ABSTRACT

THE IMPACT OF AN EXECUTIVE TRAINING PROGRAM:
A FIELD EXPERIMENT

By

John Roland Mietus

Purpose: A field experiment was conducted to determine the effects of

four levels of leader development treatments on leadership attitudes

and perceived behaviors of high-level, state government executives.

Subjects and Treatments: Sixty-three $\underline{S}$s from several different depart-

ments of a state government were exposed to one of four levels of

treatment: 1) feedback to $\underline{S}$s of (a) subordinates' perceptions of $\underline{S}$s'

individual leader behaviors, (b) $\underline{S}$s' self reports of leader behavior

and attitudes, (c) collective, fellow $\underline{S}$s' self reports of leader be-

havior and attitudes, (d) all subordinates' collective perceptions of

all $\underline{S}$s' leader behaviors; 2) feedback as above and a university

sponsored, general management development program; 3) feedback and

development program as in (2) above and placement of $\underline{S}$s into a situation

requiring a decision to set or not set goals for improved leader be-

haviors; 4) no intervention.

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<u>Design and Instrumentation</u>: A multivariate pretest and six months after treatment posttest design was used. The dependent variables were (1) <u>S</u>s' collective leadership attitudes, (2) collective leader behavior as perceived by <u>S</u>s and (3) by 254 of their subordinates. Also measured were <u>S</u>s' perceptions of their superiors' individual expectations for <u>S</u>s' leader behavior. Measurement was through an instrument, developed specifically for this study, which in turn was based on several similar standard leadership instruments.

<u>Results</u>: The four treatment levels exerted no significant main effects. There was some mild support for the hypothesis that <u>S</u>s' perceptions of their superiors' expectations for their leadership were related to changes in <u>S</u>s' behaviors and attitudes; construct validity limitations in the instrument, however, prevented a more definitive statement of the relationship. <u>S</u> reported and subordinate reported behaviors were correlated to a low positive degree.

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CHAPTER I

HISTORY

Introduction

Management development programs that include a mix of content and techniques have become pervasive and expensive aspects of modern organizations. Yet the number of carefully designed studies measuring the impact upon the manager and his followers of a total management development package are few, and the number of studies measuring the relative effects of two or more variations in total packages of management development are fewer still. From a cost and effectiveness standpoint, it would be beneficial to both the practitioner and academic communities to have available more studies of the latter kind.

Purpose

This research compared the effects over time of three variations of a management development package with the effects of no treatment upon the leadership beliefs, desires, and behaviors of a sample of high level state government leaders and their direct subordinates.

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The treatment patterns were:

F. Data handback to $\underline{S}$s of subordinates' perception of, and desires for, $\underline{S}$s' leadership behaviors; information given to each $\underline{S}$ as to how his leadership behaviors and beliefs compared with those of his peers.

T. Data handback as above and a university-sponsored general management development program.

G. Data handback and management development program as above, and the placement of $\underline{S}$s into a situation requiring a decision to set or not set goals for their leadership behaviors.

C. No treatment.

Dependent variables were:

A. Collective perceptions of significant leader behavior:

1. as reported by $\underline{S}$s.
2. as reported by direct subordinates of $\underline{S}$s.

B. Collective $\underline{S}$s' leadership attitudes.

Related Research

Cartwright (1949), in presenting some findings of research on U.S. War Bond sales, postulated a general model of behavioral change. To influence the behavior of a person, a chain of processes must be activated within him. These processes, in order, were:

1. A particular cognitive structure must be created. The person
   must become aware of the message of the potential influencer;
   this perception must then be accepted as part of the person's

cognitive structure. Here cognitive structures are considered to be clusters of beliefs, without their corresponding affect.

2. A particular motivational structure must be created. The person must see the behavior suggested by the cognitive structure as a realistic path to some personal goal. The more goals seen as attainable by a behavior or behaviors, the more probable it is that the person will engage in the behavior. Attitude, as viewed within the instrumentality-value analysis framework, is a close approximation to motivational structure.

3. A particular behavioral structure must be created. The cognitive and motivational structures must gain control of the person's behavior at some point in time. To the extent that a path of action is specifically defined and located in time, it will more probably gain control of behavior. An effective method of placing a given motivational structure in control of behavior is to put the person in a situation requiring a decision to take, or not to take, an action that is part of the structure. If the person's cognitive and motivational structures are appropriate to the behavior requested of him, he will act.

