To the Graduate Council:

I am herewith submitting a thesis written by John F. Wilbur entitled "A Field Application of Inoculation Theory." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Speech and Theatre Arts.

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A FIELD APPLICATION OF INOCULATION THEORY

A Thesis

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ABSTRACT

Inoculation theory has drawn the attention of many researchers since 1960 when it was popularized by William J. McGuire. Experimenters, including McGuire, have tested scores of variables in replicating and extending inoculation principles but generally in a sterile laboratory environment.

The main purpose of this investigation was to test basic principles of inoculation theory in a situation outside of the laboratory. Specifically, the principles of inoculation theory were applied to reduce the negative response and maintain positive attitudes toward the TV format of Public Speaking 2311 at The University of Tennessee, Knoxville. From previous experience, it had been found that students enrolled in the TV sections were prone to develop negative attitudes toward the television aspect of teaching 2311. It was theorized that a forewarning message about the TV format and about criticisms to which students would probably be exposed could help maintain positive and reduce negative attitudes.

A pretest measuring student attitudes toward the TV format of Public Speaking 2311 was given to 14 of the 16 TV sections in the first five minutes of the first class meeting in the Spring term 1976. Four weeks later all 14 sections plus two additional ones completed a comparable posttest. The 14 sections were randomly divided into two treatment groups: (1) Group A, consisting of three sections of public speaking, immediately after the pretest received an inoculative two-sided oral presentation which emphasized advantages, but discussed TV format criticisms; and (2) Group B consisting of three sections

of public speaking, immediately after the pretest received a supportive one-sided oral treatment which discussed TV format advantages only. Group C, consisting of eight public speaking sections, served as a control group and received no message between the pretest and posttest. An additional two sections of public speaking classes, Group D, received no message or pretest, but did complete a posttest. Group D served as a second control group to determine the effects of pretesting. An attempt was made to reinforce the effects of the two main treatment groups by presenting an additional booster message to one public speaking section in each of the A and B treatment groups midway between the pretest and the posttest.

It was assumed that students in all groups would be exposed to critical remarks concerning the TV format during the four week period between the pretest and posttest and a test item was added to the posttest to confirm this assumption.

In analyzing the results, students were broken into groups according to their initial attitude toward the course and a 3 x 3 analysis of variance was used to test the effects of the initial attitude (positive, neutral, or negative) and type of resistance message heard (two-sided, one-sided, none) on attitude change toward the TV format of teaching Public Speaking.

The general hypothesis stated that the principles of inoculation theory could be successfully applied to predict attitude change in this field experiment. Two specific experimental hypotheses stated that: (1) the inoculative two-sided treatment would prove superior to the supportive one-sided message in (a) maintaining positive

attitudes and (b) shifting initially neutral and negative attitudes toward a more positive position in regard to the TV format; (2) students hearing either message (supportive or inoculative) would be more likely than the students hearing no resistance message to (a) maintain positive attitudes or (b) shift initially neutral or negative attitudes toward a more positive position in regard to the TV format; (3) Group D (no pretest or message) would have less positive attitudes toward the TV format than Group C, the control group receiving the pretest; and (4) the two sections receiving the booster message would show the most attitude change or reinforcement in the predicted direction.

The main effect of the hypothetical superiority of the inoculative message over the supportive message was not supported. The messages did affect a change in attitudes as predicted, but in the opposite direction. Using a controversial issue in the field experiment, the one-sided supportive message proved superior to the two-sided inoculation treatment in all respects. The booster message as predicted did accentuate trends, though not significantly, but again opposite to the predicted direction. Group D, the non-message, non-pretest group, did not display more hostility toward the TV format as hypothesized. Hypothesis II as stated was supported.

FOREWORD

In Chapter I the reader is introduced to inoculation theory via a chronological sequence which begins with attitude change research during and after World War II. The foundations upon which inoculation theory was built are described and the theory itself defined. Detailed attention is then given to the assumptions, principles, procedures, and findings of William J. McGuire, the major proponent of inoculation theory.

Because of the difficulty of replication generally and of replicating McGuire's experiments specifically, a brief discussion of the problem is presented followed by a survey of research findings associated with inoculation theory and their application to the experiment at hand. The writer, in summarizing the chapter, stresses the prior emphasis upon laboratory investigations and suggests that the external validity and the practical relevance of the theory must be considered. This, he says, is the focus of his study.

Chapter II begins with an introduction of the environment in which the proposed field experiment will take place. Hypotheses are then presented and the general procedure for the experiment detailed. Brief sections describing materials, subjects, variables, and the experimental design follow.

The final two chapters present results, discussion, and conclusions for the reader.

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CHAPTER I

INTRODUCTION TO INOCULATION THEORY RESEARCH

Attitude Change Research

For as long as humans have existed, they have been concerned with the attitudes and beliefs of others and how to change them. Methods used by the earliest cave dwellers evolved into more sophisticated forms of persuasion as the millenia passed until the Greeks made rhetoric a highly specialized, disciplined study and art form. In our own "modern," scientifically oriented era, a great deal of research has been directed at attitude change.

During and after World War II, a significant amount of research was oriented toward experimentally determining the effects of persuasion of isolated message variables. One of these variables was the influence of message orientation (one-sided versus two-sided). In a series of field experiments Hovland, Lumsdaine and Sheffield (1949) found two-sided messages to be generally more effective than one-sided arguments. This trend was accentuated when subjects were well-educated regardless of their initial disposition toward the issue. A one-sided message proved superior when subjects were in agreement with the message source and when they were poorly educated. Subsequent research reaffirmed these basic findings (Jaksa, 1964; Koehler, 1970; McGinnes, 1966).

In the early 1950's the U.S. Congress stimulated attitude change research when it learned that American POW's in the Korean War readily abandoned long-held, traditional values and beliefs at the hands of

their captors. As a result, research monies were provided, and this impetus influenced a series of studies throughout the 1950's and early 1960's.

Some experimenters conjectured that people might avoid disagreeable messages which in the long run would act to make these persons more vulnerable to persuasive attempts when avoidance was impossible. By seeking to protect themselves from persuasive attempts they were at the same time making themselves more persuasible if the person were forced to hear an attack message. Early research with message avoidance was conducted by Gladstone, Janis, and Lumsdaine (1951) who discovered that people tended to avoid messages that were in opposition to their held beliefs. This research was subsequently supported by the findings of Osgood and Tannenbaum (1955), Brodbeck (1956), Festinger (1957), Janis (1957), Mills, Aronson, and Robinson (1959), Cohen, Brehm, and Lutane (1959), and McGuire (1960a,b).

While Hovland was experimenting with how to change attitudes, two of his associates experimented with the possibility of building resistance to persuasive attempts. Lumsdaine and Janis (1953) theorized that a person, when exposed to a persuasive message, would be swayed in one direction and then in another when exposed to a different persuasive attempt *unless* the first message was accompanied by *weak* arguments against the *persuader's* held belief. Hovland had found that a two-sided message was best in achieving attitude changes; now Lumsdaine and Janis's evidence was supporting the superiority of two-sided messages in resisting future attacks on a held belief.

The Lumsdaine and Janis study served as the foundation for what

later became known as "inoculation theory." The goal in the 1953 experiment was to induce resistance to persuasion with a pretreatment. Attitudes were measured with a pretest and a posttest in Part I of the experiment. In Part II a posttest was given after attack messages were presented. The investigators used an issue on which there were strongly held beliefs and presented it in the guise of a taped radio message. Sample groups were provided with either one- or two-sided presentations to build resistance to a later attack message. The researchers found that the two-sided inoculative presentation was the most effective in building resistance to the attack message.

It should be emphasized that the premise used by those who sought to change attitudes and beliefs, and those who sought to strengthen them, was the same: a two-sided presentation which emphasized the source's point of view, but discussed opposing viewpoints was considered the best way to achieve both goals.

Inoculation Theory and William J. McGuire

Inoculation theory generally states that it is possible to induce resistance to persuasion by motivating the subject to develop arguments to support the held belief. This is normally achieved by pre-exposing the individual to weak arguments against the held belief. This exposure acts as a threat to the individual and thereby provides the motivation needed for resistance building.

For William J. McGuire, the chief proponent of inoculation theory, selective avoidance provided an important explanation for the changing of attitude outside of the conditions under which they were

formed and maintained. He theorized that people generally maintain belief in an attitude in spite of contradictory information by avoiding messages presenting the conflicting ideas. In a practical sense, McGuire theorized that American POW's had lived all their lives in an environment where their basic beliefs went unquestioned and as a result they were unmotivated and unpracticed in defending them. When the beliefs were attacked, they were easily altered because the POW's, in effect, had only received a one-sided presentation. McGuire believed that, given a two-sided "treatment," the POW's would have more easily resisted attempts at persuasion by their captors.

McGuire, based on the earlier cited studies (Hovland, Lumsdaine, and Janis, 1949; Gladstone, Janis, and Lumsdaine, 1951; Lumsdaine and Janis, 1953; Brodbeck, 1956; Festinger, 1957; Janis, 1957; Mills, Aronson, and Robinson, 1959), further theorized that many people have beliefs which they are unpracticed in defending, not only because the beliefs are considered truisms, but also because individuals avoid encounters with people who hold beliefs that are in conflict with their own. Thus, like the American POW's in Korea, many of their beliefs are very vulnerable to persuasive attempts when avoidance is impossible.

Medical Analogy

The popularization of inoculation theory is no doubt attributable to McGuire's providing a provocative and deceptively simple medical analogy. The analogy was implied by Lumsdaine and Janis, but was not elaborated upon in their experiment.

McGuire drew the analogy that the researcher, like the physician, could expose (inoculate) individual minds to weakened arguments against held beliefs. He theorized that if a weakened virus in a vaccine caused the body to manufacture resistance (antibodies) to destroy the weak viruses and later stronger ones, then the mind, in the same way, would manufacture resistance in the form of rebuttals when exposed to weak arguments against a held belief. Further, like the body which overreacts to the weak viruses introduced to it, the mind would overreact and become super-resistant to strong subsequent attacks (arguments).

