras; and both may experience additional fear or anxiety in the public

situation either with or without cameras present. Because of these similarities, a brief review of the effects of videotape use in the classroom may help provide a basis for understanding certain aspects of the courtroom effects of cameras on witnesses.

The use of videotape recorders (VTR) and cameras in the classroom began in the late 1950's and early 1960's. Research into the effectiveness of VTR in classroom situations began in earnest in the late 1960's. The research of the early 1970's found that the use of cameras and recording equipment in the classroom did not create any negative reactions from student speakers. Bush, Bittner, and Brooks (1972) found no significant differences in levels of anxiety, exhibitionism, or reticence among students exposed to use of the VTR and students whose instructors did not use VTR as a teaching tool to record and playback student presentations. Bush et al. hypothesized that an "anxiety threshold" may exist where the presence of the classroom audience of peers creates an inherently anxious situation for the speaker (p. 129). Therefore, the addition of the camera may add little or no anxiety stimuli to this environment.

Other research dealing with the effects of VTR use in the classroom revealed that students presenting more formal, organized speeches reflected a more rigid delivery than students not subjected to the VTR (Deiker, Crane, and Brown, 1971, p. 141), and students speaking in the VTR condition experienced significantly fewer nonfluencies than non-VTR students (Deihl, Breen, and Larson, 1970, p. 188).

An early study by Welke (1968) involved student speakers appearing in three audience conditions: A visible audience, both a visible audience and an invisible audience (through use of closed-circuit television), and an invisible audience only. He found that student speakers experienced significantly less "audience-induced anxiety over time" when speaking to either the visible audience only, or the audience comprised of both visible members and closed-circuit viewers than when speaking only to the invisible audience (p. 18). The least anxiety arousing situation approximates the audience conditions of a courtroom with television cameras. Welke also discovered that individual speakers responded differently to the various conditions. Some speakers reported less anxiety when speaking to the visible audience, while others preferred the invisible audience.

At least three studies yielded positive attitudinal results related to VTR use. Two different studies found that students exposed to VTR use developed significantly more positive attitudes toward its use than students not exposed to classroom use of the VTR (Goldhaber & Kline, 1972; McCroskey & Lashbrook, 1970). In a slightly different finding, Bradley (1970) concluded that students who used the VTR daily in the classroom developed a more positive attitude toward the "intellectual atmosphere" and "content evaluation" of the course than did students in the no-VTR situation (p. 166).

Research related to use of cameras in educational settings suggests the presence of a camera may promote a more formal, conscious effort by participants to present themselves in the best possible manner within an audience setting considered "naturally" anxiety arousing. Perhaps the courtroom witness may experience the "anxiety threshold" mentioned by Bush et al. If so, the witness's awareness of the camera in the courtroom may not increase an already existing level of anxiety.

The finding by Welke that students reported a reduction of anxiety over time may prove inconsequential in this study of witnesses since a majority of witnesses

testify either only briefly or infrequently. However, results indicating an increasingly positive attitude of students toward VTR use over time tends to corroborate some courtroom surveys indicating lawyers more accustomed to camera coverage possess more positive attitudes toward its use (Buchanan et al., 1979, p. 36).

Communication Apprehension and Verbal Behavior

Just as increased exposure to VTR equipment may promote more positive attitudes toward its use in the classroom, a witness's positive adjustment to the courtroom and cameras in the courtroom may aid that witness in feeling less apprehensive or frightened in a trial situation. In regular trial proceedings, courtroom observers frequently mention the perceived existence of apprehension among witnesses. Participants in trials frequently suggest that witnesses may experience "detrimental psychological reactions" (Blashfield, 1962, p. 434), nervousness and tension (Gillmor, 1974, p. 459; Douglas, 1960, p. 5), stage fright (Griswold, 1962, p. 616; Buchanan et al., 1979, p. 35), or heightened self-consciousness (Code of Judicial Conduct, 1979, p. 156). These observations suggest an important variable in a study of the camera's effect on witnesses--communication apprehension.

McCroskey (1977) defined communication apprehension (CA) as "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (p. 78). This concept appears to describe one type of reaction some or most witnesses experience in the courtroom (with or without cameras).

A primary concern of this research was the effect of CA on a witness's ability to testify, and whether this effect was intensified by the presence of a camera. Earlier researchers have discovered differences in the verbal behavior of low and high apprehensive individuals.

Lerea (1956) discovered that low apprehensives produced a larger quantity of verbal output, a higher type-token ratio, and fewer nonfluencies and speaking errors (p. 233). Powers (1977) found high apprehensives talked less and used more rhetorical interrogatives (non-Ah interjections such as "you know?") than low apprehensives.

Freimuth (1976) found a significant relationship between CA and an individual's perceived "communication effectiveness" (p. 297). Behaviors resulting from the interaction of CA and communication effectiveness included high apprehensives reporting more silence in their speech,

low ratings in ability to use language, and overall ineffectiveness in being understood by an auditor.

Jordan and Powers (1978) investigated verbal behavior in relation to CA and social context. These researchers found that social distance (context) had no significant effect on verbal behavior; however, the level of apprehensiveness clearly accounted for differences in verbal behavior (p. 298). Jordan and Powers also discovered that high apprehensives responded more methodically to stress by altering their verbal behavior to appear more socially acceptable. Low apprehensives may be more confident in their verbal ability and thus feel less need to adapt to the situation (p. 299). High apprehensives may sometimes adjust their verbal behavior in some stressful situations to the degree that their verbalization resembles that of low apprehensives.

A courtroom appearance without the presence of cameras may represent an unusually stressful situation for some witnesses. However, the stress felt by witnesses when television cameras are present in the courtroom could affect their testimony in a number of ways: The witness may say less, experience longer periods of silence, use fewer different words to frame responses, or experience a

diminished capacity to use language; on the other hand, the apprehensive witness may adjust verbal behavior to approximate that of a low apprehensive witness.

Rationale for This Study

The controversy surrounding the presence of cameras in the courtroom continues to plague legal and media professionals. After more than 60 years of debate little factual evidence exists to support either side of the question as to what effects the camera has, if any, on the communication behavior of witnesses (Fatzner, 1979, pp. 230, 239). Attorney Joel Hirschhorn claimed at an American Judicature Society convention there were "no objective scientific studies on the effects of the presence of cameras in courts" (Chance, 1980, p. 9). To date, each side of the controversy bases arguments "largely on theories and assumptions rather than facts" (Wolf, 1978, p. 427).

The possible psychological effects of cameras on trial participants remain a major concern with jurists. The effects of cameras on witnesses will never be known until systematic research efforts probe the question. Although many legal professionals voice uncertainty about allowing news cameras unlimited access to courtrooms, most recognize the need for continued research. Justice Burger

in the majority opinion of the Chandler v. Florida (1981) case declared "Further experimentation is necessary to evaluate the potential psychological prejudice associated with broadcast coverage of trials" (p. 4146).

The absence of research may be the result of jurists' thinking that cameras must prove their positive value and demonstrate an absence of influences on the proceedings before being allowed in the courtroom where researchers may conduct in-depth experimentation (Block, 1978, p. 455; Gerbner, 1980, p. 426). However, experimental programs in various states indicate research in the courtroom and judicial due process can co-exist (Baker, 1977; Blonk, 1974; Goldman, 1978; Hall, 1962; Loewen, 1978; Netteburg, 1980; Pryor et al., 1979).

Research into the effects of cameras on witness testimony is sparse (Barker, Note 1; Gerbner, Note 2; Hoyt, Note 3; Miller, Note 4; and van Peski, Note 5). Former Kansas Supreme Court Chief Justice Harold Fatzer (1979) held that the "actual impact of the camera's presence . . . on . . . witnesses remains speculative and unknown" (p. 239). The only study tangentially related to the camera's effects on witnesses is Hoyt's (1977), in which college students

studying mass communication generally gave more detailed, more correct responses to questions in the presence of cameras.

The need for research specifically dealing with witnesses relates to the "critical" (Hirschhorn, 1979, p. 56) role of the trial witness. Cases are adjudicated on the basis of evidence supplied by witnesses. The witness's ability to recount events and frame responses in the most appropriate language is crucial to the due process aspect of our judicial system. At the same time, the perceived need for the media to disperse information in an informative, realistic manner to the public helps to create the current controversy about the presence of cameras in courtrooms. The public's need and right to know have been upheld in recent U.S. Supreme Court decisions (Richmond Newspapers, Inc. v. Virginia, 1980; Gannett Co., Inc. v. De Pasquale, 1979). By conducting carefully-controlled experimental research, the media, jurists, and the general public can begin to perceive what effects cameras have on trial participants.

Research Hypotheses

Based on the preceding review of related research, this study sought to test the following hypotheses:

1. The presence of a television camera in the courtroom will significantly affect the verbal behavior of witnesses so that the content of testimony from such subjects will be judged more lexically diverse than that of subjects testifying in a courtroom with no camera present.
2. The acquired verbal ability (vocabulary) of the subject will have more influence on the lexical diversity of the subject's testimony than either communication apprehension or the presence of the television camera.
3. The subject's reported measure of communication apprehension (PRCA) will have more impact on the lexical diversity of that subject's testimony than the presence of the television camera.
4. An interaction effect between communication apprehension and acquired verbal ability will have a significant influence on the lexical diversity of the subject's testimony.

NOTES

1. Barker, L. Professor of communication, Auburn University. Personal communication, October 17, 1980.
2. Gerbner, G. Dean of the Annenberg School of Communication, University of Pennsylvania. Personal communication, May 8, 1981.
3. Hoyt, J. L. Personal communication, October 23, 1980.
4. Miller, G. R. Professor of Communication, Michigan State University. Personal communication, October 13, 1980.
5. van Peski, D. Staff assistant, American Bar Association, Chicago, Illinois. Personal communication, October 21, 1980.

CHAPTER II

METHODOLOGY

The Laboratory Versus Field Setting

The social science researcher faces an almost unanswerable dilemma in balancing the need for maximum realism in research with the need for optimal experimental control. Some experts concerned with the effects of television cameras on witnesses' verbal behavior contend that realism and control cannot co-exist in the same experimental design (Gerbner, Note 1; Hirschhorn, Note 2).

Miller and Fontes (1979) addressed the question of realism versus control and concluded that a balance between the two should be attained:

Awareness of the degree of experimental control built into a study permits better assessment of the extent to which the stimulus presentation deviates from the phenomenon being investigated. Both generalizability and validity of the findings will be affected by the amount of control imposed. Stated differently, too much control may produce findings that are not really generalizable to the phenomenon being studied even though they may be treated as highly probable knowledge claims. Conversely, lack of experimental control may culminate in propositions where the consequences are attributed to the wrong antecedents or "causes." (p. 42)

Bermant, McGuire, McKinley, and Salo (1974) criticized most psycholegal research conducted to date for yielding results of limited generalizability. Bermant et al. described two properties to assess and classify research findings: Structural verisimilitude and functional verisimilitude. Structural verisimilitude was achieved when research designs replicated the object or system being studied in physical, proportional similarity. An example would be using minutely scaled model trains or wind tunnels to study causes of train derailments or the effects of stress on airplane design. Functional verisimilitude was present to the degree a study provided approximation of the "conduct under specified conditions to the conduct of the object or system being modeled" (p. 226).

Bermant et al. (1974) used the computer terms, "input," "throughout," and "output," to operationalize the concept of verisimilitude in research. Structural verisimilitude is concerned with input as well as demographic and psychological variables relative to the witness such as age, sex, race, income, education, occupation, self-esteem and dogmatism, etc.; while functional verisimilitude refers to throughput, or the operation of the model in relation to an actual case, and output, or the end product of the model.

compared to an actual situation (p. 227). Bermant asked two questions in determining structural verisimilitude of jury studies.

1. How realistic are the setting and circumstances wherein participants are asked to behave as jurors?
2. How similar are the participants in the research to persons likely to serve on real juries? (p. 227)

To determine functional verisimilitude one question was asked:

1. How well does this model mimic the behavior of actual juries behaving under conditions of similar input? (p. 227)

Studying trial witness testimony using a laboratory approach would emphasize functional verisimilitude, or the processing and end product, i.e., the similarity of the procedure used in the model to the actual procedure in a real trial, and the final result (the witness's testimony) of the model compared to the end product in a real trial. The conduct or procedure used to elicit the testimony would definitely affect the final form of that testimony. This study concentrated on examining possible variables affecting the trial witness's output or end product, specifically the verbal testimony.

