

AN EVALUATION OF THE CALIFORNIA STATE
PERSONNEL BOARD'S MANAGEMENT
DEVELOPMENT INSTITUTE

Thesis for the Degree of Master of Science

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John T. Voss

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AN EVALUATION OF THE CALIFORNIA STATE
PERSONNEL BOARD'S MANAGEMENT
DEVELOPMENT INSTITUTE

BY

JOHN T. VOSS

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ABSTRACT

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Problem

The problem that precipitated this study was that of developing competent and effective public service managers. In recent years, short term management development programs have sprung up throughout this country. Few, however, have addressed themselves to the unique needs of governmental management personnel. Fewer yet have been able to show positive proof that their programs contributed to the growth and development of managers.

The purpose of this study was to evaluate one such program. The study's objective was to determine if the California State Personnel Board's Management Development Institute significantly altered the leadership attitudes of a group of state managers.

Methodology

The study was designed around a longitudinal examination of the control and experimental group's leadership

attitudes. Data was collected immediately prior to the trainees exposure to a management development program and again twenty days after the managers returned to their jobs. Control group tests were administered simultaneously. Test scores were developed around two opposing yet independent leadership factors. These factors were termed Consideration and Structure.

Consideration scores reflect the extent to which an individual is likely to have job relationships with his subordinates, characterized by mutual trust, respect, and consideration for their ideas and feelings. Structure scores reflect the extent to which a manager is likely to define and structure his own role and those of his subordinates toward goal attainment.

Classic statistical methods were employed to test the hypothesis. However, since statistical averages show only magnitude, vector geometry was used to demonstrate the direction of changes in leadership attitudes.

Results

The trained groups mean average Structure scores decreased significantly after training. This correlation was also shown graphically through vector analysis.

No relationship was found between the trained and

non-trained groups Consideration scores.

It was concluded that exposure to the Management Development Institute program had resulted in a change in the managers structure attitudes. No such correlation was found in the managers Consideration orientation.

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To
Bev, Sheila and Mark

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CHAPTER I

THE PROBLEM

Career executive development in American Government has historically been a condition of paradox. During his long tenure in office, the career executive has experienced phenomenal growth in both size and complexity of government. For the most part, the executive's assent to his current position has been through the ranks, largely without adequate preparatory or supportive training.¹ To add to his dilemma, the career executive has been expected to effectively and unerringly guide the business of government during a period when social change and political vituperation were the hallmark.

Problems of government have exploded like the mushroom cloud that has become symbolic of the nuclear age in which we live, but education of top executives to meet the problems has notably lagged.²

Until recently, however, executive development was considered an improper function of government. As recently as 1938, the Comptroller General ruled that the Department of Agriculture could not spend funds for training.³ Not

¹Douglass Cater, *Developing Leadership in Government*, (Washington: The Brookings Institution for Advanced Study, 1960), pp. 5-7.

²Ibid

³Ibid

until 1949 did government begin to reexamine its mistic-able and untenable position. In that year, the Hoover Commission reported that management responsibilities were so great that the social and economic life of the nation were endangered without competency and training at the executive level of government.⁴

The second "Hoover Commission again recommended, in 1955, establishment of a highly competent, politically neutral civil service with "highly trained executives," thus giving a sense of urgency to the critical need for developing executive training programs in government.⁵ "Basic education is not the employer's responsibility; but growth should be assisted, and career development should not be left entirely to the employee, or chance."⁶

As a result of this "prodding," the Brookings Institute developed the first "Executive Leadership Conference" specifically aimed at the career executive in government.⁷

⁴The Commission on Organization of the Executive Branch of the Government, Program for Strengthening Federal Personnel Management: A Report With Recommendations, (Washington: Government Printing Office, 1955), pp. 2-6.

⁵Commission on Organization of the Executive Branch of the Government, Report on Personnel and Civil Service, (Washington: Government Printing Office, 1955), p. 49.

⁶Ibid, p. 72

⁷Cater, loc. cit.

This Conference, held in 1958, ultimately led to the development of management and executive development programs for federal and state management personnel.

In 1965, the Commission on California State Organization and Economy ("Little Hoover Commission") issued a comprehensive report on "Management Manpower Requirements for the State of California." Included in this report was the proposal that the State Personnel Board establish an interagency management development training program. As envisioned, the program, later named the "Management Development Institute,"⁸ would be designed to provide advanced training in management techniques and in public affairs.⁹

Additionally, the Commission proposed that the MDI should provide training for individuals from all levels of government--state, local, and federal, thereby, "advancing the knowledge of managing the public trust at all echelons in the State of California."¹⁰ Finally, the Commission

⁸Management Development Institute will be abbreviated as MDI throughout the remainder of this report.

⁹Commission on California State Government Organization and Economy, Management Manpower Requirements for the State of California, (Sacramento: State Printing Office, 1965), cited by Raymond S. Long and Kenneth F. Klein, "An Evaluation of the California State Personnel Board's Management Development Institute," (unpublished Master of Science Degree project report, Sacramento (California) State College, 1972), p. 1.

¹⁰Ibid

deemed that, as a method of instruction, participating managers should be exposed to outstanding administrators from business and government, as well as university professors who were capable of relating and interpreting emerging management concepts in terms of governmental agencies operations.¹¹

Since its inception in 1967, the MDI has trained about 300 managers annually. Each institute lasts two weeks and is interrupted by a one month break between the first and second halves. All sessions were conducted at locations away from the participants' jobs. The MDI's objectives are to: "provide persons at mid-careers the opportunity to learn from top people with outstanding records of accomplishment, the concepts and practices which are essential for success."¹²

¹¹Raymond S. Long and Kenneth F. Klein, "An Evaluation of the California State Personnel Board's Management Development Institute," (unpublished Master of Science Degree project report, Sacramento (California) State College, 1972), p. v.

¹²Ibid

Purpose

Educators, business, and public administrators¹³ alike agree that one of the key objectives of short term educational and training programs is attitudinal change and the development of leadership. The purpose of this study then is to evaluate the California State Personnel Board's Management Development Institute in terms of its ability to achieve attitudinal changes in mid-management personnel through the development of leadership ability.

Importance of Study

That administrators are no longer satisfied to accept on faith the value of education has been demonstrated. Just as educational programs, offered by colleges and universities are being evaluated in terms of effectiveness, so must those management development programs offered outside the academic

¹³Robert J. House, et. al., Management Development: Design, Evaluation, and Implementation, (Ann Arbor: The University of Michigan, 1967), p. 13; The President's Commission on Law Enforcement and Administration of Justice, Task Force Report: The Police, (Washington: Government Printing Office, 1967), p. 140; Sally F. Knapp, Continuing Education Report, The University of Chicago, No. 5; Douglass Cater, Developing Leadership in Government, (Washington: The Brookings Institution for Advanced Study, 1960) pp. 5-7.

setting.¹⁴ It must be positively shown that the MDI significantly influences the leadership attitudes of participating managers.

Secondarily, the findings of this study should be important to those employees of the State Personnel Board who are responsible for developing and presenting future programs. Their judgments regarding content and techniques should be reinforced.

Finally and perhaps most importantly, the various agencies of government may now be able to view the MDI as an effective and valuable tool for aiding in the development of their management personnel.

Hypothesis

The MDI has been enthusiastically endorsed as fulfilling management's educational needs and for its contribution to their growth and development.¹⁵ But, enthusiasm and subjective judgment are not acceptable indicators of effective growth. This study will show that the MDI is effective in bringing about attitudinal changes in management personnel. Restated, the hypothesis of this study is

¹⁴J. Sterling Levingston, "Myth of the Well-Educated Manager", Harvard Business Review, Vol. 49 No. 1 (January-February 1970), pp. 75-88.

¹⁵Long, op. cit.

that "the Management Development Institute" provides effective leadership training for managers employed by the State of California.

Theory

Program Purpose. Management development programs should be designed to bring about certain attitudinal changes--changes which will more adequately prepare the public service executive to meet the challenges of modern bureaucratic organizations.

Formal Development Programs. Although universities and professional organizations have developed and sponsored numerous "short course" management programs, their offerings have contributed little to the growth and development of career public service executives.¹⁶ As George V. Moser points out, simply trying to teach managers to improve their thought processes is not enough. The public service manager must possess other qualities; he must have a keen sense of coordination, a political sense, and an ingrained disposition to put the public interest first.¹⁷ University and

¹⁶Cater, op. cit. pp. 5-7.

¹⁷George V. Moser and Allison V. MacCullough, "Executive Development Courses in Universities," Conference Board Reports, Studies in Personnel Policy, No. 142, (New York; National Industrial Conference Board, Inc., 1954), p. 5.

professional development programs are rarely broadly enough based to achieve these objectives.¹⁸

Additionally, developmental programs must be "tailored" to fit the needs of both the individual and the organization.¹⁹ University and professional programs are, by in large, created to serve the business world and are therefore of limited value in training managers in public service.