The inoculation theory was tested in the laboratory by McGuire in eight published laboratory experiments (McGuire, 1961; McGuire and Papageorgis, 1961a,b, and 1962; Papageorgis and McGuire, 1961; McGuire and Millman, 1965; Anderson and McGuire, 1965). The one- and two-sided message research and the concepts of avoidance had been contributed in earlier research and in his research, McGuire added the requirement that the belief for which resistance was being cultivated be a cultural truism, a belief held to be true beyond dispute by a great majority of a given society.

Experimental Format

The format for McGuire's experiments followed the same general pattern and a graphic outline of it is presented in Figure 1. In each study subjects were college undergraduates. Four "cultural truisms" were used as basic beliefs. These included:

1. Brushing teeth after meals is a good idea.
2. Penicillin has been beneficial to mankind.

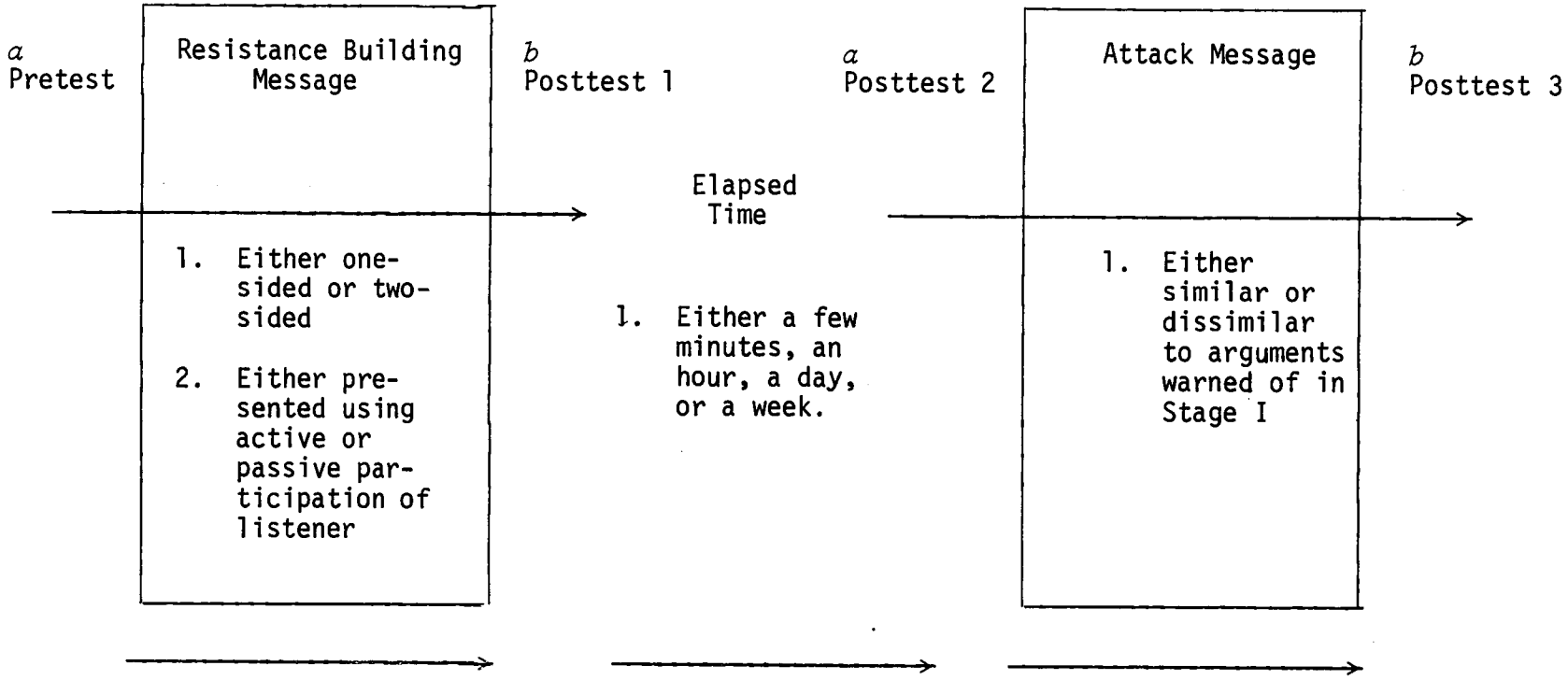


Figure 1. Format for McGuire's inoculation experiment.

3. A yearly physical examination by your doctor is advisable.

4. An X-ray is the recommended way to detect tuberculosis.

McGuire found, as he suspected, that these truisms were exceedingly susceptible to persuasive attempts precisely because they were truisms. Practice was not needed to defend a statement "everyone" knew to be true. The truisms had existed in a "germ-free" environment. Subjects had only received a one-sided presentation. However, when exposed to the attack arguments (viruses) that McGuire introduced, the truisms were altered radically.

Total time spent in one or two (maximum) sessions was two hours. During the first session which was a resistance-building effort and will hereafter be referred to as Stage I, subjects were exposed to one or more truisms, and their degree of belief was measured on a scale from 1 to 15. They were then given 600 to 1500 word statements either defending the truism (supportive one-sided) or presented mild counter-arguments refuting them (inoculative two-sided). The subjects were asked either to read the statement (passive participation), or to read and write counterarguments (active participation). Finally the subjects completed the attitude questionnaire a second time.

The second session, which comprised the attack on the truism and will be referred to as Stage II, took place from a few minutes to a week after the first session. During Stage II the attitude questionnaire used in Stage I was administered again to measure the strength of the held belief. Then strong arguments counter to the initial truism were presented in the form of a 600 to 1500 word statement. These attack arguments in some cases were similar and in other cases dissimilar

to the messages presented in Stage I. After exposure to the Stage II attacks the same questionnaire designed to measure the strength of the held belief was completed by the subjects. While there were some modifications on the basic approach, they were used only in isolated instances.

Findings

McGuire manipulated four main variables in his experiments: (1) similar or dissimilar messages in Stage I and Stage II (McGuire, 1961; McGuire and Papageorgis, 1962); (2) Time between Stage I and Stage II (McGuire and Papageorgis, 1962); (3) subject participation (active or passive) (Papageorgis and McGuire, 1961; McGuire and Papageorgis, 1962); (4) message type (one-sided or two-sided) (McGuire and Papageorgis, 1961b, 1962; Papageorgis and McGuire, 1961); Anderson and McGuire, 1965). In addition he looked at the combined effects of their variables. The variables were manipulated to elaborate the conditions under which the inoculative messages would be superior to supportive ones and to test the overall theory.

The conclusions of the several studies were quite detailed and are summarized below:

1. Inoculative two-sided presentations were generally superior to supportive one-sided treatments (McGuire and Papageorgis, 1961a).
2. a. Requiring active participation in Stage I generally inhibited the resistance-building process.

b. Inoculation was as effective when Stage II counter-arguments were not similar to those in Stage I (Papageorgis and McGuire, 1961b).

3. a. Active Stage I and passive Stage II participation was best when attack arguments were the same in both stages.

   b. Active Stage I participation was best when attack arguments in Stage II were dissimilar.

   c. A combination of active and passive treatments in Stage I with the same Stage II arguments was better than active or passive participation (McGuire and Papageorgis, 1961b).

4. a. Used in combination, an inoculative-supportive treatment in Stage I was superior to either treatment alone.

   b. A supportive-inoculative sequence was best when dissimilar arguments are used in Stage II.

   c. An inoculative pretreatment was best when similar arguments were used in Stage I and Stage II.

   d. Inoculative pretreatments were of no value when dissimilar Stage II arguments immediately followed the Stage I treatment (McGuire, 1961).

5. a. Information given in supportive treatments decayed more rapidly than that given in inoculative treatments.

   b. Decay occurred more quickly for supportive or inoculative information if attack arguments were similar (McGuire, 1962).

6. a. Forewarning the subject of the probability of a future attack was more successful in strengthening the held belief for supported versus inoculated group.
   b. While the effects of the information imparted in the support pretreatments began to decline immediately after the treatment, information effects in inoculated groups strenghtened for a time after pretreatment and then began to decay, slowly (McGuire and Papageorgis, 1962).
7. The type of issue, self-esteem, and source credibility, were significant intervening variables in the resistance-building process (McGuire and Millman, 1964).
8. a. Reassuring the subject that the held belief was accurate in Stage I weakened resistance.
   b. Highly threatening messages were superior to low threat messages in inoculating.
   c. Highly reassuring or supportive messages were superior to low reassurance messages in strengthening the held belief (Anderson and McGuire, 1965).

Insko (1967) presented an excellent critique, and McGuire (1964) also provided a detailed account of his assumptions, methodology, and findings. Of particular interest is McGuire's attempt to distinguish the inoculation approach from others taken in persuasion-resistance-building. His interest is in pretreatment and he says that "studying resistance to persuasion is not simply the reverse of studying persuasion itself" (McGuire, 1964, p. 192). He cites four approaches used to build resistance to persuasion that should not be confused with inoculation.

These include: the Behavioral Commitment Approach; the Anchoring Belief Approach; Resistant Cognitive States Induction Approach; and the Prior Resistance Training Approach (McGuire, 1964, pp. 194-200).

Though McGuire seeks to differentiate, he is hard-pressed to do so. For example, "Active Participation" is a sub-category of the Behavioral Commitment Approach which he distinguishes from his inoculation approach. However, active participation was McGuire's very focus in more than one experiment and was his primary concern in his second published experiment (McGuire, 1961). It is difficult to avoid the conclusion that McGuire is splitting hairs and that in many areas the inoculation process is little different from other approaches that have been taken by other experimenters in exploring the resistance-building phenomenon.

The Problem of Replication

It was inevitable that McGuire's work would be the focus of numerous replication attempts. He was unusually successful in his experimentation, and the medical analogy was exciting and conceptually logical. However, the research findings of many served to question McGuire's assumptions and findings. In addition, many experimenters such as Davis (1965) were not only not successful, but notably unsuccessful in supporting any of his hypotheses. In his research utilizing basic inoculation principles and controversial and non-controversial issues, Davis stated several hypotheses listed below:

1. A refutational defense leads to a greater resistance to attack than a supportive defense, independent of the type of issue, amount of support, and direction of belief.