Experimental Controls

By using a laboratory approach such variables as the type of trial (criminal, civil, etc.), the attorney-questioning behaviors, the distractions of the courtroom audience, and the witness's knowledge of and relationship to the crime could be controlled and kept constant with a large number of witnesses. This study controlled the variable of trial type by having all subject-witnesses testify about the same crime. By using a videotape of a simulated crime, each subject witnessed the same event from a vantage point common to all participating witnesses.

Thus, the subjects' relationships to the crime and the perpetrators and victims of the crime were held constant. By using one attorney as questioner, each subject experienced the same or similar questioning techniques. The attorney in this study used a set of predetermined questions for each subject. The slight variations in the questions posed by the attorney were meant to improve the interaction aspect and the realism of the situation.

Each subject testified before the same number of persons in the courtroom. In order to limit possible variations of behavior by a large number of people in the courtroom, the subjects testified with only five persons

present. Each of these confederates was instructed to behave in the same manner during the questioning of each witness.

By controlling a large number of variables, and by using an actual courtroom with realistic court personnel, this research improved the structural verisimilitude of an earlier experiment (Hoyt, 1977). Hoyt did not use a court setting, but only a "large room" where subjects were seated at a table in the center of the room (p. 490). The subjects were shown an informational, two-minute, color film describing the operation of the Berlin Post Office. In contrast; the study reported in this dissertation used an actual courtroom as the setting; the subjects viewed a videotape of a realistic convenience store robbery; and the subjects in this study represented a variety of backgrounds and interests.

Even though the in-court proceedings in this study did not constitute an actual trial, the physical surroundings were purposely intended to reflect the solemnity and decorum of an actual trial situation. The research design used in this study attempted to combine the advantages of a laboratory approach to control a large number of variables and the field setting to add realism to the simulated trial experience.

Subjects Used in This Study

This project used 58 college student volunteers who were enrolled in an introductory speech communication course at the University of Florida during the Spring Quarter, 1981. Subjects received a modest bonus credit toward their term evaluation in this speech course by participating in the project. Although the subjects' age range was a relatively narrow eight years (18-26), the subjects varied in their backgrounds and interests as evidenced by the 27 different academic areas of concentration represented in the group. Subjects reported academic majors in agriculture, business, criminal justice and law, education, engineering, health professions, journalism, and various areas of liberal arts and sciences. There were 39 women and 19 men who participated in the study. Of those 58 subjects, 32 testified with the camera in the courtroom while the remaining 26 had no camera in the courtroom during their testimony. No subject had ever testified as a witness in a trial proceeding and few (six) had ever been in an actual courtroom.

Since it might be assumed that a majority of trial witnesses are not college students between the ages of 18 and 26, the structural verisimilitude of this study was

limited in this respect. However, after discounting expert trial witnesses such as law enforcement officers, doctors, psychiatrists, etc., it might also be assumed that this study's population of novice witnesses does reflect the limited familiarity with court proceedings of the average lay witness.

Procedure

Two weeks before the experimental phase of the study, all students in the sections of the introductory speech course were administered the long-form Personal Report of Communication Apprehension (PRCA) instrument (see Appendix A) in individual class sections comprised of between 18 and 35 students. Before the administration of the PRCA, the subjects were told they were being asked to complete a survey designed to discover how people perceive their personal communication. Subjects were informed their scores would be kept confidential and would have no bearing on their class grades.

The PRCA is widely accepted in the field of study of human communication as a valid, reliable measure of communication apprehension. After eight years of use the PRCA internal reliability estimates have ranged from .92 to .96, while reliability judged through the test-retest

method was .82 (McCroskey, 1978, p. 201). The validity of the PRCA has been upheld in comparison to other CA measuring instruments. Daly (1978), in comparing eight scales used to measure anxiety in its various forms, found the PRCA to be one of the three most reliable instruments among the eight measures (p. 216). The other seven scales included Watson and Friend's Social Anxiety and Distress Scale; Paivio's Exhibitionism instrument; Gilkinson's Personal Report of Confidence as a Speaker Scale; and three scales developed by Beatty, Kruger, and Springhorn to measure prior apprehension avoidance, and tension (Daly, 1978, pp. 205, 206). Daly also found the PRCA to be the most "encompassing" instrument evaluated within this group (p. 216).

One week before the experimental phase of the study, potential subjects were told when and where to report in order to participate in the study. Students wishing to participate were required to read and sign an "informed consent" statement indicating they understood the purpose of the project, the experimental procedures to be used, and were willing to participate (see Appendix B). The only element of the study the students were not informed of concerned the use of a television camera as an integral factor in the experiment.

The experimenter presented the explanation of the procedures to be used in the project to the large audience of students attending the lecture meetings of the introductory communication course attended by all members of the course's smaller discussion sections. During this presentation, the prospective subjects were informed that the study sought to learn more about the oral communication patterns of courtroom witnesses. The students were also informed that their involvement in the study would take a maximum of one hour.

The experimental phase of the study was conducted for three consecutive days, April 15, 16, 17, 1981, from 8 A.M. until 5 P.M. Subjects were required to report to the Alachua County Court Building in Gainesville, Florida; the building houses both county and district court administrative offices and several courtrooms. The court building was constructed in 1978, thus the rooms and furnishings are of modern design. This project used two small courtrooms and adjoining jury deliberation rooms.

Subjects met the experimenter either individually or in groups of two to four, in one of the two courtrooms. If the PRCA or the informed consent form had not been filled out, the subjects completed either or both before proceeding.

If both forms had been completed, the subject or subjects (not more than four at once) were taken by a research assistant to a small jury deliberation room adjoining the courtroom.

After seating the subjects in the jury room, the research assistant (not the experimenter) informed them they were about to view a videotape of a crime. Subjects were not told if this crime was actual or simulated. The subjects were asked to pay close attention to the videotape because they would be asked to testify about the recorded events. In a real situation, witnesses would not be forewarned to watch carefully the details of a crime about to be committed. Yet, in a real situation, witnesses would be questioned as soon as feasible after the crime and later requestioned by police investigators and attorneys; the events witnessed would be incrementally imprinted on the witnesses' minds. Since time constraints prevented a similar succession of events in this experiment, the subjects were forewarned to observe the crime carefully; in this way, memory acuity might be encouraged, somewhat as it is in real life.

In order to enhance uniformity among the individual groups of subjects, the research assistant read the

directions from an instruction sheet to each group. After receiving these instructions, the subjects viewed the four-minute videotape of a replicated convenience store robbery (Note 3). Briefly, the color videotape began by showing the exterior front view of a small convenience store. Two men drove up to the front of the store in a small, foreign-made car. One man went into the store and purchased a small item while apparently observing the physical arrangement of the store's interior. After making the purchase, the man returned to the car and conversed with the second man in the car about the advisability of robbing the store. Shortly, the two men entered the store, waited a few moments, then forced at gunpoint two store employees to open the cash register. After one man emptied the register, he directed the two women employees through the store into what appeared to have been a stockroom at the rear of the store, while the second man exited the store and quickly started the motor of the car. The first man ran back through the store and got into the waiting car. As the car sped away, the two employees escaped from the back room and walked to the check-out counter where one woman, at the very end of the tape, telephoned the police, reporting the robbery.

Following the viewing of the videotape, the research assistant administered a questionnaire to each subject containing three sections: An introductory section seeking demographic information (name, age, sex, major in school, place of birth, and student classification in the university); section two containing a 50-item standardized vocabulary test; and the third section containing a 16-item attitude questionnaire to assess the subjects' opinions of the judicial system and the news media (see Appendix C).

This initial questionnaire was administered after the subjects viewed the videotape in order to more closely approach a real situation. Normally a crime witness would experience a period of time between perceiving the crime and testifying. The questionnaire not only provided necessary data for the study but also served as a mental task to involve the subjects' minds for an interval of time with something other than the content of the videotape.

The Vocabulary Test for High School Students and College Freshmen compiled by Arthur Traxler and published by Bobbs-Merrill Company (Note 4) was used in this project because of its ease of administration, short administration time (15 minutes), reliability and validity. Reliability scores for the Traxler test range from .90 to .92. When

compared to other tests widely used in academic placement of students, such as the ACT, ACE, and the American Council Psychological Examination, correlations ranged from .83 to .88 (Traxler, 1964, p. 6). In 1963, a comparison of scores from the Traxler vocabulary test with the SAT scores of freshmen college students resulted in a .65 correlation. In this study, subjects' vocabulary scores obtained from the Traxler test were compared to their SAT verbal scores; a .76 correlation resulted. These results indicate a strong relationship between the Traxler test and established verbal indices. The strong positive correlation between the SAT verbal scores of subjects in this study with the vocabulary scores obtained from the Traxler test indicate the test is an adequate measure of verbal aptitude.

The second portion of the initial questionnaire was a 16-item attitude measure constructed by this experimenter to probe such areas as the subject's attitudes toward the fairness and honesty of both our judicial system and the news media. The attitude items also sought to assess the subject's understanding of the operation of our judicial system and news media. Using a Likert-type scale, the subjects indicated their agreement or disagreement with the nine statements pertaining to the judicial system and

the seven statements relating to the news media. Although not used as independent variables in this study, the responses provided insight into subjects' perceived relationships with the court system and the media.

Following the pretest, each subject waited outside the second courtroom until a student role-playing the bailiff escorted the subject into the courtroom to the witness stand. The bailiff then administered the oath to each subject. The subject sat down and the bailiff moved to a seat in the jury box on the witness's immediate left. A retired senior citizen role-playing the court judge directed the attorney to question the witness.

A third-year law student questioned each witness using a predetermined list of 15 questions (see Appendix D). The questions asked of each subject were purposely open-ended to allow the subject to express original thought rather than any more presumed, predetermined replies. Since the purpose of this study was to assess effects of the camera on the content of testimony, the subject was given the opportunity to respond in a natural, free-form manner as no attempt was made to provide directive structure for the subject's thought pattern, thus making the camera the primary independent variable rather than the questions or

the responses. A second consideration in formulating the 15 questions was the need to obtain an adequate quantity of testimony for analysis.

The same questions were asked of each subject with only minor variations to reflect individuality of the participants' responses. The variation in questioning included repeating questions when asked, asking follow-up questions related to subjects' responses, and offering subjects the opportunity to elaborate on their answers. Although the reliability of these variations may be questioned, the desire to achieve a realistic situation prevailed in the decision to simulate an actual direct examination by an attorney rather than an experimenter simply asking a set of stock questions with minimal interaction between the subject and the questioner.

The attorney maintained the same physical distance (approximately eight feet) and general demeanor as he questioned each subject (see Appendix E for selected transcripts). After responding to the questions, each subject was dismissed by the judge and escorted from the courtroom by the bailiff, who in turn escorted the next subject to the witness stand.

After testifying, each subject reentered the first courtroom and completed a short questionnaire (see Appendix F). This questionnaire contained two parts: The first section sought to ascertain the subject's awareness of distractions perceived in the courtroom while testifying; the second section contained 14 statements adapted from the PRCA which applied specifically to the situation featuring courtroom testimony; and a final question asked the subjects to describe their understanding of the study's purpose.

Earlier survey research assessed camera distraction by simply asking: To what extent did the camera's presence in the courtroom distract you in giving testimony? Although yielding information, this approach could possibly cause respondents to view the camera as a distraction. In this study subjects were asked an open-ended question: "Did anything or anyone distract you during your testimony in the courtroom?" The subject replied either "yes" or "no" and then was asked to write a description of any distracting element, if such was perceived. This approach did not suggest possible distractions, but allowed the subjects individually to recognize disconcerting elements within the situation.

