

APPLICATION OF A MODERN ADVERTISING CAMPAIGN
TO IMPROVE TEACHER MORALE:
A CASE STUDY

By

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To my wife, Tim, who raised my
morale, and to six fine sons—
Jeff, Steve, Scott Hayden, Eric,
Timothy Scott, and Kenny—of
whom I am the very proud "Dad."

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CHAIRMAN: Arthur J. Lewis
MAJOR DEPARTMENT: Curriculum and Instruction

The Purdue Teacher Opinionaire is used to measure change in teacher morale for experimental (Vero Beach, Florida) and control markets. Change in teacher morale is hypothesized to occur when a mass media campaign is applied to samples of teachers. The mass media campaign utilizes Madison Avenue, hard-sell techniques via radio, television, newspaper, and poster coverage.

Statistical comparisons involving *t* tests, *F* tests, and anovas are made encompassing four elements of the experiment.

(1) An overall comparison of experimental school results with

control school results is made; (2) Groups of questions (referred to as factors) which are thought to be sensitive to mass media are compared with those thought to be nonsensitive; (3) Individual questions (referred to as items) are compared on a basis of relative sensitivity to mass media; (4) An anova test is used to determine whether the nonwhite population was a causative factor in the significant morale change in the Vero Beach school.

Significant change is observed; therefore the mass media campaign may have had a strong effect on keeping the experimental-school teachers' morale high while the control-school teachers' morale sharply deteriorated.

Recommendations are offered for future research in order to further demonstrate that mass media may be effectively utilized to improve teacher morale. New methods of testing are discussed pertaining to the effects of unionism upon teacher testing.

I

INTRODUCTION

*"My brother's a sort of poet, too, you know,"
he said to the bristling strangers. "Things
affect him very strongly sometimes and he
doesn't always know why."*

—Richard Adams, 1974

ONE WHO HAS SPENT A GOOD BIT OF TIME in the broadcast arena is very conscious of its persuasive and sales potential. Modern advertising sales techniques have made the broadcast media a multibillion dollar industry. Demand creation is central to its mission. The customer satisfaction that has resulted has meant that products and ideas have moved in almost unbelievable volume to meet a wide range of consumer needs and satisfaction.

In the process of providing consumer satisfaction, inertia and negative attitudes have been overcome, the threshold of awareness raised, and value constructs modified. The result has been evidenced in product sales and idea acceptance. It is that background and experience which prompted this study. The writer wanted to test the application of media persuasion and modern

advertising techniques to solving educational problems—in particular to raise teacher morale and to increase career satisfaction.

PROBLEM

The writer's teaching experience suggested a basic hypothesis: educational administration has continued to operate traditionally in solving educational problems because new approaches, and in particular the application of technology and mass media in persuasion campaigns for purposes of changing attitudes or developing individual awareness, have not been utilized to a significant degree.

The researcher felt that educators were missing the target with respect to the applications of mass media in three crucial respects. (1) They were not synthesizing the main, best ideas in education and selling those concepts to their audience. (2) They ignored the spectacular success of commercial ("Madison Avenue") advertisers who took a simple idea and repeated it forcefully in saturation campaigns* until an audience accepted the "pitch." (3) They were directed to the medium of television and ignored the potential of other media, namely radio, newspapers, billboards, public meetings, et cetera.

*A campaign designed for a market to absorb the message content as often as possible through as many media as can be obtained. The campaign should appeal to the eye and ear as well as force the recipient to actively participate in some action concerning the message.

From the general hypothesis this study emerged (1) to learn what teacher attitudes existed with respect to factors affecting teacher morale; (2) to design media message(s) which, when exposed to teachers via a mass media campaign, would effect a change in teacher opinion on matters affecting morale; and (3) having satisfied both of the above, to find a city, or market.

A review of the literature did not disclose any attempt to change teacher morale by utilizing mass media. The review did indicate that many tests have been devised to measure teacher morale. The literature search revealed ample research substantiating that mass media properly applied has the potential to change attitudes.

RATIONALE

The writer asked himself two questions. How would the "Madison Avenue" people handle the problem? How would the media buyers and the "think-time" boys solve the problem of communicating the main, best ideas of education to a hungry constituency? The answer was simple. If the Ford dealers asked J. Walter Thompson Advertising Agency to help them to sell their automobiles, the agency people would reply, "Take your simplest, best selling point and repeatedly expose it to the public as often as you can and use the saturation technique to pound home that simple idea over and over again using radio, television,

newspapers, public meetings, billboards, or any means at your disposal." "Have a Coke!" is a classic example of a simple idea pounded home time after time until "Coke" became a part of every nation's language and a beverage habit as well.

This writer has always felt that educators have been myopic in their view of the potential use of mass media. They have spent millions of dollars trying to reach an audience via noncommercial television. They began with a dull message which offered no more than a tedious drone of a professor in front of a long gray studio curtain. Critics called it the "talking head." Often the programs were directed by television "pros" who knew little or nothing about the needs and direction of modern education, let alone a knowledge of statistics and current education research methods. "Main, best ideas" were lucky to find their way into limited educational publications or were discussed in a professional seminar with a limited audience.

Another aspect of educational myopia and the mass media is exemplified by an ignorance of the potential of commercial television and radio. Educators have largely ignored the tremendous potential of free public service spots which could be telecast over commercial television outlets. Broadcasting stations have much to gain and little to lose by cooperating with educators. The Federal Communications Commission encourages, even insists, that broadcasting stations make a real time commitment to public service endeavors over and above the requirements of the federal government.

Since his earliest experiences in a television station, the author had been impressed with the apparent success of American advertisers. While handling accounts on local television stations, he observed that the companies or institutions who used the advertising professions and mass media changed people's attitudes concerning their products with amazing regularity.

After fifteen years of participation in the delivery of commercial messages, the researcher made a vocational switch from television sales to public school classroom teaching. It soon became obvious to him, as it was to most educators, that public education had its problems. Moreover, when the educator found a solution to a problem, the communication of that solution seemed inordinately difficult to convey. The educational bureaucracy differed profoundly from the smooth efficiency the author had grown to expect of American business organizations. The educational bureaucracy seemed to have difficulty in determining the essentials. It either failed to recognize its most essential problems or it failed in its ability to communicate once a problem had been identified.

In 1973 the author decided that one of the best educational ideas which might lend itself to a project of mass media hard sell technique was the question of the student's self-concept. The student's positive self-concept is absolutely essential if we hope to teach that student. But it was a rap session with

veteran educators which eventuated the direction of the study. The educators said that starting with the student is putting the cart before the horse because the real problem is the teacher and teacher morale.

Student self-concept was a popular and proper study. Arthur Combs, Donald Avila, and William Purkey (1971), and Carl Rogers (1969), as well as an increasing number of perceptual psychologists, have long espoused the cause of a perceptual-psychological approach to education. William Purkey points out that this good idea for education has been around since Rene Descartes wrote in his *Principles of Philosophy* that doubt was the principal tool of thinking (1970). Sigmund Freud early in the twentieth century suggested that the self was most important in ego development. Educators have long sensed that we express our self-concept with our behavior.

A further problem in beginning with the student was the element of self-report. Would the student be willing to honestly answer questions put to him or her regarding his or her self-concept? This researcher was not satisfied that a reliable self-concept self-report existed or could be produced pertaining to students.

Before the teacher can help the student's self-concept, the teacher's image of himself or herself must be improved. The global self-concept is too large an undertaking, but self-concept with regard to job is measurable and practically interchangeable

with the teacher's morale. An attempt would be made to improve the self-concept of the teacher regarding his or her job. A highly reliable measure was found in the form of *The Purdue Teacher Opinionnaire* (1973).

Teachers might be more prone to openly answer queries regarding the outside influence of their jobs than would students regarding their inner feelings. The priority of dealing with the teacher first seemed logical.

It was decided by the winter of 1974 that the research would deal with attempting to measure the morale of teachers.* One sample of teachers would be exposed to a modern advertising campaign designed to boost their morale. Another sample of teachers would be observed as a control group unexposed to such a morale raising campaign. The self-concept field of endeavor had not been abandoned but merely limited to manageable proportions.

SCOPE

The author sensed that although educators had been attempting to exploit the advantages of educational mass media, they

*It has been stated that teacher morale is a small phase of teacher self-concept. Dr. William Purkey notes that *self-concept* is a psychological term while *morale* is a sociological one. Dr. Arthur Combs defines morale as a "judgement of how successful one is in a situation or job" while "self-concept . . . way he sees himself" (telephone conversation, May 12, 1974).

were unaware of the potential a modern advertising approach could give their message. He saw that a case study might have as its objectives the following:

1. To ascertain, through a search of the pertinent literature, a formula for delivering an effective message which will change attitudes.
2. To determine that teacher morale could be improved by employing a modern mass media advertising campaign.
3. To measure a possible improvement in teacher morale by comparing an experimental market with a control market and to statistically compare the scores of pretests and post-tests administered to both sample populations.
4. To demonstrate to educators that there is help in any community for an educator to convey his message. This help comes from not only the educational television station, but from radio, newspapers, billboards, community meetings, and other media.
5. To determine some possible problems that a researcher might have in measuring attitude change in a sample population.
6. To recommend future research which gives input regarding the possibility of educators delivering high-priority educational messages rapidly and effectively to any selected audience—teachers, parents, taxpayers, pupils, or the general public.

Vero Beach, Florida, was chosen as the experimental market.

A ten day mass media campaign was conducted via radio, television, school hall signs, school intercom, newspaper, and teacher involvement meetings. It was designed to do a hard sell during

a limited time span and to create as great a rise in morale among teachers in the experimental market as possible. Teachers in two schools with similar demographic profiles were selected as control populations. *The Purdue Teacher Opinionnaire* was selected to measure teacher morale. This instrument yields a score indicating the general level of teacher morale while providing significant factors, or subscores, which break down morale into ten dimensions.

HYPOTHESES

HYPOTHESIS 1. Teachers exposed to a mass media campaign to improve morale will score no differently in a test designed to measure their morale, pretest/post-test, than will teachers who are not exposed to such a campaign.

HYPOTHESIS 2. Teachers exposed to a mass media campaign designed to improve their morale will score no differently in a test designed to measure their morale on factors which should be sensitive to change by a mass media campaign, pretest/post-test, than will teachers who are not exposed to such a campaign.

HYPOTHESIS 3. Teachers exposed to a mass media campaign designed to improve their morale will score no differently in a test designed to measure their morale on factors which should not be sensitive to change by a mass media campaign, pretest/post-test, than will teachers who are not exposed to such a campaign.

HYPOTHESIS 4. Teachers who are exposed to a mass media campaign designed to improve their morale will score no differently, pretest/post-test, on scores on items sensitive to such a campaign than will teachers who are not exposed to such a campaign.

HYPOTHESIS 5. Teachers who are exposed to a mass media campaign designed to improve their morale will score no differently, pretest/post-test, on scores on items which should not be sensitive to such a campaign than teachers who are not exposed to such a campaign.

HYPOTHESIS 6. Teachers of one race who are exposed to a mass media campaign designed to improve their morale will score no differently, pretest/post-test, than will teachers of another race who are exposed to the same campaign.

PREVIEW OF COMING CHAPTERS

In Chapter II a review of the literature is made and a definition of terms is presented. Chapter III offers a design for the study and discusses the procedures for gathering data. Chapter IV presents the raw data results while Chapter V discusses the results. Conclusions are drawn in Chapter VI and suggestions are made with regard to future research.

II

REVIEW OF THE LITERATURE

The concept of attitudes is probably the most distinctive and indispensable concept in contermprorary American social pyschology.

—Gordon Allport

IN THIS STUDY Madison Avenue terminology is utilized to describe the treatment of mass media effect on opinion change. Underlying the assumptions, hypotheses, and methodology of this study is the technique in which a simple idea is stated over and over again until it is believed.

Image makers working on Madison Avenue have employed this basic technique since the early days of broadcasting. In 1928 Dr. Frank Stanton, the father of the Columbia Broadcasting System, utilized the concept. He offered the advertiser a sales guarantee whereby the sponsor would be given a refund if the campaign did not produce a specific sales volume. Stanton offered to refund to a sponsor, the American Tobacco Company in this case, \$3,000 for each point below 24 on the Hooper Rating Scale for

each week that the radio program, "The Jello Show Starring Jack Benny," failed to attract more people than a rating of 24 indicated. Frank Stanton gambled, as this researcher has gambled, that audience impulses would change attitudes toward tobacco or Jello or morale.

Two decades after the birth of CBS, the Yale communication research program began to study the reinforcement theory of attitude change. Theories developed in this research program set forth certain conclusions, one of which was that attitude change results from learning produced through reinforcement (Hovland, Janis & Kelley 1953 in Insko 1967, p. 13). Hovland *et al.* followed concepts of learning developed by Hull (1942) and concepts of complex forms of social behavior, like teacher morale, developed by Miller and Dollard (1941) and by Doob (1947) (Insko 1967, p. 12).

This research pivots around two fundamental assumptions explored by Hovland and other researchers: (1) Attitude change results from reinforcement and (2) Attitude change follows change in opinion. This researcher did not attempt to explore the question whether change in teacher morale is necessarily followed by change in teacher behavior in the classroom.

It was assumed, however, that change in classroom behavior must be preceded by change in a teacher's opinion of work as a teacher. It may be assumed that a communication advocating that smoking is harmful to health may produce a nonsmoking attitude without nonsmoking behavior. Similarly, in this research the formulation of hypotheses was limited by the thesis of Hovland

et al. that new opinion must precede change in behavior, although new opinion does not insure any change in behavior.

In determining how teacher morale might be changed, several factors seemed to demand a priority in historical research: the communication, the source, and the exposure to a communication.

The communication. A message is constructed by the experimenter which advocates a position discrepant from that of the intended audience, and which contains supporting arguments, evidence, and implications. Usually there is only a single, relatively short message of unitary direction and organization.

The source. Typically the source of the communication is explicitly stated, as when the message is attributed to a specific person or known organization. In cases where it is not explicit, there is usually implicit endorsement of the message by the researcher or person in charge of the group (e.g. a teacher or an official in an organization to which the subjects belong). This legitimization of the message by the researcher's sponsorship increases the likelihood that subjects will view the advocated position as one that is reasonable, or at least worthy of consideration.

Exposure to the communication. With the use of captive audiences there is no problem of subject self-selection. That is, the audience is *not* composed of only those who want to hear this particular speech; rather it is made up of people with a variety of attitudes toward the communication. However, there is no assurance that the audience in an experiment will attend to the communication, or that there will not be self-selection in exposure to some or most of its content.

(Zimbardo & Ebbesen 1970, pp. 24-25)

Regarding the communication, certain axioms were assumed which are discussed by Watzlawick, Beavin, and Jackson (1967).