2. A large amount of defense produces more resistance to attack than a small amount of defense, within the refutational type of defense only, and for the non-controversial type of issue only, independent of agreement-disagreement.
3. Controversial beliefs are more resistant to attack than non-controversial beliefs, independent of the defense, amount of support, and direction of belief.
4. Subjects who agree with the controversial beliefs are no more resistant to attack than subjects who disagree with the controversial beliefs, independent of the type of defense and the amount of defense.
5. The superiority of the refutational defense over the supportive defense is far greater for the non-controversial beliefs, than for the controversial beliefs, independent of the amount of defense and direction of belief.
6. No three-way or four-way interaction was predicted with the direction of belief, agree versus disagree.

None of the hypotheses was supported and understandably, results of this type only added to speculation concerning the reliability and validity of the McGuire experiments.

Realistically, however, replication is a problem generally and is not peculiar to McGuire's research. Many initially successful experiments violate Leedy's (1924) axiom "that any research effort should be replicable" (p. 67). An example of the problem would be the Garrett and Vohs (1968) attempt to replicate the Festinger-Maccoby (1964) experiment on resistance to attitude change. The results were

quite contradictory. Rosnow (1968) obtained findings that led him to conclude that subjects would yield most results the experimenter desired. Rosenthal (1966) also focused on the problem of "experimenter effects."

Loevinger (1968) and Smith, Smith, Scheffens, and Seinmann (1971) suggested that research experiments should be replicated before being submitted for publication. Though Lykken (1968) thinks Loevinger's idea a good one, for him it's too idealistic. Rather, he suggests continued publication of unreplicated experiments so that independent investigators will learn of the initial efforts and then attempt to replicate the findings.

In a second article, Smith, Smith, Baumgarte, Gliner, and Goodale (1971) say that the major problem among researchers is disagreement on what replication is, and Barber and Gurman (1972) state that, in many cases, replication is an "unattainable ideal." Smith et al. do suggest requirements for replication. These include:

> (a) identical conditions for repeated observation by one or more S's (sufficient statements by E are required to enable him or E2 to reconstruct identical conditions); (b) equivalent samples of S from the sample population; (c) sufficient reports of results by E1 to permit him or E2 to judge whether a second set of observations are those which would be expected (predicted) from knowledge of the first set; and (d) equivalent results of two independent sets of events (pp. 691-92).

Because of the problems of replication generally and of McGuire's inoculation experiments specifically, more attention than usual was given to considering intervening variables that might have an influence on the relative effectiveness of two-sided inoculative messages in building resistance to persuasion.

Associated Research

Studies Contesting Avoidance Theory

A major assumption made by McGuire was that people tend to avoid messages that are in disagreement with the held beliefs and as a result when avoidance is impossible they are quite vulnerable to persuasive attempts. If this assumption were not correct there might be other approaches to consider in explaining vulnerability for persuasion or inoculation theory.

Indeed, some researchers have found evidence which is in opposition to the avoidance postulate. For example, Stogdill (1959), Mills, Aronson, and Robinson (1959) and Steiner (1962) found evidence to show that individuals seek out incompatible information after decision choices. Ray (1967) exposed high-school students to consonant supportive initial arguments on controversial and non-controversial issues and contrary to the selection avoidance postulate, he found that they did not avoid, but rather sought out incompatible beliefs.

Congruity Research

Another source of challenge for inoculation theory came from proponents of congruity theory as postulated by Osgood and Tannenbaum (1955). Congruity theory minimizes avoidance in favor of attitude modification or reinforcement which results from the interaction of the source, the message, and the receiver. Manis and Blake (1963) successfully induced resistance to persuasion using congruity theory. They achieved immunization by providing the subject with arguments to support the held belief and counter attack messages the subjects were likely to hear against a held belief.

Norris and Tannenbaum (1965) reported that resistance to attitude change could be achieved by derogating the source of an attack on the belief and by providing the subject with arguments to support the held belief. In this successful experiment the credibility of the message source (William J. McGuire) was attacked and arguments supporting the held belief provided the subjects. Macauley (1965), employing inoculation (refutation) and congruency (source derogation) approaches using a controversial issue and written messages, hypothesized that source derogation would prove superior to an inoculation approach in resistance-building but that used in combination they would prove superior to either inoculation or congruency alone. The inoculation model did not receive support but the congruity model did. Used in combination more resistance was conferred as predicted.

Macauley, Norris, and Tannenbaum (1966) applied congruity theory principles (source derogation, refutation of the message, strengthening the held belief) to test the effectiveness of application before and after attacks. "Refutation" and "Strengthening" proved to be the most effective, and treatment before the attack was superior to treatment after it. Burgoon and Chase (1973), using congruity principles, considered language intensity as a variable in resistance-building. The finding supported the hypotheses that supportive treatments require very intense arguments in support of the held belief and that the intensity of the inoculative message should model the expected intensity of later attacks on the held belief.

Forewarning and Inoculation

Several experimenters have focused on the influence of a forewarning message concerning the possibility of an attack on a subject's held belief. Kiesler and Kiesler (1964) experimented with warnings before versus after the attack message. They concluded that forewarning was critical to resistance building while a warning about the propagandistic nature of the attack after the attack was useless. Friedman and Sears (1965) confirmed the influence of forewarning on resistance-building. Ray (1967) found in his experimentation that preparing subjects for the initial inoculation pretreatment improved resistance development. In 1973 Infante found evidence to support his hypotheses that the opinionated language and authoritativeness of the message source in forewarning subjects are important variables in conferring immunization to later attacks on the held belief.

Controversial Issues and Truisms

While McGuire used "truisms" in most of his experimentation, the great majority of those researchers cited here who attempted to replicate McGuire's work took Insko's advice and substituted controversial issues for the truism. Brown (1967) particularly sought to "determine the appropriate definition of resistance to persuasion for the evaluation of inoculation theory, when it is applied to controversial issues as well as cultural triusms and to attempt to measure some of the important intervening variables (perceived threat of inoculation, and counterarguing in response to an inoculation) suggested by inoculation theory" (p. 5421B).

She developed two definitions, chose two topics--one truism (penicillin) and one controversial issue (population control laws)--and predicted that "refutational defense would be perceived as more threatening . . . and the amount of counterarguing would be greater for inoculated subjects" (p. 5421B). Working with supportive one-sided and refutational two-sided groups, she found that a supportive pretreatment did increase resistance to persuasion on a controversial issue. No resistance improvement was demonstrated by inoculation pretreatments. The predicted difference between inoculated and non-inoculated groups was not supported. It was found that inoculated groups practiced attack derogation more than supported groups. Brown concluded that the major intervening variables in inoculation theory were far from clear and that much more research was needed. Ray (1967) reported that the two-sided refutational (inoculation) approach was the best way to build resistance to persuasion and that the controversy of the issue did not affect resistance.

Inoculation and Group

Some experimentation with the success of inoculation in small groups has been undertaken. Jones (1972) reported that resistance development was situational and reliant to some extent upon group cohesion. However, her hypothesis that increased group cohesion would increase resistance via inoculation approaches was not supported.

In 1972 McCroskey, Young, and Scott successfully extended an experiment with resistance building and found that an inoculative two-sided message delivered orally conferred more immunization with small groups than did the supportive one-sided message. His second hypothesis

concerning the inclusion of evidence in a treatment was not supported in this study as it had been in his 1970 experiment.

Inoculation Values and Attitudes

In her experiment, Jones (1972) predicted that resistance development was correlated with the saliency of the issue to a particular individual, and that resistance would generally increase with inoculation. She found that inoculation was effective in making attitudes and values generally more resistant to persuasion (anchoring approach).

Carnot (1968) experimented with the "anchoring" approach and hypothesized that an inoculative treatment which enhanced the perceived instrumental relationship between the belief and highly valienced goals would make the belief more resistant to persuasive attempts. His hypothesis was supported by the findings. Leppaluoto (1972) considered issue familiarity as a variable intervening in the persuasion building process and approached the experiment in hopes of anchoring resistance-building messages to related attitudes. She found that the more familiar the issue the easier to improve resistance to persuasion.

Other Important Variables

Freedman and Steinbruner (1964) focused on the subject's perceived choice in taking a position on an issue and resistance building and found that the higher the choice the greater the resistance to later attacks on the held belief.

Sigal (1967) found that confidence was a direct variable to be considered in building persuasion resistance. The higher the confidence, the greater the resistance. Working with 160 high-school

subjects, reinforcement on decisions made by groups of students served to build, maintain, or reduce confidence. Falsified academic records of college applicants served to instill a belief, and official or personal references served as the counterarguments. Students had received prior evaluative criteria for selecting or rejecting applicants. As hypothesized, the greatest resistance to the persuasion recommendations was exhibited by the high confidence group. Schulman (1968) found evidence to support his hypothesis that held views that are unpopular are more resistant to persuasive attempts than held views that are popular, and McCroskey (1970) reported that the inclusion of evidence in a treatment message to a subject acted to sustain resistance to persuasive attempts over a several week period (though in a 1972 experiment with Young and Smith the "evidence" hypothesis was not supported).

Infante and Grimmett (1971) taught subjects the "critical method" as a way of improving resistance to persuasive attempts. They found that it increased the persuasibility of men but reduced it for women (increased resistance). McGurrin (1972) hypothesized that one-sided would be inferior to two-sided treatments in inducing resistance, and that a high status source would induce more resistance than a low-status source. Also, he predicted that role-consistent would be superior to role-inconsistent sources in increasing resistance. He postulated that refutational conditions which involved a threat and dissonance factor would experience *less* conferred resistance than those that had exposure to threat only. Further, he stated that supportive conditions which involved dissonance would be more susceptible

to change than those without dissonance. The findings generally supported the hypothesis. Hass and Linder (1972), in a series of three experiments, found evidence to support the hypothesis that the availability of rebuttals was important to the subject in an effort to ward off attack messages on a held belief and Burgoon and Chase (1973) found that intensity of treatment messages was a critical factor in resistance building.