Management Attitude. Among the leadership attitudes which should characterize the manager's attitudinal set is that of seeing his role in perspective. His is not the task of contributing directly to the organization's objectives. Rather he must perceive his role as a group leader whose job it is to establish an environment for group effort to achieve mutually acceptable goals.²⁰ That this goal complements the goals of the organization in which he and his subordinates are employed, will largely determine the success or failure of the entire organization.

¹⁸Cater, op. cit., p. 10.

¹⁹House, op. cit., p. 11.

²⁰Ralph M. Stogdill and Alvin E. Coons (Eds.), Leader Behavior: Its Description and Measurement, (Columbus: Ohio State University Bureau of Business Research, 1967), pp. 120-133.

A second attitude which is essential to managerial success is one of consideration. Mutual trust, helpfulness and cooperation are essential if subordinate-management relationships are to be maintained at a highly effective level. Equally important is the manager's consideration attitude toward his superiors and to the organization's efforts as a whole. Without consideration, the manager's effectiveness will be severely limited.²¹

Summary. A certain set of attitudes are essential to managers who are employed in public service. These attitudes include the manager's perceptions of his role as a leader within the total framework of the organization's objectives. And they must also include his perceptions of the manager's working relationship with his subordinates and superiors.

Short-term management programs sponsored by universities have not been successful in developing these attitudinal sets in public service executives.

Definition of Terms

The term "effective management training" is defined as training which either reinforces positive attitudes or leads to change, in a positive direction, in the attitudes of those managers who have been exposed to the MDI.

²¹Ibid.

"Management personnel" refers to that group of governmental employees who are directly involved in and responsible for the supervision, direction, and control of subordinate employees. First-line supervisors or top administrators are not included.

The terms "career executives, executives, and managers" are used interchangeably in this report. Each term implies employment by a governmental agency, as proposed to private enterprise.

Overview

This study was designed to test, analyze, and report on the effectiveness of the MDI. The report is organized to give the reader insight into the processes by which the study was carried out.

In Chapter 2, the pertinent literature relating to the identification of leadership attitudes and characteristics and measurement of effectiveness of management development programs is reviewed.

The basic research design, including sampling techniques and testing methodology is described in Chapter 3.

In Chapter 4, the findings of the research is analyzed and reported.

Finally, in Chapter 5, those findings which are deemed

pertinent to this study are summarized and recommendations are made for future studies.

Through this progression, it is hoped that the reader will be better able to judge the value of the MDI in contributing to the growth and development of management personnel.

CHAPTER II

REVIEW OF LITERATURE

Early attempts at evaluating management development courses consisted of simply asking the participants how they felt about the program. If there was general agreement that the course either: (1) broadened the trainees intellectual outlook, (2) jolter their pet prejudices, (3) provided a good experience, or (4) provided a welcomed break from the job, the course was considered a success.¹ Given any one of this set of responses, those responsible for the program came away feeling that they had significantly contributed to the growth and development of their charges.²

As might be expected, however, it was not long before the demand for positive proof of effectiveness drowned out these empirical laudations of success.³

¹Melvin Anshen. "Executive Development: In-Company vs. University Programs," Harvard Business Review, 32:5, (September-October, 1954), 88.

²Ibid.

³Douglass Cater. Developing Leadership in Government, (Washington: The Brookings Institution for Advanced Study, 1960), p. 5.

In this chapter, pertinent literature pertaining to the scientific evaluation of management development courses will be reviewed. Studies related to both industrial and public service training programs will be described.

Related Studies

Ohio State-Harvester Study.⁴ Ohio State University's study of the International Harvester Company's two-week human relations course for foremen is perhaps the best known, yet most disappointing, early attempt at scientific evaluation of a development program.

Under the direction of Dr. Edwin A. Fleishman, a measurement device, later designated the Leadership Opinion Questionnaire,⁵ was developed to apply to the experimental group, "before," "immediately after," and "some time after" the human relations course was given. The questionnaire was constructed around two opposing leadership dimensions-- "consideration" and "initiating structure." Fleishman

⁴Kenneth R. Andrews. "Is Management Training Effective? II. Measurement, Objectives, and Policy," Harvard Business Review, 35:2, (March- April, 1957), 63-71.

⁵Leadership Opinion Questionnaire will be abbreviated LOQ throughout the remainder of this chapter.

defined "consideration" as:

The extent to which an individual is likely to have job relationship with his subordinates characterized by mutual trust, respect for their ideas, consideration for their feelings,⁶ and a certain warmth between himself and them.

He defined "initiating structure" as:

The extent to which an individual is likely to define and structure his own role and those of his subordinates towards goal attainment.⁷

Fleishman's test of foremen before and after two weeks of schooling clearly showed a decrease in initiating structure and an increase in consideration attitudes. This change was attributed, in part, to the effectiveness of the human relations training.

Unhappily, however, the situation changed when the trained group was examined after various lengths of time back on the job. Both dimensions, "consideration" and "initiating structure," decreased markedly from their original pre-test scores, further, when the "some time later" scores were compared with the control group, the trained foremen ended up with attitudes lower in consideration and higher in initiating structure than those who had not been trained.

⁶Edwin A. Fleishman. Manual for Leadership Opinion Questionnaire, (Chicago: Science Research Associates, 1960), p. 1.

⁷Ibid.

The Ohio State-Harvester Company experience has been criticized for its assumption that a supervisor's "consideration" attitude can be improved, but only at the expense of his "structure" attitude. Consideration and initiation of structure cannot both increase; if one increases, the other declines. Such an assumption seems very untenable. How can a supervisory training program be effective if the beneficent is expected to increase his consideration for individuals rather than get the work done?⁸

Fleishman's study and those that followed posed threats to the belief that good morale leads directly to increased efficiency on the job. The author's explanation regarding why the trained foremen showed higher scores on initiating structure when the program tried to produce lower ones is also interesting.

While a course makes the foreman more concerned with human relations, the whole project makes him more aware of his part as a member of management. He is singled out for this special training, and he participates without cost to himself in a program that is obviously expensive. Perhaps the human-relations aspects persist long enough for the post-training questionnaire, but what the man takes back to his plant is a tendency to assume more of a leadership role.⁹

⁸Andrews, op. cit., pp. 64-65.

⁹Edwin A. Fleishman, Edward F. Harris, and H. E. Burt. Leadership and Supervision in Industry, (Columbus: Bureau of Educational Research, Ohio State University, 1955), p. 92.

Another implication of the study is that like learning, leadership is apparently embedded in a social setting. Later investigations of Fleishman's original work revealed that the foreman's superiors had their own ideas of how to supervise employees and achieve work goals. Upon returning to the work situation, the trained foreman had to conform to their superior's ideas regardless of the lessons learned at school. This role conflict and frustration accounted for the lower scores on the "some time later" questionnaire.¹⁰

Human Relations Training and the Stability of Leadership Patterns.¹¹ Shortly after Fleishman's original Ohio-State-Harvester Study was completed and published, Edwin F. Harris and Fleishman began anew testing and retesting other foremen who attended International Harvester's two week "concentrated" human relations course.

This later study utilized the longitudinal method in that leadership attitudes and behavior were measured before and after training was given. Harris and Fleishman's purpose

¹⁰Herbert E. Krugman. "Management Development Training: Who Profits Most?" Personnel, 36:3, (May-June, 1959), 59-62.

¹¹Edwin F. Harris and Edwin A. Fleishman. "Human Relations Training and the Stability of Leadership Patterns," The Journal of Applied Psychology, 39:1 (1955), 20-25.

was to compare this measurement with that obtained by Fleishman's earlier "cross-sectional" approach. A second problem investigated was the effects of "refresher" human relations training on the behavior and attitudes of foremen who had received the original training some time before.

Additionally, Harris and Fleishman were concerned with the stability of leadership behavior patterns over a period of time for those foremen who had received human relations training. These behavior patterns were compared with foremen who had not received such training.

Again, the LOQ was used along with another of Fleishman's tests, the Supervisory Behavior Description Questionnaire to evaluate the training program.

The results of this study generally confirmed previous findings. Mean scores before and after training were not significantly changed when evaluated "back in the plant." However, it was found that relatively consistent patterns of leadership behavior and attitudes existed, over time, for foremen who had not received training. Conversely, for foremen who had had intervening training a much lower coefficient of agreement was found between administrations of the questionnaires. The same fluctuation was found for both the intervening refresher course and for the original course.

The researchers described their findings as "consistent with previous findings."¹² They pointed out, however, that wide shifts, in both directions, in test scores were noted, thus indicating that individual differences exist among foremen in the leadership attitudes after training.