Axiom 1. There is a property of behavior that could hardly be more basic and is therefore often overlooked: Behavior has no opposite. In other words, there is no such thing as nonbehavior or, to put it even more simply: One cannot *not* behave. Now, if it is accepted that all behavior in an interactional situation has message value, i.e., is communication, it follows that no matter how one may try, one cannot *not* communicate. Activity or inactivity, words or silence, all have message value. They influence others and these others, in turn, cannot *not* respond to these communications and are thus themselves communicating. It should be clearly understood that the mere absence of talking or of taking notice of each other is no exception to what has just been asserted. The man at a crowded lunch counter who looks straight ahead, or the airplane passenger who sits with his eyes closed, are both communicating that they do not want to speak to anybody or be spoken to, and their neighbors usually "get the message" and respond appropriately by leaving them alone. This obviously is just as much an interchange of communication as an animated discussion.

(Mortensen 1973, p. 37)

Axiom 2. The report aspect of a message conveys information and is therefore synonymous in human communication with the *content* of the message. It may be about anything that is communicable regardless of whether the particular information is true or false, valid, invalid, or undecidable. The command aspect, on the other hand, refers to what sort of a message it is to be taken as, and therefore ultimately to the *relationship* between the communicants.

All such relationship statements are about one or several of the following assertions: "This is how I see myself . . . this is how I see you . . . this is how I see you seeing me" and so forth in theoretically infinite regress. Thus, for instance, the messages "It is important to release the clutch gradually and smoothly" and "Just let the clutch go, it'll ruin the transmission in no time" have approximately the same information content (report aspect), but they obviously define very different relationships.

(Mortensen 1973, p. 38)

This has implications for the strategy which was used in the campaign, namely that we used the National Education Association as the message giver on television, and students and parents on radio. We avoided saying that this was part of a research so that the teachers would not be affected by the feelings of being used as guinea pigs.

Axiom 2 runs over into the problem of the source. The nature of the speaker who would address teachers through various sources is crucial to credibility and to nonconflict with the message giver. It seems likely that a trustworthy source giving the same persuasive messages as an untrustworthy source will produce more attitude change (Zimbardo & Ebbesen 1970, p. 49).

In 1951 Hovland and Weiss conducted a study to determine how much more change a trustworthy source would produce than an untrustworthy source. They concluded that the magnitude of difference in attitude change produced by trustworthy communicators

was more substantial than that produced by untrustworthy sources. The average change for trustworthy sources was 22.5 percent, while for untrustworthy sources it was 8.4 percent (Insko 1967, p. 43).

Axiom 3. The nature of a relationship is contingent upon the punctuation of the communicational sequences between the communicants. (Mortensen 1973, p. 41)

Staccato, nagging commercials tend to arouse opinion change and cause "reality distortion." In other words, the wife may nag. Then the husband broods or withdraws, but he may change as the result of being nagged. As she is dressing for school and listening to the CBS morning news, a teacher may hear several times a one-minute public service announcement praising teachers. If she mulls these messages over in her mind as she stands at her classroom door later in her day, her morale may change.

This researcher proposes two additional axioms.

Axiom 4. In order to sell a new opinion, the idea or product must appear new.

Modernity is in; obsolescence is out. No evidence supports this axiom, although the fact that national advertisers sell newness is self-evident. To be "in," one must drink the product and thereby "join the Pepsi generation." Similarly, in this study

teachers were told through students and townspeople: Say thanks to a teacher; it's an idea whose time has come.

In actual practice during the 1930s, the hucksters of Madison Avenue followed a visceral instinct for all these principles of communication and developed, without benefit of research, convincing arguments based on experience with much larger population samples than researchers have been able to employ. The hucksters' results were the positive, sometimes astounding, product sales volume for clients who believed in the Madison Avenue techniques.

In short, the evidence of Madison Avenue's success is the best support of these axiomatic principles: Reinforcement is necessary; words have message value; content is important; presentation should be staccato; trustworthiness is required; and opinion change must precede attitude change. Advertisers have sold and continue to sell products by using techniques based on these principles (Insko 1967).

Axiom 5. Role playing of an attitude position contrary to one's own supplies new insight into that position.

Zimbardo and Ebbesen have stated the idea in these terms:

The technique of role playing has been used for producing changes in a person's personality. By role-playing behavior

which normally he would not have performed, the person is assumed to gain insight into how others see him and how he might behave. In other words, the person gets to see the world from another point of view by acting as if he had a different attitude. If it can be assumed that the role playing of an attitude position contrary to one's own supplies new insight into that position, it might be possible to use this technique to produce attitude change.

(1970, p. 31)

Janis and King (1954) and Hovland and Weiss (1953) performed experiments in role playing and concluded that role playing of attitude positions counter to one's own can be a powerful technique in producing attitude change (Zimbardo & Ebbesen, p. 31). The problem in this research was to devise a method of inducing one hundred teachers to role participate.

There is ample evidence and commercial experience to support the contention that attitudes can be successfully changed. The communication in this research entailed a mechanical process only; a myriad of commercials was available to draw from. However, the source from which the communication was to emanate presented a crucial if not ethical problem.

The problem of the source generated the question whether to reveal the intent to persuade. Michael Burgoon and Judee K. Burgoon addressed this question, suggesting a subtle approach rather than a direct "we are testing you" gambit.

Rule (pertaining to the male's communication behavior): While ribald humor is not appreciated or tolerated at cocktail parties and other large social gatherings, it is appreciated and tolerated, in moderation, in the privacy of your apartment, *but* not during moments of intense romantic involvement.

Rule (pertaining to the female's communication behavior): While you are not to assert your dominance over me at large social gatherings, you may dominate on occasion when we are alone. *But* under no circumstances are you to attempt to dominate when I have had a frustrating day at work or when I am with one of my close friends.

(Steinberg & Miller 1975, p. 129)

In Chapter III the decision to substitute for the researcher as message source an amorphous force of students, townspeople, teachers themselves, and a national teachers' union as source of the message will be discussed.

Klapper concluded that a wealth of evidence indicates that the very fact that a message originates from a mass media center, such as a radio or television station, insures that a certain amount of credibility attaches to the message via the medium (Sears & Freedman 1971, p. 212). That is, if it's on television, it must be true.

In political research and in studies of the Army-McCarthy hearings, Horton and Wohl (1956), Bradford (1956), Burdick (1962), Lang and Lang (1959), and Weibe (1958) all concluded that viewers superimpose personalities on an objective view of the issues

(Insko 1967, pp. 174-175). Pool (1952) found that college students' perceptions of political candidates varied according to the medium of information, either television or radio (Insko, p. 175). Although student perceptions varied, the strength of the Eisenhower personality overwhelmed the issues.

This uniformity of perceptions may mean that all media project the same image or that the characteristics projected over television and radio were assimilated to the images developed through exposure to other media. There is some suggestion in the data that television increased partisanship, for differences between supporters' and opponents' assignments of attributes to either candidate were greater among watchers than among listeners. However, Stevenson fared better on radio, for the listeners' image was more favorable than the watchers', regardless of which candidate they favored. (p. 175)

At no time did a search of the literature reveal that educators have attempted to raise teacher morale by employing mass media. One can speculate that such television network shows as "Room 222" and "Lucas Tanner" did much to raise the teacher's self-image or opinion about his job. The researcher wondered what effect a character such as Miss Brooks or Lucas Tanner had on teacher self-images--just as he speculated about the attitude changes which may have come about in police. "Dragnet," "Police Story," "The Blue Knight," and many other

law enforcement presentations must have had some effect, pro or con, upon the police. The researcher speculated as to how the medical profession viewed its role after exposure to such image makers as "Doctor Kildare" or "Medical Center." How did "Emergency" affect the fireman or "The Waltons" change the self-image of West Virginia mountain people.

Ample evidence was found to support the supposition that teacher morale or student morale was improved when either was asked to role play as decision makers in school projects. Miller *et al.* (1967) described a rather typical procedure whereby administrators attempted to obtain feedback from thirty-two Wisconsin elementary teachers, their viewpoints of classroom teaching and learning (Deal 1975). Miller *et al.* found, just as many other experimenters have, that regardless of the teachers' views they generally felt better about their jobs following the participatory sessions.

Positive attitude changes were observed at the state level in a multimedia utilization project and on a national level in Japan, when teachers were asked for their advice (Deal 1975). The literature clearly indicated that the more a teacher participated in decision making and in positive role-playing situations, the more positive the attitude became toward teaching.

John A. Lee (1971) observed in his brilliant documentation of the Scarborough College experiment that teacher morale went down when the feeling was created that the machine might replace

the teacher (in Deal 1975). Scarborough College of the University of Toronto was the first North American college planned from its inception for television.

It became apparent from the review of the literature that the experiment would probably be enhanced if some form of morale-raising teacher role participating, or role imitating, could be arranged to convey the morale raising message to the experimental group.

The review of the literature also made the author aware of a restriction which would be applied to this research. The morale raising campaign would be directed at changing teacher opinion regarding their jobs and would not address itself in any way to attacking the much larger undertakings of changing their attitudes.

III

DESIGN OF THE STUDY AND PROCEDURES FOR GATHERING DATA

There was no answer but a gentle snoring. The snoring got more distinct every minute and sounded more like a tune; at last she could even make out words.

—Lewis Carroll.

THE DESIGN OF THIS STUDY was the pretest/post-test control group design.

$$\begin{array}{ccc} RO_1 & X & RO_2 \\ RO_3 & & RO_4 \end{array}$$

where R = a randomly selected group from the population, O = observation or testing, X = the treatment on the experimental group.

Subscript 1 = pretest sample in the experimental market (Vero Beach), subscript 2 = post-test sample in the experimental market, subscript 3 = pretest sample in the control market, and subscript 4 = post-test sample in the control market.

Vero Beach High School, Vero Beach, Florida, located on the Atlantic Ocean in southeastern Florida was selected as the experimental school. Two demographically similar high schools in the area were selected as the control schools.*

A mass media campaign designed to improve the morale of the teachers of Vero Beach High School was conducted during the late spring of 1975. *The Purdue Teacher Opinionnaire* (1973) was utilized as the test instrument (see Appendix A). The instrument is designed to measure teacher morale and is especially well suited for this experiment. It yields a total score indicating the general level of a teacher's morale and it also provides subscores from which in this research the effect of the mass media campaign upon certain factors and items were determined. These factors and specific items break down morale into meaningful dimensions, some of which would appear to be more sensitive to a mass media campaign designed to improve teacher morale than others. A panel of experts was asked to select factors and items from the opinionnaire which they felt might be affected by such a campaign and other factors and items which they felt were relatively immune to such a campaign. The ten factors with brief descriptions and test/retest correlations follow.

*Anonymity of the control group has been maintained because of the embarrassment the statistics in this research might create for these schools.

In Chapter IV the reader will find the three factors which an expert committee deemed most sensitive to media persuasion and three factors which they felt were least sensitive to media persuasion.

FACTORS

FACTOR 1. TEACHER RAPPOR WITH PRINCIPAL deals with the teacher's feelings about the principal. Reliability .84.

FACTOR 2. SATISFACTION WITH TEACHING pertains to teacher relationships with students and feelings of satisfaction with teaching. Reliability .84.

FACTOR 3. RAPPOR AMONG TEACHERS focuses on a teacher's relationship with other teachers. Reliability .80.

FACTOR 4. TEACHER SALARY pertains primarily to the teacher's feelings about salary and salary policies. Reliability .81.

FACTOR 5. TEACHER LOAD deals with such matters as record keeping, clerical work, community demands, extracurricular loads, and keeping up to date professionally. Reliability .81.

FACTOR 6. CURRICULUM ISSUES solicits teacher reactions to the adequacy of the school program in meeting student needs and in preparing students for effective citizenship. Reliability .76.

FACTOR 7. TEACHER STATUS samples feelings about prestige, security, and benefits afforded by teaching. Reliability .81.

FACTOR 8. COMMUNITY SUPPORT OF EDUCATION deals with community understanding and willingness to support a sound educational program. Reliability .89.

FACTOR 9. SCHOOL FACILITIES AND SERVICES has to do with the adequacy of facilities, supplies, and equipment, and the efficiency of the procedures for obtaining materials and services. Reliability .80.

FACTOR 10. COMMUNITY PRESSURES gives special attention to community expectations of a teacher's personal standards, his participation in outside school activities, and his freedom to discuss controversial issues in the classroom. Reliability .62.

The author hypothesized that a factor such as Teacher Status would be more sensitive to a campaign to change teacher morale than would a relatively constant factor such as Teacher Salary or School Facilities and Services; that is, a teacher might be more amenable to a change in attitude regarding teacher prestige in the community following nice things being said about the teacher than the teacher would with regard to salary which is relatively constant. The author speculated that if the post-test scores of the mass media sensitive items and scores were better than the nonsensitive items and factors that there would be an indication that the mass media campaign had indeed had an effect upon the experimental group which helped the experimental group's morale. He also reasoned that a comparison of the sensitive items and factors between the control groups

and the experimental groups would show better results for the experimental than the control and thus indicate that the mass media campaign had indeed had an affect upon the experimental group.

TESTS FOR VALIDITY

Because of the design of the experiment, certain sources which might affect the validity of the study had to be controlled.

HISTORY. In the spring of 1975 the question of teacher unionism and the right to collective bargaining was a volatile issue. There were indications that union factions had a mistrust of researchers who asked questions regarding teacher morale and teacher aspirations. There were cases in adjacent counties to the experimental county in which as many as two hundred take-home questionnaires had been returned with identical answers. It was felt by the administrators in several of those Florida counties that undue pressures might be brought to bear upon the teachers to answer the questionnaire according to the desires of certain pressure groups, either pro-union or anti-union. Every administrator who expressed an opinion indicated that there would be no validity whatsoever in the test if the teachers were permitted to take the questionnaire home or to discuss it in any political sense. It was therefore decided that the only possible solution to control for history was to call a teacher's meeting in the test school on short notice and to strictly control the geography

and time of testing. The teachers were given approximately 30 minutes to complete the questionnaire without discussion with other teachers and without leaving the room. In each case the principal indicated that he intended to use the results in his state report, which was a true statement. Further, the results would also be utilized by a graduate student as data for a doctoral dissertation. The teachers were assured that at no time would their individual answers be made available to any administrator. Because of the pressure of time and a fear of fatigue on the part of the teachers, plus the fact that fewer than 100 teachers could be expected at the Vero Beach High School meeting, the following approach to sampling was employed. A group of 49 teachers was randomly selected to receive the pretest. The rump 49 teachers on a staff of 98 were told that the meeting was over and that they could go home. Three weeks later following the treatment—a mass media campaign designed to improve their morale—the rump 49 teachers were post-tested. Discussion of the test was discouraged during the three-week treatment period. If a teacher was counted absent from the meeting, that teacher, for purposes of the experiment, was counted as a mortality.

MATURATION. The experimental time was limited to a three-week period in order to limit the effect of maturation. The author suspected that the morale of all schools tended to decline with end-of-the-year fatigue but that such fatigue would be considered relatively uniform in schools which had identical teaching days and were demographically similar.