Type of Message

The inoculative two-sided message has, in the great majority of experiments, proved to be the most effective approach to building resistance to persuasion. There are, however, two exceptions worth noting. Brown (1971) found that a supportive treatment was superior to an inoculative in conferring resistance on a controversial issue. In addition, Macauley, Norris and Tannenbaum, using congruity approaches, found that in building resistance strenghening the held belief (which amounts to a supportive pretreatment) was superior to other approaches tested.

Applications and Implications

In their article McGuire and Millman (1965) spent considerable time defending the selective avoidance phenomenon which they indicated was under strong attack. True, whether or not a person avoids or confronts an issue disagreeable with his or her held belief is not crucial for the present experiment. Nevertheless, the discussion must be considered as several researchers have tended to minimize the avoidance explanation in favor of confrontation and what takes place when a

receiver hears an attack message that comes from a highly credible source (congruity theory). The emphasis in these experiments has been on controversial issues and is more practical in orientation than the inoculation approach which rests on the truism.

Congruity principles suggest that resistance is built by source derogation practice, providing the subjects with arguments to support the belief, and by strengthening the held belief. Resistance is achieved without providing attacks on the belief (inoculation). The obvious problem with the inoculation is that the pretreatment attack on the controversial issue may be too weak or too strong for any given individual. If too strong then the belief is altered, if too weak the individual is not sufficiently motivated to develop rebuttals. Burgoon and Chase (1973) indicate that with a controversial issue the intensity of the treatment must be very strong for supportive groups and should be of the same intensity as the expected attack on the held belief for inoculative groups. This all suggests that the source, receiver, message, variables--the heart of the congruity model--should be carefully considered and, if possible, controlled to achieve the desired outcome. In a field experiment operating with a minimal control factor, the researcher must consider his subjects and the type of attack message they are likely to hear. He must also consider the source of the message and then adjust his treatment accordingly, as suggested by Burgoon and Chase. Even if adequate consideration is given to these variables, the self-esteem of the receiver is intervening and uncontrollable in a field experiment. Further, his or her view of the saliency of the issue is critical (Jones, 1972). The researcher can only hope to

bolster the esteem variable using congruity principles, i.e., derogating potential attack sources, bolstering the belief, practicing refutations and striving to find a salient issue.

Providing subjects with a warning indicating that they will be exposed to an attack is at the heart of the resistance-building process. The warning places the subject on guard and motivates him/her to develop rebuttals. Thus the supportive and inoculative messages must carry a clear warning of a possible attack.

The source of the treatment message, if orally delivered, is all-important. Infante (1973) says the source should be perceived as authoritative. Sigal's (1972) study with subject confidence as a variable supports what is being said here as do the findings of McGurrin (1972) with status and role of the message source. In the experiment at hand a critical factor will be the demeanor of the source of the supportive and inoculative message, and the subject's perception of the status role or authoritativeness of the message source.

The message design itself will also be important. As indicated, the strength or weakness of the message must be balanced for the type of treatment as well as for the strength of attack message expected. Infante (1973) says opinionated language should be used and McCroskey (1970) says that the inclusion of supportive evidence is valuable. Burgoon and Chase (1973) stress language intensity as a key variable in the resistance-building process.

The overwhelming superiority of the inoculative two-sided message over the supportive one-sided seems incontestible, though Brown (1972) found the supportive superior to the inoculative message as did Macauley, Norris, and Tannenbaum (1965), using congruity principles.

Summary

In summary, inoculation theory is rooted in attitude change research and the earliest inoculation experiment was conducted by Lumsdaine and Janis (1953), but credit for its development must go to William J. McGuire. However, attempts at replicating McGuire's experiment have met with mixed results. Yet replication is a general problem among researchers in all areas of experimental psychology and because of the problem of reliability, several have called for the imposition of new standards.

Considering the difficulty of replication generally and of replicating McGuire's work specifically, anyone who is considering such an attempt would want to carefully consider prior experimentation that sought to explain and extend McGuire's experiments. The previous pages of this paper were devoted to that purpose.

The major concern of this investigation is whether the positive results in testing inoculation theory principles in the laboratory can be obtained in a field setting. Further, it is suggested that a critical flaw in McGuire's medical analogy is that it overlooked the fact that physicians practice their trade in the real world and not in the laboratory. The question of external validity must be considered and the remainder of the paper reports on this field experiment which was designed to test the practical relevance of inoculation theory.

CHAPTER II

METHODOLOGY

Introduction

Based on the previous research and the need to test the reliability of inoculation theory principles in a field setting, a design was established to examine four hypotheses emanating from inoculation theory. In this chapter the field setting in which the research took place is described, hypotheses presented, and the general procedures, materials, subjects, and variables discussed.

Speech 2311 is a service course in Public Speaking and is a degree requirement for most undergraduate students at The University of Tennessee, Knoxville. Several sections are taught "live" in the normal classroom setting while a TV format is the means by which the department is able to service the majority of the 600 students who enroll each quarter. Based on faculty assessments it is agreed that most students don't choose the TV sections voluntarily. While some students willingly accept the alternative, others have a pronounced aversion for it and enter the classroom with a strong negative attitude.

The TV format consists of one 50-minute TV lecture each week for eight weeks. The TV presentations are delivered by the 2311 Coordinator and are presented in a formal, scholarly and straightforward manner.

In addition to the TV lectures, students also attend two weekly laboratory sessions conducted by teacher assistants who are full-time graduate students in the Department of Speech and Theatre. The lab sessions are used for discussion, speech preparation, and delivery.

The Speech Department, in the past, has made no effort to mediate neutral and negative attitudes with counterarguments, or to reinforce attitudes of those students positively disposed toward the course. Thus, these TV sections appeared to be quite suitable for a field experiment. The issue was controversial and the situation lent itself to applied unobtrusive observation. Student attitudes could be measured under the guise of a departmental survey and a procedure was devised to divide the material into the same patterns used by McGuire.

Hypotheses

The general hypotheses stated that the principles of inoculation theory could be successfully applied to predict attitude change in this field experiment. Two specific experimental hypotheses stated that (1) the inoculative two-sided treatment would prove superior to the supportive one-sided message in (a) maintaining positive attitudes and (b) shifting initially neutral and negative attitudes toward a more positive position in regard to the TV format; (2) students hearing either message (supportive or inoculative) would be more likely than the students hearing one resistance message to (a) maintain positive attitudes or (b) shift initially neutral or negative attitudes toward a more positive position in regard to the TV format; and (3) Group D (no pretest or message) would have less positive attitudes toward the TV format than Group C, the control group receiving both pretest and posttest; (4) the two sections receiving the booster message would show the most attitude change or reinforcement in the predicted direction (inoculative versus supportive).

General Procedure

Stage I

During the Spring quarter 1976, a pretest to measure initial attitudes toward the topic was administered to a group of 297 undergraduates in 14 of 16 TV sections of Speech 2311 at The University of Tennessee, Knoxville. At issue was the degree to which students held a positive, neutral or negative attitude toward the TV format. The questionnaire included nine attitude items, but the focal item was question 5 which sought to measure the degree to which the subject disliked the TV section. The pretest was given in the first five minutes of the first laboratory class which met prior to any TV lecture. (See Appendix B.)

Six sections were drawn from the general population of 16 sections for the treatment group. Three of these sections comprised Group A. Immediately after the pretest each section making up Group A received a 4-minute, oral, one-sided supportive message concerning the TV format (see Appendix A). The message discussed TV format advantages only. Three sections labeled Group B each received a 7-minute, oral, two-sided inoculative message which emphasized format advantages, but discussed criticisms as well (see Appendix A). The same source delivered all messages. The message source was introduced as a graduate student conducting a survey for the Speech Department. The presentations were well rehearsed and delivered in a low-key, informal, manner. There were no questions by students regarding the presentation.

Eight of the 10 remaining TV sections not in Groups A or B comprised a control group and were labeled Group C. Students in these

sections received no message after the pretest. The teaching assistants in these eight sections were given a standard introductory message to deliver at the very beginning of their first class period. The statement described the pretest as a department survey and thereby established the "cover" for the experiment. The typed statement also served to assure a standard presentation in all classes in the control group (see Appendix C). The surveys were passed out and collected in the first 5 minutes of the class period.

The remaining two sections of TV 2311 were labeled Group D. This was second control group and students in these sections received no pretest or presentation but did complete a posttest. This approach was designed to test the possibility that Group D students would react less favorably toward the TV format simply because they had received no attention via a Stage I pretest (Hawthorne Effect).

Stage II

During the four week period that followed the pretest, it was assumed that students would be exposed to attacks on the TV format. This formed the attack portion of Stage II. The attacks took the form of natural and spontaneous peer criticisms of the TV format. To measure the degree to which students were exposed to such criticisms, an additional question was added to the posttest.

Also, during Stage II, one section from Group A and one from Group B were given a special "booster" treatment two weeks after the pretest. This particular approach was an extension of McGuire's medical analogy and was an experimental innovation designed to fight message decay and sustain resistance to attacks on the TV format.

The "booster shot" was administered by a teaching assistant. He simply asked the students to recall the graduate student who had talked with them two weeks earlier and to try to recall and write on paper as much of his presentation as possible. Also, they were to add any additional advantages and/or disadvantages they could think of that were not discussed in that presentation (see Appendix C).

Four weeks after the pretest the same attitude questionnaire was administered to all 16 sections of Speech 2311. A standard introduction was again used in all the groups (see Appendix C). Group D was given the standard presentation used with the Group C control classes in Stage I. Teaching assistants administered the posttest in both control groups while the same graduate student administered the survey in the treatment groups, Groups A and B (see Appendix C).

Materials

Resistance Building Messages

The supportive and inoculative messages, as discussed, served as the stimuli for the experiment. They were prepared after discussions with faculty concerning advantages and disadvantages of the TV format. The main issues were assimilated and the presentations memorized and rehearsed for delivery by the message source (Appendix A).