Harris and Fleishman summarized their findings as follows:

From the point of view of training evaluation research, one cannot assume that insignificant changes in group means alone are indicative of 'no' training effects. The problem appears more complicated than that. It raises the possibility of differential effects according to the individual and the situation in which he finds himself.¹³

Again, it must be concluded that when the "trained" foremen returned to their work-a-day world, they were not permitted to put to use the lessons learned during the training.

Both Ohio State-Harvester studies suggest that more sophisticated analytical techniques are needed for reporting the effects of management training research. The classic statistical mean score methods may not be adequate. Rather, variations in test scores might provide both researchers and trainers with a more valid indication of effect.

¹²Ibid.

¹³Ibid.

Instruction-Centered and Student-Centered Approaches in Teaching a Human Relations Course.¹⁴ DiVista's study of instructor-centered versus student-centered teaching methods found the LOQ to be a useful instrument in measuring attitudinal changes in medical administrative supervisors in a military school.

The intent of this study was to evaluate the achievement of students in terms of desired changes in attitudes resulting from a twenty hour human relations course and to test the relative effectiveness of two opposing teaching models in achieving these changes.

Through the use of pre- and post-test study design, DiVista concluded that leadership attitudes had significantly changed in supervisors who had been exposed to a twenty hour course in human relations. He further indicated that the particular teaching method used had no significant relationship to these changes in attitude.¹⁵

This change appears to occur by virtue of being in a 'school situation' and is not directly attributable to the particular teaching method. The evidence that this occurs is a result of being a school situation is that this change occurred for each group including the control group.¹⁶

¹⁴Francis J. DiVista. "Instructor-Centered and Student-Centered Approaches in Teaching Human Relations Courses," The Journal of Applied Psychology, 38:5 (1954), 324-335.

¹⁵Ibid.

¹⁶Ibid.

DiVista goes on to point out that any such change may not be permanent. However, leadership attitudes can be changed if proper teaching techniques are used and management is earnest and sincere in wanting a change. His study again reinforces the concept of attitudinal change through training.

Human Relations Training and Attitude Change: A Vector Analysis.¹⁷ Of the several studies of training effectiveness, Carron's analysis of the results of a human relations training program probably is the most impressive. The subjects of his study were 23 male supervisors in the research, development, and engineering units of a large chemical company. All held degrees in the physical sciences or engineering; many held advanced degrees.

After selection of his control and training group, Carron applied the LOQ to both, and determined statistically that both groups were similar. He then applied the same test immediately after, six months after, and 17 months after the end of the training period. His findings are quoted below:

Structure. At post-training, the mean difference score on Structure was -7.1 for the Training Group and -1.5 for the Control Group. This difference

¹⁷Theodore J. Carron. "Human Relations Training and Attitude Change: A Vector Analysis," Personnel Psychology, 17:4, (Winter, 1955), 403-421.

was significant at the 0.025 level. At the time of follow-up 17 months later, however, the mean difference score was -6.5 for the training group and -3.3 for the Control Group. This difference just misses being significant ($p = .07$).

Consideration. At post-training, the mean difference scores on Consideration were +3.2 for the Training Group and +0.1 for the Control Group. The difference between these means is not significant. At follow-up 17 months later, the mean difference scores on Consideration were +1.1 for the Training Group and -0.8 for the Control Group. The difference between these means has even less significance¹⁸ than the difference in means at post test.

Based upon these findings, one might first conclude that attitude changes did not take place over the period of training. Such was not the case however. Statistical averages for a group simply do not tell what happened to individual members. Extreme shifts in individual scores may be cancelled out in group averages because they are in opposite directions. The group mean may thus imply that no change has occurred. To cope with this problem, Carron employed vector geometry to analyze the Structure and Consideration dimensions of Fleishman's LOQ.¹⁹ He could

¹⁸Ibid.

¹⁹See Appendix 1, a. and b. for a graphic illustration of the leadership attitude changes for Carron's training and control groups.

then show statistically significant changes from authoritarian to democratic attitudes in individual members of the experimental group. This change persisted over the 17 month follow-up period.

Carron concludes his report by saying that:

...the true objective of training is behavior change. And we assume that behavior will change if attitudes change. Therefore, the Structure and Consideration dimensions should have greater validity when applied to the description of behavior.²⁰

Leadership Behavior: Interpersonal Needs and Effective Supervisory Training.²¹ Creighton University's research, conducted by Biggs, Huneryager, and Delaney, attempted to relate the interpersonal needs of the supervisor to his leadership style.

Restating Tannenbaum's²² earlier thesis, the authors theorized that (1) the leader's own interpersonal needs

²⁰Carron, op. cit.

²¹Donald A. Biggs, S. G. Huneryager, and James J. Delaney. "Leadership Behavior: Interpersonal Needs and Effective Supervisory Training," Personnel Psychology, 19:3, (Autumn, 1966), 311-320.

²²R. Tannenbaum, I. Wecksler, and F. Massarik. Leadership and Organization: A Behavioral Science Approach, (New York: McGraw-Hill, 1961), cited by Donald A. Biggs, S. G. Huneryager, and James J. Delaney. "Leadership Behavior: Interpersonal Needs and Effective Supervisory Training," Personnel Psychology, 19:3, (Autumn, 1966), 311.

determine what he sees or what he does in attempting to influence the behavior of others, and (2) those same interpersonal needs have an effect on other aspects of his total personality structure. To test these theories, the researchers evaluated a two-week University sponsored conference for 32 Youth Opportunity Center supervisors.

The LOQ was administered at the onset and conclusion of the conference. This was done in an attempt to describe the leaders behavior pattern before and after training.

A second test, the Firo-B Scale was also administered at the same time in order to obtain a description of the students' interpersonal needs. This latter test (FIRO-B) yields scores on six scales: Expressed Inclusion, Wanted Inclusion, Wanted Control, Expressed Control, Wanted Affection, and Expressed Affection.²³ Biggs and his staff were then able to compare the high and low score on the Leadership Opinion Questionnaire "Structure" and "Consideration" factors with the need for inclusion, control, and affection.

²³W. C. Schultz. FIRO: A Three Dimensional Theory of Interpersonal Behavior, (New York: Rinehart and Company, 1958), cited by Biggs, Huneryogger, and Delaney, 313.

At the beginning of the conference, it appeared that the participants tended to describe themselves as having two relatively strong interpersonal needs: (1) wanting to initiate interaction with other people (Express Inclusion) and (2) wanting to have other people control or tell them what to do (Wants Control). Conversely they described themselves as having a relatively weak need to act personal or close to other people (Expressed Affection).

A significant change occurred, however, after training. Scores on the FIRO-B Scale, Wants Affection changed in the negative direction ($P=0.05$), thus inferring that the leadership training tended to decrease the participants' need for wanting "people to get close and personal with them, to like them, or to express positive feelings toward them."²⁴

At the same time, it was found at the conclusion of the conference, that those participants who scored high on the Initiating Structure of the LOQ tended to endorse a significantly stronger need to express control than did those with low-structure scores. In contrast, the "High-Structure" group did not differ from the "Low-Structure" group on the scale "Wants Affection" (FIRO-B Scale). The researcher concluded that:

²⁴ Biggs, Huneryager, and Delaney, op. cit. p. 316.

Leaders with high structure orientation may have these attitudes positively reinforced by their organizations' environment and thus the need to control factor is most difficult to change or reorient with such a short training exposure.²⁵

Biggs thus suggests that to be effective, change must be genuinely wanted within the trainees organization. Otherwise, all is lost. Change will not occur. The researchers position was reinforced both within and without this study.

Although many attempts have been made within the private and university sectors to evaluate management development programs, scientific evaluations of governmental programs have fallen woefully behind. Only two such evaluative exercises were found; one an empirical evaluation by the Brookings Institution Center for Advanced Studies; the second a comprehensive survey of the Management Development Institute, sponsored by the California State Personnel Board for middle managers in state and local government in California.

The Brookings Institution Center for Advanced Studies.²⁶

This study, a pioneer attempt to develop and evaluate a management development course for public service managers,

²⁵ Ibid., pp. 318-319.

²⁶ Douglas Cater. Developing Leadership in Government, (Washington: The Brookings Institution Center for Advanced Study, 1960.)

was little more than a rudimentary or cursory attempt at program evaluation. Brooking's assessment was based principally upon the students' own stated perceptions of the relative worth of each subject offered and of the value of the entire program.