The treatments described earlier could be analyzed for differential effects in inducing these cognitive, motivational, and behavioral structures, and for inducing behavioral changes per se. A review of the literature on these leadership development programs showed no systematic attempt to do this.

General Management Training

Since top management began to be convinced in the late 1940's that leadership training was useful for their supervisors and middle managers, there has been a remarkable adoption of human relations training programs. There has been quite a bit of variability in content, methods, and settings for these programs. The more traditional programs had classrooms as a setting, staffmen as trainers, and lecture-discussion methods as a primary medium. Substantively, they included information on personality, motivation, attitudes, leadership, personal efficiency, and interpersonal relationships. The trainee was primarily in a passive role. The sensitivity training group and structured laboratory involved the learner in active learning and practice in interpersonal relationships, using data gathered in the training sessions. The survey collection, feedback, and team development meeting approach involved the gathering of interpersonal process data about the supervisor's organization; the supervisor, subordinates, and trainer

then discussed these data as a means to the improvement of interpersonal functioning.

This thesis was primarily concerned with the first type of program discussed above, the more popular and traditional lecture-discussion classroom type of training. Few systematic studies have been made to evaluate rigorously this type of training. Many studies of a less than experimental design have been conducted, and most proclaim many benefits.

Rigorous evaluations of human relations training have generally made the following assumptions: 1) changes occur as a result of training in the leader's attitudes about supervision, 2) these changes are reflected in the leader's behavior toward subordinates, 3) this changed behavior is perceived by subordinates, and 4) they in turn become more satisfied with their superior, more motivated and productive (Mann, 1957, p. 150). Because of the confounding of many uncontrolled intervening variables, it has been difficult at best to assess leadership training impact against the extrinsic criterion of worker productivity. On the other hand, evaluation studies measuring the impact by means of the focal person's self-reports have been incomplete. If the direct subordinate of the trainee has noted a change in trainee behavior it can then be said that training had an effect. A more rigorous standard would require observed behavioral changes in subordinates. Hence, properly done evaluation studies measure not only trainee self-reports

of beliefs and behaviors, but also subordinate perceptions of trainee behavior. Few studies have done this within the framework of a well controlled experimental design. The following were studies that met these criteria.

In the early 1950's, three studies were conducted at the International Harvester Company's Central School in conjunction with the University of Chicago by Fleishman, Harris, and Burtt. These studies had a target population of supervisors; various techniques and content were presented. Evaluation criteria were the Leadership Opinion Questionnaire (LOQ) and the supervisor form of the Leadership Behavior Description Questionnaire (LBDQ). The first study focused on an experimental group of forty-six supervisors; no control groups were used. Initiating structure scores decreased and consideration scores increased. The second study used three experimental groups which were differentiated on length of time after training that the posttest was administered; a control group was used. No differences were found on the LOQ between the experimental and control groups, and the only significant difference on the LBDQ was that one of the three trained groups was lower on consideration than the controls. However, when the trainees were differentiated on the basis of their manager's LOQ scores, significant differences on the LBDQ were found between those trainees who had managers with high scores and those trainees whose managers had low scores. Thus the impact of training, if there was any, was

neutralized by organizational climate. As this was a posttest only

design, with matching of <u>S</u>s on age, education, and experience, it may

have been that the groups were not comparable. A third study was run.

One experimental and one control group were measured before training

and after one year after training. There were no changes in mean

scores, but the pre-post correlation of subordinate ratings on the

LBDQ was lower for the experimental group; that is, leadership patterns

were less stable for the experimental group. This might be explained

in that different sub-groups of trainees might have reacted differen-

tially to the training; when they were placed together in the analysis

of the experimental group changes, differences between them may have

cancelled out (Fleishman, 1953; Fleishman, Harris, Burtt, 1955; Harris

and Fleishman, 1955).

Canter (1951) ran a supervisory human relations training pro-

gram for eighteen first line supervisors in an insurance company.