Attitude Questionnaire

To determine initial student dispositions, a questionnaire was developed from the same information used for the presentations. Part I of the instrument was made up of five items and sought information concerning the number of prior TV courses taken; the subject's year in

college, sex, the amount of prior information classification concerning TV 2311, and the last three digits of the subject's Social Security number. Part II of the "survey" instrument was an attempt to determine an individual's predisposition toward the TV format. There were nine statements about the TV format. Item 5 which measured the student's held disposition concerning his or her presence in the TV section was the key variable. Students read each statement and reacted by indicating their degree of agreement, disagreement, or neutrality on a 15-point attitude scale. The scale was divided into five segments in which the subject could strongly agree or disagree, probably agree or disagree or hold a neutral position (see Appendix B).

The instrument was introduced as a departmental survey which was being administered in an effort to improve the 2311 TV format and took students approximately 5 minutes to complete. A single item (number 10) concerning exposure to criticism was added to the posttest (see Appendix B). In each instance when the instrument was used, it was given a standard introduction.

Subjects

There were 330 undergraduate and 2 graduate students at The University of Tennessee, Knoxville, who participated in the study. There were 200 males and 132 females. Of the participants, 172 students were sophomores, 63 were juniors, 62 were freshmen, and 32 were seniors. Ninety-eight students who took the pretest were not in class the day of the posttest and were accordingly dropped from the study[1] (Table 1).

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[1]It should be explained that because the pretest was given in the first five minutes of the first class meeting, several of the 98 students who were not present for the posttest had dropped the course.

Table 1

Demographic Characteristics of Subjects by Treatment Group

	Percentage						
	Sex		Classification				
	Male	Female	Fr.	Soph.	Jr.	Sr.	Grad.
Group A Supportive One-Sided	54[a]	47	12	51	21	16	0
Group B Inoculative Two-Sided	58	42	28	48	12	10	2
Group C Control	64	37	21	57	17	5	0
Group D Control	78	22	18	71	12	0	0
Total	60	40	21	54	16	9	1

[a]The number represents the percentage of the particular group that is the characteristic of the column title above it.

Independent and Dependent Variables

The initial student attitudes (positive, neutral, or negative) and the message type (inoculative, supportive, or none) made up the main independent variables.

The major dependent variable was the degree of attitude change about the TV format of teaching public speaking.

Design

The experimental design was a 3 x 3 factorial. It was used to test the effects of the supportive, inoculative, or no message condition on initially positive, neutral, or negative student attitudes. An analysis of variance was used to analyze change scores from the pretest to the posttest. Comparisons were made between the classes in the treatment groups A and B hearing the single resistance-building message and the "booster" groups using a t test. The influence of the inoculative versus supportive presentations was investigated. In order to determine the influence that the pretest alone had, a comparison of posttest scores between the Group C and Group D control groups was made using a t test. In all cases the .05 level of significance was used to test the hypotheses.

CHAPTER III

RESULTS

Introduction and Major Assumption

The results of the previously described experiment in Chapter II will be presented by first discussing assumptions underlying the experiment and secondly, detailing the statistical findings directly related to the hypotheses.

It was noted earlier that a critical assumption of this experiment was that there would be attack messages on the course format between the pre and posttest. In order to evaluate this assumption a single item which assessed the amount of criticism was added to the posttest. Item 10 reads, "Over the past few weeks I have heard many critical remarks (+10), several critical remarks (5-9), some critical remarks (1-4), no critical remarks about the television format of Public Speaking 2311 (circle one)" (see Appendices B-2 and B-3).

An analysis of the responses to item 10 in Table 2 suggests that there was a substantial amount of criticism from students concerning the course format and thus, the initial assumption was justified. The mean for the total was 2.43 which lies between the "some" and "several" categories. Specifically, this suggests that 65% of the students heard between 7 and 9 criticisms about the TV format prior to the posttest. The figures indicate little difference in perceived criticism between Groups A, B, or C, but there is a considerable difference between these three groups and Group D, the no-message,

Table 2

Amount of Criticism Heard by Groups by Treatment Category

Group	Critical Remarks Heard				Mean
	None	Some	Several	Many	
	%				
A--Supportive	16	46	28	10	2.63
B--Inoculative	12	44	30	14	2.54
C--Control	16	41	23	19	2.51
D--Control	6	11	34	49	1.74
Total	14	38	27	21	2.43

no-pretest group. This indicates that students in the D group perceived more criticisms than students in Groups A, B, or C. The difference of differential perception of criticism between the two control groups would suggest a Hawthorne Effect or an effect of pretesting as predicted by Hypothesis IV. Inconsistent with expectations, the same effect did not carry over to other items, particularly the major dependent variable of attitude toward the TV format of teaching public speaking.

The test of each hypothesis in this study was based primarily on the item on attitude toward the TV format of teaching public speaking, which said, "I'd rather not be in the TV section. Given the choice, I would opt for a different section." The investigator assumed that there would be a carry-over effect of the resistance-building messages to the other eight items on the attitude scale. In analyzing each

hypothesis, then, the initial focus will be on item 5, after which any positive findings for the other eight items will be reported.

Hypothesis I

The first hypothesis stated that the inoculative two-sided treatment would prove superior to the supportive one-sided message in producing positive attitude change toward the TV format of teaching public speaking. This hypothesis was tested using a 3 x 3 analysis of variance of change scores from the pre to the posttest. The analysis of variance results are presented in Table 3.

Table 3

ANOVA Summary Table: Effects of Prior Attitude and Message Type on Attitude Change Toward TV Format

	SS	df	MS	F	p
Initial Attitude	751.89	2	375.94	32.000	.001
Message Type	112.04	2	56.02	4.77	.01
Initial Attitude x Message Type	70.61	4	17.65	1.50	.20
Error	1001.64	8	125.21	10.66	.001
Total	3198.57	195	16.40		

There was a significant effect of message type $F(2,187)=4.77$, $p<.01$). However, the effect was not in the direction as predicted, but rather in the opposite direction. As seen from Table 4, the average

Table 4

Mean Changes of Attitude Toward TV Format for Message Type x Initial Attitude Groups

Groups	Initial Attitude			Total Means for Message Type
	Negative	Neutral	Positive	
Supportive	2.00 (34)[a]	.94 (16)	-2.50 (4)	1.18
Inoculative	1.78 (18)	-1.74 (23)	-2.44 (9)	-.60
Control	1.30 (43)	-2.21 (43)	-5.24 (17)	-1.25
Total Means for Initial Attitude Groups	1.59	-1.47	-4.04	.55

[a]The numbers in parentheses represent the number of persons used to calculate the mean above it.

change score was 1.18 for the supportive message group, -.60 for the inoculative message group, and -1.25 for the control group. A positive score represents change in favor of the TV format.

The results of the t test show a significant difference between the control and treatment groups. Change for the control group is less positive than for the treatment group. Thus the treatment did help to maintain positive or reduce negative attitudes toward the TV format.

In the design, classes were either exposed to a single resistance-building message or to an initial resistance-building message and an additional one midway through the attack period (both groups). In

comparing the effectiveness of supportive versus inoculative treatments, the single message groups and booster groups were separated. A significant difference between the supportive and inoculative treatment was found for the booster groups. The superiority of the supportive message was not statistically significant for the groups receiving the single resistance message. As predicted, the booster message served to accentuate attitude change but again in the opposite to the predicted direction. The supportive message was superior to the inoculative message when it was reinforced by the booster effects used in this study.

Hypothesis I predicted that the inoculative treatment would maintain positive and shift neutral and negative attitudes. A distinction should be noted between the effects of message type across initial attitude categories. The results suggest a slight interaction between message type and initial attitude, though they are not statistically significant ($F=(4,187)-1.50$, $p=.20$). People who were initially positive or negative, as noted in Table 4, show little difference as a result of the inoculative or supportive treatment, but the persons who were initially neutral were slightly more influenced by the supportive resistance-building message, with the control being much more negative.

It might be noted that there is a significant effect of initial attitude on the dependent variable $F(2,187)-32.00$, $p<.001$. This effect is not important in the testing of any hypothesis and moreover represents an artifact of the design. The most likely explanation is the "regression toward the mean" phenomena. That is, due to common

statistical error there was some natural movement toward the mean when groups are selected on the basis of their external scores on a variable. Thus, people who were initially negative became more positive and people who were initially positive became more negative.

So far the effect of message type on the dependent variable of attitude toward TV format has been examined. Now the effect of message type will be considered on other related dependent variables. Message type produced significant effects on three of the other dependent variables. On item 6 (Students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation), there was a significant relationship between message type and pre-posttest attitude change ($F(2,187)=3.28$, $p<.05$). The direction of the effect was consistent with the direction of the effect on item 5: the supportive groups were superior to the inoculative which were in turn superior to control groups.

The effect of message type on two other dependent variables approached significance. The two items were item 7 (Preparation for a TV presentation is more demanding on a professor than a preparation for a regular classroom presentation) and item 2 (Television teaching should first be entertaining, then informative). The significance level for item 7 was $F(2,187)=2.16$, $p=.12$, and for item 2 was $F(2,187)=2.46$, $p.=.09$. Again the direction of the amount of attitude change on these items was in the same direction as item number 5: the supportive was superior to the inoculative which in turn was superior to the control group.

Hypothesis II

The second hypothesis predicted that the treatment groups (supportive or inoculative) would produce more positive attitude changes than that observed in the control condition (Group C). The comparison between Groups A and B versus Group C by the t test was significant as predicted ($t=2.28$, $df=191$, $p=.02$). Thus, the resistance-building messages accomplished their goals.

An analysis of the results in relation to other variables shows that several are worth consideration. Item 6 stated that students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation. Comparing the treatment with the control group, the results are significant ($t=2.47$, $df=191$, $p=.02$). Item 7 (Preparation for a TV presentation is more demanding on a professor than a preparation for a regular classroom presentation) shows a significant difference between treatment and control groups ($t=2.02$, $df=191$, $p=.05$). Item 2 (Television teaching should first be entertaining, then informative) approaches significance when the difference between the control and treatment groups are analyzed ($t=1.85$, $df=191$, $p=.07$). All of the above results were in the predicted direction.