The second portion of the final questionnaire contained 11 statements adapted from the PRCA, and three reworded versions of the open-ended questions in part one of the questionnaire. Subjects responded to all the questions of this questionnaire using a five-point Likert-type scale. Although not a primary objective of this study and not used as a variable in this study, the experimenter sought to assess the relationship between PRCA scores and scores obtained from an instrument related to the delivery of courtroom testimony as a specific communication situation. The three remaining questions of part two served as a reliability check of questions contained in part one. In an effort to provide control for any biased or irresponsible statement which might appear, the final item of this instrument assessed the subject's knowledge of the study's purpose.

After completing the final questionnaire, the experimenter debriefed each subject individually. The debriefing consisted of general questions repeated for each subject, such as: "What was your general reaction to testifying in a courtroom; did the scene in the videotape appear realistic; and did the courtroom scene seem real?" The experimenter scanned the completed final questionnaire and asked

for clarification of any ambiguous responses. Clarifications offered by the subjects were written on the questionnaire by the subject. After this initial questioning period, the experimenter informed each subject that the primary purpose of the study focused on the effect of the television camera on the content of witness testimony.

By design, subjects were randomly assigned to one of two experimental conditions before testifying in the courtroom: The condition with a portable videotape camera present in the courtroom and the condition with no camera being used in the courtroom. Every five subjects experienced a different camera condition, i.e., the first five subjects testified with the camera in the courtroom, the second group of five subjects testified in the no-camera condition, etc. A camera operator noticeably adjusted the camera, which was mounted on a tripod during the testimony of each witness, and started and stopped the video recorder before and after each subject testified (see Appendix G for a floor diagram of the courtroom). During each subject's testimony only five other persons were in the courtroom: The judge, the attorney, the bailiff, the camera operator (who served as an audience member in the

no-camera condition), and a person who tape-recorded all the testimony for analysis.

The recording of all testimony was accomplished using a portable audio cassette tape recorder. The person recording was visible to the subjects as they entered the courtroom, but subjects could see neither this person nor the tape recorder while testifying (see Appendix G). The first items of the final questionnaire (Did anything distract you while giving testimony in the courtroom?) was used to assess any effects of the tape recorder in the courtroom as well as the presence of the camera.

Analysis of Results

The testimony elicited during the courtroom questioning was transcribed from the audiotape and twice checked for accuracy by the experimenter who compared the transcript with the contents of the audiotape. The only change made in the transcripts from the original audiotape was to change vocalizations such as "uh huh," "huh uh," or "em huh" to "yes," "no," and "yes," respectively. This change was made only where the vocalization clearly represented a positive or negative response to a question.

An integrated set of Fortran IV programs known as FAMULUS (Ashley & Cruse, 1980) was used to analyze the

testimony. The FAMULUS family of computer programs has been used since its development in 1967, to organize, sort, and enumerate various types of numerical and lexical data (Ashley & Cruse, 1980, p. 4) (Note 5). The specific FAMULUS program "count" yielded the total number of words used by each subject, the total number of different words used, the frequency of each word used, the mean word length of all words used by each subject, and the frequency with which each subject repeated words while testifying.

The total number of words used and the number of different individual words used was needed to compute the type-token ratio (TTR) of each subject. The TTR is computed by dividing the number of individual words (types) used by the total number of words (tokens) in a spoken sample (Carpenter, 1969, p. 162; Johnson, 1944, p. 1). The most reliable TTR must be computed using the same-sized samples of not less than 100 words, since the normal person repeats a word every 10 to 15 words spoken (Miller, G. A., 1963, p. 89). Therefore, generally, the larger the language sample, the smaller the number of different types used in proportion to the total number of words.

The mean word length (MWL) for each subject was used as an indicator of vocabulary (Johnson, 1944; Carpenter,

1969). The average word frequency (AWF) reflected how many words a subject spoke before repeating a previously used word. For example, an AWF of 9.50 would indicate the subject spoke an average of nine and one-half words before repeating a word already used during the testimony.

By searching the list of words and their frequencies used by each subject, the total number of articles (a, an, the) and vocalized pauses (eh, un, um, and) was calculated. This total (named trivial words) was subtracted from the total number of words used by the subject to obtain the total adjusted testimony length (TAT) for each witness. In addition, the division of the total number of trivial words by the total number of words used (plus trivial words) yielded a trivial word ratio (TWR) for each subject.

The use of TAT and TWR seemed more valid to this researcher as dependent variables than simply considering the total number of words used by each subject. An individual might testify using a large total number of words, yet if 25% or 33% of those words were simply vocalized pauses or articles the lexical quality and complexity of the testimony would be judged of lower quality than an individual using the same total number of words but fewer trivial words. To date, TAT and TWR have not been used in the analysis of testimony by other researchers.

The first 100 words of each subject's testimony received an additional analysis to determine the TTR. Earlier studies have indicated that the first one or two minutes, or about 100 words, of a person's verbal output typifies that person's verbal behavior (Fairbanks, 1924, p. 24; Jordan & Powers, 1978, p. 294). By studying word frequencies, researchers may hypothesize about individual and group language norms (Bradac, Kinsky, & Davies, 1976, p. 71; Johnson, 1944, p. 3).

For analysis of the research hypotheses, the subjects were grouped according to their relationship to the three independent variables: Communication apprehension scores (PRCA), vocabulary scores, and camera condition (either testifying with the camera or with no camera in the courtroom). The following statistical null hypotheses were examined:

- H₁: The presence of the television camera in the courtroom has no significant effect on the subject's TTR, MWL, AWF, TAT, or TWR of testimony when adjusting for verbal ability communication apprehension.
- H₂: The verbal ability of the subject has no significant effect on the TTR, MWL, AWF, TAT, or TWR of testimony when adjusting for the presence of the camera and communication apprehension.

- H₃: The subject's measured level of communication apprehension has no significant effect on the TTR, MWL, AWF, TAT, or TWR of testimony when adjusting for verbal ability and the presence of the camera.

An analysis of covariance was used to test the relative impact of each independent variable upon the dependent variables of this study. Due to unequal cell sizes and the existence of ordinal and interval values for two of the independent variables (communication apprehension and vocabulary), an analysis of covariance was chosen to evaluate the first three hypotheses. As opposed to the analysis of variance, analysis of covariance considers the relative values of the ordinal and intervally-scaled independent variables of this study, thus more clearly indicating the effect of the nominal variable (camera condition) upon the witness's verbal output (Agresti & Agresti, 1979, pp. 458, 459).

- H₄: The variables--camera condition, verbal ability, and communication apprehension--exhibit no interaction effects when subjects testify in the courtroom.

Both an analysis of variance for unbalanced data and an analysis of covariance was used to test for interaction among the three variables--camera condition, verbal ability, and communication apprehension. The ANOVA for

unbalanced data controls for the unequal cell sizes and indicates the possibility of differing slopes of the regression lines, thus indicating that two variables may interact to produce the measured difference in witness response (SAS, 1979, p. 242).

The courtroom television camera alone may or may not produce a significant change in the verbal output of the witness. The process of analysis presented in this chapter seeks to assess either positive or negative effects of the television camera on a trial witness while considering and controlling for the possible effects of the witness's normal level of communication apprehension and the ability of the witness clearly to verbalize while testifying.

NOTES

1. Gerbner, G. Dean of the Annenberg School of Communication, University of Pennsylvania. Personal communication, May 8, 1981.
2. Hirschhorn, J. Attorney for the defendant to Chandler v. Florida case heard before the U.S. Supreme Court. Personal communication, April 24, 1981.
3. The videotape used in this research was produced by and used with the permission of the Editorial Office of the Institute of Food and Agricultural Sciences, University of Florida, Gainesville.
4. The Vocabulary Test for High School Students and College Freshmen by Arthur Traxler was used in this research with the express, written permission of Bobbs-Merrill Company.
5. Computing was done utilizing the facilities of the Northeast Regional Data Center of the State University System of Florida located on the campus of the University of Florida in Gainesville.

CHAPTER III

RESULTS

This chapter presents the tabulated results of the communication apprehension test, the pre-experimental questionnaire, and the post-experimental questionnaire. Also reported are the mean scores of the dependent measures (type-token ratio--TTR, mean word length--MWL, average word frequency--AWF, total adjusted testimony--TAT, and trivial word ratio--TWR). Finally, statistical findings in response to the study's four hypotheses are reviewed.

Self-Report Findings

Each subject completed the PRCA instrument approximately two weeks before participating in the courtroom phase of the experiment. The highest PRCA score obtained from the 58 subjects was 104 (high apprehensive), while the lowest score was 44. In developing the PRCA, McCroskey (1978) used 25 questions with the highest possible score being 125 and the lowest possible score 25. McCroskey found the mean score to vary between 73 and 75 in studies using over 12,000 college students and

4,000 adults (p. 201). The mean score for the subjects in this study was 73.5, with 23 subjects scoring above the mean and 35 scoring at the mean or below. The 32 subjects randomly placed in the camera experimental situation had a mean PRCA score of 71.16, while the 26 subjects in the no-camera-condition averaged 76.39, thus no statistically significant difference existed ($.80 > p > .50$) between the two groups in relation to their normal communication apprehension levels. The mean PRCA score obtained in this study served as a dividing point between high and low apprehensive subjects.

Pre-Experimental Questionnaire

The Traxler vocabulary test comprised the first section of the pre-experimental questionnaire administered immediately after the subjects viewed the videotape of the simulated crime. In the development of the vocabulary test, the scores for the 50th percentile ranged between 35 and 36 for college freshmen taking the test (Traxler, 1964, p. 9). The mean score on the vocabulary test for all subjects in this study was 33.21, with a range of 45 (high) to 14 (low). Subjects placed in the camera-condition (where the camera was present during testimony) averaged 34.84 on the test while subjects in the no-camera-condition

(where no camera was in the courtroom during testimony)

averaged 31.19 (see Table 1). Thus, no statistically *

Table 1. Camera and No-Camera Group Mean Scores for the Independent Variables Communication Apprehension (CA) and Vocabulary Proficiency (VOCAB).

Camera Situation	CA Level	VOCAB Level	CA Scores	VOCAB Scores
Camera	High	High	94.2	38.5
		Low	86.0	23.5

	Low	High	61.1	39.9
Low		54.5	26.3	

No-camera	High	High*	(100.0)	(45.0)
		Low	93.4	28.1

	Low	High*	61.2	37.2
Low		66.8	25.0	

*Only one subject in this cell.

significant difference ($.20 > p > .10$) in vocabulary scores existed between the camera group and the no-camera group.

On the basis of the results of the PRCA scores and the vocabulary scores, subjects were divided into eight groups. There were two camera situations (with and without the camera present), two levels of CA (high and low in

each camera situation), and two levels of vocabulary proficiency (a high and low vocabulary group within each CA group).

Section Two of the pre-experimental questionnaire contained a 16-item attitude survey. The first nine questions attempted to assess the subjects' attitudes toward our judicial system, and the remaining seven questions assessed the subject's attitudes toward the newsmedia. The items contained in this survey were constructed by the experimenter. The Kendall tau b test of association was used to assess the relationship of positively and negatively phrased forms of the statements. All positive and negative pairs of the statements were found to be associated with probability of at least $p < .01$. This section of the questionnaire was included primarily to provide the experimenter information on the subjects' general attitudes toward the two entities (the judicial system and the news media) germane to this study. However, even though the results of the survey were not used to assist in interpreting a dependent variable in this study, the results may help explain some of the other findings (see Appendix H for survey results).

Post-Experimental Questionnaire

Immediately after testifying in the courtroom, subjects completed a questionnaire containing four open-ended questions and 14 Likert-type statements adapted from the PRCA. The four open-ended questions asked the subjects if they had perceived any distractions while testifying, the nature of any distractions observed, the effect of nervousness on their ability to perceive distractions, if such were perceived, and their perception of the study's purpose. The experimenter reviewed each subject's responses to these four questions during the debriefing session in an effort to clarify the meaning of unclear written responses.

In reply to the question asking subjects if they had observed any distractions, 19 subjects indicated that something had distracted them while testifying. Nine of the 32 subjects in the camera-condition noted distractions, while 10 of the subjects in the no-camera-condition reported being distracted.