The Institution's training program was, "designed to unsettle the trainees through processes which have too long been allowed to follow accustomed ruts".²⁷ As reported by Douglas Cater, their purpose was not training in the true sense of the word, but rather education--education which would jog the "trainee's brain muscle" to "renewed activity."²⁸

Evaluation consisted of interviewing each participant to determine if he, (1) had been stimulated by the in-group exchange of ideas, (2) had experienced any change in thinking about his own role and that of his agency in the overall mission of government, and (3) felt that the educational experience had been worthwhile.²⁹

As might be expected, each enthusiastically endorsed the training program as being useful to their own growth and development. More importantly however, was their unanimity in the belief that any development program, to be effectual, must be tailored to the specific needs of its

²⁷Ibid., p. 7.

²⁹Ibid., pp. 12-14.

²⁸Ibid.

participants. Professional and university sponsored programs had not been "geared" to the needs of public service managers and were therefore of limited value to this large segment of management personnel.

Although the Brookings Institution experience contributed little to the advancement of scientific measurement and evaluation of management development programs, its findings did set the stage for both the development and testing of future programs for public service executives.

An Evaluation of the California State Personnel Board's Management Development School.³⁰ Long and Klein's study of California State Personnel Board's Management Development Institute lists three main objectives as a basis for their research:

1. To assess participant's reactions to the courses in terms of content, presentation, and methods of instruction while managers were actually taking the course;
2. To examine the application and implementation of concepts and skills learned in the course by a sample of managers who had graduated from the program six months before the study was initiated.

³⁰Raymond S. Long and Kenneth F. Klein, "An Evaluation of the California State Personnel Board's Management Development Institute," (Unpublished Master of Science Degree Thesis), Sacramento (California) State College, 1972.

3. To measure changes in attitudes toward the management process as a result of participation in the course.³¹

Since only objective 3 is related to the measurement of attitudinal change, only that portion of the research will be treated in depth here.

According to Long and Klein, their research was:

...designed to evaluate the impact of the "Management Development School" by analyzing the perceptions, experience, and attitudes of participants before, during, and immediately after attendance at the school.³²

To do this the researchers replicated a study which had evaluated a similar course offered by the American Management Association in 1969.³³

Long and Klein's research design included the use of a pre- and post-test which was administered to 21 participants of the Management Development Institute.³⁴ The control group was comprised of 34 "graduates" who had attended the MDI some six months earlier. No post-test was administered

³¹Ibid. p. 2.

³²Ibid., pp. 4-5.

³³Vera Kohn and Treadway C. Parker, Management Development and Program Evaluation: Partners in Promoting Managerial Effectiveness, (New York: American Foundation of Management Research, Inc., 1969), p. 124.

³⁴California State Personnel Board's Management Development Institute will be abbreviated MDI throughout the remainder of this chapter.

to this group. Pre- and post-test scores were then analyzed and compared with those of the "control" group.

Any attempt at matching, except on certain demographic criteria, is lacking in the evaluation report. Validity and reliability estimates were not stated for the test instrument and apparently no attempt was made to determine if something outside the training situation might have been responsible for the changes in attitudes which the study reports.

Nevertheless, Long and Klein reported attitude changes. After two weeks of training the participants' attitudes, favoring more management training for themselves and their subordinates moved in a positive direction. This change was reported as "statistically significant". At the same time, however, no "statistically measurable" or "significant" changes occurred in the same groups attitude toward the management process and a manager's responsibilities and function...³⁵

This apparent dichotomy is according to the researchers, an indication of the participants' broad conceptual view of the managers' role. A more adequate explanation, however, might be that of question of test reliability.

³⁵Long and Klein, op. cit., p. 19.

Interesting also is the researchers conclusion that, after attendance at the management school, the participants' attitudes towards planned on-the-job development programs also moved in a positive direction.

While no attempt was made to correlate the post-graduate group responses with those of the participant group, Long and Klein reported that the post-graduates were able to apply the knowledge and skills learned at the school to their job situation.

The enthusiastic comments and specific descriptions of on-the-job application of new knowledge were refreshing and encouraging, particularly since this graduate group had a time interval of six months or more from completion of the School to responding to the questionnaire.³⁶

Long and Klein's study has undoubtedly contributed to the growth and development of managers who have or will attend the MDI. Their research has not, however, contributed significantly to scientific inquiry.

Summary

Even to the most casual observer, it should be apparent that little has been done in the way of scientific evaluation of management development programs offered to public service managers and executives.

³⁶Ibid., pp. 34-35.

The Brookings Institution's findings, while establishing definite guidelines for program content, objectives, and purposes, offers little more than a hint of how the scientific evaluation process might proceed. Their measurement technique consisted of nothing more than a survey of the subjective judgments of their trainees. This procedure may be of limited value in designing future development programs. It does not, however, answer the question, "Is management training effective?"³⁷

Long and Klein's work though somewhat more sophisticated, in terms of research design, omitted much of the information needed to make valid judgments. For example, validity and reliability estimates were totally neglected in their report. No attempt was made to identify or isolate the "outside," independent variables which might have contributed to the "attitude changes" which they reported. Like the Brookings study, Long and Klein relied heavily upon the trainees own "enthusiastic endorsement" of the MDI as having "fulfilled their training requirements and contributed to their growth and development".³⁸

³⁷Andrews, "Is Management Training Effective? II. Measurement, Objectives, and Policy," op. cit., p. 63.

³⁸Long and Klein, op. cit., p. 36.

Conversely, university and professional management development program evaluations have been concerned primarily with measuring attitude shifts in the trainee.

The Leadership Opinion Questionnaire has proven to be a valuable and useful device for determining whether or not certain courses of instruction were responsible for changing participants' attitudes on two dimensions of leadership--Initiating Structure and Consideration.

Of the several studies reviewed, only the Ohio State-Harvester Studies were considered a failure. Later research, however, established that this failure was the fault of the training program, not of the test instrument.

DiVista's study, although not directly related to the present one, also confirmed Fleishman's identification of "Initiating Structure" and "Consideration" as being the two critical dimensions of leadership and therefore are suitable categories for consideration in measuring the effectiveness of management development courses.

Carron applied a unique concept in his use of the LOQ in the evaluation process. Recognizing that statistical means are not always suitable for describing attitude changes, Carron graphically portrayed his finds through "vector analysis." In this way, he was able to show individual changes, in either direction, thus avoiding the "cancelling"

effect caused by mathematical averaging.

Finally, Biggs, Huneryager and Delaney used the LOQ to show a relationship between a manager's leadership ability and his own interpersonal needs. Definite correlations were reported between a manager's need scores on the FIRO-B personality test and Fleishman's Leadership Opinion Questionnaire.

This study has drawn heavily from the finding of each of the studies reviewed. Carron's vector analysis technique has been used to describe individual changes in leadership attitudes. Fleishman's LOQ has been used to pre-test and retest both the control and experimental groups to assure that only changes resulting from exposure to the MDI, are measured and reported. And, finally, reliability and validity estimates have been established for both groups. In this way, it is hoped that the fatuous errors of subjective judgment have been avoided.

CHAPTER III

RESEARCH DESIGN

One way of determining the success of a training program is to ask the trainee whether the objectives of the course were met. Though this is a fairly common technique used to measure training results, its validity is open to question. Since most people respond favorably to training, their appraisal of results are likely to be biased.¹

A more accurate evaluative method is to compare the kind of on-job behavior that is expected to result from training with the behavior that actually takes place. Assuming that attitudes are reflected in behavior, this study has attempted to measure a group of trainees leadership attitudes before and shortly after exposure to the California State Personnel Board's Management Development Institute² training program.

Population and Sample

Inasmuch as all agencies of the California State Government participate in the MDI, the study population

¹Peggy V. Stroud, "Evaluating a Human Relations Training Program," Personnel, 36:6 (November-December, 1954), 52.

²Management Development Institute will be abbreviated MDI throughout the remainder of this report.

included all management personnel employed by the State of California. From this population, a non-probability, accidental sample of 29 state managers was drawn to test the research hypothesis.

The selection of candidates to attend the MDI is the exclusive prerogative of each sponsoring agency, thereby precluding any attempt at randomization of the sampling process.

At the opening session of the MDI each trainee was asked to select one other state manager for inclusion in the control group. Insofar as possible, the nominee's personal and professional characteristics were to be similar to the trainee's own. Such independent variables as age, sex, education, length of state service, tenure in present position, and orientation toward the leadership function were the principal criterion to be considered in making the selection.

In this way it was felt that the biases related to opposing views of leadership and supervision would be avoided. Both the trainee and his control group counterpart would be of the same ilk, demographically and philosophically.

Data Collection. In addition to their selection of the control group, each trainee was asked to complete a

biographical questionnaire and Fleishman's Leadership Opinion Questionnaire.³ The entire selection and testing process required no more than 25 to 30 minutes.