Hypothesis III

The third hypothesis stated that Group D (no pretest, no message) would have less positive attitudes toward the TV format than Group C, the control group receiving the pretest. The hypothesis results were

tested by a t test of posttest results between Groups C and D. Group C had taken a pretest in addition to the posttest while Group D completed the posttest only. It was felt that attitudes of the C group would be more positive than those of the D group simply because of the attention paid them via the pretest (Hawthorne Effect). However, the results were not significant ($t=.38$, $df=137$, $p=.70$). Thus, the hypothesis was not supported.

Tests between the two control groups demonstrated significant differences on two related dependent variables. The two were item 2 (Television teaching should first be entertaining, then informative) ($t=2.10$, $df=137$, $p=.04$) and item 6 (Students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation) ($t=2.88$, $df=137$, $p=.005$). The direction of the difference was such that students in Group D felt that they were less likely than those in Group C to learn better from the TV format and more favorable than Group C toward a TV format that would entertain. Thus, while there was no effect of pretesting for the main dependent variable (item 5), the effect did emerge for certain related variables.

Hypothesis IV

The fourth hypothesis stated that the two sections receiving the booster message would show the most attitude change or reinforcement in the predicted direction. The hypothesis was tested by a t test of the mean attitude change for booster against non-booster groups. This comparison was made separately for the groups hearing the supportive and inoculative messages.

A comparison of the results showed that, for the persons in the supportive group, the difference in the regular and booster groups was not significant ($\bar{X}_B$=1.69; $\bar{X}_{NB}$=.97). For persons who received inoculative treatments, a comparison of booster with non-booster groups did not show significance though it did approach significance: t=1.32, df=91, p=.198 ($\bar{X}_B$=-1.92; $\bar{X}_{NB}$=-.18). Thus, the hypothesis was not confirmed.

Focusing on the additional interaction effects of dependent variables, a comparison was made among booster and non-booster groups, supportive non-booster, inoculative non-booster, supportive booster, and inoculative booster. For the supported booster and non-booster groups item 6 (Students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation) the difference approached significance (t=1.71, df=1.91, p=.09). The difference between the inoculated booster and non-booster treatment groups did not approach significance.

The results of two additional items--number 2 (Television teaching should first be entertaining, then informative) and item 7 (Preparation for a TV presentation is more demanding on a professor than a preparation for a regular classroom presentation)--approached significance in terms of the effects of message type. However, a comparison between booster and non-booster for both groups hearing supportive and inoculative messages showed no significant results.

Other Dimensions

Two other intervening variables, the amount of pre-information students had received from classmates about the TV format (none, some,

much) and the number of TV courses students had taken prior to the Public Speaking 2311 TV course (range=1 to 14), were used to test the interactive effect of message type with prior exposure to the public speaking course or TV format. It was felt that pre-information and previous TV courses would serve to increase negativism. No interaction between amount of prior information about Public Speaking 2311 or number of TV courses taken and message type was statistically significant.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

Introduction

The results as cited did not support the predicted superiority of the inoculative over the supportive message (Hypothesis I). The message did effect a change in attitude as predicted (Hypothesis II). Using a controversial issue with an orally delivered supportive or inoculative message, the one-sided supportive message proved superior to the two-sided inoculative treatment. The booster message accentuated attitude change trends in the booster groups (Hypothesis III) but in the opposite direction from that predicted. The secondary hypothesis (Hypothesis IV), which was designed to test the effect of the pretest (Hawthorne Effect) as explained, was not supported.

The procedure in this chapter will be to focus first upon limitations and then implications of this experiment. Unique features of the design will be discussed and modifications suggested for future research.

Limiting Variables

People

The limitations of the experiment fall under the heading of low control variables and can be divided into people and message types.

People involved directly in the experiment included the treatment message source, attack message sources, and the teaching

assistants who delivered messages and administered the pretest and/or the posttest to the control groups.

The majority of experiments cited have utilized written messages in both the treatment and attack stages. This insured maximum control and allowed the experimenter the flexibility of matching treatment and attack messages. However, the demands of this field experiment dictated a more naturalistic approach with all of the additional risk. Using written messages minimizes the influencing of variables such as source credibility, status, role consistency (McGurrin, 1972), and opinionatedness and authoritativeness (Infante, 1975). In using written messages the experimenter does not need to consider nonverbal communication and other subconscious cues the message source might give off during a presentation.

Conversely, the use of a message source added variables that would need to be considered in this experiment. The source of the treatment message was a critical element. He had to "come off" well. Recognizing the risk involved in this approach, an effort was made to maximize control without sacrificing realism. Accordingly, the message source memorized and rehearsed both messages so as to maximize his credibility with the subjects. He was given a standard introduction. Consideration was given to his style of delivery which was informal and low key. Even the clothing to be worn was considered. Thus, a good deal of control was achieved while retaining the naturalness of the setting.

The possibility of experimenter bias influencing the nature of the presentation was real. The message source could have subconsciously

designed a favored message and delivered it in such a way as to produce the results desired (Rosenthal, 1966). If an attempt was subconsciously made it failed as shown by these experimental results.

The second people variable was totally uncontrollable and as such provided a second experimental limitation. The use of students as attack sources did not disturb the experimental setting but did introduce problems. A critical assumption was made in regard to exposure to the attack messages, and results, as cited, showed that, as predicted, the great majority of students did hear attack messages. However, the direction and intensity of the messages were not correctly anticipated. The sources of the attacks directed their messages at the coordinator delivering the TV lecture and only indirectly at those who held positive or mutual beliefs about the TV format. Further, the intensity of the attacks was far more extreme than predicted.

While the nature of the attacks will be considered in the following section, the point to be made here is that the unpredictability of attack intensity caused an experimental limitation in that the resistance-building messages were possibly not strong enough to predict the superiority of the inoculation treatment.

The third low control people variable involved in the experiment was the teacher assistant whose influence, positive or negative, was felt by students in the weekly laboratory sessions of 2311 throughout the duration of the study. A small amount of control was exercised by providing the teaching assistants with scripts to read to students during pretest and posttest sessions; however, there was no way to provide for control during a four-week period and the teaching

assistant's impact on students during those weeks, no doubt, had some degree of influence on the outcome of the study. It is possible that a teaching assistant held in high esteem by students could mediate somewhat the negative impact of the TV format. Conversely, a teaching assistant held in low regard by students could serve to accentuate the negative feelings about the TV format and Public Speaking 2311, generally. This variable may well explain the non-support for the Hawthorne Effect hypothesis but it does not sufficiently explain the difference between supportive and inoculative treatment groups and the D control group. The evidence indicates that the teaching assistant variable had no influence as the experimental design called for one inoculative and one supportive group to be assigned to each of the "T.A.'s" working with treatment groups.

Messages

Because the extreme intensity and direction of the messages was not anticipated, they would be considered a limitation in this experiment. Burgoon and Chase (1973) cite the need to use very intense language in supportive treatments and to match the intensity of the inoculative treatment with the intensity of the attack messages in building resistance to persuasive attempts. While matching treatment and attack messages is easily achieved in a laboratory setting, this experimenter could not accurately predict the strength of the attack messages and, as such, this was a major experimental limitation.

Other Limitations

The controversiality of the chosen issue is somewhat in question and was another limitation of the study. The approach taken in this

experiment was to develop a controversy where none had existed; to offer an alternative explanation where none had previously been offered; to attempt to mediate negative attitudes; to move neutral attitudes toward a more positive position; and to reinforce those attitudes that were favorably disposed toward the teaching format of TV 2311.

Another possible limitation had to do with the temporal element in the experiment. The treatment sessions as discussed were very short in duration in comparison to other formats used in inoculation experimentation. Thus there is a distinct possibility that the shortness of the treatment session was a factor mitigating against the stimulus being strong enough or salient enough for the superiority of the inoculative to emerge over the supportive message. The message was not of sufficient length to impact on students in a significant way. The longest treatment session lasted only 15 minutes versus the one and two hour sessions used by McGuire. It should be noted that the results of the second treatment--the booster treatment--support this idea. There was a significant amount of change difference in the booster groups versus regular treatment groups and the "double dose" which doubled the message impact was significant.

A final limitation was the nature of the group itself. In most previous studies in the laboratory groups have been isolated and inoculated or supported according to their held belief. Of course, this would have destroyed the realistic setting of this experiment. Yet there can be little doubt that the treatments would have been more effective if they could have been focused on one group which was either positively, neutrally, or negatively disposed toward the TV format. In this field experiment each group contained all these elements.

Implications

The intensity of the attack messages probably has the most profound implication for improving future studies. As the term progressed, subsequent observations in the TV lecture hall indicated the extreme nature of the attack messages. They took place during the TV lecture and were delivered in the form of open derision and ridicule of the coordinator who was presenting the lecture. In addition, this type of indirect attack which was not leveled against a person positively or neutrally disposed toward the format but against the coordinator was shown by Jones (1972) to be more effective than direct attacks in weakening resistance to a held belief.

This all leads to the heart of our discussion of the experimental results which indicate the superiority of the supportive over the inoculative treatment message. It is suggested that the supportive message was superior because the one-sidedness and opinionatedness (Infante, 1973) of the supportive message was more intense and provided more equality of intensity with the attack messages versus the inoculative two-sided messages. The inoculative two-sided message which discussed advantages and disadvantages possibly seemed bland in comparison to the attack messages. Conversely, because the supportive message did not discuss disadvantages of the TV format but stressed advantages only, it was perceived as a stronger message by the Group A students and they were more moved by it. A strong message was needed to counter the strong attack message.

The findings of this experiment suggest other implications for consideration. Certainly it is not inconceivable that in a field

setting an inoculative two-sided presentation will prove inferior to a supportive one-sided treatment message. The issue at hand was highly ego involving in comparison to a McGuire "brushing teeth truism" or a Lumsdaine and Janis (1953) issue concerning the ability of the Russians to explode a nuclear device. As reflected in statements written in the booster sessions, students in this experiment were highly involved. They felt that they were suffering an injustice and they considered it ludicrous that a course which was designed to perpetuate desirable public speaking habits would, as they perceived it, be so poorly taught and without regard for many of the tenets of good public speaking.