Three of the nine distraction-reporting subjects in the camera-condition indicated the camera was the primary distractor while one subject named both the camera and the person operating it as the distracting factor. The person

in the audience who operated the camera was identified as the distracting factor by two additional camera-condition subjects. The person who sat in the audience portion of the courtroom during the no-camera-condition was mentioned as the source of distraction by five subjects in that situation.

Other factors mentioned by subjects as distractions and their frequency of mention included: The tape-recorder (2), the unfamiliar atmosphere of the courtroom (3), someone moving outside the courtroom (1), the bailiff clearing his throat (1), extraneous noise outside the courtroom (1), the presence of the microphone (1), an unexplained sense of nervousness (1), and the "nice-looking" attorney (1). Some subjects mentioned more than one source of distraction, thus explaining the larger number of distracting factors than persons distracted.

Two of the three subjects who named the camera specifically as a distracting agent indicated the presence of the camera hindered their ability to testify. All three subjects disturbed by the camera felt the distraction affected the content of their answers.

Five of the nine subjects mentioning distractions in the camera-condition were classified "high apprehensive"

with PRCA scores ranging from 83 to 103. Four of the nine subjects were in the high vocabulary group.

In the no-camera-condition, two of the 10 subjects distracted were high apprehensive and low vocabulary. The majority of the subjects (8) distracted in the no-camera-condition were low apprehensive. Five of those eight were in the high vocabulary group (see Table 2).

Table 2. Subjects Reporting Distractions in the Courtroom.

Camera Situation	CA Level	VOCAB Level	Number of Subjects Distracted
Camera	High	High	4
		Low	1

	Low	High	4
Low		0	

No-camera	High	High	0
		Low	2

	Low	High	5
Low		3	

In summary, 28% (9 of 12) of the camera-condition subjects reported distraction(s) in the courtroom while testifying. In the no-camera condition 39% (10 of 26) of

the subjects reported distraction(s). Of the nine distracted in the camera-condition, only three reported the camera as the sole source of distraction.

Section Two of the post-experimental questionnaire compared 10 selected statements from the PRCA with 10 adapted forms of the statements to reflect the specific situation of the courtroom. The items selected from the long-form PRCA for this specific application are similar in nature to the short-form PRCA (McCroskey, 1978, p. 201). The mean composite score for all items adapted to the specific courtroom situation was 2.64 (with 1.0 indicating low apprehension), while the composite mean for the similar items on the PRCA was 3.08. However, only five of the 10 pairs yielded statistically significant ($p < .05$) levels of association (using the Kendall tau b test of association).

The final question of the post-experimental questionnaire asked subjects their perceptions of the study's purpose. In an effort to verify the meaning of responses to this question, the experimenter specifically asked each subject to explain their responses in detail. A total of six subjects stated the purpose of the study correctly on the questionnaire. Five of the six had experienced the

camera-condition while testifying; three of these five subjects indicated they were distracted while testifying. Two of the six subjects indicated they determined the purpose of the study only after completing the preceding parts of the final questionnaire.

Dependent Measures

The five dependent measures examined in this study included the type-token ratio (TTR), the mean word length (MWL), the average word frequency (AWF), the total adjusted testimony (TAT), and the trivial word ratio (TWR). The mean TTR for the entire subject sample was 0.592. The mean TTR for the subjects in the camera-condition was 0.5919, while the mean for no-camera-condition subjects was 0.5915. Thus, the verbal output as measured by the TTR revealed no statistically significant difference between the groups of subjects in the two camera situations ($t = .305$, $df = 57$, $.80 > p > .50$). Subjects reporting low levels of CA had higher TTR scores than high apprehensives (0.600 to 0.579), but the difference was insignificant ($t = .395$, $df = 57$, $.80 > p > .50$). The difference in TTR scores among high and low vocabulary subjects (0.603 to 0.577) was also insignificant ($t = .495$, $df = 57$, $.80 > p > .50$).

The testimony of the 58 subjects in this study had an average MWL of 4.32. No statistically significant differences existed in the scores of the various independent variable subgroups. No-camera subjects had a slightly higher MWL than camera witnesses (4.33 to 4.31). Subjects reporting low levels of CA had a higher MWL than higher apprehensive subjects (4.34 to 4.29). Individuals with higher vocabulary scores also had a slightly higher MWL than those subjects scoring lower on the vocabulary test (4.33 to 4.31).

The mean AWF for the entire subject sample was 9.54 with no significant differences among subgroups of witnesses. Subjects repeating less words, thus recording a higher AWF were camera-condition subjects (9.64), low apprehensives (9.84), and high vocabulary subjects (10.11). These averages compare to 9.43 for no-camera subjects, 9.10 for high apprehensives, and 8.85 for low vocabulary individuals.

The adjusted testimony length of subjects varied from subgroup to subgroup, but again the differences were statistically insignificant. The mean TAT for all subjects was 553.4 words. Subgroups yielding the longest testimony were the no-camera subjects (558.5 to 549.2 for camera subjects) low apprehensives (638.1 to 424.4 for high apprehensives),

and subjects with high vocabulary scores (625.9 to 464.0 for low vocabulary individuals).

The ratio of trivial words to the total number of words in subjects' testimony also exhibited no significant differences from group to group. The overall TWR was 0.188. Unlike the other dependent variables reported, a lower TWR score would indicate more diverse, complex testimony. The no-camera group had a slightly lower TWR than the camera group (0.186 to 0.189). Virtually no difference existed between high and low apprehensives (0.1877 to 0.1881). High vocabulary subjects had a lower mean TWR (0.183) than low vocabulary subjects (0.194) (see Table 3).

Table 3. Group Mean Scores of Dependent Variables.

Camera Situation	CA Level	VOCAB Level	TTR	MWL	AWF	TAT	TWR
Camera	High	High	.588	4.27	9.97	467.5	.179
		Low	.585	4.33	9.07	432.0	.198
	Low	High	.598	4.32	9.97	622.8	.189
		Low	.585	4.35	8.67	553.3	.195
No-Camera	High	High*	(.570)	(4.40)	(9.50)	(526.0)	(.176)
		Low	.570	4.27	8.56	383.9	.189
	Low	High	.628	4.40	10.51	748.2	.176
		Low	.577	4.33	9.24	570.2	.199

*Only one subject in this cell.

One subject group registered the best mean scores on all five dependent variables. The low-apprehensive, high-verbal, no-camera group yielded a mean TTR score of 0.628, a MWL of 4.40, an AWF of 10.51, a TAT of 748.2, and a TWR of 0.176. The lowest TTR was produced by the no-camera, low-apprehensive, low-vocabulary group (0.570). The lowest MWL (4.27) was registered in both the camera and no-camera high-apprehensive groups. The camera-condition, low-apprehensive, low-vocabulary group produced the lowest AWF (8.67). The lowest TAT (383.9) was produced by the no-camera, high-apprehensive, low-vocabulary group. The camera-condition, high-apprehensive, low-vocabulary group yielded the highest TWR (0.198).

No significant differences were recorded in the scores of male and female subjects. Males had slightly higher scores on TTR (0.613 to 0.481), MWL (4.42 to 4.18), AWF (10.22 to 9.22), and TAT (622.1 to 419.9). However, females used a slightly smaller ratio of trivial words than males (0.183 to 0.188).

By examining the mean scores, little difference can be observed among the various levels of the subjects as grouped according to the independent variables. However, generally, the higher (indicating more verbally complex)

scores in relation to the three dependent variables were produced by the groups scoring higher on the vocabulary test.

Hypotheses Test Results

The first hypothesis tested concerned the effect of the camera on the dependent variables:

- H₁: The presence of the television camera in the courtroom has no significant effect ($p < .05$) on the subject's TTR, MWL, AWF, TAT, or TWR contained in testimony when adjusting for the effects of CA and vocabulary proficiency.

Using an analysis of covariance test to evaluate the first hypothesis, the addition of the television camera to the courtroom situation accounts for a statistically insignificant amount of the variance in the dependent variable TTR ($p < .13$); similarly with the MWL, the camera accounts for little variance in the scores ($p < .98$). The camera also appears to have little effect on AWF scores ($p < .64$), TAT scores ($p < .41$), or TWR scores ($p < .61$). Therefore, when considered alone, the presence of the camera appears to have a statistically insignificant effect on verbal behavior. Thus, the first hypothesis can not be rejected at the .05 level (see Table 4).

Table 4. The Effect of the Television Camera on Verbal Behavior.

Dependent Variable	F (1, 57)	$P <$
Type-token ratio	2.33	0.133
Mean word length	0.00	0.976
Average word frequency	0.23	0.637
Total adjusted testimony	0.70	0.406
Trivial word ratio	0.26	0.611

The second hypothesis tested concerned the effect of the subject's verbal ability (as measured by the Traxler vocabulary test) on the dependent variables.

H₂: The vocabulary proficiency of the subject has no significant effect ($p < .05$) on the TTR, MWL, AWF, TAT, or TWR within a subject's testimony when considering the possible effects of the presence of the camera and the level of the subject's CA.

The measured effect of a subject's vocabulary proficiency on the resulting TTR of the testimony was insignificant ($p < .20$) when the presence of the camera and the subject's level of CA were considered. When examining the effect of vocabulary proficiency on MWL, the effect was also insignificant ($p < .49$). Vocabulary proficiency had an insignificant effect on TAT ($p < .08$) and TWR

($p < .99$). However, the subject's verbal ability appears to significantly affect the AWF ($p < .04$) (see Appendix I). Considering these findings, the second hypothesis can be rejected at the .05 level only for the dependent variable AWF (see Table 5).

Table 5. The Effect of Vocabulary Proficiency on Verbal Behavior.

Dependent Variable	F (1, 57)	$P <$
Type-token ratio	1.68	0.200
Mean word length	0.48	0.493
Average word frequency	4.38	0.041*
Total adjusted testimony	3.11	0.083
Trivial word ratio	0.00	0.990

*Significant at the .05 level.

The third hypothesis tested the effect of CA on the verbal behavior of witnesses.

- H₃: The subject's measured level of CA has no significant effect ($p < .05$) on the TTR, MWL, AWR, TAT, or TWR of the subject's testimony when regulating possible effects of the camera's presence and the subject's vocabulary proficiency.

When adjusting for the possible effects of verbal ability and the presence of the camera, the subject's CA accounts for an insignificant amount of the variance in the TTR ($p < .09$). CA also has an insignificant effect on MWL ($p < .58$), AWF ($p < .30$), and TWR ($p < .32$). CA does appear to have a significant effect on TAT ($p < .001$) (see Appendix I). Because of these findings, the third hypothesis can be rejected only for TAT (see Table 6).

Table 6. Effect of Communication Apprehension on Verbal Behavior.

Dependent Variable	$F (1, 57)$	$p <$
Type-token ratio	2.95	0.092
Mean word length	0.31	0.581
Average word frequency	1.08	0.303
Total adjusted testimony	12.42	0.001*
Trivial word ratio	1.00	0.322

*Significant at the .05 level.

The fourth hypothesis sought to test for possible interaction effects among independent variables.

H₄: The variables (camera situation, verbal ability, and CA) exhibit no interaction effects when subjects testify in the courtroom.

An analysis of variance for unbalanced data (designs yielding uneven cell sizes) revealed no significant interactions among the independent variables. In fact, a least square means comparison indicated only two groups of the eight to be significantly different at the .05 level. Both groups were in the no-camera condition. The no-camera, low-apprehensive, high-vocabulary group had significantly different mean TTR scores ($p < .02$) than the no-camera, high-apprehensive, low-vocabulary group.

Using an analysis of covariance to assess possible interaction effects revealed a possible trend toward interaction when considering TTR scores. An interaction between the camera situation and CA yielded a probability of $p < .16$. Similarly, the AWF scores were affected by the interaction of the camera situation and CA ($p < .04$) (see Appendix I). No other interactions among variables approached significance. Thus, the fourth hypothesis may be rejected at the .05 level only for an interaction effect between the camera situation and CA in relation to the dependent variable AWF (see Table 7).

Table 7. Interaction Effect of the Camera Situation and Communication Apprehension on Verbal Behavior.