Identical questionnaires and the LOQ were then mailed to each of the control group nominees. Included was a postage paid, pre-addressed envelope to enable this group to return all data directly to the researcher, thereby insuring anonymity and facilitating and scoring and tabulating of control data. Of the 19 questionnaires returned, one was discarded because of incomplete information.

All training-group data was collected at its source in Sacramento, California and then shipped directly to the researcher in Michigan.

Fifteen days after the conclusion of the MDI program, LOQ's were again mailed to all members of the treatment and control groups. Participants were asked to complete the questionnaire and return it to the researcher within 10 days. Each was informed that a summary of the study findings would be available upon request. Twenty-six (81.2%) of the second set of questionnaires were returned by the treatment group and 16 (72.7%) were received from the control group.

³Leadership Opinion Questionnaire will be abbreviated "LOQ" throughout the remainder of this report.

The similarities between the two groups--treatment and control, are demonstrated in the following tables.

TABLE 3.1

SUMMARY OF DEMOGRAPHIC SIMILARITIES

<u>Characteristic</u>	<u>Control Group</u> N=18			<u>Treatment Group</u> N=29		
	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>
Age	26	39.3	6.7	21	40.1	2.1
Length of State Service	28	13.4	2	21	13.8	2
Time in Present Employment	22	11.4	2.3	25	10.8	2.4
Length of Time In Present Position	7	2.2	1.2	18	3.5	1.5

The most striking difference between the two groups is that of age. However, since all other categories are similar, the age disparity is considered tolerable. Education level and major areas of academic concentration were also comparable.

TABLE 3.2

EDUCATION LEVEL

<u>Degree Level</u>	<u>Control Group</u> N=18		<u>Treatment Group</u> N=29	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
High School	5	28%	7	24%
Associate	2	11%	4	14%
Bachelors	9	50%	10	34%
Masters	1	6%	7	24%
Doctorate	1	6%	1	4%

TABLE 3.3

AREA OF ACADEMIC CONCENTRATION

<u>Area of Study</u>	<u>Control Group</u> N=18		<u>Treatment Group</u> N=29	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Business	5	28%	9	31%
Education	1	6%	-	-
Liberal Arts	2	11%	-	-
Natural Science	-	-	2	7%
Public Administration	2	11%	3	11%
Social Science	2	11%	4	14%
Technical (Eng.Arch.)	3	17%	5	18%
Other	3	17%	5	18%

Current work position was yet another category which demonstrated similarities between the two groups.

TABLE 3.4

TYPES OF WORK ASSIGNMENTS

<u>Work Description</u>	<u>Control Group</u> N=18		<u>Treatment Group</u> N=29	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Functional Management Position	7	39%	13	45%
General Management Position	4	22%	5	17%
Technical Management Position	1	6%	5	17%
Advisory/Consulting Position	6	33%	8	28%

In describing "career histories" with the State of California, the control and experimental group participants provided the following comparisons.

TABLE 3.5

SUMMARY OF CAREER HISTORY

	<u>Control Group</u> N=18		<u>Treatment Group</u> N=29	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
A series of jobs with- in one program or operating division of your department	8	44%	12	41%
A series of jobs shifting among two or more programs or operating divisions of your department	10	56%	13	45%
A series of jobs with- in the "line" or "op- erating" program of a State department	8	44%	11	38%
A series of jobs within the "staff" or "service" programs of a State department	2	22%	6	21%
A series of jobs shifting between "line" and "staff"	6	33%	9	31%
A series of jobs in two or more State departments	-	-	3	10%

Examination of pre-test scores from the training and control groups also reveals striking similarities in each group's orientation and philosophy toward the leadership function. Table 3.6 provides some insight into how closely these groups were matched.

TABLE 3.6

PRE-TEST LOQ SCORES

<u>Dimension</u>	<u>Control Group</u> N=18			<u>Treatment Group</u> N=29		
	<u>Spread</u>	<u>Mean</u>	<u>SD</u>	<u>Spread</u>	<u>Mean</u>	<u>SD</u>
Consideration	19	54.8	2.3	26	55.8	2.1
Structure	27	44.6	2.8	25	45	2.3

Measures

Edwin A. Fleishman's Leadership Opinion Questionnaire was used to measure each manager's perception of his own role and that of his subordinates towards the organization's goals. The LOQ contains 40 items, half of which are concerned with opinions relating to "Consideration" and half with opinions relating to "Structure". Fleishman's definition of these two factors is repeated here for clarification:

Consideration (C). Reflects the extent to which an individual is likely to have job relationships with his subordinates characterized by mutual trust, respect for their ideas, consideration for their feelings, and a certain warmth between himself and them. A high score is indicative of a

climate of good rapport and two-way communications. A low score indicates the individual is likely to be more impersonal in his relations with group members.

Structure (S). Reflects the extent to which an individual is likely to define and structure his own role and those of his subordinates toward "goal attainment." A high score on this dimension characterizes individuals who play a very active role in directing group activities through planning, communicating, information, scheduling, criticizing, trying out new ideas and so forth. A low score characterizes individuals who are likely to be relatively inactive in giving direction in these ways.⁴

It is important to note that these dimensions are independent. This means that supervisors may be high on both dimensions, low on both, or high on one and low on the other. Further, a high "Structure" score does not necessarily typify only authoritarian leadership. High "Structure" scores may be consistent with democratic leadership when accompanied by sufficiently high "Consideration" scores.⁵

Reliability and Validity

Test-retest coefficients have showed reliability = .80 on Consideration and .74 on Structure. Split-half reliability was estimated at .69 for Consideration and .74 for Structure.⁶

⁴Edwin A. Fleishman, Manual for Leadership Opinion Questionnaire, (Chicago: Science Research Associates, 1969) p. 1.

⁵Theodore J. Carron, "Human Relations Training and Attitude Change: A Vector Analysis, "Personnel Psychology," 17:14, (Winter, 1964), 407.

⁶Delbert C. Miller, Handbook of Research Design and Social Measurement, (New York: David McKay Company, Inc., 1964), pp. 304-306.

Dependent Variables. Two dependent variables, -- Consideration (C) and Structure (S) were analyzed in this study. No attempt was made to relate single test items to any leadership characteristic. Rather, scores from each of the leadership factors were examined to determine what effect the MDI had on the treatment group. Both variables were measured by the LOQ.

Hypothesis

1. Management development training as provided by the MDI will decrease the "Structure" scores on Fleishman's LOQ.
2. Management development training as provided by the MDI will increase the Consideration scores on Fleishman's LOQ.

Two basic assumptions undergird each of these hypotheses. First, management based on individual growth (positive motivation) is more successful in the long run than is management based on power and coercion (negative motivation). As a result of training, then, one would expect a movement away from authoritarian attitudes toward a more democratic group attitude.

Second, merely by sponsoring development training for their employees, each state agency has subscribed to the

idea that "change" is necessary. Each sponsoring agency will then permit, if not indeed encourage, the utilization of the lessons learned in school in their day-to-day operations. If this is so, then post-test scores, administered 30 days after completion of the training program, will reflect each trainee's acceptance and use of the skills and training he received at the MDI.

Analysis

The LOQ contains forty items which are arranged in the form of a summated "Likert-type" scale. Twenty items test the individual's "Structure" character; twenty examine his "Consideration" character. Further scaling and coding was unnecessary.

In addition to the conventional statistical means and standard deviation analysis, this study utilized Carron's vector geometry to portray individual changes in leadership attitudes.

Carron's formula for vector analysis is as follows:

Graphically, a vector may be represented by an arrow. The length of the arrow is proportional to magnitude, while its angle with respect to a coordinate system indicates direction. Thus, if we use Consideration as the ordinate and Structure as the abscissa of our coordinate system, then point (S_1, C_1) defines the attitude pattern of an individual subject before training and the point (S_2, C_2) defines the attitude pattern at post-training. The

vector representation is an arrow drawn from (S_1, C_1) to (S_2, C_2) . The length and direction of the vector can be readily calculated from the different scores as follows.⁷

$$V = \sqrt{(\Delta S)^2 + (\Delta C)^2}$$

Summary

This study was designed to determine if significant attitudinal changes occurred in California State management employees as a result of exposure to the MDI. Control and experimental groups were established, and before and after tests were used to show similarities or "match" between the two groups and to test the research hypothesis.

Because of the prevailing trainee selection process, it was impossible to randomly select either the treatment or control group. The trainees themselves were responsible for selecting members of the control group. This was done in an attempt to avoid differences in management philosophies and to maintain anonymity of participants. That the procedure satisfactorily accomplished these objectives was demonstrated statistically in the charts found in this chapter.

In addition to the conventional statistical proofs, this study used Carron's vector analysis to demonstrate the effectiveness of the MDI. In this way, individual changes

⁷Carron, op. cit., pp. 411-412.

in attitudes, both in magnitude and direction, have been described.