Another significant implication deals with attitude change research Evidence concerning one-sided and two-sided messages suggests that a one-sided presentation is best in changing beliefs when subjects are poorly educated (Hovland et al., 1949). In retrospect this was exactly the situation in regard to the 2311 TV format. Though subjects were not poorly educated generally, they were uninformed concerning the full extent of the controversy about the 2311 TV format. They were more familiar with the disadvantages than the advantages. Perhaps most had not considered any advantages until they were exposed to the supportive inoculative treatment. Thus the evidence concerning attitude change, as cited, would suggest that a one-sided presentation would be superior in moving "neutrals" and "negatives" to a more positive position, especially when little is known about arguments from the opposite side.

The booster message did reinforce the trends initiated in the

treatment session. The "booster shot" was, as predicted, effective in accentuating the trends of the treatment sessions and students in the booster groups did show the most change as a result of the treatment as hypothesized. The concept of a "booster shot" fits neatly into McGuire's medical analogy, and has proven itself a valuable tool in this experiment. As such, it should be retained in any future undertakings.

Unique Aspects

Many of the unique features of this experiment were limitations as well and, as such, have been discussed. Almost all bear directly upon the nature of the field experiment.

This effort was unique because it took inoculation theory research out of the laboratory and into a field environment. Messages, people, and time control caused problems as detailed. However, the control had to be sacrificed to achieve a degree of naturalness.

There is no attempt here to alibi the results and place the burden of responsibility on the limitations of the experimental design as it fits in a field setting. Without the setting we would have had no experiment. Rather, the recommendation here is for more field experimentation generally and for replication of this effort with modifications which will be discussed.

As early as 1951, Lewin called for field experimentation to validate laboratory findings and there is a long list of names that could be added to Lewin's. Many researchers have made the same

recommendation for the past 20 years. Unfortunately, however, only 3% of the experiments in 1968, 1969, and 1970 published in the *Journal of Personality and Social Psychology* were concerned with field studies (Bickman and Henchy, 1971, p. 1). Despite the two major problems of laboratory experiments, i.e., inadequate generalizability of findings and the obvious manipulation of subjects in an artificial setting, researchers seem to still prefer the comfort and security of the artificial laboratory versus the harsh realities of the field. Of laboratory experiments, Borman (1970) says that "the variables that are created, manipulated, and measured in the laboratory setting are often either different from or but faint reflections of the analogous variables in groups working in a field situation" (p. 214). He refers to Mills who called "laboratory groups 'phantom groups' and argued that they are 'the experimenters' own creation'" (p. 214).

So then this effort avoided the use of "phantom groups" and it is generally unique for this reason.

Other unique and specific features of this field experiment in inoculation theory include the use of oral treatment and attack presentations; a highly ego-involving relevant issue; the length of the experiment (four weeks), and the length of the treatment message sessions(15 minutes maximum); the heterogeneity of groups regarding the issue; and the extension of McGuire's medical analogy with the concept of the "booster shot."

Experimental Modifications and Future Research

The limitations and implications, as discussed, suggest experimental modifications and areas for future research. It was noted

that the low control people variables are an experimental weakness but that, due to the nature of the experiment, must be tolerated. This is not to say that some control cannot be exercised as indeed it was in this experiment. Messages delivered by the treatment source were rehearsed and the teaching assistants were provided with detailed instructions to follow and message scripts to deliver. The experimenter, in most cases, collected the pretests and posttests during the first half of the period in which the test was to be given. So it is known that the instructions were at least generally complied with.

Follow-up conversations with the teaching assistants provided no reason to doubt that all had gone according to schedule. However, one cannot be too careful and it is suggested that a meeting with teaching assistants, designed to explain the details of the experiment and elicit promises of full cooperation, take place prior to the beginning of the experiment. A follow-up meeting after the experiment to discuss student reactions would also be helpful. The cooperation of the teaching assistant is critical and every measure should be taken to achieve it.

This experimental design did not fully consider the impact of the "T.A.'s" personality until Hypothesis IV, the Hawthorne hypothesis, was not supported. An approach needs to be devised to measure this important variable.

Regarding the treatment source, it is suggested that a future researcher be careful to assure a high quality presentation. The messages should be carefully rehearsed with qualified observers and

with consideration given to source credibility variables as discussed. This is not to suggest that the message source in this experiment was not perceived as highly credible. The point is that a quality presentation is crucial to the experiment.

A major modification should be made with message intensity by anyone who intends to replicate this study. It would seem to be the most critical variable as discussed. Burgoon and Chase (1973) indicate that the supportive message must be more intense than the attack message and that the inoculative treatment match in intensity the attack. This would call for much more intensity in treatment messages in light of the nature of the attacks.

The treatment messages themselves should be liberally sprinkled with evidence to support statements made. McCroskey (1970) indicated that evidence was a key variable in sustaining resistance over a long period of time as needed for this experiment.

The booster treatment proved itself effective and should not be eliminated as an experimental tool. The approach was an extension of the original analogy and seems logically justified in light of the temporal element involved in the experimental design.

The ethics involved in manipulating student attitudes in this way may be in question. However, evidence suggests that students learn better if they are motivated and if the learning atmosphere is generally appropriate to learning. In addition, teachers teach better in such an atmosphere. The attempt here was to create that atmosphere and test inoculation theory principles in the process.

The general hypothesis that inoculation principles as outlined

by McGuire could be applied in a field experiment has not been supported but a replication of this experiment, given the modifications suggested above, should yield results in the direction as predicted.

The field experiment which considers the impact of intervening variables and makes allowances for them is the real testing ground for laboratory findings. While the laboratory researcher testing an inoculation approach can isolate and control variables, and make contributions, we must never lose sight of the fact that the real test is always the potential application of laboratory findings in a field environment.

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APPENDICES

APPENDIX A

SUPPORTIVE AND INOCULATIVE MESSAGES

ONE-SIDED SUPPORTIVE MESSAGE

I think Public Speaking 2311 is a required course for most of you in this TV section, is that right? Well, I think I can say that 2311 *will be* one of the most useful courses you will ever take at The University of Tennessee because much of what you will learn here is readily applicable in a variety of situations each day you live.

The TV lectures are prepared and presented in a formal, straightforward and scholarly fashion by Dr. Lorayne Lester, a well-known and well-published authority in the field of Speech. Your laboratory sessions are conducted by a well-qualified teacher assistant--in this case, Jo Matherne. Thus, this particular format, the TV and the lab, exposes you regularly to two classroom situations, two personalities, styles, techniques and approaches. The TV format is also flexible in that it assures a standard presentation of material via the TV, while providing for diversity of emphasis in the lab sessions.

The TV section provides us with flexibility, *but* it also helps *your* schedule because *each* of the weekly lectures is piped into the dormitories and Claxton on the closed circuit TV at *three* different hours. *One* of the presentations should fit into your busy schedule.

There are two objective tests--a mid-term and final, and both are True-False tests. Approximately one-half of the test questions will be drawn from the TV lectures and one-half will be taken from the assigned text.

We *have* surveyed the literature for testing studies undertaken with college TV sections like this one. Our findings do show that students in large college TV sections, given a standard presentation,

score as well as or higher on tests than their counterparts in smaller independent sections.

The work load in the course *is* moderate to heavy. There will be several graded speech assignments, the two objective exams, an out of class critique, and readings from the text.

I can say that great care has been taken in gathering and assimilating materials for the course. And, I *personally* feel the TV eye--the TV camera--helps assure you of quality presentation consistently. The course *was* designed *only* after careful consideration of your course responsibilities, and based on our assumptions concerning your capability generally.

The TV section *alone* enables the Speech department to service all of you who need this course to fulfill a degree requirement. Because of the demand, some of you may have had to wait several quarters to get the course. I can say that if it weren't for the flexibility offered by the TV format, your waiting period might have been longer.

In closing, let me thank you again for completing the attitude rating scale. The information will help us determine how 2311 is and where we might want to go with it. I do hope to be back in four or five weeks to talk with you again and assess your attitudes at that time. Meanwhile, good luck in the course.

TWO-SIDED INOCULATIVE MESSAGE

I think Public Speaking 2311 is a *required* course for most of you in the TV section, is that right? You may or may not know that in the past *some* students have indicated a strong aversion for 2311, generally, and the TV format, specifically, and I would like to discuss some of *their* complaints with you.

Some students have said that the course is not relevant because of the emphasis on *formal principles* rather than on the development of style and finesse in Public Speaking. They have complained that the TV lectures are not exciting or entertaining and that the work load is *too* heavy. Further, they've said that there is *too* much emphasis on *written* grammar and *written* outlines for a course in Speech. Also, because the Public Speaker is concerned, to a great extent, with building rapport with an audience, some students have suggested that the impersonal TV format is incongruous and even ludicrous for this particular course and they could see *no* advantages in taking the TV section.

All of these complaints have *some* foundation and we don't deny it. *But*, we *do* feel that there is *another* side to the story and we want to present it for your consideration.

First, we do feel that this course will be one of the most useful you will take at The University of Tennessee because as professionals you will be called upon daily to give your views and opinions, and what you learn here *will* be readily applicable in a variety of situations each day you live. Training in public speaking should prove invaluable to you.

The eight TV lectures are *not* designed to be exciting or entertaining as some think they should be. Dr. Lester's goal is to present the material in a formal, scholarly, and straight-forward way. Time pressures *do* necessitate this approach on TV.

The TV format *does* assure a standard presentation of material via the TV while at the same time allowing for diversity of emphasis in the lab sessions. Dr. Lester, who prepares and presents the lectures, is a well-known and well-published authority in Speech. The labs are conducted by highly skilled teaching assistants; in this case, Jim Holt.

Unfortunately, the TV lectures *do* block the potential for immediate feedback and teacher-student interaction. For rapport-building between speaker and audience, this is a *poor* medium to be sure. However, this format *alone* enables the Speech department to service *all* of you who need this course to fulfill a degree requirement. I know that some of you have had to wait several quarters to get this course and if it weren't for the flexibility offered by the TV format, your waiting period might have been even longer.