TESTING. In the experimental school, questions were asked by the teachers: "Why was I selected?" "Why was I allowed to leave early without having to take the test?" The answer given was the truth: The teachers were told that the selection had been random and that the other half of the teachers was to be tested at a later date. In that way, the guinea-pig effect was kept to a minimum. The teachers apparently accepted the answer as reasonable. Furthermore the Hawthorne effect seemed to be minimized by the apparent interest the teachers displayed as they proceeded to take the questionnaire. All of us seem to forget the effect of testing once we begin to answer questions about ourselves. It was observed that if there was an effect of testing, it was one of total interest and an attitude of pleasure in the fact that someone higher up in the school echelon was showing concern for the feelings of teachers. As the test progressed, teachers seemed to relax and to enjoy the game.

Campbell and Stanley state that instrumentation, regression, selection, mortality, and interaction of selection and maturation, et cetera, are not sources of invalidity or cannot be controlled in the pretest/post-test control group design (1963, p. 17).

INTERACTION OF TESTING AND X. Every possible precaution was taken to separate the test from the campaign. The campaign simply happened as if some unknown teacher benefactor had

decided to say nice things about the teachers. Never was there any suggestion that what was occurring in the media had anything to do with the post-test in the experimental school.

INTERACTION OF SELECTION AND X. The selection was random and all experimental teachers were exposed to the treatment with relative uniformity and consistency.

MULTIPLE TREATMENT INTERFERENCE. There was no case in any of the test high schools where similar tests had been administered.

REACTIVE EFFECTS OF EXPERIMENTAL ARRANGEMENTS. The testing situation in all cases was a typical teacher's meeting in that particular school. The test was administered with an emphasis on helping the principal with his annual report. The teachers did not note anything out of the ordinary.

As an extra precaution in the control market, the test was administered to the faculties of two nearly identical schools. The superintendent of the county selected two high schools which were within three miles of each other, whose *modi operandi* were similar, and which were demographically as identical as the experimenter could hope. Because of the political climate, it was felt that a better reading could be made by this split-school approach than by testing half the faculty in each school and then returning three weeks later to test the other halves. Because both schools had faculties of less than a hundred, it was decided to test the entire population of each school. The author recognized that a large random

sample over many schools would be more desirable, but he was forced to recognize that the loss of security from union and non-union activists was too great and that it would jeopardize the validity of the results. He felt that a design of split-halves (randomly split) for Vero Beach High School and split-schools in the control market was the best solution considering the volatility of the political situation in Florida during the spring of 1975. Events which occurred during the treatment time in the control market showed that these precautions had been necessary and that a mailing or a split-halves design would have been a fiasco.

TREATMENT

The Vero Beach High School pretest group RO_1 was scheduled to be tested on Tuesday, May 13, 1975. The control school RO_3 was tested the following day. A mass media campaign to improve the morale of the Vero Beach High School teachers was then conducted. During the week of June 2, 1975, the post-tests were given: Tuesday, June 3, in the experimental school and Friday, June 6, in the remaining control school. The treatment period was scheduled to begin at 6:00 PM Tuesday, May 13, and to continue through Tuesday morning, June 3. The basic strategy was to attempt to change teachers' opinions about their jobs through five approaches: posters, role playing in the form of a teacher banquet, newspapers, radio, and television.

POSTERS

We had a learning experience with posters.

Murphy's 4th Law: If you wish to say nice things about teachers via hall posters, do not place them where students can write replies on them.*

During the early parts of the campaign, we placed posters in all the stairwells and halls of Vero Beach High School. The posters looked as though they had been painted by students (studied amateurism) and said, "Say thanks to a teacher; it's an idea whose time has come." We soon discovered unrepeatable graffiti by disgruntled students offering unflattering suggestions. Fortunately the graffitis were discovered early in the morning before the teachers could read the countersuggestions. The contaminated posters were promptly removed, and others were placed in the library, teacher's lounge, or in glass cases where student ribaldry could be restricted.

Posters served a purpose. If a teacher was not exposed to any other medium, the chances were almost a certainty that every teacher was exposed to the posters on several occasions. We felt that the poster was a guarantee that every teacher would get the message.

*This is the author's extension of Murphy's three laws which are discussed by Laurence J. Peter, *The Peter Prescription* (New York: William Morrow & Co., Inc., 1972), p. 38. Murphy's third law may also apply in this case: "If anything can go wrong, it will."

ROLE PARTICIPATING

Although the review of the literature in Chapter II indicated role participating as an important element in changing opinions, this researcher originally planned to utilize role participating at a minimum level. The ultimate goal of this and future researches is aimed at creating instant morale change via mass media. It was felt that creating a role participating situation would be tedious and limited in the group it might reach. Nevertheless, luck was with us and we were not about to refuse Dame Fortune. At first our plan was to entice certain teachers into helping with posters and radio messages, and that was to be the extent of the role participating. However, as Christmas vacation ended (1974-1975), talk began to circulate in the teacher's lounge that one of the truly great teachers at Vero Beach High School was about to retire. As time passed, committees were formed by teachers, former students, townspeople, and administrators to honor Mrs. Helen Hancock for her superb services as a teacher.

It should be noted by future researchers that this researcher feels that the Helen Hancock testimonial was quite possibly the most important factor during the spring of 1975 in maintaining high morale among teachers in the experimental group. Future researchers should attempt to create role participating situations for the experimental group, but they should also be aware that spontaneous situations may occur which may do far more morale raising than any staged situation. Should such a situation

occur, it is best to roll with the tide while enjoying all the side eddies, such as extra, positive radio, newspaper, and television exposure.

The Helen Hancock testimonial received sixty-three news commentaries on Vero Beach radio stations, six television exposures on WTVX-TV, unlimited word-of-mouth exposure, and newspaper coverage (see Appendix B).

RADIO CAMPAIGN

The radio campaign may have been the second most effective medium used. In order to create a feeling throughout Vero Beach that Teacher Appreciation Week was spontaneous, it was born in a social studies class as a student project. The students readily agreed that any project which would improve teacher morale was to the students' advantage. Very soon other classes were involved in painting posters, helping with a teacher retirement dinner, and especially, working on a slogan for radio spots. Spontaneity was complete. No one asked, "Where did this idea originate?" It just "grewed, like Topsy." Over one hundred students tried their hands at slogans and commercials. A student committee decided that Neil Stannard, a senior and a local disc jockey, had developed the best slogan. They adopted "Say thanks to a teacher; it's an idea whose time has come."

Neil became our radio commercial producer and, in some cases, announcer. The spots which he produced had upbeat music

in the background and sounded as though a student was speaking. On the other spots we used the voice of a mother who was well known in the community as a successful parent and a working contributor to many facets of a better community life in Vero Beach.

Indian River County has two AM radio outlets, WTTB and WAXE, and one FM outlet, WGYL. We decided to forego the use of WGYL because its coverage area extended into the control market and could easily bias the experiment.

We broadcast the following messages alternately on the AM stations (see Appendix C):

Hi, I am a concerned parent . . . and I'd like to take this opportunity to say "Thanks" to the teachers of Indian River County . . . because they, more than anyone else, have made this past school year the best ever. It's teachers in their day-to-day work who determine the quality of a school system . . . and our teachers deserve our gratitude for a job well done. Say "Thanks" to a teacher . . . today!

I am a concerned parent asking you to say "Thanks" to a teacher. Indian River County schools have just experienced their greatest year ever, in terms of both accomplishment and of harmony . . . and this is due in large part to the men and women who are the "front line" of education . . . the classroom instructors. Say "Thanks" to a teacher . . . it's an idea whose time has come.

During the experimental week, student leaders spoke over the Vero Beach High School intercom expressing their appreciation for the fine job that their high school faculty had done during the 1974-1975 academic year. They concluded each announcement with the slogan "Say thanks to a teacher; it's an idea whose time has come."

TELEVISION

The experimenter was fortunate in obtaining the help and public service time of WTVX-TV, a CBS affiliate. WTVX-TV is the only television station in the area between Palm Beach and Cape Kennedy on the Treasure Coast of Florida. Therefore, with the exception of fringe signals from other cities or the rare households which were connected to cable at that time, the teacher praising announcements were directed to as nearly a captive audience as any television programmer could hope for.

The following public service announcements were telecast (see Appendix D):

AUDIO	VIDEO
<p>STATION BREAK 1</p> <p>If we can afford to pay two thirds of the cost of mass transit in our community, then we can afford to pay one third of the cost of educating our children.</p> <p>Say thanks to a teacher; it's an idea whose time has come.</p>	<p>Senator Edward Kennedy speaking at a National Education Association convention.</p> <p>Still shot of smiling teacher helping interested student.</p>

AUDIO

VIDEO

STATION BREAK 2

We are trying to meet our responsibility in mass transit. Urge your congressional representative to do as much for our children's education.

Say thanks to a teacher; it's an idea whose time has come.

STATION BREAK 3

Each child is like an arrow pointing to his future.

There are slow learners and fast learners. Some have special difficulties. Some need extra guidance and help.

Some falter.

Some drop out.

The teachers of America believe that their job is to shape every child for its true flight to his own target, and they need your help.

Say thanks to a teacher; it's an idea whose time has come.

STATION BREAK 4

When is it the individual's right to determine his own actions?

The right to say what you want and equality. Ninety-eight percent isn't good enough; it's got to be 100% or it just isn't.

Government should guarantee that . . .

Montage of rapid transit films.

Still shot of smiling teacher helping interested student

Animated arrows.

Bending arrows.

Wiggling arrows.

Reverse action arrow.

Arrow tailspins.

Arrows shooting skyward.

Arrow heading toward target.

Arrow hits target.

Still shot of smiling teacher helping interested student.

Young male teacher addressing high school students in classroom.

First student responds.

Second student interrupts.

AUDIO

VIDEO

STATION BREAK 4, continued:

Six students interrupt.

Audio background speaker:
For Pete Shrively, teaching is more than a matter of fact. He is helping America's future learning to speak it's conscience.

Back to teacher speaking:
Is that an interference with one's civil rights or not?

Many students respond enthusiastically with varied answers.

Say thanks to a teacher; it's an idea whose time has come.

Camera zooms in on teacher

Camera on students.

Still shot of smiling teacher helping interested student.

Following the announcements, four prime time programs were aired over WTVX-TV, exposing parents, students, and community leaders who expressed their appreciation for the contributions which had been made by Indian River county teachers.

The most serious decision made regarding the design was the question of the split-school approach in the control market. Every precaution was taken to assure the researcher that the teacher populations of the two schools were similar. Nevertheless, a serious, although necessary, limitation remained. Would a change in morale from the pretest to the post-test in the control markets reflect a true morale change or simply differences of the two populations?

IV

PRESENTATION OF THE DATA

*There is a high correlation
between the birth of new
babies in Dublin, Ireland,
and the stork population.*

—Graffiti

THE PROFILE PRESENTED in Table IV-1 can be interpreted in the following manner: The value on the percentile scale represents the percentage of a group of schools similar to those indicated by the norm group that obtained either the same or a lower median rating* than did another school on that factor.

For example, a school which received a median rating of 3.67 on the first factor might have a percentile rank of 71 on that factor. This would mean that 71 percent of all schools upon which the norms were based received either this median rating

*The median ratings for *The Purdue Teacher Opinionnaire* are: Factor 1, 3.46; Factor 2, 3.69; Factor 3, 3.25; Factor 4, 3.06; Factor 5, 3.70; Factor 6, 3.46; Factor 7, 3.00; Factor 8, 3.17; Factor 9, 3.63; and Factor 10, 3.72 (Bentley & Rempel 1970, p. 13).

or a lower one. Only 29 percent of the schools received a higher median rating on that factor.

Since factor ratings offer a more consistent picture of a school's relative standing, the percentile norm profile represents median values for the ten factors rather than for each of the one hundred items. The item weights used in computing factor medians are explained in the *Manual for the Purdue Teacher Opinionnaire* (Bentley & Rempel 1970). High values indicate the presence of the quality represented by the factor, whereas low values may suggest lower morale concerning this dimension when compared with other schools included in the norm group.

The item median results of the experimental (Vero Beach) pretest, of the experimental post-test, of the control group pretest, and of the control group post-test are presented in Table IV-2.

TABLE IV-1. FACTOR PERCENTILE PRETEST AND POST-TEST DATA

<i>Factor</i>	<i>Experimental Pretest</i>	<i>Experimental Post-Test</i>	<i>Control Pretest</i>	<i>Control Post-Test</i>
1	71%	56%	23%	1%
2	88	71	56	25
3	55	54	54	8
4	85	59	8	2
5	95	46	8	1
6	91	91	95	38
7	66	56	22	1
8	78	71	80	40
9	97	90	64	32
10	94	84	42	4

TABLE IV-2. ITEM MEDIAN PRETEST AND POST-TEST DATA GROUPED BY FACTORS

<i>Item</i>	<i>Experimental Pretest</i>	<i>Experimental Post-Test</i>	<i>Control Pretest</i>	<i>Control Post-Test</i>
Factor 1:				
2	3.8	3.3	3.1	2.3
3	3.2	3.1	2.9	1.7
5	2.9	2.2	3.4	2.0
7	3.7	3.3	2.2	1.4
12	2.8	2.5	2.0	1.3
33	3.1	3.2	2.9	1.4
38	3.4	3.2	3.0	2.1
41	3.7	3.4	2.6	1.3
43	3.0	2.8	2.4	1.8
44	3.5	2.2	2.5	1.2
61	3.5	3.3	2.8	1.3
62	3.8	3.6	3.4	1.8
69	3.7	3.3	2.9	2.2
70	3.7	3.7	3.0	1.3
72	3.4	2.7	2.4	1.7
73	3.3	3.1	2.9	2.1
74	3.6	3.4	3.4	2.6
92	3.7	3.5	3.4	2.6
93	3.2	3.2	3.0	2.2
95	3.7	3.5	3.0	1.6
Factor 2:				
19	3.8	3.8	3.7	3.7
24	3.1	3.3	2.9	2.8
26	3.8	3.8	3.7	3.5
27	3.1	3.2	3.1	2.8
29	2.9	2.9	2.9	2.3
30	3.4	3.5	3.4	3.0
46	3.9	3.8	3.8	3.9

47	3.7	3.6	3.5	3.0
50	3.8	3.7	3.8	3.8
51	3.3	3.5	3.3	3.4
56	3.9	3.9	3.9	3.7
58	3.5	3.6	3.7	3.5
60	3.8	3.7	3.5	3.1
76	3.9	3.7	3.7	3.7
78	3.8	3.6	3.7	3.7
82	3.4	3.4	3.5	3.5
83	3.4	3.2	3.2	2.9
86	4.0	3.9	3.8	3.9
89	3.9	3.8	3.8	3.9
100	3.8	3.6	3.5	2.8

Factor 3:

18	3.3	3.2	2.8	1.4
22	3.3	3.3	3.2	2.9
23	3.1	3.1	3.2	2.4
28	3.7	3.7	3.3	3.1
48	3.7	3.8	3.8	3.8
52	3.6	3.5	3.6	2.8
53	3.4	3.2	3.3	3.2
54	2.4	2.2	2.3	1.5
55	3.2	3.2	3.3	2.9
77	3.3	3.4	3.3	3.0
80	3.1	3.1	3.1	3.2
84	3.1	3.2	3.3	3.0
87	3.1	3.2	3.1	3.0
90	3.0	3.1	3.2	3.1

Factor 4:

4	3.1	2.9	1.9	1.8
9	2.9	2.5	1.4	1.1
32	3.6	3.2	2.3	1.4
36	3.1	3.0	2.1	1.3
39	3.3	2.8	2.6	2.1
65	1.9	1.8	1.4	1.2
75	3.1	3.2	1.8	1.4

TABLE IV-2, continued:

<i>Item</i>	<i>Experimental Pretest</i>	<i>Experimental Post-Test</i>	<i>Control Pretest</i>	<i>Control Post-Test</i>
Factor 5:				
1	2.3	1.4	1.3	1.1
6	3.2	3.0	2.4	1.9
8	3.9	3.6	3.6	3.6
10	3.8	3.6	3.4	3.5
11	3.8	3.7	3.3	2.0
14	3.6	3.5	3.0	2.5
31	3.6	3.4	3.3	2.9
34	3.7	3.5	3.0	3.1
40	3.7	2.9	3.3	2.7
42	3.9	3.8	3.6	3.2
45	3.8	3.6	3.0	2.6
Factor 6:				
17	3.6	3.7	3.9	2.7
20	3.6	3.5	3.7	2.9
25	3.2	3.2	3.1	2.3
79	3.7	3.5	3.6	2.8
88	3.2	3.2	3.4	3.0
Factor 7:				
13	2.7	2.8	2.6	1.8
15	3.2	2.9	2.3	1.9
35	2.5	2.7	2.6	2.2
37	3.5	3.5	2.8	2.3
63	2.8	2.9	2.5	2.3
64	3.2	2.6	1.7	1.4
68	2.8	2.9	2.8	2.4
71	3.3	3.3	3.4	2.9

Factor 8:

66	2.8	2.7	3.2	2.8
67	3.7	3.8	3.5	3.0
94	2.9	2.8	3.0	2.7
96	3.2	3.3	3.1	1.9
97	3.2	3.0	3.2	3.0

Factor 9:

16	3.8	3.2	2.8	2.3
21	3.0	3.0	2.8	2.3
49	4.0	3.9	3.5	3.5
57	2.9	2.7	2.2	1.5
59	3.7	3.7	3.5	3.2

Factor 10:

81	3.6	3.6	3.4	3.1
85	3.8	3.7	3.3	3.2
91	3.3	3.3	3.2	2.3
98	3.8	3.6	3.3	3.1
99	3.9	3.8	3.6	3.4

V

ANALYSIS OF THE DATA

*If you want to change
history, write it.*

—Graffiti

FOUR CRITERIA WERE ESTABLISHED whereby the experimenter could decide whether a mass media campaign had in fact affected teacher morale in Vero Beach. The experimenter assumed that teachers in both the experimental and control markets would experience declining morale at the end of the school year. The experimenter's hope was that a mass media campaign in Vero Beach would retard that decline, keep it level, or possibly raise it, while the control sample would decline. Four questions were asked.

1. Did the overall picture from the pretest and post-test in Vero Beach remain relatively stable while the morale in the control market plummeted?
2. Would certain factors which were more prone to be affected by a morale raising campaign show less decline than factors which could be considered immune to a mass media campaign?

3. Were there certain items which were more sensitive to a morale raising campaign than other items?

4. Were there any obvious demographic differences between the population in the experimental market and the control market?

Regarding the first question, the experimenter illustrates gross differences by relative percentile changes in Table V-1 and in Figures V-1 and V-2. With reference to the second question, it seemed that a question pertaining to the teacher's feelings of status in the community would be more affected by television spots praising the work done by teachers than a teacher's feelings regarding his salary or the physical plant in which he worked. Salary and physical plant seemed to be a constant factor which would not be readily changed by a morale raising campaign.

Similarly, it was reasoned in the third question, there should be certain items which are more sensitive to a morale raising campaign than other items. If questions could be found such as, "I think my community appreciates me," then it was reasoned that such a question should be strongly affected by a television campaign. Whereas such a question as, "Are you pleased with the amount of audiovisual material in your school?" would be relatively unaffected by a morale raising campaign.

Regarding the fourth question, if there were substantial differences in the black/white population of the experimental market as compared with the control market, then an analysis of

variance might indicate a demographic causation for the differences in the results.

All hypotheses were tested using the same general statistical procedure (excepting Hypothesis 1; see page 49, below). The procedure involves using four t tests in an attempt to determine whether one group had changed relatively more than another group.* The limitation of this procedure should be noted since the pretests and post-tests were given to different subjects. Because of the political climate in Florida at the time, the experimenter felt that the procedure of split halves was most desirable in order that teachers would not have an opportunity to discuss the questionnaire among themselves and in order that they would not be exposed to unnecessary political pressures.

Measures on each *Purdue Teacher Opinionnaire* morale variable were obtained for four groups: Vero Beach pretest, Vero Beach post-test, control pretest, and control post-test. If t tests are used and it is found that Vero Beach pre is not significantly different from control pre but Vero Beach post is significantly different from control post, then there is evidence of a significant difference in the change from pre to post in the experimental group relative to the change from pre to post in the control group.

*For a more complete explanation, see page 247 of *Reading Statistics and Research* by Huck, Cormier, and Bounds (New York: Harper & Row, 1974).

Or if t tests are used and it is found that control post is not significantly different from control pre but Vero Beach post is significantly different from Vero Beach pre, then there again is evidence of a significant difference in the change from pre to post in the experimental group relative to the change from pre to post in the control group. A similar argument allows a comparison of the changes in Vero Beach pre/post for whites and blacks.

It is not necessary to determine whether the differences between the experimental market and the control market are statistically significant. It is only necessary to determine

HYPOTHESIS 1. Teachers exposed to a mass media campaign to improve morale will score no differently in a test designed to measure their morale, pretest/post-test, than will teachers who are not exposed to such a campaign.

whether there was any difference at all inasmuch as some of the factors should not have been affected by the media campaign and therefore would serve to dilute the results. What the experimenter is essentially asking in the first hypothesis and in the other five hypotheses is whether there was an overall change in the experimental market compared with the control market and, if there was a change, was that change much greater in the media sensitive factors and items than was the change, if any, in the media nonsensitive factors and items.

A cursory glance by the reader makes the answer to the first hypothesis rather obvious. The reader can see that overall the control market morale dropped 30 percentile points while the experimental market morale dropped 14.2 points (Table V-1).

TABLE V-1. BREAKDOWN OF VARIOUS FACTOR SCORES FOR VERO BEACH PRETEST/POST-TEST AND CONTROL PRETEST/POST-TEST*

<i>Factor</i>	<i>Vero Beach Pretest</i>	<i>Vero Beach Post-Test</i>	<i>Control Pretest</i>	<i>Control Post-Test</i>
1	71	56	23	1
2	88	71	56	25
3	55	54	54	8
4	85	59	8	2
5	95	46	8	1
6	91	91	95	38
7	66	56	22	1
8	78	71	80	40
9	97	90	64	32
10	94	84	42	4
ΣP	820	678	452	152
$\Sigma P/N$	82.0	67.8	45.2	15.2

$$(\Sigma P_1/N) - (\Sigma P_2/N) = 14.2$$

$$(\Sigma P_3/N) - (\Sigma P_4/N) = 30$$

NOTE: P = percentile score.

*Sizes of samples were: Vero Beach pretest 49, Vero Beach post-test 49, control pretest 86, control post-test 41.

Figures V-1 and V-2, following, illustrate visually the percentile changes of Vero Beach pretest/post-test as compared to the greater change in control pretest/post-test.

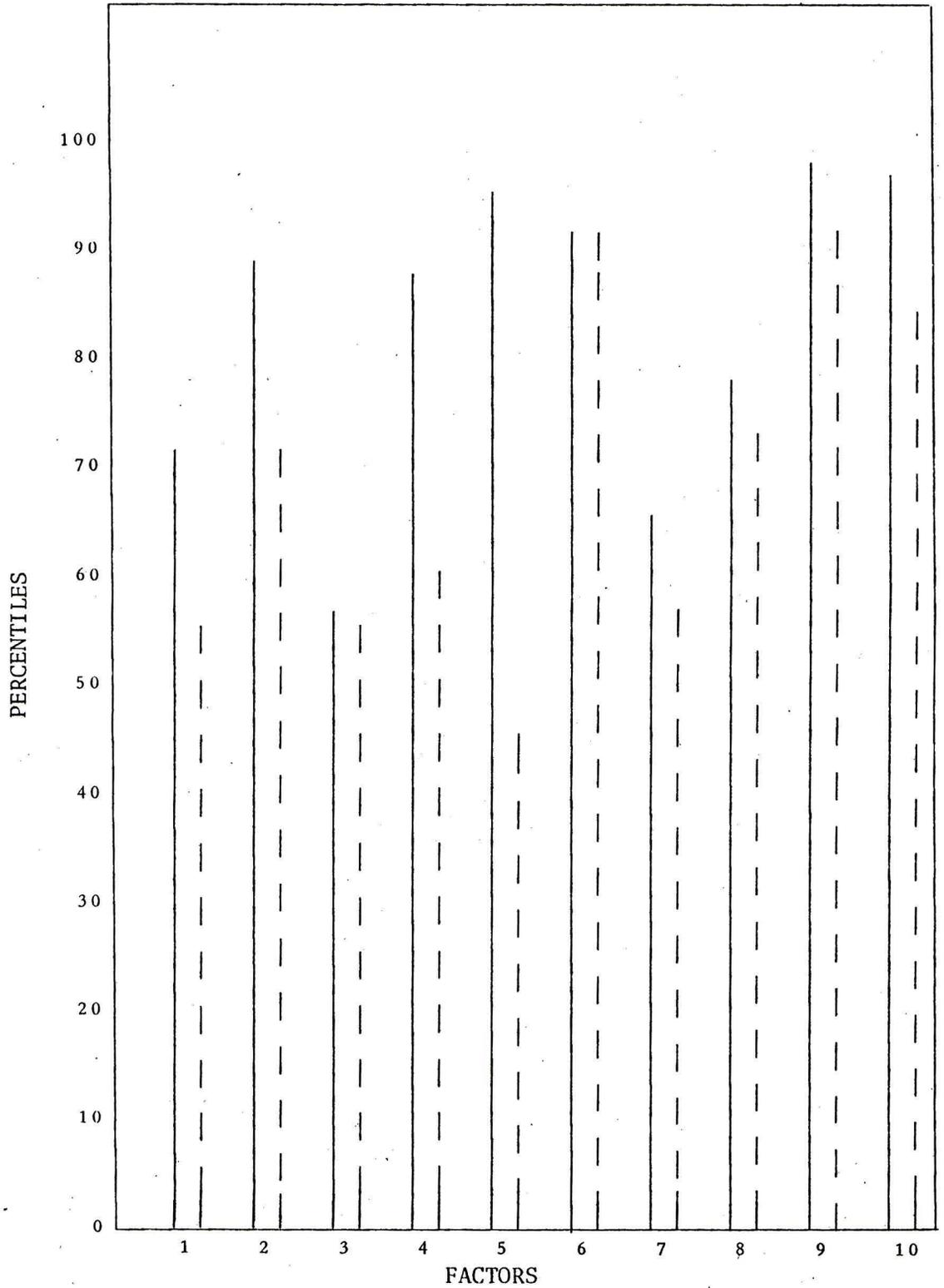


FIGURE V-1. PERCENTILE CHANGES OF VERO BEACH PRETEST/POST-TEST. Solid line indicates pretest and broken line indicates post-test for each factor.

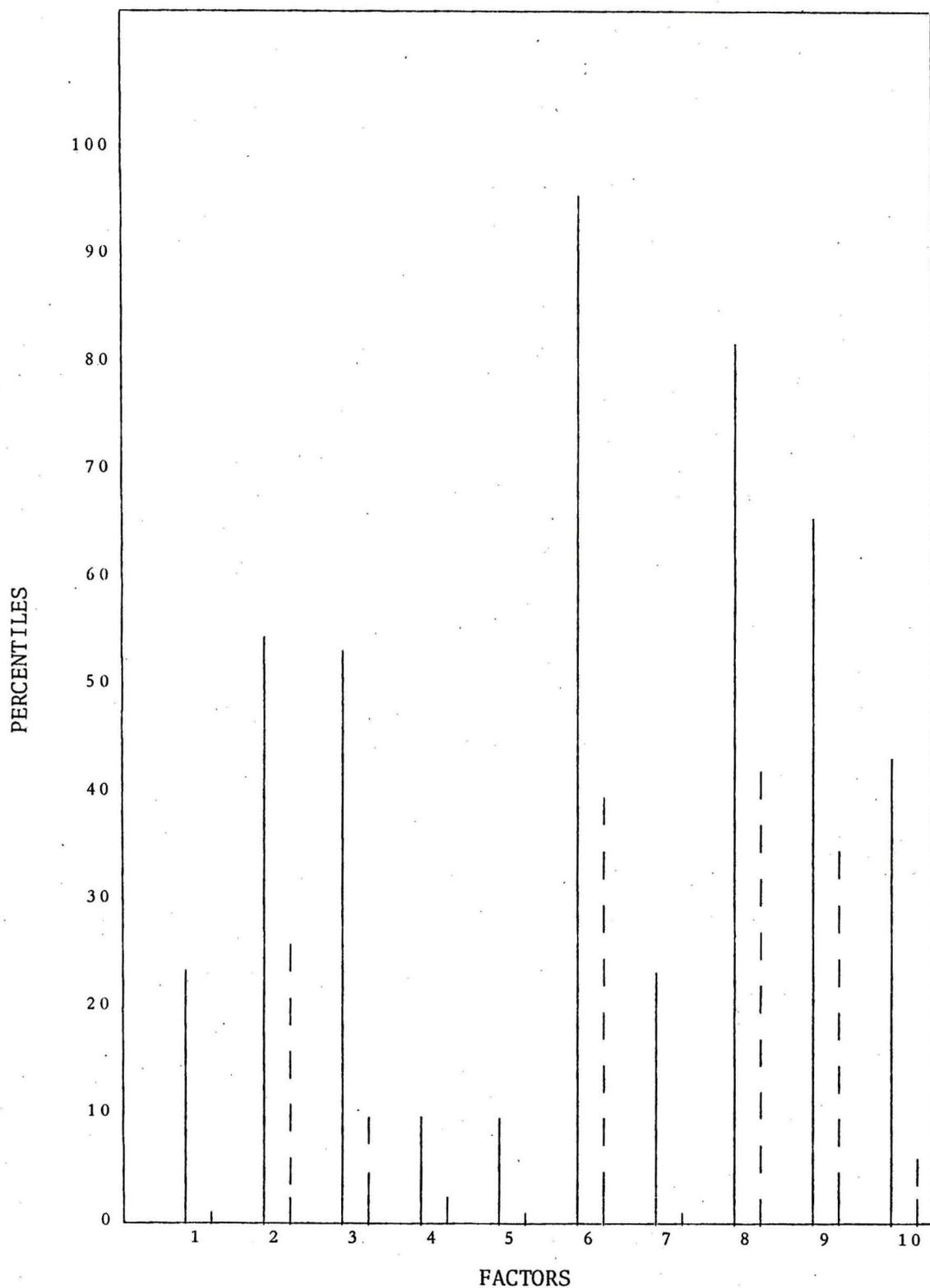


FIGURE V-2. PERCENTILE CHANGES OF CONTROL PRETEST/POST-TEST. Solid line indicates pretest and broken line indicates post-test for each factor.