Chapter 4 provides an analysis of the results of this study.

CHAPTER IV

ANALYSIS OF RESULTS

In the preceeding chapters, the problem chosen for study was defined; pertinent literature, pertaining to management development program evaluation methods, was reviewed; and the design for the present study was developed. Let us turn now to the reporting of the results of that study.

Hypothesis One

Management development training as provided by the MDI will decrease the Structure scores on Fleishman's LOQ. Restated in more testable terms, the trained group's means score on Structure will be less than that of the non-trained group.

Null Hypothesis

No difference will be found in group mean scores on Structure between the trained and non-trained groups.

Structure Scores

At post training the mean difference on Structure scores was $-.50$ for the control and -1.08 for the treatment group. Standard deviation difference was $-.34$ for the control group and $-.81$ for the treatment group. Correlation

coefficients were calculated at .18 and .48 for the control and experimental groups respectively.

This shift in Structure scores, after training, was not significant for the control group; it was, however, for the treatment group ($p=.05$).

TABLE 4.1

STRUCTURE FACTOR SCORES

	\bar{X}_1	\bar{X}_2	Dif.	s1	s2	Dif.	r
Control N=16	44.00	43.50	-.50	6.25	5.91	-.34	.18
T-Group N=26	44.18	43.10	-1.08	6.05	5.24	-.81	.48

The null hypothesis was rejected. The correlation between pre- post-training scores was significant at the .05 level.

Hypothesis Two

Management development training as provided by the MDI will increase the Consideration scores on Fleishman's LOQ. The test hypothesis was, "the trained group's mean score on Consideration will be more than that of the non-trained group."

Null Hypothesis

No difference will be found in group mean scores on Consideration between the trained and non-trained groups.

Consideration Scores

After training, the mean difference on Consideration was $-.95$ for the treatment group and $+1.0$ for the control group. The difference of standard deviations was -1.28 for the treatment group and -1.14 for the control group. Correlation coefficients were $.12$ and $.29$ for the control and experimental groups respectively. Table 4.2 summarizes these findings.

TABLE 4.2

CONSIDERATION FACTOR SCORES

	\bar{X}_1	\bar{X}_2	Dif.	s_1^2	s_2^2	Dif.	r
Control N=16	54.60	55.50	$+.90$	6.54	5.40	$+1.14$	$.12$
T-Group N=26	55.14	54.19	$-.95$	5.52	4.24	-1.28	$.29$

Neither coefficient of correlation was statistically significant. The null hypothesis was accepted.

Vector Analysis

It will be recalled that in applying vector geometry to test-retest scores, Carron found that both magnitude and direction of changes in attitudes could be shown.¹

¹Theodore J. Carron. "Human Relations Training and Attitude Change: A Vector Analysis, "Personnel Psychology, 17:4, (Winter, 1955), 403-421.

By using Carron's formula, it was possible to show individual and group scores obtained prior to training and again 30 days after the trainees returned to their "work-a-day" world. This was done by using calculated vectors for each individual score.

Graphically, a vector may be represented by an arrow. The direction of the arrow represents the direction of attitude change; the length shows the magnitude of change. Using Consideration as the ordinate and Structure as the abscissa of the coordinate, pre-training and post-training scores were plotted for the two groups. Arrows were then drawn between these two points.

The tail of the arrow defines the Structure and Consideration scores before training. The arrow point represents the same individual's score after training. No change in before and after training scores was represented by a dot. Each vector represents an individual. The letters correspond to the subjects listed in Appendix B and C.

In Figures 1 and 2, experimental and control group scores were drawn around medians taken from Fleishman's LOQ Manual. These medians effectively divide the graph into four quadrants each of which may be considered as indicative of different leadership styles. Individuals

who score low on both Consideration and Structure show a laissez-faire pattern of leadership with little concern for the individual or the organization. Low Structure-high Consideration patterns are indications of democratic leadership attitudes while high Structure and low Consideration patterns are indicative of autocratic leadership attitudes. A high Consideration-high Structure score probably reflects a paternalistic leadership attitude.²

It can be seen from Figure 1 that the T-Group post training scores are clustered around the Consideration median. A definite movement away from a high Structure pattern is shown while Consideration Scores remain fairly constant. This was consistent with the earlier findings.

Statistically significant changes were found in the experimental groups scores while the Consideration scores remain stable.

²Edwin A. Fleishman, Manual for Leadership Opinion Questionnaire, (Chicago: Science Research Associates, 1969), p. 1.

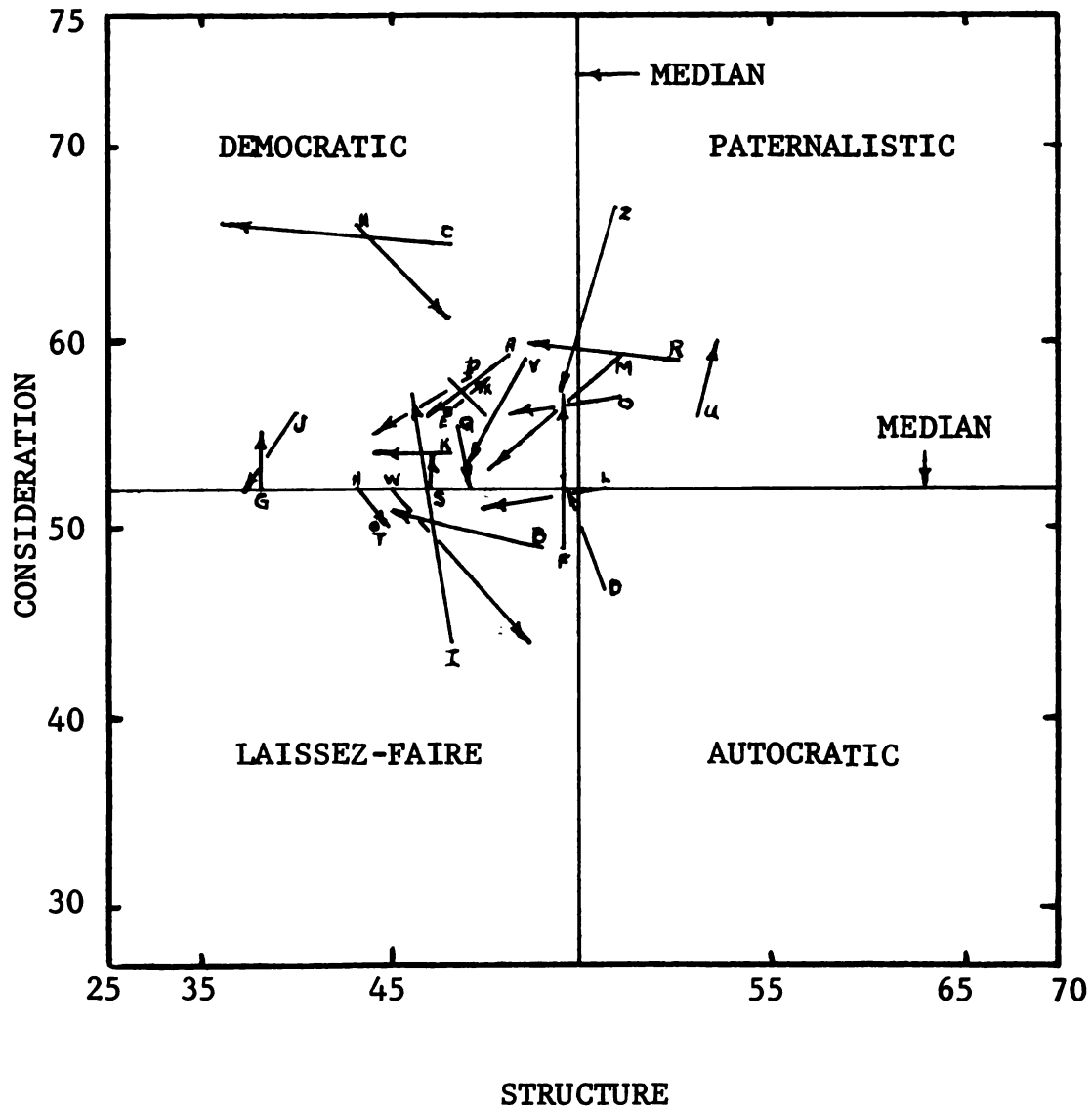


Figure 1

VECTOR ANALYSIS OF ATTITUDE CHANGES IN T-GROUP

(Before vs. post-training scores; medians from
Fleishman's LOQ Manual, N=493)

Figure 2 shows the attitude patterns of the control group. Here the vector pattern seemed more erratic. Large movements in both direction and magnitude tend to be cancelled by opposing vectors. Although there was some

grouping around the Consideration median, there was no discernable orientation pattern. This too was consistent with the earlier findings.