Dependent Variable	<u>F</u> (1, 57)	P <
Type-token ratio	2.07	0.156
Mean word length	0.01	0.904
Average word frequency	4.24	0.044*
Total adjusted testimony	0.35	0.554
Trivial word ratio	0.00	0.962

*Significant at the .05 level.

Summary

By dividing the subjects into two groups (high and low) in relation to each of the two variables, CA and vocabulary proficiency, the researcher's ability to detect significant differences between groups decreases as the distinction between groups decreases. However, as evidenced by the mean scores reported for the five dependent variables, no statistically significant differences existed among the mean scores of the eight groups of subjects.

The presence of the camera, when considered as a single factor, had little or no effect on the verbal behavior of witnesses as far as possible effects can be

measured statistically. However, the camera situation and CA appeared to interact to create a significant effect on the AWF of subjects.

In this experimental situation, CA, as an isolated factor, had a statistically significant effect on the witnesses' length of testimony--the higher the subject's CA score the shorter the testimony. When considering TTR scores, CA approached a significant effect. As might be expected by the very nature of AWF, vocabulary proficiency had a statistically significant effect on this dependent variable.

CHAPTER IV

CONCLUSIONS

The question of the television camera's effects on courtroom trial participants has not been answered with any real degree of certainty for almost 30 years, since the American Bar Association included television in its prohibition of camera trial coverage in 1952. Through this study, an effort was made to continue the process of researching the effects of the television camera on courtroom communication, and specifically, its effects on the content, or lexical nature and diversity, of witness testimony.

The first conclusion to be drawn from this study is that the presence of the television camera, in this experimental situation, had no perceivable effect on the overall lexical nature or diversity of witnesses. The research hypothesis suggested the presence of the camera would enhance the verbal behavior of witnesses. This study found no evidence to support that hypothesis directly. The mean TTR and AWF scores were slightly higher for camera than no-camera subjects (TTR 0.5919 to 0.5915,

AWF 9.64 to 9.43), but they were not statistically significant. No-camera subjects used slightly longer words than camera subjects (MWL 4.33 to 4.31), but the difference between the groups did not reflect statistical significance. It should be noted that the higher mean vocabulary scores for the camera group may explain the differences found among these dependent measures.

The courtroom camera may affect the testimony of a particular segment of the population. The high-apprehensive, high-vocabulary camera group reported three of the four instances of actual camera distraction. Although the dependent measures for this group were not significantly different from the study's population as a whole, the perceived distraction of the camera may have affected this group's ability to testify in some manner undetected by the dependent measures. Hoyt (1977) discovered the presence of the camera enhanced the quality of subjects' responses, but the findings of this study neither conform nor refute his results.

The statistically significant finding that an interaction exists between the presence of the camera and the individual's level of communication apprehension tends to support the conclusion that highly apprehensive,

articulate individuals may experience distraction caused by their perception of the camera's presence, yet this perceived distraction may not be reflected in the lexical nature of their testimony. As suggested by Jordan and Powers (1978), high apprehensives may be more aware of the stressful situation and attempt to adjust their behavior to approximate that of low apprehensives. The high apprehensives in the camera-condition may have been more cognizant of various distracting factors in the environment.

Eight of the 19 subjects reporting distractions during their periods of testifying indicated the distractions either hindered their testifying or caused them to alter the content of their testimony. This agrees somewhat with earlier responses to item 25 of the PRCA, "I would enjoy presenting a speech on a local television show." The mean score of all subjects on this item was 3.56, yet in the post-experimental questionnaire, when asked if they would answer questions in the same manner if their court appearance was being televised to the Gainesville community, the mean score of all subjects was a more positive 2.33. This may indicate that having experienced the courtroom situation, witnesses react to a more concrete

stimulus more positively than to the abstract possibility of appearing on television. This difference in mean scores may also be the expression of relief after experiencing a stressful situation.

The second research hypothesis suggested that vocabulary proficiency would have a greater effect on the lexical nature and diversity within the testimony than either communication apprehension or the presence of the television camera. The findings of this study only partially support this hypothesis.

A stepwise regression procedure (SAS, 1979, p. 391) used to measure the relative effect of each independent variable revealed vocabulary proficiency the best predictor variable for MWL and AWF. Vocabulary was the second most important predictor for TTR and TAT. Although the stepwise procedure indicated vocabulary as an important variable in predicting the dependent variable scores, the vocabulary proficiency accounted for only between 1.5% to 9% of the total variance recorded in this study's dependent measures. Thus, vocabulary proficiency had more effect on two dependent variables than either camera situation or CA, but accounted for a relatively small amount of the difference in subjects' responses. A conclusion that may be

drawn from this data is that the three independent variables leave much of the variance in TTR, MWL, AWF, TAT, and TWR scores unaccounted for, thus suggesting that some variable(s) not reported in this study may explain better the differences in subject response. A second conclusion might be that each level of the independent variables should be more precise.

The third research hypothesis postulated that the CA level accounted for more variation in witnesses' lexical nature and diversity than the presence of the television camera. As with the second hypothesis, the data resulting from this experiment only partially supports this assumption.

The stepwise regression procedure indicated CA was the best predictor variable (of the variables included in this study) for TTR and TAT scores. Although statistically insignificant for TTR, CA had a significant effect ($p < .001$) on TAT scores. In both TTR and TAT the effect of CA was negative, i.e., the higher the CA score, the lower the TTR and TAT scores. Thus the conclusion that witnesses with lower CA levels would provide the more complex, complete testimony than more highly apprehensive witnesses.

The ability to perceive distractions in the environment appears to be related to CA. When considering self-reported distractions by subjects while testifying, nine of 19 persons who reported feeling distracted were low-apprehensive, high-vocabulary subjects. This finding appears to support what might be concluded by intuitive thinking: Since high-vocabulary, low-apprehensives might be less intimidated by the unfamiliar environment and less concerned about monitoring their verbal behavior, they would feel less constrained and perhaps freer clearly to perceive distracting elements. Six of the 19 individuals reporting distractions also indicated the distraction affected the content of their testimony. Four of these six subjects were high-apprehensives.

The fourth research hypothesis suggested the existence of an interaction effect among the independent variables. The findings of this study seem to confirm that an interaction between the camera situation and communication apprehension level existed in regard to the dependent variable AWF. Mean scores for AWF were lower for camera-condition subjects than for no-camera subjects in three of four paired comparisons. This might indicate that in situations where the television camera is present,

highly-apprehensive persons' testimony could be affected. According to the data reported in Chapter III, the testimony of high-apprehensives may be less complex, less detailed, and not as complete as lower apprehensive subjects.

Limitations of the Study

Even though the variables in this study were carefully controlled, there are particular factors which will limit the generalizability of the acquired results. The first limiting factor is the subject population. As mentioned in Chapter II, the average courtroom witness is not a college student. The media environment that has surrounded the 18 to 26 year-old age group may have desensitized them more than it has older people, to the presence of the camera. Secondly, living, working, and studying on or near a large university campus may afford more regular contact with television personnel and equipment than the average citizen or witness experiences. Students who regularly attend classes in which videotape equipment is a standard teaching tool would understandably be less alarmed or aware of the television equipment in the courtroom.

A second limitation of this study might be the relatively unstressful courtroom situation used. One attorney asking open-ended questions in a rather neutral manner differs markedly from the actual courtroom scene in which two attorneys alternate in questioning witnesses in both direct and cross-examination approaches. One subject in this study mentioned during the debriefing session that his nervousness before testifying was prompted by his expectation of having his responses challenged by an attorney. However, in a more realistic court appearance, the witness could become less aware of the television camera because of other competing, stress-causing stimuli.

A further limitation of this research experiment appears to be its inability to account for a larger portion of the variance in the dependent measures. The highest level of variance accounted for by the variables tested in this study was 26%. Although only small differences in the dependent measures existed among subgroups, this experimenter expected the independent variables to explain better the existing differences. This finding suggests other variables not considered in this study may have a measurable impact on witnesses' verbal behavior.

As some in the legal profession have suggested, a major limitation of this study stems from the use of an experimental situation rather than a real trial or trials for study. This researcher's primary argument against using actual courtroom trials as the only research environment is the inability to distinguish which variable or variables caused which response(s). The number of variables operating in the courtroom make their isolation difficult or impossible in an environment with little or no experimental control. This researcher asserts that the best setting for initiating research of witness behavior is an environment where causes and effects can be better observed in planned isolation and more reliably associated, factor with factor.

Although an experimental situation is not the "real thing," a well-constructed experimental design can believably feature aspects of reality. No subject in this study suggested that the courtroom environment he or she experienced seemed unrealistic, or false. To the contrary, a number of subjects mentioned the realistic aspect of the courtroom used for the study.

Implications for Future Research

Three areas or approaches for future research will be discussed. The first approach could involve the in-depth study of the syntactical nature of witness testimony. This research study limited its scope to lexical considerations, but a better understanding of the witness's verbal form and manipulation of various oral symbols might prove useful in assessing the effects of the television camera on testimony. The following questions could be asked by researchers: Do witnesses qualify their answers more in the presence of the television camera? Do witnesses develop different syntactical patterns of speaking with and without the camera in the courtroom? Parkinson (1981) studied the syntactical nature of attorneys' and defendants' language to determine certain factors reflected in successful attorneys' presentations and in the testimony of defendants who were acquitted. A similar analysis of witnesses testifying with television cameras present in the courtroom may prove enlightening.

A second area for future research is in regard to the effects of the unfamiliar courtroom environment on witnesses' ability to testify. Three subjects in this study mentioned the "eerie feeling," the unfamiliar environment,

and the formal atmosphere of the courtroom as distracting factors in their presentation of testimony. A majority of the subjects mentioned their lack of familiarity with the courtroom and judicial proceedings during the debriefing session. Perhaps as important as research into camera effects may be, research into courtroom environmental effects should also be studied.

A third area for future research involves the study of audience effects on witnesses. A total of 13 witnesses mentioned some aspect related to the effects of the audience (or the one person sitting in the audience section of the courtroom) on them while testifying. One subject mentioned expecting a larger audience; others suggested that the people in the courtroom watching her testify made her nervous. The packed courtroom versus a sparsely populated one may affect witnesses' ability to testify effectively.

As an overview, this study found no evidence to support the hypothesis that the television camera, as a single factor, in the courtroom either hindered or enhanced the verbal behavior of witnesses. Vocabulary proficiency had a statistically significant effect on the frequency subjects repeated words. CA significantly

affected the total length of subjects' testimony. A statistically significant interaction effect was discovered between the presence of the camera and the CA level of witnesses.

During the debriefing session conducted privately with each subject, this researcher found that people generally reacted to the presence of the camera in one of three ways: The person enjoyed having his or her participation recorded by the camera and did not object to the camera's presence; the person noticed the camera while testifying, but was so intent on answering the attorney's questions that her or his awareness of the camera's presence diminished sharply; or, the person disliked being photographed in any way, at any time, in this courtroom situation, and the camera was regarded as a distracting factor while testifying.

Thus, the camera in the courtroom may affect certain types of people negatively and not adversely affect others. The camera appears most apt to affect adversely those who are highly apprehensive, intelligent, articulate individuals. However, as this study's findings indicate, even though a witness may perceive himself or herself as being

distracted or hindered in testifying by the television camera, the verbal behavior, as such, is not measurably affected.

APPENDICES

APPENDIX A

**THE PERSONAL REPORT OF COMMUNICATION
APPREHENSION**

NAME _____

SS# _____

DIRECTIONS: This instrument is composed of 25 statements concerning your communication with other people. Please indicate the degree to which each statement applies to you by marking whether you (1) Strongly Agree, (2) Agree, (3) Are Undecided, (4) Disagree, or (5) Strongly Disagree with each statement. There are no right or wrong answers. Work quickly, just record your first impression by circling the correct number.