Table V-1 shows twice the decline in morale in the control market as opposed to the experimental market. In this connection, it should be recalled that the morale in the experimental market was exceptionally high statistically to begin with and therefore had potentially far greater distance to fall. On Factors 1, 4, 5, 7, and 10 the control market literally hit the bottom.

Having noted that there was a gross difference between the morale level of the experimental market and the control market, an expert committee* and the experimenter separately chose factors and items which seemed to be more or less prone to being affected by a media campaign. There were significant differences between factors considered media sensitive by an expert committee and factors considered media sensitive by the experimenter, and these sensitive factors were compared with the selected nonsensitive factors.

Both the select committee and the author, in blind ballot, selected as media sensitive Factors 2, 7, and 10. Nonsensitive media factors, both the select committee and the author agreed, were Factors 1, 4, and 9.

*The author's appreciation is extended to those committee members: Micki Edwardson, professor of communications; Julius Hodges, director P.K. Yonge Laboratory School; Carson Coleman, Jimmy Johnson, James N. Young, and Thomas Greene, administrators, Vero Beach High School; Gail Archer, Beverly Brubaker, Samuel A. Burns, Annie Grace Foster, Sue Linley, Nancy McDowell, Jessie Salmon, and Andrew Walls, teachers, Vero Beach High School.

The f value, the pooled variance estimate (t value), and the separate variance estimate (t value) for all ten factors may be found in Appendix E. In the discussion of the media sensitive factors, the author has selected the pooled variance estimate (t value) as the most sensitive.

ANALYSIS OF MEDIA SENSITIVE FACTORS

HYPOTHESIS 2. Teachers exposed to a mass media campaign designed to improve their morale will score no differently in a test designed to measure their morale on factors which should be sensitive to change by a mass media campaign, pretest/post-test, than will teachers who are not exposed to such a campaign.

two-tail probability is .348. Therefore, the null hypothesis is accepted for Vero Beach for Factor 2. In the case of the control market for Factor 2, with a df of 125, the point of significance is 1.97. The one-tail t value for the difference between pretest and post-test in the control market is 1.55, and the two-tail

SENSITIVE FACTORS

Factor 2. Satisfaction with teaching.

Factor 7. Teacher Status.

Factor 10. Community Pressures

NONSENSITIVE FACTORS

Factor 1. Teacher Rapport with Principal.

Factor 4. Teacher Salary.

Factor 9. School Facilities and Services.

For media sensitive

Factor 2, df of 96, t is significant at the 1.98

level. Factor 2 shows that the one-tail t score for the change between pretest/post-test Vero

Beach is .94 and that the

probability is .125. The null hypothesis for the control market is therefore accepted for Factor 2. Apparently the treatment in Vero Beach in the case of Factor 2 would not significantly change the morale as compared with the control market.

In Factor 7 the Vero Beach pretest/post-test one-tail t score is .04, and the two-tail probability is .970. The null hypothesis is accepted. In Factor 7, control market pretest/post-test, the one-tail t value is 2.44, and the two-tail probability is .016. Hypothesis 2 is therefore rejected for the control market. There is a significant difference between the decline of morale in the control market compared to the lesser decline in the experimental market. It is concluded that the significant difference in Factor 7 may have been caused by the morale raising media campaign.

In Factor 10 the one-tail t score for Vero Beach pretest/post-test is 1.75, and the two-tail probability is .084. The null hypothesis is therefore accepted. For Factor 10, control market pretest/post-test, the one-tail t value is 2.6, and the two-tail probability is .01. Inasmuch as both groups indicated the same direction (morale drop), the null hypothesis is rejected regarding the control market, and it is concluded that the media campaign may have been the cause of maintaining relatively high morale regarding Factor 10 in the experimental market while the control market declined.

ANALYSIS OF MEDIA NONSENSITIVE FACTORS

By hidden ballot both the committee and the author agreed that Factors 1, 4, and 9 would be relatively nonsensitive, or insensitive, to a media campaign, and therefore the end-of-the-year morale drop in both the experimental and control markets should be similar.

HYPOTHESIS 3. Teachers exposed to a mass media campaign designed to improve their morale will score no differently in a test designed to measure their morale on factors which should not be sensitive to change by a mass media campaign, pretest/post-test, than will teachers who are not exposed to such a campaign.

Regarding Factor 1, pretest/post-test Vero Beach, the one-tail t value is 2.01, and the two-tail probability is 0.48. The null hypothesis for the experimental market is rejected. For Factor 1 in the control market, the one-tail t value is 6.41, and the two-tail probability is .000. The null hypothesis for the control market is rejected, and it is concluded that the decline in morale in both markets was relatively similar and was unaffected by the media campaign.

For Factor 4, Vero Beach pretest/post-test, the one-tail t value is 1.73, and the two-tail t value is 0.86. The null hypothesis is accepted for Vero Beach. For Factor 4 in the control market, the one-tail t value is 2.68; the two-tail probability is .008. The null hypothesis is rejected. There is a significant difference in the morale change between the control market and the experimental market on a factor which was considered nonsensitive to media persuasion.

For Factor 9 in Vero Beach, the one-tail t value is 1.31. The two-tail probability is 1.94. The null hypothesis is accepted. Regarding Factor 9 in the control market, the one-tail t value is 2.55, and the two-tail t value is .012. The null hypothesis is rejected. There was a significant difference in the relative decline of morale in the control market as compared with the experimental market.

It should be noted that in the vote, Factor 3 (Rapport Among Teachers) missed being included as one of the television sensitive factors by one vote. A discussion of this factor seems to be in order. First some background information regarding the influences which occurred during the time between the pretests and the post-tests in both markets and what has occurred in the year since is in order.

In the experimental market during the testing period, there was little or no discussion regarding the question of whether teachers should leave the National Education Association and join the American Federation of Teachers. However, in the control market the superintendent of schools noted that the low morale which was recorded in the post-test was the direct result of militant teacher organizations stirring up discontent among their teachers. He therefore concluded that this research was meaningless because of the bias of unionism in his county. It should be noted, however, that it may well have been the mass media campaign in Vero Beach which kept the teachers in a more

moderate attitude regarding unionism in the county. Furthermore, it is interesting to note that one year after the mass media campaign was stopped in Vero Beach, the teachers in the experimental county did indeed vote to join the American Federation of Teachers and did take a strong militant stand against the school administration, threatening to strike. Above all, it is interesting to note that one year following the removal of media persuasion from Vero Beach that the experimental high school teachers were deeply divided over the issue of unionism and that apparently the rapport which existed in the spring of 1975 had diminished by the spring of 1976.

Another observation is that the media campaign in Vero Beach was generally directed to the high school teachers only. For instance, the role playing experiment honored a high school teacher, and the people involved in the banquet were high school faculty. When the election was held in the spring of 1976, junior high school and elementary teachers in the experimental county voted 80 percent in favor of the militant union, whereas a majority of the high school faculty rejected unionism. Figure V-3 illustrates what happened to rapport among teachers in the control market during its move toward unionism. Although in the experimental market rapport remained generally high, possibly the result of the mass media campaign, it is a matter of record that radical unionism did not come to Vero Beach until one year after the morale raising media campaign had been stopped.

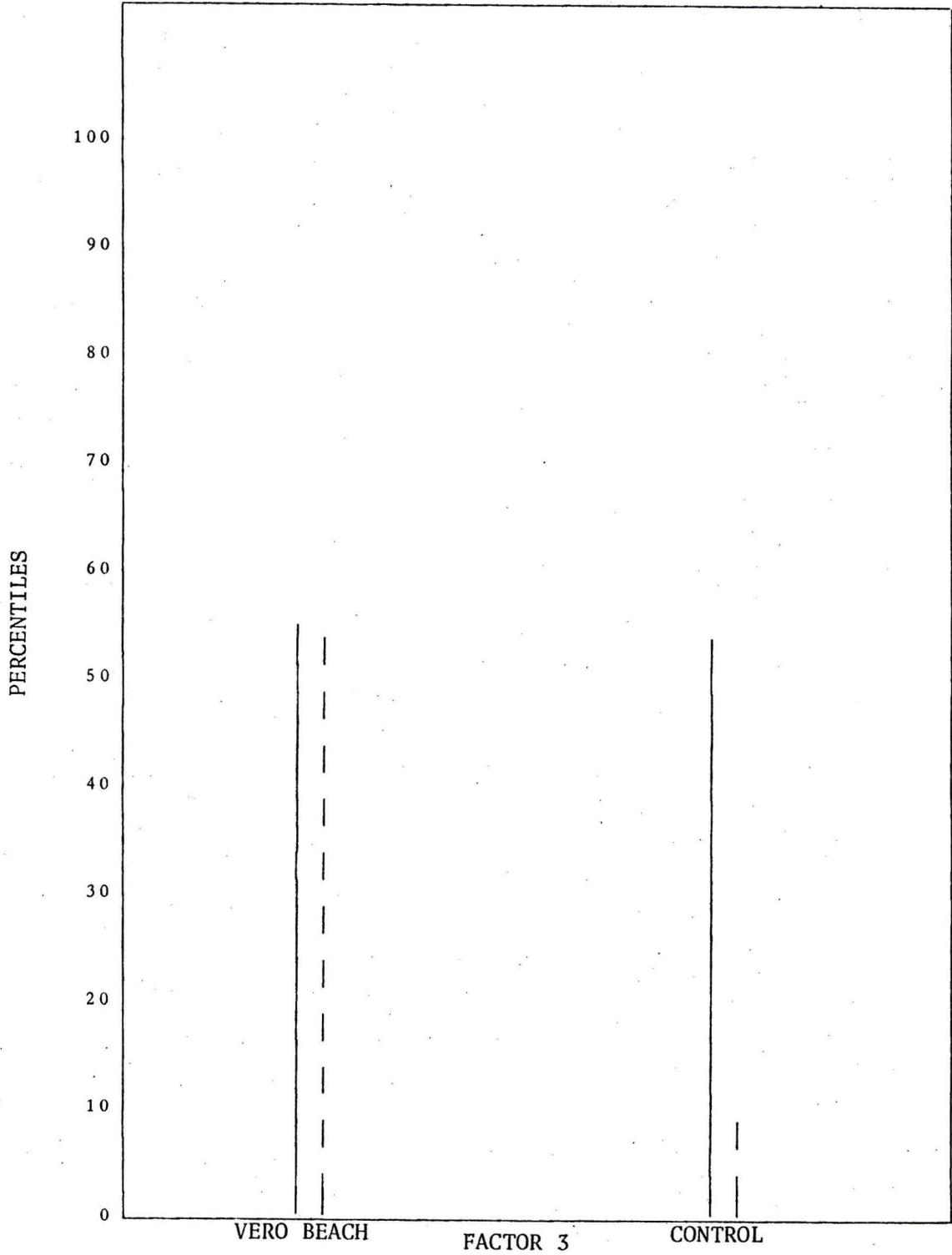


FIGURE V-3. PERCENTILE CHANGES OF EXPERIMENTAL AND CONTROL MARKETS ON FACTOR 3. Solid line indicates pretest and broken line indicates post-test.

ANALYSIS OF MEDIA SENSITIVE ITEMS

The following items were considered to be more sensitive to a media campaign designed to raise teacher morale than any of the other items: Item 8

(committee selection only),

Item 13 (committee and experi-

menter selected), Item 15 (committee and experimenter selected),

Item 19 (committee and experimenter selected), Item 24 (committee and experimenter), Item 26 (experimenter only), Item 35 (committee

and experimenter), Item 42 (experimenter only), Item 45 (com-

mittee only), Item 46 (committee and experimenter), Item 47

(committee and experimenter), Item 48 (committee only), and

Item 63 (experimenter only).

In Item 8, Vero Beach pretest/post-test, the one-tail t value is 3.20, with 96 df, and the two-tail probability is .002.

ITEM 8. Community demands upon the teacher's time are unreasonable.

The null hypothesis is rejected for the experimental market.

For Item 8, control market pretest/post-test, the one-tail t value is .19, with 125 df, and the two-tail probability is .851. The null hypothesis is accepted. It is found that on Item 8, an item which the committee felt was media sensitive, there was a significant drop in morale in the

HYPOTHESIS 4. Teachers who are exposed to a mass media campaign designed to improve their morale will score no differently, pretest/post-test, on scores on items sensitive to such a campaign than will teachers who are not exposed to such a campaign.

experimental market rather than the control market. Therefore the fourth null hypothesis is accepted.

For Item 13, Vero Beach pretest/post-test, the one-tail t value is $-.50$, and the two-tail probability is $.618$. The null hypothesis is accepted for the experimental market.

ITEM 13. My teaching position gives me the social status in the community that I desire.

In Item 13, control market pretest/post-test, the one-

tail t value is 2.02 , with a df of 124 , and the two-tail probability is $.046$. The null hypothesis for the control market is rejected, and the fourth null hypothesis is therefore rejected.

ITEM 15. Teaching enables me to enjoy many of the material and cultural things I like.

In Item 15, Vero Beach pretest/post-test, the one-tail t value is $.57$, and the two-tail probability is $.572$. The null

hypothesis for the experimental market is accepted. In Item 15, control market pretest/post-test, the one-tail t value is 1.60 , and the two-tail probability is $.113$. The null hypothesis is accepted for the control market. Since the null hypothesis is accepted for both markets, the fourth null hypothesis is accepted.

In Item 19, Vero Beach pretest/post-test, the one-tail t value is $-.40$, and the two-tail probability is $.693$. The null hypothesis is accepted for

ITEM 19. Teaching gives me a great deal of personal satisfaction.

the experimental market. In Item 19, control pretest/post-test,

the one-tail t value is $-.21$, and the two-tail probability is $.836$. The null hypothesis is accepted for the control market. No significant difference is found between the markets. The fourth null hypothesis is therefore accepted.

For Item 24, Vero Beach pretest/post-test, the one-tail t value is $.92$, and the two-tail probability is $.361$. The null hypothesis is accepted for the experimental market. For Item 24, control pretest/post-test, the one-tail t value is $.93$, and the two-tail probability is $.354$. The null hypothesis is accepted for the control market. No difference between the markets is found, and the fourth null hypothesis is therefore accepted.