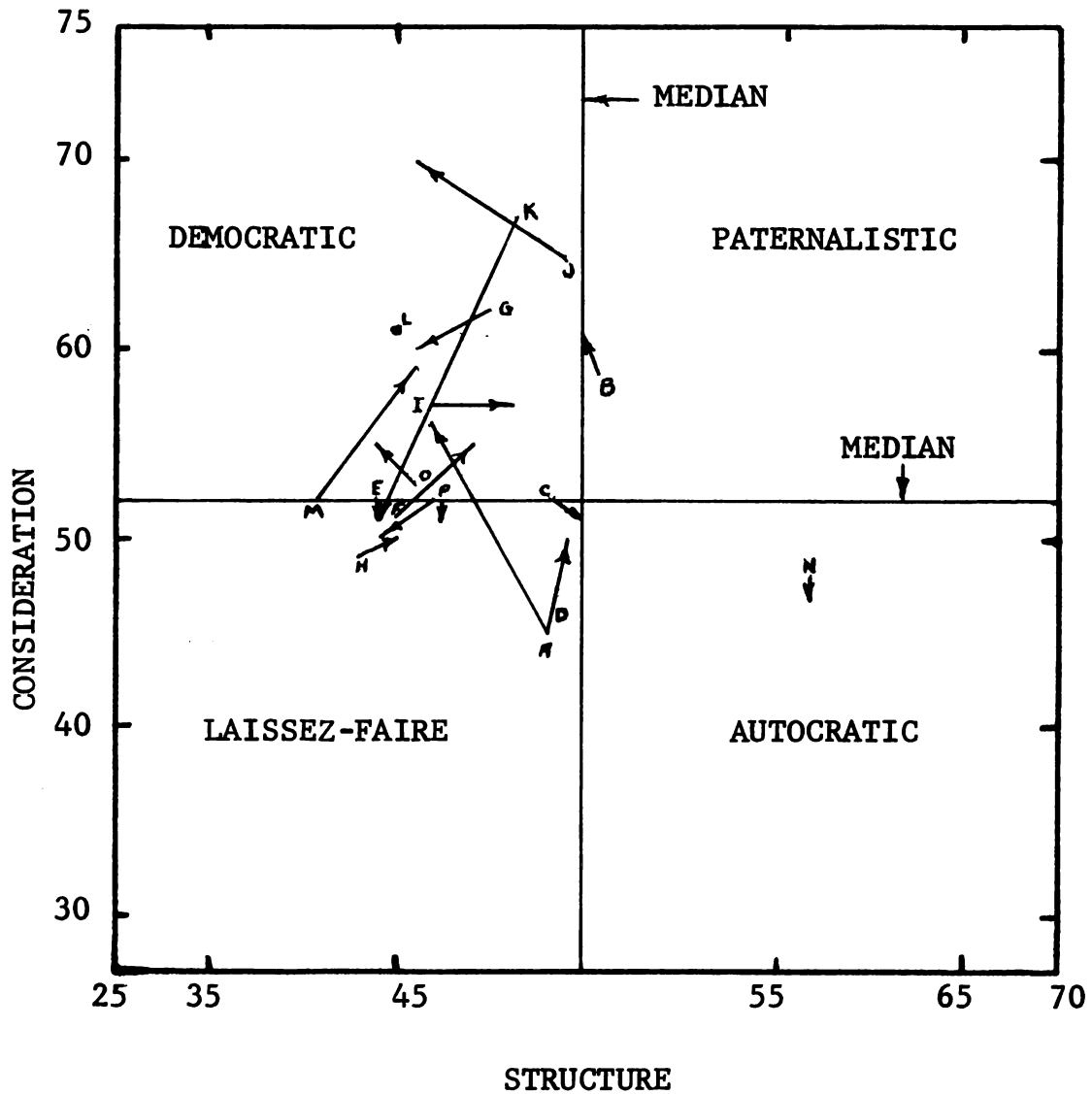


Figure 2

VECTOR ANALYSIS OF ATTITUDE CHANGES IN CONTROL GROUP

(Before vs. post-training scores; medians from Fleishman's LOQ Manual, N=493)

Summary

A statistically significant relationship was shown between the experimental group's pre- and post-training scores on the Structure scale. This relationship was not present on the Consideration scale.

Conventional statistical methods were used to test the hypothesis. A second method of testing was then applied to enable the reader to determine visually, both the magnitude and direction of change in the leadership attitude patterns of the subjects of this study.

CHAPTER V

SUMMARY AND CONCLUSIONS

The current rapid growth of American government brought with it a need for competent well trained public administrators and managers. For the most part, this need has been met through educational and training programs sponsored by universities and private organizations. These management programs have sprung up in such numbers that no matter where the public manager finds himself, he should be able to afford himself an opportunity for growth.

University and private organizations have not, however, addressed themselves to the unique needs of public service managers. Neither have they been able to answer the question, "Is management training effective?" This study has attempted to assess the value of a public employee management development program, in terms of its ability to improve the leadership attitudes of management personnel employed by the State of California.

In reviewing literature it became very clear that little work had been done in the area of scientific evaluation of management development programs. Rather, those responsible for the program seem satisfied to leave

evaluation to the empirical and often subjective judgment of the trainee. This is particularly true of the public service management development programs. Two exceptions, which were important to this study were the works of Edwin A. Fleishman and Theodore J. Carron.

Fleishman developed a Leadership Opinion Questionnaire around two opposing human relations factors - Structure and Consideration. Since these factors are independent, yet limited in scope, it was felt that the LOQ could be used effectively within the time and economic constraints which abound this study.

Carron's use of vector geometry to describe and assess the results of a human relations course provided an additional tool for evaluating the results of the present study.

In designing this study, the investigator asked members of the experimental group to name the members of the control group. The principal criterion to be used in making this selection was that the trainees were asked to match in-so-far as possible, his own professional and demographic personality. Biases related to opposing views of the management function were avoided in this manner.

Conclusions

The major findings of this study were:

1. The trained group's mean average Structure scores decreased significantly below those of the non-trained group.
2. No statistically significant difference was found between the trained and non-trained test scores on the LOQ Consideration scale.

These findings were reaffirmed through the use of vector analysis.

Discussion

The purpose of this study was to evaluate the effectiveness of the California State Personnel Board's Management Development Institute in terms of its ability to change leadership attitudes in a selected group of State managers. The results suggest some limited success in this regard.

Structure attitudes - that is, the experimental group's orientation toward the organization as opposed to the employee, may have "softened" somewhat. Their Consideration attitudes did not change. This is not to say that exposure to the MDI did not have some training value. It probably indicates that, upon returning to their work situation, much of what was learned was not put to use. As Fleishman

pointed out, the trainees' supervisors have their own ideas of how to supervise. The trainee has to conform. How else might one explain the apparent "softening" of the trainees' Structure attitudes without a concomitant increase in Consideration? If it is true that a supervisor's attitudes are reflected in his actions, then frustration and role conflict are inevitable.

One additional factor might also have contributed to the dichotomy found in the test results. If training goals are ill defined and if objectives are not clearly stated, no management development program will succeed. The erratic dispersion of Consideration scores, when viewed against the apparent change in the trainee's Structure orientation, may indicate a weakness in program design.

It must be concluded, however, that exposure to the MDI did have some positive effects on the selected group of managers.

Implications for Future Research

Future researchers should consider this as a pilot project. Larger samples, replicated studies, and variations in testing procedures would all be appropriate.

While it is felt that the LOQ is an appropriate device for testing the results of similar programs, other

testing instruments should also be used at the same time to give a better balance and depth to any future study.