1. While participating in a conversation with a new acquaintance I feel very nervous. 1 2 3 4 5
2. I have no fear of facing an audience. 1 2 3 4 5
3. I talk less because I'm shy. 1 2 3 4 5
4. I look forward to expressing my opinions at meetings. 1 2 3 4 5
5. I am afraid to express myself in a group. 1 2 3 4 5
6. I look forward to an opportunity to speak in public. 1 2 3 4 5
7. I find the prospect of speaking mildly pleasant. 1 2 3 4 5
8. When communicating, my posture feels strained and unnatural. 1 2 3 4 5
9. I am tense and nervous while participating in group discussions. 1 2 3 4 5
10. Although I talk fluently with friends, I am at a loss for words on the platform. 1 2 3 4 5
11. I have no fear about expressing myself in a group. 1 2 3 4 5
12. My hands tremble when I try to handle objects on the platform. 1 2 3 4 5
13. I always avoid speaking in public if possible. 1 2 3 4 5

14. I feel that I am more fluent when talking to people than most people are.	1 2 3 4 5
15. I am fearful and tense all the while I am speaking before a group of people.	1 2 3 4 5
16. My thoughts become confused and jumbled when I speak before an audience.	1 2 3 4 5
17. I like to get involved in group discussion.	1 2 3 4 5
18. Although I am nervous just before getting up, I soon forget my fears and enjoy the experience.	1 2 3 4 5
19. Conversing with people who hold positions of authority causes me to be fearful and tense.	1 2 3 4 5
20. I dislike to use my body and voice expressively.	1 2 3 4 5
21. I feel relaxed and comfortable while speaking.	1 2 3 4 5
22. I feel self-conscious when I am called upon to answer a question or give an opinion in class.	1 2 3 4 5
23. I face the prospect of making a speech with complete confidence.	1 2 3 4 5
24. I'm afraid to speak up in conversation.	1 2 3 4 5
25. I would enjoy presenting a speech on a local television show.	1 2 3 4 5

APPENDIX B
INFORMED CONSENT

INFORMED CONSENT

Investigator: Don Shores, Graduate Student,
Department of Speech,
University of Florida, Gainesville

Name of Subject: _____ SS# _____
Age: _____ Sex: _____

I agree to be a subject in a research project conducted by the above named researcher. The nature of this study has been explained to me and I understand its purpose is to learn more about the oral communication patterns of courtroom witnesses. I also understand that my participation in the study will require me to appear at the District Court Building in Gainesville where I will view a short videotape of a simulated crime. After viewing the videotape, I will fill out a series of tests and questionnaires designed to assess (1) my ability to properly use the English language; (2) my degree of fear or anxiety about communicating with others; and (3) my attitudes about the U.S. court system and the news media. Upon completing the questionnaire I will enter a courtroom and answer questions about the contents of the videotape. I understand my oral responses will be tape recorded for later analysis. I agree to fill out a second questionnaire after answering the questions in the courtroom. The second questionnaire will ask my reactions to answering the questions in the courtroom setting. I also understand that I may, without prejudice, refrain from participation in any part of the study, but that my participation will entitle me to receive a small amount of extra credit in my SPC 2300 class.

I understand that the data that I contribute to this study will be handled in a professional manner, and will be maintained in a confidential manner by the research staff. I agree, however, that the data I contribute may be used in scientific reports of this study in ways considered appropriate by the researcher, provided that my name not be used without my express permission.

I understand that no discomfort or risk is involved with this experiment other than a normal amount of anxiety which might accompany my testifying in a strange environment. I also understand that no immediate benefits are expected.

APPENDIX C
RESEARCH QUESTIONNAIRE

RESEARCH QUESTIONNAIRE

NAME: _____ SS#: _____
last first m.i.

DATE: _____ AGE: _____ SEX: _____

PLACE OF BIRTH: _____

MAJOR IN SCHOOL: _____ CLASSIFICATION: _____

PART I

VOCABULARY TEST FOR HIGH SCHOOL AND COLLEGE FRESHMEN

DIRECTIONS: In each of the following exercises there is a sentence or expression which contains an underlined word and is followed by five words or phrases numbered from (1) to (5). You should read the given sentence or expression, then read the five words or phrases following it, and select the one whose meaning is most nearly like the meaning of the word which is underlined in the sentence or expression. Enter the correct number of the word corresponding to your answer in the blank to the left of each statement.

EXAMPLE:

4 They will exhibit the picture today. (1) finish,
(2) buy,
(3) find,
(4) show,
(5) sell

Proceed as rapidly as you can work accurately. Your score will be the Number of right answers reduced by one fourth of your wrong answers. You can expect to make your best score if you do not guess wildly but attempt as many questions as you think you know, even though you may not be entirely sure of the right answer. Do not spend too much time on any one question. Wait for the signal to begin, your time will be limited for this portion of the questionnaire.

DO NOT TURN THIS PAGE UNTIL TOLD TO DO SO: : : :

The Vocabulary Test for High School Students and College Freshmen, constructed by Arthur E. Traxler, was published by the Bobbs-Merrill Company, Inc., Indianapolis, Indiana. Due to the copyrighted nature of the test, it is not reproduced in this volume, but may be obtained by writing the Bobbs-Merrill Company.

This second section of the questionnaire seeks to assess your feelings toward two elements in our society--the judicial system and the news media. Please indicate your agreement or disagreement with each of the following statements by circling the number corresponding to your immediate impression:

(1) Strongly Agree, (2) Agree, (3) Undecided, (4) Disagree, (5) Strongly Disagree

1. The U.S. court system is the best way I know to decide the guilt or innocence of a person accused of a crime. 1 2 3 4 5
2. I possess a clear understanding of the judicial process an accused person must go through before being declared guilty or innocent. 1 2 3 4 5
3. Generally, attorneys are honest and moral. 1 2 3 4 5
4. The U.S. judicial system treats all persons as fairly and equally as any system I know about. 1 2 3 4 5
5. Our judicial process does not necessarily regard everyone as "innocent until proven guilty." 1 2 3 4 5
6. I feel the average U.S. citizen does not understand how our judicial process operates. 1 2 3 4 5
7. I do not trust attorneys in general. 1 2 3 4 5
8. Judges are not always unbiased in their decisions in the courtroom. 1 2 3 4 5
9. I respect judges in our judicial system as unbiased individuals. 1 2 3 4 5
10. I believe most of the information I obtain from the news media (radio, TV, newspapers, magazines, etc.) to be true. 1 2 3 4 5

11. The news media have the best interests of our society in mind when reporting information. 1 2 3 4 5
12. Money and ratings are the primary goals of the news media. 1 2 3 4 5
13. The news media usually distort and twist the information we receive. 1 2 3 4 5
14. I use at least one of the various types of news media at least once a day during the average week. 1 2 3 4 5
15. The very presence of the news media changes or alters the nature of an event or happening. 1 2 3 4 5
16. As a whole the news media attempt to present information in an objective manner. 1 2 3 4 5

APPENDIX D

**ATTORNEY'S QUESTIONS USED IN
OBTAINING TESTIMONY**

THE QUESTIONS ASKED EACH SUBJECT

1. Please state your name and current address.
2. How old are you?
3. Did you just view a videotape in another room?
4. Please describe what you observed in the videotape you watched a few minutes ago.
5. Would you describe in detail what the store looked like?
6. Would you describe the persons who committed the crime?
 - a. Their physical features?
 - b. Their clothes?
7. Was anyone else in the store at the time other than the persons you just described?
8. Please describe anyone else in the store at the time the crime took place.
9. Did you see the reactions of the clerk?
10. Please describe the reactions of the clerk in the store during the crime.
11. Describe the vehicle in which the masked men fled.
12. Describe the reaction of the store clerks upon returning to the checkout counter after the robbery.
13. Did either of the clerks say anything while the thieves were driving away?
14. What was said?
15. Going back in time just a little, do you remember anything either of the masked men said during the crime?

Thank you, I have no further questions.

APPENDIX E

SELECTED TRANSCRIPTS

SELECTED TRANSCRIPTS
OF SIMULATED TRIAL TESTIMONY

The following persons participated in the oral portion of the simulated trial procedure: the judge (JUD), the attorney (ATT), the bailiff (BAI), and the witness (WIT).

Identification Number: IDNO 45
Age: AGE 21
Sex: SEX F
Camera Condition: CACO N
Communication Apprehension: COAP 104
Vocabulary Score: VOSC 26

JUD Would the bailiff escort the next witness to the stand?

BAI Would you please remain standing and raise your right hand? Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

WIT I do.

BAI You may be seated.

JUD The State may now question the witness.

ATT Would you please state your full name for the record?

WIT _____

ATT What is your current address?

WIT _____

ATT And how old are you?

WIT Twenty-one.

ATT Did you just view a videotape in another room?

WIT Yes.

ATT Would you please describe for us the events that you saw on that videotape?

WIT OK. Eh, a car pulled up to like a magic market, eh, convenience store. And a man walked into the store and bought a package of gum, and then went back out into his car. And there was another man in the car, and they discussed which side of the store they would go on when they went in and, and then they went back into the store. One of the men went to the right and the other one went to the left. And there was two women in the store, and then the one man, eh went up to the counter, took the money, put it in a bag. They both had guns. Then they took the money. Then they left the store.

ATT All right. Now I want to ask you if you would in as much detail as possible to describe what the store looked like.

WIT Eh, well, it was like a grocery store. There, eh, signs like sales signs and advertisements on the windows. There was aisles of groceries. There was a lady, I think she was like filling the shelves on the one side of the store and another lady behind the counter with the cash register.

ATT Do you recall any other details about the store itself?

WIT It was just everywhere, there was space, was used with, you know, grocery items.

ATT I'm going to ask you if you will once again in as much detail as possible to describe the two men that committed the crime.

WIT OK, eh, one of the men was wearing, eh a greenish jacket. The other one was wearing like a white jacket, a light jacket. Eh, they both were tall men. Dark hair. I think they both had mustaches. And the one I think had a, a, like a red ski mask on, and I don't know if the other one did or not. His back was faced.

ATT Do you recall any other details about them?

WIT No.

ATT OK. Now besides the two men that you've just described, was there anyone else in the store during the time the crime was committed?

WIT Eh, there was another lady shopping, and she purchased something and she walked out.

ATT Anybody else in the store during the time that the crime was committed?

WIT No. Just the two ladies and the two men.

ATT There were two ladies? Would you describe the two ladies for me.

WIT OK. One was eh, a short black lady and the other one was a tall, heavy-set, white woman.

ATT Do you recall any other details about them? What they were wearing for instance?

WIT No.

ATT OK. Were you in a position where you could see the reaction of either of the two ladies, say for instance during the time that the crime was committed?

WIT Eh, the short woman kept turning around, and then the men kept telling her to, you know, to turn around. Not to face them. I guess to face towards the cigarette machine.

ATT What were their reactions after they returned from the back of the store to the center of the store?

WIT The woman's reactions? They just seemed pretty calm. Seemed like they had gone through something like that before.

ATT OK. I want to ask you, if you would, in as much detail as possible, to describe the vehicle that the men fled in.

WIT It was a compact car. I don't know what the name brand. I think it was a white car, but I'm not sure.

ATT Do you remember any other details?

WIT No.

ATT OK. While the men were fleeing in that car, while they were driving away, do you recall the women saying anything?

WIT No. They just eh, got on the phone and called the police.

ATT How about during the commission of the crime? Do you recall anything that the robbers said?

WIT No. Just to the one lady he told her to turn around. You know, to face the cigarettes.

ATT And you didn't see anything else?

WIT That's it. That's all I know.

JUD (to the witness) You may step down now (pause). Would the bailiff please escort the next witness to the stand?

Identification Number: IDNO 28
Age: AGE 19
Sex: SEX F
Camera Condition: CACO C
Communication Apprehension: COAP 50
Vocabulary Score: VOSC 27

BAI Would you please remain standing and raise your right hand? Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

WIT I do.

BAI You may be seated.

JUD The State may now question the witness.

ATT Please state your name for the record.

WIT _____.

ATT _____, what's your current address?

WIT _____

ATT And how old are you?

WIT Nineteen.

ATT Did you just view a videotape in another room?

WIT Yes I did.

ATT Would you please describe for us the events which you saw on that videotape?