ITEM 24. Teaching enables me to make my greatest contribution to society.

In Item 26, Vero Beach pretest/post-test, the one-tail t value is $-.13$, and the two-tail probability is $.895$. The null hypothesis is accepted for the experimental market.

ITEM 26. I love to teach.

For Item 26, control market pretest/post-test, the one-tail t value is 1.09 , with a df of 125 , and the two-tail probability is $.278$. The null hypothesis is accepted for the control market, and no significant difference is found between the two markets. The fourth null hypothesis is therefore accepted.

For Item 35, Vero Beach pretest/post-test, the one-tail t value is -1.05 , and the two-tail probability is $.296$. The null hypothesis is accepted for the experimental market.

ITEM 35. Our community makes its teachers feel as though they are a real part of the community.

is accepted for the experimental market. In Item 35, control market pretest/post-test, the one tail t value is 1.97, with a df of 120, and the two-tail probability is .051. The null hypothesis is accepted for the control market. However, it is noted that under separate variance estimates, the one-tail t value is 2.02, and therefore the fourth null hypothesis in the control market could be rejected. Since the pooled variance estimate is used, no significant difference is found between the two markets, and the null hypothesis is therefore accepted with reservations.

In Item 42, Vero Beach pretest/post-test, the one-tail t value is 1.11, and the two-tail probability is .270.

ITEM 42. My teaching load is unreasonable.

The null hypothesis is accepted for the experimental market. For Item 42, control market pretest/post-test, the one-tail t value is 1.47, with a df of 124, and the two-tail probability is .144. The null hypothesis is accepted for the control market. No significant difference between the markets is found, and the fourth null hypothesis is accepted.

In Item 45, Vero Beach pretest/post-test, the one-tail t value is 2.25, with a df of 95, and the two-tail probability

ITEM 45. My heavy teaching load unduly restricts my nonprofessional activities.

is .027. The null hypothesis is rejected for the experimental market. For Item 45,

control market pretest/post-test, the one-tail t value is .99,

with a df of 122, and the two-tail probability is .322. The null hypothesis is accepted for the control market. There is a significant difference between the two markets in the wrong direction. Therefore the fourth null hypothesis is accepted for Item 45.

In Item 46, Vero Beach pretest/post-test, the one-tail t value is .81, with a df of 96, and the two-tail probability is .422. The null

ITEM 46. I find my contacts with students, for the most part, highly satisfying and rewarding.

hypothesis is accepted. For

Item 46, control market pretest/post-test, the one-tail t value is $-.94$, with a df of 124, and the two-tail probability is .349. The null hypothesis is accepted for the control market. There is no significant difference between the markets. The fourth null hypothesis is therefore accepted.

For Item 47, Vero Beach pretest/post-test, the one-tail t value is .12, and the two-tail probability is .907. The null

ITEM 47. I feel that I am an important part of this school system.

hypothesis is accepted for the experimental market. In

Item 47, control market pretest/post-test, the one-tail t value is 2.30, with a df of 125, and the two-tail probability is .023. The null hypothesis is rejected for the control market. There is a significant difference between the markets. The fourth null hypothesis is therefore rejected.

For Item 48, Vero Beach pretest/post-test, the one-tail t value is $-.81$, with a df of 96, and the two-tail probability is $.419$. The null hypothesis is accepted for the experimental market. In Item 48, control market pretest/post-test, the one-tail t value is $.40$, with a df of 124, and the two-tail probability is $.693$. The null hypothesis is accepted for the control market. No significant difference is found between the markets. The fourth null hypothesis is therefore accepted.

ITEM 48. The competency of the teachers in our school compares favorably with that of teachers in other schools with which I am familiar.

In Item 63, Vero Beach pretest/post-test, the one-tail t value is $-.98$, with a df of 94, and the two-tail probability is $.327$. The null hypothesis is accepted for the experimental market. For Item 63, control pretest/post-test, the one-tail t value is 1.66 , with a df of 124, and the two-tail probability is $.099$. The null hypothesis is accepted for the control market. No significant difference is found between the markets. The fourth null hypothesis is therefore accepted.

ITEM 63. Teaching gives me the prestige I desire.

.327. The null hypothesis is accepted for the experimental market. For Item 63, control

ANALYSIS OF MEDIA NONSENSITIVE ITEMS

The nonsensitive items are: Item 1 (committee and experimenter selected), Item 4 (committee only), Item 16 (committee

and experimenter), Item 21 (committee and experimenter), Item 31 (experimenter only), Item 39 (experimenter only), Item 49 (committee and experimenter), Item 54 (committee only), Item 59 (committee and experimenter), Item 64 (committee and experimenter), Item 65 (committee only), Item 67 (committee and experimenter), and Item 72 (experimenter only).

HYPOTHESIS 5. Teachers who are exposed to a mass media campaign designed to improve their morale will score no differently, pretest/post-test, on scores on items which should not be sensitive to such a campaign than teachers who are not exposed to such a campaign.

In Item 1, Vero Beach pretest/post-test, the one tail t value is 3.43, with a df of 96, and the two-tail probability is

.001. The null hypothesis is rejected for the experimental market. For Item 1, control

ITEM 1. Details, "red tape," and required reports absorb too much of my time.

market pretest/post-test, the one-tail t value is .244, with a df of 125, and the two-tail probability is .016. The null hypothesis is rejected for the control market. There was a significant drop in morale in both markets. The fifth null hypothesis is therefore accepted.

For Item 4, Vero Beach pretest/post-test, the one-tail t value is 1.23, with a df of 95, and the two-tail

ITEM 4. The faculty feels that their suggestions pertaining to salaries are adequately transmitted by the administration to the board of education.

probability is .221. The null hypothesis is accepted for the

experimental market. In Item 4, control market pretest/post-test, the one-tail t value is .58, with a df of 125, and the two-tail probability is .565. The null hypothesis is accepted for the control market. No significant difference between the two markets is found. The fifth null hypothesis is therefore accepted.

For Item 16, Vero Beach pretest/post-test, the one-tail t value is 1.92, with a df of 96, and the two-tail probability is .057. The null hypothesis is accepted for the experimental market. For Item 16, control pretest/post-test, the one-tail t value is 1.64, with a df of 124, and the two-tail probability is .103. The null hypothesis is accepted for the control market. There is no significant difference between the two markets. The fifth null hypothesis is therefore accepted.

ITEM 16. My school provides me with adequate classroom supplies and equipment.

For Item 21, Vero Beach pretest/post-test, the one-tail t value is .21, with a df of 96, and the two-tail probability is .838. The null hypothesis is accepted for the experimental market. For Item 21, control pretest/post-test, the one-tail t value is 2.81, with a df of 125, and the two-tail probability is .006. The null hypothesis is rejected for the

ITEM 21. The procedures for obtaining materials and services are well defined and efficient.

.838. The null hypothesis is accepted for the experimental market. For Item 21, control pretest/post-test, the one-

control market. There was a significant difference between the two markets. The fifth null hypothesis is therefore rejected.

In Item 31, Vero Beach pretest/post-test, the one-tail t value is .92, with a df of 96, and the two-tail probability is .360. The null hypothesis

ITEM 31. The school schedule places my classes at a disadvantage.

is accepted for the experimental market. In Item 31, control market pretest/post-test, the one-tail t value is 1.52, with a df of 125, and the two-tail probability is .130. The null hypothesis is accepted for the control market. There is no significant difference between the markets. The fifth null hypothesis is therefore accepted.

For Item 39, Vero Beach pretest/post-test, the one-tail t value is 2.42, with a df of 96, and the two-tail probability is

ITEM 39. Teachers clearly understand the policies governing salary increases.

.017. The null hypothesis is rejected for the experimental market. In Item 39,

control pretest/post-test, the one-tail t value is 1.67, with a df of 125, and the two-tail probability is .097. The null hypothesis is accepted for the control market. There was a significant difference between the markets. Therefore the fifth null hypothesis is rejected. However, it is noted that on this particular item, considered to be nonsensitive to media persuasion, the Vero Beach morale dropped significantly while the control school morale did not, which would seem to indicate

that influences other than media were tending to depress the Vero Beach morale with a greater force than was occurring in the control market.

In Item 49, Vero Beach pretest, the one-tail t value is 1.24, with a df of 95, and the two-tail probability is .217. The null hypothesis is accepted for the experimental market. In Item 49, control market pretest/post-test, the one-tail t value is $-.11$, with a df of 125, and the two-tail probability is .912. The null hypothesis for the control market is accepted. No significant differences are found between the two markets. The fifth null hypothesis is therefore accepted.

ITEM 49. My school provides the teachers with adequate audio-visual aids and projection equipment.

In Item 54, Vero Beach pretest/post-test, the one-tail t value is 1.14, with a df of 96, and the two-tail probability is .256. The null hypothesis is accepted for the experimental market. For Item 54, control market pretest/post-test, the one-tail t value is 4.00, with a df of 124, and the two-tail probability is .000. The null hypothesis is rejected for the control market. There was a significant difference between the two markets. The fifth null hypothesis is therefore rejected.

ITEM 54. Our school faculty has a tendency to form into cliques.

.256. The null hypothesis is accepted for the experimental market. For Item 54, control

In Item 59, Vero Beach pretest/post-test, the one-tail t value is $-.66$, with a df of 96, and the two-tail probability is

.511. The null hypothesis for the experimental market is accepted. For Item 59, control market pretest/post-test, the one-tail t value is 1.78, with a df of 125, and the two-tail probability is .077. The null hypothesis is accepted for the control market. No significant difference between the two markets is found. The fifth null hypothesis is therefore accepted.

ITEM 59. Library facilities and resources are adequate for the grade or subject area which I teach.

For Item 64, Vero Beach pretest/post-test, the one-tail t value is 2.09, with a df of 96, and the two-tail probability is

ITEM 64. My teaching job enables me to provide a satisfactory standard of living for my family.

.039. The null hypothesis is rejected for the experimental market. For Item 64, control market pretest/post-test,

the one-tail t value is 1.09, with a df of 125, and the two-tail probability is .277. The null hypothesis is accepted for the control market. There was a significant difference in morale change between the two markets, with a significant depression in morale expressed in the experimental market, probably caused by something other than the media. Therefore Item 64 is similar to Item 39 in indicating that something was depressing the Vero Beach teachers more than it was depressing the control market teachers. This would seem to indicate that when Vero Beach morale rose significantly on media sensitive items, the rise was possibly despite whatever was causing the significant decline

on Items 39 and 64. It should be noted that both of these items pertain to salary, which in the case of a teacher's occupation is considered a rather static or set variable and therefore should be relatively impervious to the blandishments of a morale raising campaign, just as the committee and the experimenter determined in their balloting.

In Item 65, Vero Beach pretest/post-test, the one-tail t value is .69, with a df of 96,

and the two-tail probability

is .491. The null hypothesis

is accepted for the experimental

group. For Item 65, control market pretest/post-test, the one-tail t value is 1.43, with a df of 123, and the two-tail probability is .154. The null hypothesis is accepted for the control market. No significant difference is found between the markets. The fifth null hypothesis is therefore accepted.

For Item 67, Vero Beach pretest/post-test, the one-tail t value is -.84, with a df of 96, and the two-tail probability is

ITEM 67. In my judgement, this community is a good place to raise a family.

.403. The null hypothesis is

accepted for the experimental

market. In Item 67, control

market pretest/post-test, the one-tail t value is 3.91, with a

df of 125, and the two-tail probability is .000. The null

hypothesis is rejected for the control market. There was a

significant difference between the two markets. The fifth null

hypothesis is therefore rejected.

For Item 72, Vero Beach pretest/post-test, the one-tail t value is 2.48, with a df of 96, and the two-tail probability is .015. The null hypothesis is rejected for the experimental market. For Item 72, control market pretest/post-test, the one-tail t value is 2.58, with a df of 125, and the two-tail probability is .011. The null hypothesis is rejected for the control market. There was a similar significant decline in morale in both markets. The fifth null hypothesis is accepted.

ITEM 72. Teachers' meetings as now conducted by our principal waste the time and energy of the staff.

DEMOGRAPHIC FACTORS

There were no obvious differences regarding the sexes of the teachers in the experimental market as compared with the control market. The ages of the teachers in both groups were similar. However, 40 percent of the experimental faculty were of the black race, whereas the control market was 99 percent white.

HYPOTHESIS 6. Teachers of one race who are exposed to a mass media campaign designed to improve their morale will score no differently, pretest/post-test, than will teachers of another race who are exposed to the same campaign.

The experimenter asked himself, "Could this demographic difference between the markets be the contributing factor whereby Vero Beach morale remained high while the morale of the all-white faculty of the control market declined? Was it

the high morale of the large black population in Vero Beach which kept the overall Vero Beach scores elevated and not the media campaign?"

F tests and *t* tests were calculated as well as an anova, comparing the scores of the black population to the white population in both schools. No significant differences were found in any of the tests. The sixth null hypothesis was therefore accepted.

VI

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Someone pointed a finger at a serious world problem—the educator studied the finger, and the mass communicator moved the finger.

—Graffiti

It is a terrible era in which we live. . . . we have answers to questions we haven't even asked.

—Graffiti

IN THE SPRING OF 1974-1975, a mass media campaign designed to raise teacher morale was conducted for a period of ten days in Vero Beach Florida. It was directed to the faculty of Vero Beach High School. One half of the faculty, randomly selected, was pretested with *The Purdue Teacher Opinionnaire*. Two weeks later the remaining half of the faculty was post-tested. In the meantime, control schools were selected and tested in a similar, neighboring county.

The results were calculated in the form of percentiles, *F* tests, and *t* tests. Having observed the percentile changes in the Vero Beach pretest/post-test compared to the control market pretest/post-test, one might conclude that something happened during the two-week test period which caused the control market morale to drop at approximately twice the rate of the experimental

market even though the experimental market had a far greater distance to drop.

It would appear that the main conclusion to be drawn from the statistics gathered in this research is that the morale raising campaign which was conducted in the experimental market may well have been the contributing factor in a significant difference between the morale drop in the experimental market and the morale drop in the control market.

It was noted that there was a significantly larger population of black faculty members in the experimental market than in the control market. It was found that there was no significant difference in the black teacher responses compared with the white teacher responses. The data for demographic differences probably did not account for the differential between the two markets.

Six factors were selected by a committee and the experimenter to be either sensitive or nonsensitive to a mass media morale raising campaign. Three factors showed that the effects of the campaign to maintain high morale in the experimental market as opposed to the declining morale in the control market were inconclusive. In two of the three media sensitive factors there was significant change, and in all three factors selected as media sensitive, the trend was in favor of rejecting the second null hypothesis; that is, the media sensitive factors remained relatively high in the experimental market while they declined in the control market.

The three nonsensitive factors indicated that something other than the media campaign may have caused the difference in morale between the experimental market and the control market. (See later comment regarding causative factors.)