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APPENDICES

APPENDIX A-1

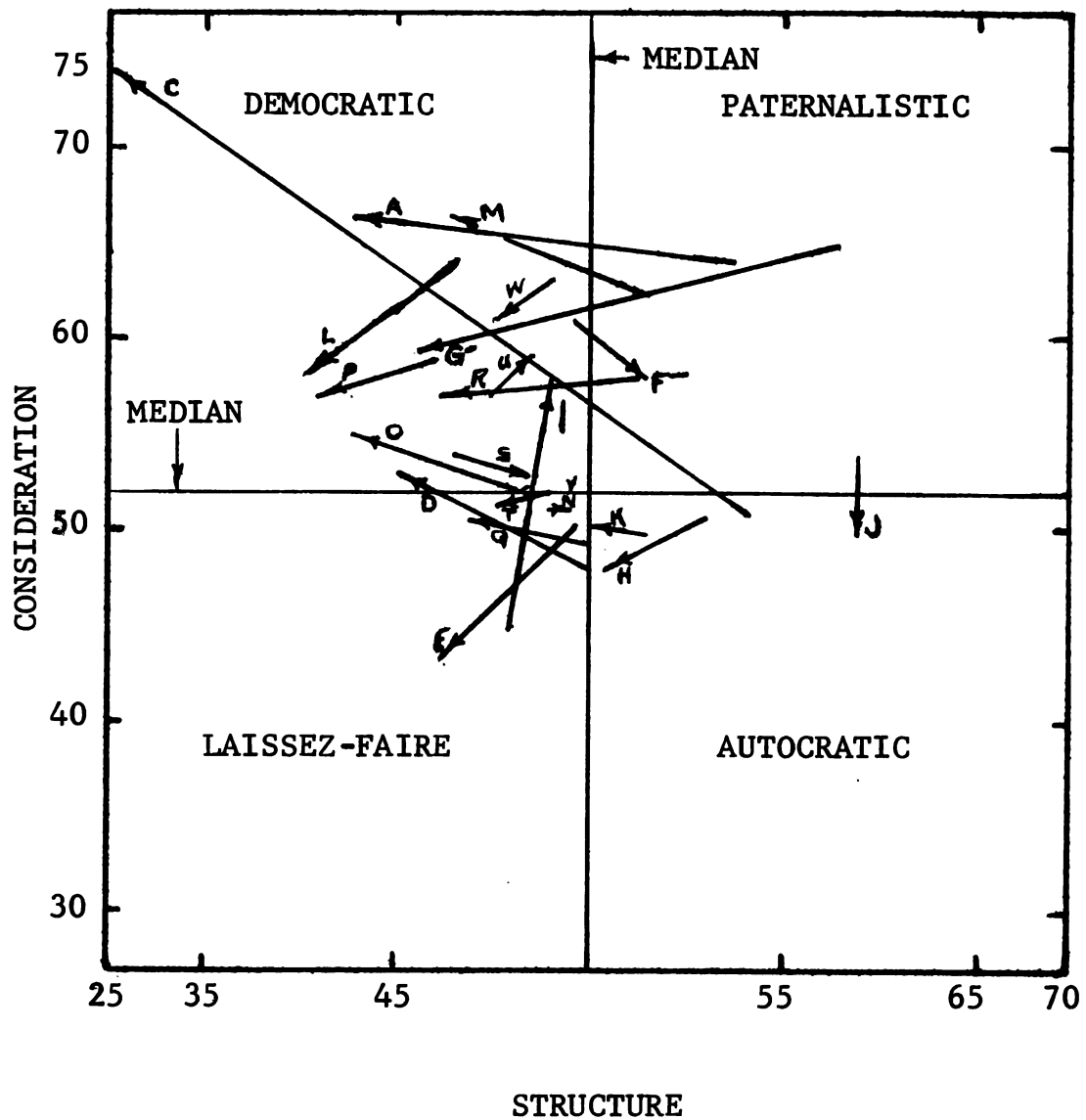


Figure 3

VECTOR ANALYSIS OF ATTITUDE CHANGES IN T-GROUP

(Before vs. follow-up scores; medians from
Fleishman's LOQ Manual, N=780)

APPENDIX A-2

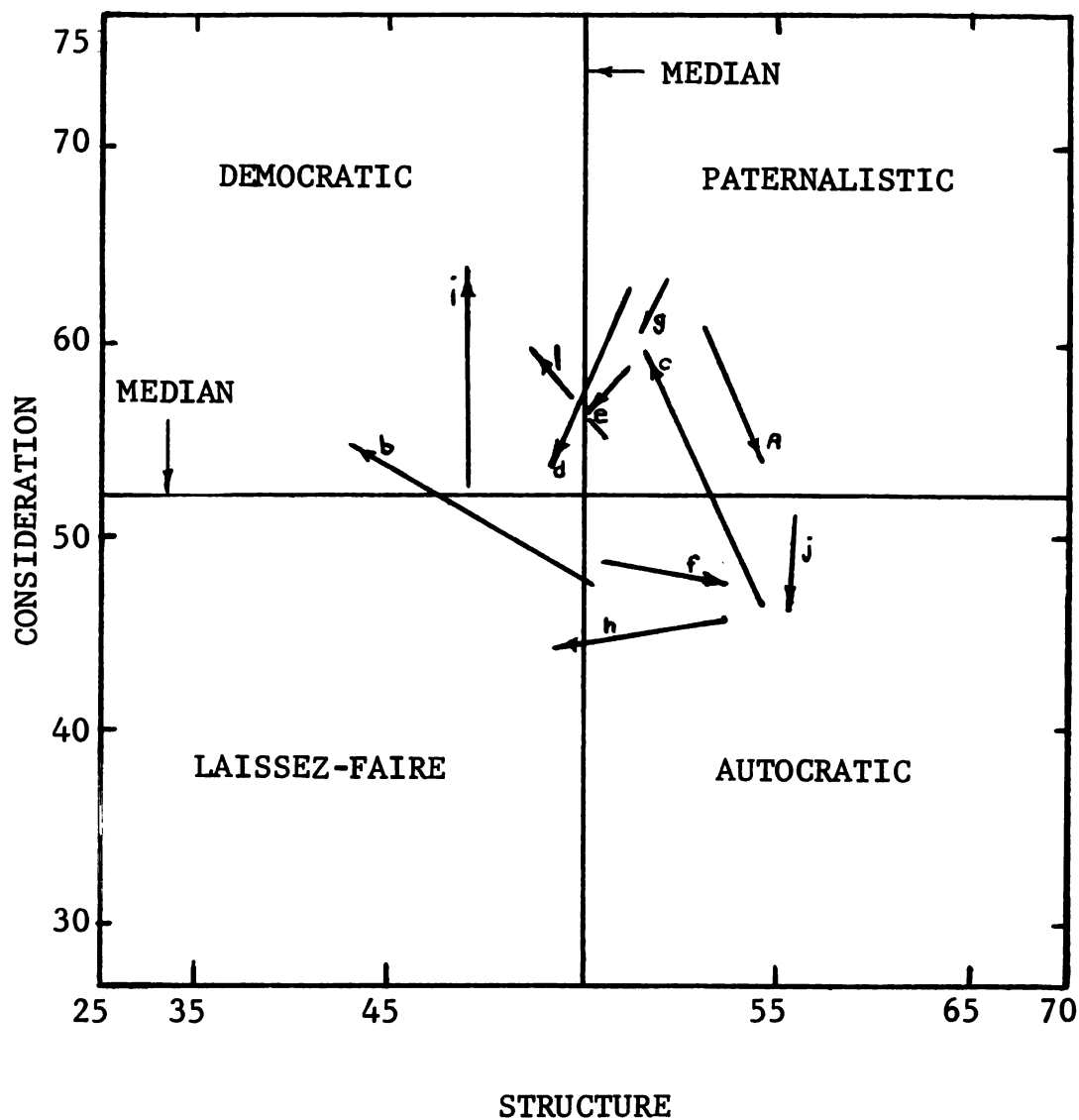


Figure 4

VECTOR ANALYSIS OF ATTITUDE CHANGES IN CONTROL GROUP

(Before vs. follow-up scores; medians from
Fleishman's LOQ Manual, N=780)

APPENDIX B

EXPERIMENTAL GROUP SCORES

	<u>Pre-Training</u>		<u>Post-Training</u>	
	C	S	C	S
A	54	40	49	48
B	59	46	56	42
C	65	43	66	31
D	47	51	52	49
E	55	43	55	43
F	49	49	57	49
G	52	33	55	33
H	52	38	50	40
I	44	43	57	41
J	56	35	52	36
K	54	43	54	39
L	52	51	51	45
M	59	52	53	45
N	66	38	61	43
O	57	52	56	46
P	58	43	56	45
Q	58	43	42	44
R	59	56	60	47
S	52	42	54	42
T	50	39	50	39
U	56	56	60	57
V	59	47	53	44
W	52	40	44	47
X	56	43	58	45
Y	58	44	55	39
Z	68	52	57	49
<u>Spread</u>	21	23	22	26
X	55.14	44.18	54.19	43.10
S	5.52	6.05	4.24	5.24

APPENDIX C

CONTROL GROUP SCORES

	<u>Pre-Training</u>		<u>Post-Training</u>	
	C	S	C	S
A	45	48	56	42
B	59	51	61	50
C	52	48	51	41
D	45	48	50	49
E	52	39	53	39
F	51	40	55	44
G	62	45	60	41
H	49	38	50	40
I	57	42	57	46
J	65	49	70	42
K	67	46	50	39
L	61	40	61	40
M	52	35	59	41
N	48	62	47	62
O	53	41	55	38
P	<u>52</u>	<u>42</u>	<u>50</u>	<u>39</u>
<u>Spread</u>	22	24	23	23
X	54.6	44.0	55.5	43.5
S	6.54	6.25	5.4	5.91

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