WIT Well I saw a sports, not a sports car, but a small car pull up into a convenience store parking lot. Then a fellow in a green jacket got out of the car and walked into the convenience store. And he purchased something and went back into the car and conversed with his friend. And the other gentleman who was

sitting in the passenger side in the front seat, and they were discussing whether or not it would be successful if they did try to go in there. And the people that were in there, they were going to wait until all the customers left out. And then they were going to go in. And so the guy in the green jacket went in, and I guess, waited till, they till the people left. And they came in and held them up. And the guy got a brown bag and took the money out of the cash register. And then they asked them for the key to the safe or where was the safe and the lady said that she didn't know the combination and so they took them in the back and then they left. And then the people came out and called the police.

ATT Now Michelle, would you describe for us in detail what the store looked like?

WIT The store, well a convenience store. The windows, the glass out front was clear. You know, where you could see out into the parking lot. Um, it was fair, fair, fairly cluttered with rows, you know islands and stuff. And the cash register area where the people stood behind was kinda in the center.

ATT Do you recall anything else?

WIT No.

ATT All right. Would you describe now in as much detail as possible the two men that committed the crime?

WIT OK. There was one man with a green jacket and jeans, and he had a mustache was white. And the other man also had on a kinda off white yellowish jacket. And he had on jeans and a mustache also. And when they came in the second time to rob the place they had on what appeared to be ski masks, you know over their face. And they were fairly tall. I'd say about six feet-one, it appeared on the screen.

ATT Now besides the two men that you've just described, was there anybody else in the store during the time of the robbery?

WIT Um, I didn't notice anyone but the two clerks.

ATT All right. Would you describe them for us?

WIT Well one lady was white, rather heavy-set. She was the one that made the phone call when they came out of the back after the eh, people left. And the other lady I don't remember her too well, but she was much thinner than the heavy-set woman.

ATT All right. Were you able to see any of the reactions of the clerks, say during the commission of the crime?

WIT No I didn't notice any reaction. They seemed to be rather calm, you know, and helpful, you know, not helpful in the sense of them also being assisting or whatever but just so they wouldn't get hurt.

ATT How about after they returned to the center of the store after the robbers had already fled, do you recall any reactions then?

WIT Well they just calmly walked out you know. And I faintly remember the lady saying we were just talking about this, or something and she just went to the phone and picked it up and started dialing. You know, they didn't seem really upset.

ATT Now, once again if you will, I am going to ask you to describe in as much detail as possible the car, the vehicle in which the men fled.

WIT The car. Well it was a compact car. I didn't really recognize the make of it even though it looked similar to a Honda. And it was gray. That's all I really remember. Compact gray car.

ATT While the men were fleeing in the car do you recall anything that either of the clerks said?

WIT Something about we were just discussing this or, we were just talking about this. Something of that nature.

ATT How about during the commission of the crime itself, do you recall anything that the robbers said?

WIT I just recall him asking one of the clerks where was the safe. You know, and they remarked they didn't have the combination.

ATT Do you recall them saying anything else?

WIT Um, well one time one of the clerks turned around and the guy in the yellow jacket gestured to her, you know, told her to turn back around, you know. And that was all I remember.

ATT Thank you very much _____. Your honor, I have no further questions of this witness.

Identification Number: IDNO 32
Age: AGE 24
Sex: SEX M
Camera Condition: CACO N
Communication Apprehension: COAP 62
Vocabulary Score: VOSC 40

JUD Would the bailiff escort the next witness to the stand?

BAI Would you please remain standing and raise your right hand? Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

WIT I do.

BAI You may be seated.

JUD The State may now question the witness.

ATT Please state your name for the record.

WIT _____.

ATT _____, what's your current address?

WIT _____

ATT And how old are you?

WIT Twenty-four.

ATT Did you just view a videotape in another room?

WIT Yes I did.

ATT All right. Would you please describe for us the events that you saw on that videotape?

WIT Eh, I saw a car pull up to a convenience store, and I saw a man, one man, get out of the car, go in and buy something. And he went back to the car, and then, and, and another fellow, eh, talked about something. Seemed like they were going to rob the place. And eh, the man who had been in the store before, went back into the store. Went to the magazine rack and eh, waited around. And all of the sudden they pulled eh, masks on their faces, one, the man that was at the magazine put a mask on his face. And then another man, who appeared to be the other man that was in the car with him, came in with a mask already on his face. And the man that was at the magazine rack had a handgun, what appeared to be a handgun, and the other man had what appeared to be a shotgun or a bat I couldn't tell from the videotape. And they proceeded to rob the cash register. And eh, after the robbery they forced the cashier and one witness, who happened to be in the store, into the back room and then they left in their car.

ATT All right. Could you describe for us in detail what the store looked like?

WIT Well the store was a typical convenience store with, you know, a small structure, rectangular, with a parking lot out front. Glass doors, big glass windows all across the store front.

ATT Do you recall any other details about the store?

WIT And it was loaded with goods. And the cashier's station was in the center of the store.

ATT I'm going to ask you, if you would, to describe in as much detail as possible the two men that committed the crime.

WIT Eh, the first man that we saw was eh, a white male 'bout, looked to me to be about five-ten a hundred and eighty pounds. He had a mustache and dark hair, dark brown hair, eh, short, 'bout half way over his ear. Eh, stocky built, kinda muscular built. Eh, he was wearing blue jeans and a what appeared to be a green plastic jacket. Eh, the other man was somewhat similar although he looked to be a little taller, one or two inches and a little heavier. Eh, he also had a mustache. Eh 'bout the same kind of hair, straight, brown hair. Eh, looked to me like he had a little bit more receding hair line than the other gentleman did. Eh he too was wearing blue jeans, but he had on a tan windbreaker. And that's about all I recall.

ATT Do you recall anybody else being in the store during the commission of the crime, other than the two that you've just described?

WIT Eh. The camera moved around and there appeared to be, there appeared to be one or two people in the store right before the crime was committed. However, once the what appeared to be the crime got into motion eh, there was only one other witness that we saw. But eh, seems to me like I recall someone else in the back.

ATT Would you describe for us the people in the store other than the two men?

WIT Eh well, the cashier was eh, a white woman about, oh fifty years old. Eh, heavy. Eh, she wore glasses, and the other witness was a, a, eh, black lady about eh, twenty-five to thirty years old. She was wearing glasses also and a dress, a white dress. Well, it looked like a white dress. Eh, she was just in there buying something.

ATT Do you recall any of the reactions of any of the clerks, say for instance during the commission of the crime?

WIT Eh, the cashier appeared to be very calm about the whole thing. She looked like she might have gone through it before. She did what she was asked to do very quickly and with no argument. The criminals eh, asked her to open the safe. She said, stated she didn't know the combination and after a little bit they eh, gave up and just left with the, with the money they had gotten from the cash register.

ATT How about the reactions after they came back from the back to the center of the store? Do you recall those?

WIT Yes. They came out of the room as soon as they left and eh, the cashier stood in the back of the store for a second just to make sure the car had gone ahead and driven off with both people in there. And then she went immediately to the phone and called the police. Eh, the other woman she walked with her until the camera followed her over to the phone and then you couldn't see her anymore.

ATT Michael, I want to ask you once again, if you will, to describe for us in as much detail as possible the vehicle in which the men fled.

WIT Eh. The vehicle appeared to me to be a silver or, or a light blue. I couldn't really tell, the color quality was kind of poor. It appeared to be a silver, eh Japanese compact eh, sedan. Eh, sorta looks like a station wagon but it's not really it's hatch-back. Eh, sedan. Eh it was a two-door. Eh, it was definitely Japanese. I don't know if it was a Mazda or Toyota. Eh, it looked to be either eh, late seventies or, or an eighty model. It was a very late model car. Eh no dents. It looked almost brand new.

ATT How about during the crime, do you recall anything that either of them said during that time?

WIT Eh the only thing I recall is her going right to the phone and asking and calling the police to tell them that they had been robbed.

ATT How about during the commission of the crime, do you recall anything that the robbers said?

WIT Eh. They said freeze, right when they started, when they came in. Eh, they were very abrupt as you'd expect robbers to be. Eh. They told both of the witnesses to turn around and face away from them. And eh, one of the witnesses eh, the black woman at one time turned around to look and see what they were doing and he immediately told her to turn back around face away from him. Eh, other than that, I don't have any recollection of any other activities by the witness.

ATT Thank you very much Michael. You honor I have no further questions for this witness.

JUD (to the witness) You may step down now (pause). Would the bailiff please escort the next witness to the stand?

APPENDIX F

POST-EXPERIMENTAL QUESTIONNAIRE

POST-EXPERIMENTAL QUESTIONNAIRE

Subject

Name: _____ SS#: _____

DIRECTIONS: Please answer each of the questions on this page as truthfully and accurately as possible. Complete the open-ended questions on this page before responding to the statements on the following page.

1. Did anything or anyone distract you during your testimony in the courtroom? _____ (yes or no) If yes, please describe the thing(s) or person(s) causing the distraction:

2. If you answered "yes" to the above question, did the distraction you mentioned noticeably hinder your ability to continue your testimony? _____ (yes or no) Did the distraction affect the content of your answers? _____ (yes or no)

If yes to either of the above, please describe how you feel you were hindered or the content affected:

3. If you answered "no" to question number 1, do you think you noticed nothing distracting because you were too anxious or nervous to notice anything? _____ (yes or no) Please explain your answer.

DIRECTIONS: Please respond to the following statements as honestly and quickly as you can. Indicate your agreement or disagreement with each of the following statements by circling the number corresponding to your immediate impression:

- (1) Strongly Agree, (2) Agree, (3) Undecided, (4) Disagree, (5) Strongly Disagree

1. I felt no fear while answering questions in the courtroom.	1 2 3 4 5
2. I look forward to having the opportunity to testify in a real courtroom trial in the future.	1 2 3 4 5
3. While testifying my posture felt strained and unnatural.	1 2 3 4 5
4. I observed nothing in the courtroom which distracted me from giving testimony.	1 2 3 4 5
5. My hands trembled while testifying.	1 2 3 4 5
6. After beginning my testimony I began to feel less nervous and actually began to enjoy the experience.	1 2 3 4 5
7. I got really involved in answering the attorney's questions.	1 2 3 4 5
8. I felt more at ease while testifying than I feel in normal conversation.	1 2 3 4 5
9. I was fearful and tense during my testimony in the courtroom.	1 2 3 4 5
10. I face the prospect of another court appearance as a witness with apprehension and nervousness.	1 2 3 4 5
11. My thoughts became jumbled and confused when speaking in the courtroom.	1 2 3 4 5

12. I felt too fearful to notice any distractions in the courtroom during my testimony.
13. I would probably answer questions differently if I knew my court appearance was being televised to the Gainesville community.
14. I would not mind my friends and family seeing me testify on television.
15. Briefly describe your understanding of the purpose of this research study:

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

APPENDIX G

**DIAGRAM OF COURTROOM USED
IN EXPERIMENT**

DIAGRAM OF COURTROOM USED IN
EXPERIMENTAL SITUATION

APPENDIX H

RESULTS OF THE SURVEY OF SUBJECT'S ATTITUDES

RESULTS OF THE SURVEY OF SUBJECT'S ATTITUDES TOWARD THE JUDICIAL SYSTEM AND THE NEWS MEDIA

The following mean scores indicate the relative valence of the subjects' attitudes: (1) the most positive score, (5) the most negative score.