An analysis of the television-sensitive items indicated very strongly that the media campaign may have been the contributing factor in keeping the Vero Beach morale high while the control market morale significantly declined. It is further noted that in the agreed-upon nonsensitive items regarding salary, Vero Beach morale was significantly lowered and control market morale was not significantly lowered. That is, on items which should not have been affected by a morale raising campaign (because salary is considered a relatively constant item by teachers), the overall statistics were depressed, much more so in Vero Beach than in the control market. In other words, had there been no questions regarding salary, Vero Beach morale would have indicated far higher results while the control market would have indicated far lower results.

It was observed that on a fourth factor (Rapport Among Teachers), which would appear to be a media sensitive factor, Vero Beach morale remained virtually constant while the control market morale declined sharply and significantly. It has further been observed that one year following the withdrawal of the morale raising media campaign in Vero Beach, rapport among teachers has significantly declined and Vero Beach teachers

have voted to join a militant union and threatened to strike, just as the control market teachers did one year earlier.

The question is raised: Would Vero Beach teachers have voted for radical unionism one year earlier had there not been a morale raising mass media campaign? The converse of that question may be applied to the control market.

Additionally, it was observed that when the union vote came, 80 percent of the junior high and elementary school teachers in Vero Beach voted for the militant stand against administrators, while a majority of the high school teachers voted against the militant stand. The morale raising mass media campaign had been directed toward the high school faculty, and it is possible that its effects were sufficiently long lasting to alter high school teachers' opinions one year later.

It is important to note that the process of observing these results through the perspective of the selection committee and the experimenter is highly questionable. Who can say that the teachers' attitude and relationship with the principal is not profoundly affected by a change in the teachers' morale as the result of a morale raising media campaign? In other words, the concept of selecting media sensitive factors and items is highly suspect. What seems to be much more important is that in every factor and item, with the exception of the salary question, the experimental market morale remained much higher than the control market's morale. That is the primary conclusion and should lead to further investigation.

The implications of this research are profound, even frightening. The questions which flow from it are almost limitless. If in fact the morale raising media campaign in Vero Beach did indeed affect teacher morale, as the results would indicate, then we are dealing with a question of how much can we change morale and for how long and in what types of markets. A positive conclusion to this question would obviously lead to the query, can we raise the morale of firemen, policemen, or another group? Finally, the results of this research lead to the realization that we are dealing with a profound and measurable process of mind control. One would naturally ask the question, just how significant is the raised eyebrow of Walter Cronkite upon the political decisions of the electorate? Was General De Gaulle popular because of his wartime feats or because he controlled mass media in France?

The following additional research is suggested.

(1) Experiments similar to the Vero Beach test should be conducted in other small-to-medium sized markets to measure the possibility that similar results may be repeatedly obtained.

(2) Tests should be conducted over longer periods of time to measure the possibility that morale will remain high during the period of a morale raising campaign regardless of the length of those campaigns.

(3) Ten-day campaigns, such as the one in Vero Beach, should be conducted, with the addition of further post-testing

so as to measure the long-term effect, if any, of the campaigns.

(4) Similar campaigns and testing should be conducted in large cities. The validity of the Vero Beach results may be applicable to small markets only inasmuch as entropy and multiplicity of media outlets is so great in major markets that the results may be significantly different from those of this research. Furthermore, the process by which educators obtain public service spots may be far more difficult in the more heavily commercialized major market stations.

(5) Additional study is recommended for the model of this research. It is readily admitted that the statistics obtained in this research are what the statistician refers to as "soft." That is, the author was hindered from obtaining truly random samples because of the fact that the administrators in the school systems which were tested felt that the political climate was such that anything but a surprise test would be biased by outside influences. Militancy among teachers in 1976 is a fact of life. New methods of testing must be devised which will assure that the teachers' answers are not biased by outside influences, but at the same time, the researcher is assured of obtaining truly random samples rather than dealing with split halves as this researcher was forced to do.

(6) A shorter instrument and more polarized instrument than the one used should be devised for this research. One

hundred questions involving a testing of approximately one-half hour is too much to ask of teachers who may be tired and overworked and overtested. Furthermore, the author is not satisfied that there is a clear delineation in *The Purdue Teacher Opinionaire* between what is media sensitive and what is nonmedia sensitive. It may be that there is no such difference. Once a teacher's morale is changed, he may perceive everything in a more positive light.

(7) A great deal of additional work remains to be done in the field of morale raising public service announcements. One might ask, does the image of Kotter on television raise or lower the teacher's feeling of importance? It is not enough that we put a morale raising campaign on the air, we must feel certain that what we are putting on the air will truly do the job.

(8) Additional research should be conducted in other occupations.

(9) Extensive research has been conducted in the past on the question of violence on television. It would seem from the results of this research that a much more serious implication of the effects of mass media needs to be researched, and that is the question of just how powerful mass media suggestion really is upon our way of life and upon the way we think.

(10) This research assumed the populations of the split schools of the control market were similar. It would be much more desirable and conclusive if a truly random survey within the same schools could be conducted where the political climate would permit.

APPENDIX A

THE PURDUE TEACHER OPINIONAIRE

THIS INSTRUMENT IS DESIGNED to provide you the opportunity to express your opinions about your work as a teacher and various school problems in your particular school situation. There are no right or wrong responses, so do not hesitate to mark the statements frankly. . . .

Fill in the information below. You will notice that there is no place for your name. Please *do not* record your name. All responses will be strictly confidential and results will be reported by groups only. Do not omit any items. . . .

Read each statement carefully. Then indicate whether you *agree, probably agree, probably disagree, or disagree* with each statement [A, PA, PD, D]. . . .

1. Details, "red tape," and required reports absorb too much of my time.
2. The work of individual faculty members is appreciated and commended by our principal.
3. Teachers feel free to criticize administrative policy at faculty meetings called by our principal.
4. The faculty feels that their suggestions pertaining to salaries are adequately transmitted by the administration to the board of education.
5. Our principal shows favoritism in his relations with the teachers in our school.
6. Teachers in this school are expected to do an unreasonable amount of record-keeping and clerical work.

7. My principal makes a real effort to maintain close contact with the faculty.
8. Community demands upon the teacher's time are unreasonable.
9. I am satisfied with the policies under which pay raises are granted.
10. My teaching load is greater than that of most of the other teachers in our school.
11. The extra-curricular load of the teachers in our school is unreasonable.
12. Our principal's leadership in faculty meetings challenges and stimulates our professional growth.
13. My teaching position gives me the social status in the community that I desire.
14. The number of hours a teacher must work is unreasonable.
15. Teaching enables me to enjoy many of the material and cultural things I like.
16. My school provides me with adequate classroom supplies and equipment.
17. Our school has a well-balanced curriculum.
18. There is a great deal of griping, arguing, taking sides, and feuding among our teachers.
19. Teaching gives me a great deal of personal satisfaction.
20. The curriculum of our school makes reasonable provision for student individual differences.
21. The procedures for obtaining materials and services are well defined and efficient.
22. Generally, teachers in our school do not take advantage of one another.
23. The teachers in our school cooperate with each other to achieve common, personal, and professional objectives
24. Teaching enables me to make my greatest contribution to society.

25. The curriculum of our school is in need of major revisions.
26. I love to teach.
27. If I could plan my career again, I would choose teaching.
28. Experienced faculty members accept new and younger members as colleagues.
29. I would recommend teaching as an occupation to students of high scholastic ability.
30. If I could earn as much money in another occupation, I would stop teaching.
31. The school schedule places my classes at a disadvantage.
32. Within the limits of financial resources, the school tries to follow a generous policy regarding fringe benefits, professional travel, professional study, etc.
33. My principal makes my work easier and more pleasant.
34. Keeping up professionally is too much of a burden.
35. Our community makes its teachers feel as though they are a real part of the community.
36. Salary policies are administered with fairness and justice.
37. Teaching affords me the security I want in an occupation.
38. My school principal understands and recognizes good teaching procedures.
39. Teachers clearly understand the policies governing salary increases.
40. My classes are used as a "dumping ground" for problem students.
41. The lines and methods of communication between teachers and the principal in our school are well developed and maintained.
42. My teaching load in this school is unreasonable.
43. My principal shows a real interest in my department.

44. Our principal promotes a sense of belonging among the teachers in our school.
45. My heavy teaching load unduly restricts my nonprofessional activities.
46. I find my contacts with students, for the most part, highly satisfying and rewarding.
47. I feel that I am an important part of this school system.
48. The competency of the teachers in our school compares favorably with that of teachers in other schools with which I am familiar.
49. My school provides the teachers with adequate audio-visual aids and projection equipment.
50. I feel successful and competent in my present position.
51. I enjoy working with student organizations, clubs, and societies.
52. Our teaching staff is congenial to work with.
53. My teaching associates are well prepared for their jobs.
54. Our school faculty has a tendency to form into cliques.
55. The teachers in our school work well together.
56. I am at a disadvantage professionally because other teachers are better prepared to teach than I am.
57. Our school provides adequate clerical services for the teachers.
58. As far as I know, the other teachers think I am a good teacher.
59. Library facilities and resources are adequate for the grade or subject area which I teach.
60. The "stress and strain" resulting from teaching makes teaching undesirable for me.
61. My principal is concerned with the problems of the faculty and handles these problems sympathetically.

62. I do not hesitate to discuss any school problem with my principal.
63. Teaching gives me the prestige I desire.
64. My teaching job enables me to provide a satisfactory standard of living for my family.
65. The salary schedule in our school adequately recognizes teacher competency.
66. Most of the people in this community understand and appreciate good education.
67. In my judgment, this community is a good place to raise a family.
68. This community respects its teachers and treats them like professional persons.
69. My principal acts as though he is interested in me and my problems.
70. My school principal supervises rather than "snoopervises" the teachers in our school.
71. It is difficult for teachers to gain acceptance by the people in this community.
72. Teachers' meetings as now conducted by our principal waste the time and energy of the staff.
73. My principal has a reasonable understanding of the problems connected with my teaching assignment.
74. I feel that my work is judged fairly by my principal.
75. Salaries paid in this school system compare favorably with salaries in other systems with which I am familiar.
76. Most of the actions of students irritate me.
77. The cooperativeness of teachers in our school helps make my work more enjoyable.
78. My students regard me with respect and seem to have confidence in my professional ability.

79. The purposes and objectives of the school cannot be achieved by the present curriculum.
80. The teachers in our school have a desirable influence on the values and attitudes of their students.
81. This community expects its teachers to meet unreasonable personal standards.
82. My students appreciate the help I give them with their school work.
83. To me there is no more challenging work than teaching.
84. Other teachers in our school are appreciative of my work.
85. As a teacher in this community, my nonprofessional activities outside of school are unduly restricted.
86. As a teacher, I think I am as competent as most other teachers.
87. The teachers with whom I work have high professional ethics.
88. Our school curriculum does a good job of preparing students to become enlightened and competent citizens.
89. I really enjoy working with my students.
90. The teachers in our school show a great deal of initiative and creativity in their teaching assignments.
91. Teachers in our community feel free to discuss controversial issues in their classes.
92. My principal tries to make me feel comfortable when he visits my classes.
93. My principal makes effective use of the individual teacher's capacity and talent.
94. The people in this community, generally, have a sincere and wholehearted interest in the school system.
95. Teachers feel free to go to the principal about problems of personal and group welfare.

96. This community supports ethical procedures regarding the appointment and reappointment of members of the teaching staff.

97. This community is willing to support a good program of education.

98. Our community expects the teachers to participate in too many social activities.

99. Community pressures prevent me from doing my best as a teacher.

100. I am well satisfied with my present teaching position.

APPENDIX B

HELEN HANCOCK ENDS TEACHING *

*Schumann 1975.

RETIRING AFTER 37 YEARS OF TEACHING, Mrs. Helen Hancock, a business education teacher at Vero Beach High School, will say goodbye to the profession she said she would never enter, but found so rewarding.

Mrs. Hancock will be reminded of her teaching career as long as she stays in Vero Beach. She has taught in Indian River County her entire working life, and constantly comes in contact with former students.

"When I go downtown and see all the young men and women I have taught, and they are using, developing and refining what I began to help them learn, it is most rewarding."

A graduate of Vero Beach High School, Mrs. Hancock and her family moved to Vero Beach from St. Louis Missouri when she was 2 years old.

Journalism was the profession she had planned to enter, but during the depression these jobs were scarce and the pay was low. She instead entered the business field to become a secretary or bookkeeper. Mrs. Hancock worked at this for several years until a higher-paying teaching job was offered to her. "It was the only thing I said I'd never do, and I'm so glad I did, because I've been so very happy."

Teaching business education at Fellsmere, she began her long teaching career. Because the school was so small she had to teach English and science, too.

The atmosphere of small classes was enjoyable for the first-year teacher. Had it not been so enjoyable, she probably would not have stayed with it.

While learning all the things a first-year teacher has to learn, and developing her teaching personality, she admits to making all the mistakes a rookie teacher makes. Her advice to young teachers is "Like what you do, enjoy your classes and work hard."

Mrs. Hancock doesn't find anything really difficult about her job. There are problems, but if the students and the teacher work at them, they can be overcome.

Different personalities and the things that come up in class that can be laughed at are what she finds most enjoyable about her job.

"It's interesting to watch the youngsters develop. When you are working real hard and explaining something that is difficult and you see the student's eyes light up, he's gotten what you said. But they don't always get what you say, and you have to do it over again."

Mrs. Hancock is now teaching her "grandchildren." She taught the parents of many of her present students, but doesn't feel the standards of education have been lowered anywhere along the way. In fact, she thinks today's youngsters have a wider variety of experience, making them more interesting.

"We are working with a different kind of person. Back when I was growing up there was no TV and very little travel."

Fundamentally, she sees no difference between 15, 16 and 17-year-olds who she taught in 1938 and those she is teaching today.

Mrs. Hancock feels Vero Beach as a high school of which it can be proud. "When we get to the place where we don't want things to be better, then we have to be on the lookout. I don't think we are ever perfect."

Married and the mother of one son, she vows not to stay home and "vegetate" after her retirement. She enjoys doing things with her hands, keeping house and cooking. Volunteer work is something she is looking forward to.



TEACHER RETIRES. Mrs. Helen Hancock discusses bookkeeping with student Keven Parks. Mrs. Hancock plans to retire this June, after 37 years of teaching. She began her teaching career in Fellsmere in 1938 and has been teaching in Indian River County ever since. She is presently a business education teacher at Vero Beach High School.