The work load for the course *is* moderate to heavy. Some, in the past, have had preconceptions that this would be a "gut" course--one that would take little or no effort--and they were surprised by the demands of 2311. There *will* be assigned readings from the text, several graded speech assignments, two objective exams, and an out of class critique. The exams will be true-false--one mid-term and one final. One-half of the material for the tests will come from the lectures and one-half will be drawn from the text.

I *can* say that *great* care was exercised in gathering and assimilating materials for the course and I personally feel that the TV eye--the TV camera--helps assure *you* of high quality presentation consistently. I can say that the course *was* designed *only* after careful consideration of your other course responsibilities and our assumptions concerning your general capability.

We do feel that though there are *dis*advantages, the TV section offers you certain *ad*vantages. For example, studies show that students in large college TV sections, given a standard TV presentation, score as well or *higher* on standardized tests than do their counterparts in smaller independent sections.

Secondly, the TV section provides *you* with scheduling flexibility that your classmates in independent sections *don't* have in that the TV lectures are piped into the dorms and Claxton *three* times each week so you *should* be able to fit *one* presentation into your busy schedule.

Also, because of the TV format, you have regular exposure to *two classroom* situations, *two* approaches, *two* personalities, styles and techniques.

Again, we are *not* denying that student criticisms are without foundation. There *is more* emphasis on formal principles than on showmanship in the TV sections of Public Speaking 2311. We don't deny the importance of the latter, but our focus in *this* course is on the former.

The TV lectures *are* very formal and are *not* entertaining. However, there *are only eight* time periods in which to present the material so that *time* pressures are forcing a tightly knit TV presentation. The TV format *is* impersonal but at this specific university, at *this* particular time, it is the *only* way we can service *your* needs.

You will at times be tempted to bad-mouth the format and I'm sure you'll *hear* some of the objections I've presented today. However, there are limitations of all sorts which force all of us to use the TV format and we are doing the best we can with it.

In closing, let me thank you again for completing the attitude rating scale. The information will help us determine where 2311 is, and where we might want to go with it. I do hope to be back in four or five weeks to talk with you again and assess your attitudes at that time. Meanwhile, good luck in the course.

APPENDIX B

PRETEST AND POSTTESTS

PRETEST

PART I--PERSONAL INFORMATION

Please indicate: sex M - F (circle one)

class Fr. - Soph. - Jr. - Sr. (circle one)

Please tell us how much pre-information you have about the course; that is, have friends or classmates told you what to expect. (circle one)

No information Some Information Much information

Please code the scale by indicating the last three digits of your social security number.

_____

Please indicate the number of courses you have had that were taught on closed circuit TV _____.

PART II--RATING SCALE

Please indicate on the scales provided your degree of agreement or disagreement with the following statements.

1. Public Speaking 2311 should be a required course for a degree at The University of Tennessee.

/ 1 / 2 / 3/ 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely/ Probably / Uncertain/ Probably / Definitely /
False False True True

2. Television teaching should first be entertaining, then informative.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

3. Public Speaking 2311 should stress showmanship and style in public address rather than formal principles.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

4. Public Speaking 2311 is a course with a light work load.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

5. I'd rather not be in the TV section. Given the choice, I would opt for a different section.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

6. Students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

7. Preparation for a TV presentation is more demanding on a professor than a preparation for a regular classroom presentation.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

8. Teachers have a responsibility to motivate first and convey information second.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

9. I believe that what I can learn in Public Speaking 2311 will be highly, moderately, slightly beneficial to me. (circle one)

POSTTEST FOR GROUP C

Please code the scale by indicating the last three digits of your social security number.

_____

Please indicate the number of courses you have had that were taught on closed circuit TV _____.

RATING SCALE

Please indicate on the scales provided your degree of agreement or disagreement with the following statements.

1. Public Speaking 2311 **should be a required** course for a degree at The University of Tennessee.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

2. Television teaching should first be entertaining, then informative.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

3. Public Speaking 2311 should stress showmanship and style in public address rather than formal principles.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

4. Public Speaking 2311 is a course with a light work load.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

5. I'd rather not be in the TV section. Given the choice, I would opt for a different section.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

6. Students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation.

/ 1 /	2 /	3 /	4 /	5 /	6 /	7 /	8 /	9 /	10 /	11 /	12 /	13 /	14 /	15 /
/Definitely False		/ Probably False		/ Uncertain /					Probably True	/		Definitely True		/

7. Preparation for a TV presentation is more demanding on a professor than a preparation for a regular classroom presentation.

/ 1 /	2 /	3 /	4 /	5 /	6 /	7 /	8 /	9 /	10 /	11 /	12 /	13 /	14 /	15 /
/Definitely False		/ Probably False		/ Uncertain /					Probably True	/		Definitely True		/

8. Teachers have a responsibility to motivate first and convey information second.

/ 1 /	2 /	3 /	4 /	5 /	6 /	7 /	8 /	9 /	10 /	11 /	12 /	13 /	14 /	15 /
/Definitely False		/ Probably False		/ Uncertain /					Probably True	/		Definitely True		/

9. I believe that what I can learn in Public Speaking 2311 will be highly, moderately, slightly beneficial to me. (circle one)

10. Over the past four weeks I have heard many critical remarks (+10), several critical remarks (5 to 9), some critical remarks (1 to 4), no critical remarks (0) about the television format of Public Speaking 2311. (circle one)

POSTTEST FOR GROUP D

PART I--PERSONAL INFORMATION

Please indicate: sex M - F (circle one)

class Fr. - Soph. - Jr. - Sr. (circle one)

Please tell us how much pre-information you have about the course; that is, have friends or classmates told you what to expect. (circle one)

No information Some information Much information

Please code the scale by indicating the last three digits of your social security number.

_____

Please indicate the number of courses you have had that were taught on closed circuit TV _____.

PART II--RATING SCALE

Please indicate on the scales provided your degree of agreement or disagreement with the following statements.

1. Public Speaking 2311 should be a required course for a degree at The University of Tennessee.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

2. Television teaching should first be entertaining, then informative.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

3. Public Speaking 2311 should stress showmanship and style in public address rather than formal principle.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

4. Public Speaking 2311 is a course with a light work load.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /
/Definitely / Probably / Uncertain / Probably / Definitely /
False False True True

5. I'd rather not be in the TV section. Given the choice, I would opt for a different section.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /				
/Definitely / False	Probably / False	Uncertain /	Probably / True	Definitely / True

6. Students are more likely to assimilate material (learn better) from a TV format than from a regular classroom presentation.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /				
/Definitely / False	Probably / False	Uncertain /	Probably / True	Definitely / True

7. Preparation for a TV presentation is more demanding on a professor than a preparation for a regular classroom presentation.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /				
/Definitely / False	Probably / False	Uncertain /	Probably / True	Definitely / True

8. Teachers have a responsibility to motivate first and convey information second.

/ 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 /				
/Definitely / False	Probably / False	Uncertain /	Probably / True	Definitely / True

9. I believe that what I can learn in Public Speaking 2311 will be highly, moderately, slightly beneficial to me. (circle one)

10. Over the past four weeks I have heard many critical remarks (+10), several critical remarks (5 to 9), some critical remarks (1 to 4), no critical remarks (0) about the television format of Public Speaking 2311. (circle one)

APPENDIX C

MESSAGES DELIVERED BY TEACHING ASSISTANTS

PRETEST MESSAGE GIVEN BY TEACHER ASSISTANTS

Before I begin my presentation, I would like to ask you to assist the Speech Department by completing an attitude scale concerning Public Speaking 2311. We are eager to discover what students think about the TV section of 2311 and this is all part of a department study and evaluation. Please complete Part I, then read each statement carefully and indicate honestly your degree of agreement or disagreement with each of the nine statements.

Use pencil or pen.

BOOSTER MESSAGE GIVEN BY TEACHER ASSISTANTS

You'll remember that a few weeks ago, on the first day of class, we had a graduate student in the Speech Department ask for your input about the course in order to assist the department in evaluating it. You'll recall that you completed a questionnaire and that he talked with us for a few minutes about:

Supportive 1:15--The advantage of the TV format

Inoculative 3:30--Criticisms and advantages of the TV format

Well, he says he'll be back in a week or so to do the followup on his first presentation. Meanwhile, he asked me to ask you to take a few minutes to write down:

Supportive 1:15--As many *advantages* of the TV format as you can recall his discussing in his initial presentation and, in addition, any others you can think of.

Inoculative 3:30--As many *criticisms* and *advantages* of the TV format as you can recall his discussing in his initial presentation and any other advantages or criticisms you can think of.

Take about 10 minutes.

Use a piece of scrap paper, pencil or pen, and print or write.

Don't include your name on the paper.

I think they're probably trying to get additional ideas and input for their survey.

Okay?--Take about 10 minutes.

POSTTEST MESSAGE GIVEN BY TEACHER ASSISTANTS

Some time ago, you'll recall, I asked you to complete a department questionnaire and indicated we would need a second one in a few weeks. Well, four weeks have passed and I have the second half of the survey for you today.

I want to take the first few minutes of the class period to pass out the forms for completion. This form is the same as the first one with the exception of the last item.

Carefully read each statement and respond accordingly. Use pencil or pen.

The information will help the department assess the 2311 TV format. You are the key ingredient in our effort to collect data, so please respond honestly and openly. There's no way anyone could trace anything you have to say.

Okay?--Take about five minutes.

VITA

John Wilbur was born in Worcester and attended elementary and secondary school in North Brookfield, Massachusetts. Following high school graduation he enlisted in the U.S. Marine Corps. After discharge he enrolled at Worcester State College, graduating with a B.S. degree in History Education. He accepted a teaching position at New Milford, Connecticut, High School and continued his studies in History at Danbury State College, from which he received an M.S. degree. After obtaining that degree he left secondary education for a position in college administration. He has worked as a College Admissions Counselor, Director of Admissions, and College Admissions Consultant over the past ten years.

John Wilbur entered the Graduate School of The University of Tennessee in September 1974 and in June 1976 he received a Master of Arts degree with a major in Speech.