1. The U.S. court system is the best way I know to decide the guilt or innocence of a person accused of a crime. 2.19
2. I possess a clear understanding of the judicial process an accused person must go through before being declared guilty or innocent. 2.97
3. Generally, attorneys are honest and moral. 3.02
4. The U.S. judicial system treats all persons as fairly and equally as any system I know about. 2.54
5. Our judicial process does not necessarily regard everyone as "innocent until proven guilty." 3.26
6. I feel the average U.S. citizen does not understand how our judicial process operates. 4.04
7. I do not trust attorneys in general. 2.62
8. Judges are not always unbiased in their decisions in the courtroom. 3.59
9. I respect judges in our judicial system as unbiased individuals. 2.81
10. I believe most of the information I obtain from the news media (radio, TV, newspapers, magazines, etc.) to be true. 2.88
11. The news media have the best interests of our society in mind when reporting information. 3.45

12. Money and ratings are the primary goals of the news media.	3.34
13. The news media usually distort and twist the information we receive.	2.81
14. I use at least one of the various types of news media at least once a day during the average week.	1.88
15. The very presence of the news media changes or alters the nature of an event or happening.	3.59
16. As a whole, the news media attempt to present information in an objective manner.	2.57

APPENDIX I

COMPUTER PRINT-OUT OF STATISTICALLY
SIGNIFICANT RESULTS

DEPENDENT VARIABLE: AMF

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	30.47060264	7.61765066	2.66	0.0425	0.167290	17.7262
ERROR	53	151.67117495	2.86172594		STD DEV		AMF MEAN
CORRECTED TOTAL	57	182.14207759			1.69166366		9.54327586

SOURCE	DF	TYPE I SS	F VALUE	PR > F	TYPE IV SS	F VALUE	PR > F
CC	1	0.6664033	0.23	0.6305	12.01243755	4.20	0.0454
COAP	1	4.3951080	1.52	0.2255	12.52629001	4.38	0.0412
COAP*CC	1	12.14752095	4.24	0.0443	12.14752095	4.24	0.0443

DEPENDENT VARIABLE: TAT

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	857507.20849693	214376.80212423	4.69	0.0026	0.261536	38.6284
ERROR	53	2421223.89495135	45683.46971606		STD DEV		TAT MEAN
CORRECTED TOTAL	57	3278731.10344828			213.73691706		553.34482759

SOURCE	DF	TYPE I SS	F VALUE	PR > F	TYPE IV SS	F VALUE	PR > F
CC	1	1233.76690981	0.03	0.8701	32036.46425854	0.70	0.4061
COAP	1	694637.07569938	15.21	0.0003	567611.79433888	12.72	0.0009
COAP*CC	1	18206.72864469	0.39	0.5340	18206.72864469	0.36	0.5540

REFERENCES

- Agresti, A., & Agresti, B. F. Statistical methods for the social sciences. San Francisco: Dellen Publishing Company, 1979.
- Ashley, T. R., & Cruse, D. FAMULUS user's manual. Gainesville, Fla.: The Center for Instruction and Research Computing Activities, April 1980.
- Aspen, M. E. Cameras in the courtroom: The Florida experiment. Illinois Bar Journal, 1978, 67, 82-87.
- Associated Press. Justices hear cameras-in-court case. Gainesville Sun [Florida], November 13, 1980, p. 1A.
- Baker, P. Report of the Supreme Court of Florida, re: conduct of audio-visual trial coverage in trial of Florida v. Zamora. Unpublished report, case number 77-25123-A. Filed in 1977.
- Bermant, G.; McGuire, M.; McKinley, W.; & Salo, C. The logic of simulation in jury research. Criminal Justice and Behavior, 1974, 1(3), 224-233.
- Blashfield, A. E. The case of the controversial canon. American Bar Association Journal, 1962, 48, 429-434.
- Block, I. J. Cameras and courtrooms: The denial of due process. The Florida Bar Journal, 1978, 52, 454-455.
- Blonk, H. Washington trial covered by cameramen. Editor and Publisher, December 21, 1974, p. 18.
- Bradac, J. J.; Kinsky, C. W.; & Davies, R. A. Two studies of the effects of linguistic diversity upon judgments of communication attributes and message effectiveness. Communication Monographs, 1976, 43, 70-79.

- Bradley, B. E. An experimental study of the effectiveness of the video-recorder in teaching a basic speech course. Speech Teacher, 1970, 19, 161-167.
- Buchanan, R. W.; Pryor, B.; Meeske, M. D.; & Strawn, D. U. The Florida experiment. Trial, April 1979, pp. 34-36. >
- Bush, J. D.; Bittner, J. R.; & Brooks, W. D. The effect of the videotape recorder on levels of anxiety exhibitionism, and reticence. Speech Teacher, 1972, 21, 127-130.
- Carpenter, R. H. The essential schemes of syntax: An analysis of rhetorical theory's recommendations for uncommon word orders. Quarterly Journal of Speech, 1969, 55, 161-168.
- Carter, C. A. Media in the courts. Williamsburg, Va.: National Center for State Courts, 1981.
- Chance, J. C. A David among Goliaths on the Chandler case. The Quill, September 1980, p. 9.
- Chandler v. Florida. United States Law Week, 1981, 49, 4141-4149.
- Code of judicial conduct--amendment--electronic media and still photography coverage of judicial proceedings. The Florida Law Weekly, April 13, 1979, pp. 155-166.
- Daly, J. A. The assessment of social-communicative anxiety via self-reports. A comparison of measures. Communication Monographs, 1978, 45, 204-218.
- Deihl, R. E.; Breen, M. P.; & Larson, C. U. The effects of teacher comment and television videotape playback on the frequency of nonfluency in beginning speech students. Speech Teacher, 1970, 19, 185-189.
- Deiker, R. J.; Crane, L.; & Brown, C. T. Repeated self-viewings on closed-circuit television as it affects changes in the self-concept and personality needs of student speakers. Speech Teacher, 1971, 20, 131-142.
- Denniston, L. Photo finish: The latest word on cameras in the courtroom. The Quill, March 1981, pp. 20-22.

Douglas, W. O. The public trial and the free press.
Rocky Mountain Law Review, 1960, 33, 1-10.

Fairbanks, H. Studies in language behavior: The quantitative differentiation of samples of spoken language.
Psychological Monographs, 1944, 56(2), 19-38.

Fatzer, H. R. Cameras in the courtroom: The Kansas opposition. Washburn Law Journal, 1979, 18, 230-243.

Freimuth, V. S. The effects of communication apprehension on communication effectiveness. Human Communication Research, 1976, 2, 289-298.

Gannett Co., Inc. v. DePasquale. 1979, 433 U.S. at 368.

Gerbner, G. Trial by television: Are we at a point of no return? Judicature, 1980, 63, 416-426.

Gillmor, D. M., & Barron, J. A. (Eds.). Mass communication law (2nd ed.). St. Paul, Minn.: West Publishing Co., 1974.

Goldhaber, G. M., & Kline, J. A. Effects of videotape on attendance and attitude in the fundamentals of speech communication course. Speech Teacher, 1972, 21, 93-98.

Goldman, P. S. News camera in the courtroom during State v. Solorzano (Nev.) 546 P 2nd 1295: End to the Estes mandate? Southwestern-Nevada University Law Review, 1978, 10, 2001-2067.

Graham, F. Cameras in the courtroom: Yes, bring them in. American Bar Association Journal, 1978, 64, 545-550.

Griswold, E. The standards of the legal profession: Canon 35 should not be surrendered. American Bar Association Journal, 1962, 48, 615-618.

Hall, F. H. Colorado's six years' experience without judicial Canon 35. American Bar Association Journal, 1962, 48, 1120-1122.

- Hirschhorn, J. Brief of appellants: Chandler v. Florida. Filed with the United States Supreme Court, October, 1979.
- Hoyt, J. L. Courtroom coverage: The effects of being televised. Journal of Broadcasting, 1977, 21, 487-495. ✓
- Johnson, W. Studies in language behavior: A program of research. Psychological Monographs, 1944, 56(2), 1-15.
- Jones, N. J. Linguistic differences in personal and social communication contests in dramatic literature. Unpublished master's thesis, Texas Tech University, 1977.
- Jordan, W. J., & Powers, W. G. Verbal behavior as a function of apprehension and social context. Human Communication Research, 1978, 4, 294-300.
- Kelso, R., & Pawluc, S. M. Focus on cameras in the courtroom: The Florida experience, the California experiment, and the pending decision in Chandler v. Florida. Pacific Law Journal, 1980, 12(1), 1-40.
- Knopf, T. A. Camera coverage on trial: The state of Florida v. Ronney Zamora. The Quill, November 1977, pp. 21-23.
- Kornblum, G. O., & Rush, P. E. Television in courtroom and classroom. American Bar Association Journal, 1973, 59, 273-276.
- Lerea, L. A preliminary study of the verbal behavior of speech fright. Speech Monographs, 1956, 23, 229-233.
- Loewen, R. F. Cameras in the courtroom: A reconsideration. Washburn Law Journal, 1978, 17, 504-514.
- McCroskey, J. C. Oral communication apprehension: A summary of recent theory and research. Human Communication Research, 1977, 4, 78-86.
- McCroskey, J. C. Validity of the PRCA as an index of oral communication apprehension. Communication Monographs, 1978, 45, 192-203.

- McCroskey, J. C., & Lashbrook, W. B. The effect of various methods of employing video-taped television playback in a course in public speaking. Speech Teacher, 1970, 19, 199-205.
- Miller, G. A. Language and communication. New York: McGraw-Hill Book Co., 1963.
- Miller, G. R.; Bender, D.; Florence, T.; & Nicholson, H. Real versus reel: What's the verdict? Journal of Communication, 1974, 24, 99-111.
- Miller, G. R., & Fontes, N. E. Videotape on trial: A view from the jury box. Beverly Hills, Calif.: Sage Publications, Inc., 1979.
- Netteburg, K. Does research support the Estes ban on cameras in the courtroom? Judicature, 1980, 63, 466-475.
- Parkinson, M. G. Verbal behavior and courtroom success. Communication Education, 1981, 30, 22-32.
- Petition of Post-Newsweek Stations, Florida, Inc. for change in code of judicial conduct. Filed June 14, 1977 with the Florida Supreme Court, Case number 46835.
- Powers, W. G. The rhetorical interrogative: Anxiety or control? Human Communication Research, 1977, 4, 44-47.
- Pryor, B.; Strawn, D. U.; Buchanan, R. W.; & Meeske, M. D. The Florida experiment: An analysis of on-the-scene responses to cameras in the courtroom. Southern Speech Communication Journal, 1979, 45, 12-26.
- Report of the Supreme Court committee to monitor and evaluate the use of audio and visual equipment in the courtroom. Unpublished report filed with the Wisconsin Supreme Court March 30, 1979.
- Richmond Newspapers, Inc. v. Commonwealth of Virginia. United States Law Week, 1980, 48, 5008-5022.
- Roper, Organization, Inc. Public perceptions of television and other mass media. New York: Television Information Office, 1979.

Sample survey of the attitudes of individuals associated with trials involving electronic media and still photography coverage in selected Florida courts between July 5, 1977 and June 30, 1978. Unpublished report prepared by the Judicial Planning Coordination Unit, Office of the State Courts Administrator, November 1, 1978.

SAS user's guide. Cary, N. C.: Statistical Analysis System Institute, Inc., 1979.

Tongue, T. H., & Lintott, R. W. The case against television in the courtroom. Williamette Law Review, 1980, 16(3), 777-801.

Traxler, A. Vocabulary test for high school students and college freshmen: Instruction manual. Indianapolis, Ind.: The Bobbs-Merrill Company, 1964.

Welke, J. W. The effects of intensional and extensional audiences on communicator anxiety: An experimental study. Central States Speech Journal, 1968, 19, 14-18.

White, F. W. Cameras in the courtroom: A U.S. Survey. Journalism Monographs, April 1979, No. 60.

Wolf, S. G. The role of the electronic media in the criminal justice system. Cincinnati Law Review, 1978, 47, 417-430.

BIOGRAPHICAL SKETCH

Born March 9, 1952, in Bentonville, Arkansas, Donald Lewis Shores, Jr., began life with his mouth open. His mouth remained open often until he entered the seventh grade. During the high school and college years of the late 60's and early 70's, he kept his mouth shut and attempted to learn.

Upon graduation from Harding College in Searcy, Arkansas, in 1974, Shores began a career as a radio newscaster (thus opening the mouth once again). After two years of radio, he went back to school. Fifteen months later, Shores emerged from Murray State University in Murray, Kentucky, with a master's degree in communication.

In 1978, Shores entered the University of Florida, closed his mouth and started soaking up knowledge. Now the year of 1981, with Ph.D. in hand Shores heads with his family of three to the gold-filled hills of California and the beaches of Pepperdine University to once again open his mouth.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Donald E. Williams
Donald E. Williams, Chairman
Professor of Speech

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Thomas B. Abbott
Thomas B. Abbott
Professor of Speech

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Anthony J. Clark
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Associate Professor of Speech

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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August 1981

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