APPENDIX C

PROGRAM SCHEDULES :
RADIO

THE PROGRAMS OF "SAY THANKS TO A TEACHER" were broadcast on the following dates and times, on the following stations:

WAXE

May 29, 1975

4:11 PM
6:14 PM
6:49 PM

May 30, 1975

6:29 AM
7:35 AM
8:54 AM
12:24 PM
1:07 PM
4:27 PM
6:05 PM
6:44 PM

May 31, 1975

7:13 AM
9:04 AM
10:51 AM
1:10 PM
3:01 PM
6:15 PM
6:45 PM

June 1, 1975

10:08 AM
10:58 AM
11:55 AM
12:48 PM
3:08 PM
5:24 PM
6:45 PM

June 2, 1975

8:36 AM
12:42 PM
4:22 PM
4:50 PM
5:30 PM

WTTB

May 23, 1975

8:00 PM
8:15 PM
8:32 PM
9:02 PM
9:35 PM
10:00 PM
10:35 PM
11:05 PM
11:15 PM

May 24, 1975

9:00 PM
9:35 PM
10:30 AM
11:00 PM
12:00 AM

May 25, 1975

1:15 PM
2:00 PM
4:00 PM
7:41 PM
10:00 PM

May 28, 1975

8:00 PM
9:00 PM
10:00 PM

May 30; 1975

8:35 AM
9:35 PM
10:35 PM
11:29 PM

June 1, 1975

2:35 PM
4:00 PM
6:00 PM

APPENDIX D

PROGRAM SCHEDULES:
TELEVISION

THE PROGRAMS OF "SAY THANKS TO A TEACHER" were broadcast on
WTVX-TV, on the following dates and times:

May 23, 1975

8:00 AM
8:29 AM
8:59 AM
3:59 PM
4:59 PM
6:45 PM
8:59 PM
9:59 PM
11:15 PM
11:59 PM

May 24, 1975, through June 2, 1975 (daily)

8:00 AM
8:29 AM
8:59 AM
3:59 PM
4:59 PM
6:45 PM
8:59 PM
9:59 PM
11:15 PM
11:59 PM
12:29 AM
12:59 AM

In addition, 5-minute interviews of teachers, community
leaders, students, and parents, stressing the great value of
teachers to the community were broadcast May 23 and 25, 6:10 PM
and May 29 and June 1, 11:10 PM.

APPENDIX E

ANALYSIS OF DATA FOR FACTORS

TABLE E-1. ANALYSIS OF DATA FOR FACTORS IN VERO BEACH

<i>Factor</i>	<i>POOLED VARIANCE ESTIMATE</i>				<i>SEPARATE VARIANCE ESTIMATE</i>			
	<i>F Value</i>	<i>Two-Tail Probability</i>	<i>t Value</i>	<i>df</i>	<i>Two-Tail Probability</i>	<i>t Value</i>	<i>df</i>	<i>Two-Tail Probability</i>
1	1.09	.760	2.01	96	.048	2.01	95.81	.048
2	1.30	.372	.94	96	.348	.94	94.43	.348
3	1.10	.743	.30	96	.764	.30	95.78	.764
4	1.10	.748	1.73	96	.086	1.73	95.79	.086
5	1.53	.095	3.05	96	.003	3.05	90.83	.003
6	1.07	.824	.56	96	.577	.56	95.90	.577
7	1.74	.058	.04	96	.970	.04	89.47	.970
8	1.01	.986	.34	96	.732	.34	96.00	.732
9	1.01	.985	1.31	96	.194	1.31	96.00	.194
10	2.57	.001	1.75	96	.084	1.75	80.41	.084

TABLE E-2. ANALYSIS OF DATA FOR FACTORS IN THE CONTROL MARKET

<i>Factor</i>	<i>F Value</i>	<i>Two-Tail Probability</i>	<i>POOLED VARIANCE ESTIMATE</i>			<i>SEPARATE VARIANCE ESTIMATE</i>		
			<i>t Value</i>	<i>df</i>	<i>Two-Tail Probability</i>	<i>t Value</i>	<i>df</i>	<i>Two-Tail Probability</i>
1	1.06	.863	6.41	125	.000	6.47	80.83	.000
2	2.73	.001	1.55	125	.125	1.83	117.94	.070
3	1.19	.503	3.55	125	.001	3.45	73.03	.001
4	1.22	.498	2.68	125	.008	2.78	86.19	.007
5	1.27	.407	2.56	125	.012	2.67	87.91	.009
6	1.15	.592	5.92	125	.000	5.78	74.18	.000
7	1.56	.122	2.44	125	.016	2.64	96.41	.010
8	1.47	.140	4.26	125	.000	3.98	66.86	.000
9	1.17	.541	2.55	125	.012	2.48	73.52	.015
10	1.17	.544	2.60	125	.010	2.53	73.56	.014

APPENDIX F
ANALYSIS OF DATA FOR ITEMS

TABLE F-1. ANALYSIS OF DATA FOR ITEMS IN VERO BEACH

Item	POOLED VARIANCE ESTIMATES		
	t Value	df	Two-Tail Probability
1	3.43	96	.001
2	2.30	96	.024
3	.42	96	.674
4	1.23	96	.220
5	2.16	96	.033
6	.60	96	.553
7	1.52	96	.133
8	3.20	96	.002
9	.91	96	.366
10	1.16	96	.251
11	1.53	95	.130
12	.47	96	.640
13	-.50	96	.618
14	-.21	95	.831
15	.57	96	.572
16	1.92	96	.057
17	-.88	96	.380
18	.88	96	.384
19	-.40	96	.693
20	.23	96	.817
21	.21	96	.838
22	.12	96	.906
23	0	96	1.000
24	-.92	96	.361
25	-.10	96	.918
26	-.13	96	.895
27	-.09	96	.928
28	-.91	96	.365
29	.29	96	.773
30	.38	96	.707
31	.92	96	.360
32	2.05	96	.043
33	-1.19	95	.236
34	2.03	96	.045
35	-1.05	96	.296
36	.54	96	.590
37	.12	96	.908
38	.89	96	.378
39	2.42	96	.017
40	1.98	95	.051
41	1.50	96	.137
42	1.11	95	.270

TABLE F-1, *continued*:

<i>Item</i>	<i>POOLED VARIANCE ESTIMATES</i>		
	<i>t</i> Value	<i>df</i>	<i>Two-Tail</i> <i>Probability</i>
43	1.17	96	.244
44	2.01	96	.047
45	2.25	95	.027
46	.81	96	.422
47	.12	96	.907
48	-.81	96	.419
49	1.24	95	.217
50	1.18	95	.240
51	-.29	96	.772
52	.49	96	.624
53	1.18	96	.243
54	1.14	96	.256
55	-.17	96	.867
56	-.66	96	.511
57	1.26	96	.209
58	-.34	96	.737
59	-.66	96	.511
60	1.63	96	.105
61	1.57	96	.119
62	1.30	95	.197
63	-.98	94	.327
64	2.09	96	.039
65	.69	96	.491
66	.53	96	.599
67	-.84	96	.403
68	-.35	96	.730
69	1.71	95	.090
70	-.13	96	.894
71	-.52	96	.607
72	2.48	96	.015
73	1.04	96	.301
74	.69	96	.489
75	.20	96	.839
76	2.13	96	.036
77	-.97	95	.336
78	1.16	96	.249
79	1.56	95	.123
80	-.15	95	.879
81	.41	95	.685
82	.36	94	.723
83	-.19	95	.850
84	.13	95	.898
85	1.02	95	.311

TABLE F-1, *continued*:

<i>Item</i>	<i>POOLED VARIANCE ESTIMATES</i>		
	<i>t</i> <i>Value</i>	<i>df</i>	<i>Two-Tail</i> <i>Probability</i>
86	1.82	94	.072
87	-.99	94	.325
88	.23	94	.822
89	1.27	95	.207
90	-.93	95	.353
91	-.04	95	.965
92	.62	95	.537
93	.23	95	.822
94	-.55	95	.584
95	1.00	94	.319
96	-.28	94	.782
97	.61	94	.541
98	2.49	94	.015
99	.66	94	.511
100	.25	94	.802

TABLE F-2. ANALYSIS OF DATA FOR ITEMS IN THE CONTROL MARKET

Item	POOLED VARIANCE ESTIMATES		
	t Value	df	Two-Tail Probability
1	2.44	125	.016
2	3.30	125	.001
3	4.69	125	.000
4	.58	125	.565
5	4.48	124	.000
6	2.05	125	.042
7	2.37	124	.019
8	.19	125	.851
9	1.86	124	.065
10	-.29	124	.773
11	5.43	125	.000
12	3.41	123	.001
13	2.02	124	.046
14	1.54	125	.127
15	1.60	124	.113
16	1.64	124	.103
17	6.50	124	.000
18	5.32	124	.000
19	-.21	124	.836
20	4.80	125	.000
21	2.81	125	.006
22	2.44	125	.016
23	4.33	124	.000
24	.93	124	.354
25	4.44	124	.000
26	1.09	125	.278
27	1.50	125	.135
28	.89	125	.377
29	2.09	124	.038
30	1.79	122	.076
31	1.52	125	.130
32	2.66	124	.009
33	4.99	123	.000
34	-.06	124	.955
35	1.97	120	.051
36	2.86	125	.005
37	1.81	123	.073
38	4.04	125	.000
39	1.67	125	.097
40	2.23	123	.028
41	6.82	125	.000
42	1.47	124	.144

TABLE F-2, *continued*:

Item	POOLED VARIANCE ESTIMATE		
	<i>t</i> Value	<i>df</i>	Two-Tail Probability
43	1.73	123	.086
44	5.42	124	.000
45	.99	122	.322
46	-.94	124	.349
47	2.30	125	.023
48	.40	124	.693
49	-.11	125	.912
50	.88	124	.379
51	-1.08	122	.283
52	4.01	125	.000
53	.69	123	.488
54	4.00	124	.000
55	3.53	124	.001
56	1.52	124	.130
57	2.28	125	.024
58	1.21	123	.230
59	1.78	125	.077
60	1.84	124	.067
61	5.85	125	.000
62	4.83	125	.000
63	1.66	124	.099
64	1.09	125	.277
65	1.43	123	.154
66	2.74	125	.007
67	3.91	125	.000
68	1.96	124	.052
69	2.68	125	.008
70	6.54	125	.000
71	2.12	123	.036
72	2.58	125	.011
73	3.06	123	.003
74	3.84	125	.000
75	1.28	125	.202
76	.17	125	.862
77	2.63	124	.010
78	.08	125	.939
79	2.91	124	.004
80	.24	123	.808
81	1.61	124	.111
82	.42	125	.673
83	.99	125	.326
84	2.47	125	.015

TABLE F-2, *continued*:

<i>Item</i>	<i>POOLED VARIANCE ESTIMATE</i>		
	<i>t</i> <i>Value</i>	<i>df</i>	<i>Two-Tail</i> <i>Probability</i>
85	.58	125	.563
86	-1.40	125	.165
87	1.50	125	.137
88	2.50	124	.014
89	-.47	124	.642
90	.23	125	.818
91	3.88	124	.000
92	4.53	125	.000
93	3.47	125	.001
94	1.71	125	.090
95	6.76	121	.000
96	5.06	120	.000
97	1.65	121	.101
98	1.25	120	.213
99	2.04	119	.044
100	4.33	121	.000

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BIOGRAPHICAL SKETCH

ALBERT KENNEDY ROWSWELL was born in Pittsburgh, Pennsylvania, on March 23, 1926. He received the Bachelor of Arts in history from Rollins College in 1948. In 1968 he was graduated from Florida Atlantic University with the Master's degree in secondary school administration. Additional studies were carried on at Tulane University, the University of Pittsburgh, and Florida State University.

Rowswell's teaching career includes Culver Military Academy in Indiana, New Orleans Academy, and Vero Beach High School. He has been a visiting lecturer at the University of Florida in broadcasting and in teaching teachers to teach.

Algebra, analytical geometry and trigonometry, general mathematics, modern mathematics for parents, English literature, general science, world history, American history, Florida history, current events, history of the twentieth century, sociology, and geography have been taught by Rowswell in his public school teaching career.

During these teaching years he introduced as emcee to the Treasure Coast of Florida a radio show involving students, parents, and community leaders, titled "The Now Generation," which candidly discussed the problems of modern education.

Rowswell began his broadcasting career in 1932 on "The Blue Network" at Radio City. His father, "Rosey" Rowswell, as master of ceremonies for the "Cliquot Club Gingerale Show," secured this employment for his six-year-old son. The son's task consisted of pouring Cliquot Club gingerale in front of the microphone for the stars of the show, Harry Reisser and his Eskimos. Remuneration for this job consisted of one glass of gingerale.

Much of Rowswell's youth was spent at Forbes Field watching the Pittsburgh Pirates in the 1930s, '40s, and '50s while his father did the play-by-play broadcasts. In 1948 he joined KDKA-TV (then WDTV) as cameraman, film editor, announcer, and office boy.

In 1949 Rowswell opened one of the first radio-television departments for an advertising agency (Cabot-Coffman) in the city of Pittsburgh. In 1950 he rejoined KDKA-TV as sales liaison director. In 1951 he accepted the position of regional manager for Motion Pictures for Television, Inc., a company which controlled 90 percent of the feature films available to television during the early 1950s, covering every television station in the southern United States, Mexico, and the Caribbean. In addition to sales and syndication he acted as assistant production manager for the stars of "The Grand Ole' Opry." In 1956 he moved to Ziv-United Artists as regional manager for the southern and western states, during which time he was responsible

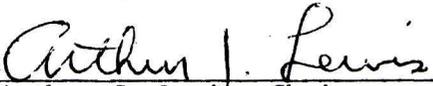
for the sales of "Mr. District Attorney," "I Led Three Lives," "The Eddie Cantor Show," "Highway Patrol," "Bat Masterson," and "Sea Hunt." He was also involved in the national sales of "Superman" to Kellogg's.

In the early 1960s Rowswell was president and developer of the largest country club, real estate complex in the eastern United States: North Hills Field Club and Estates, Inc. During that period he was active in fund raising for educational television, specifically WQED-TV in Pittsburgh. In 1961 WQED-TV awarded him the educational television's "Man of the Year" trophy.

In 1965 Rowswell decided to return to his primary interest, which was teaching. Nevertheless, during the next decade he telecast over three thousand television shows via the CBS outlet WTVX-TV (radio and television), Fort Pierce-Vero Beach.

Rowswell is married to Florence Keeher Rowswell, a diversified cooperative training teacher-coordinator at Vero Beach High School, Florida. They are the parents of six boys—Jeffrey, Steven, Scott Hayden, Eric, Timothy Scott, and Albert Kennedy III. Four of the boys—Jeff, Steve, Timothy Scott, and Kenny—have followed in their father's footsteps by broadcasting sports shows or doing commercials. They represent a third generation of broadcasters inasmuch as their grandfather broadcast the first sports interview show in the history of radio with "Pie" Traynor in 1921 via KDKA.

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


Arthur J. Lewis, Chairman
Professor of Curriculum and
Instruction

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

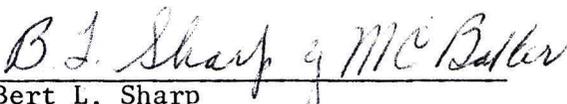

Kenneth A. Christiansen
Chairman and Professor of
Broadcasting

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


Ralph B. Kimbrough
Professor of Educational
Administration

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

August, 1976


Bert L. Sharp
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Harry H. Sisler
Dean, Graduate School