Training was by lecture-discussion methods and emphasized cognitive

information regarding the psychology of human behavior. Ten two-hour

sessions were presented. A control group of eighteen supervisors re-

ceived no training. Both groups had a battery of six tests administered

in a pre- and posttest design. For five out of twelve scores available,

the experimental group changed more than would have been predicted on

the basis of the control group's changes. However, in this study the

probability of a Type I error was set at .10. Tests measured knowledge

of general psychological facts, logical reasoning, social judgment, supervisory knowledge and ability to estimate group opinion. Tyler (1949) in a companion study, measured changes in morale of the subordinates of these supervisors. Improvement in morale was found in both experimental and control groups.

Hariton (1951) studied the effects of human relations training on skilled trades foremen in a large public utility. Fifty first-line foremen and their four hundred subordinates were split into matched experimental and control groups; these groups were further naturally split into two field divisions each. The criteria were foremen's attitudes and behaviors toward subordinates; these were operationally defined by measuring employee perceptions of foremen before the training period and three months after the end of the training. There was a significant increase in satisfaction with foremen in one experimental division and a significant decrease in the other experimental division. When the experimental divisions were combined, the differences were neutralized. Changes in the control group did not center on supervision. The variable most highly related to changes in the experimental division was the practices of the foreman's superior. It was concluded that training foremen in human relations principles was effective in changing subordinate satisfaction with foremen only when higher level supervision was open to both the course content and to change.

In 1958 Moon and Hariton studied the effects of a human rela-
tions training program in inducing behavioral changes in engineering
supervisors in a section of the General Electric Corporation. Sixty-
six subordinates of thirty-two trainees and sixty-seven subordinates
of non-trainees were asked to fill out a ten-item questionnaire regard-
ing behavioral changes their superiors made in training-related areas
over a two-year period encompassing the training. Trainees were seen
as changing more on eight of ten items; these items were primarily
related to the consideration construct.

Schwartz, Stillwell, and Scanlan (1968a, 1968b) report a study
in which middle managers from an insurance company were exposed to a
"stock" university training program. A cycle or time lag design was
used, and Ss were randomly assigned to the two groups; it was six months
between the times the two groups were trained. The LBDQ was adminis-
tered before and after training; no feedback to participants was re-
ported. Between the two training programs, each participant was inter-
viewed in regard to how he handled critical incidents in his job. The
Ss in the first group were described as becoming less definitive, less
production-centered, less active, less oriented toward superiors, and
more oriented toward subordinates. The Ss in the second group were
described as becoming more active and moving toward more structure. An
interaction of the first training program and other parts of the orga-
nizational system was found. The interviews showed the trained group

talked more of employee development and reported more personnel inci-
dents; the second group talked more of conflict and staffing problems.

Hand, Richards, and Slocum (1972, 1973) evaluated the effective-
ness of a human relations training program for inducing changes in con-
sideration, initiating of structure, and self-awareness in forty-two
steel industry middle managers. Experimental and control groups were
randomly selected and further divided, on the basis of organization
climate, into consultative and authoritarian groups. The dependent
variables were measured by the LOQ, the Supervisory Behavior Descrip-
tion Questionnaire (SBDQ), a performance rating scale, and Berger's
self-acceptance scale. Climate was measured by the Institute for Social
Research's Profile of Organization Characteristics. Measurements were
made prior to training, ninety days after training, and eighteen months
after training. Ninety days after training not much change was noted;
eighteen months after training SBDQ consideration scores increased in
both experimental groups and decreased in both control groups. Experi-
mental subjects also saw themselves as more considerate and self-aware.
The autocratic control group increased in SBDQ initiating structure
scores at eighteen months. Salary and promotion increases favored the
consultative group; this was taken to be an indication of top management
values which reinforced the human relations consideration training but
not the initiation of structure training. The need for a long period

of time to elapse between training and assessing attitude and perform-
ance changes was suggested.

Numerous forces, other than training, have been seen as influ-
encing the leader and establishing, in the Lewinian sense, an equi-
librium state. A well established finding within the organizational
psychology literature has been that the cultural environment of a
leader has a large impact upon his behavior and attitudes. Essentially
unilateral power and authority structures of a bureaucratic organiza-
tion underlie the hierarchical structuring of roles. The expectations
of a superior have been viewed as one of the determining factors in a
manager's behavior (Mann, 1957, p. 152). The aforementioned studies
(Fleishman, Harris, Burtt, 1955; Hariton, 1951; Hand, Richards, and
Slocum, 1972) indicated that organizational climate, especially the
leadership style of the superior of the trainee, heavily influenced the
effect of training. Therefore, in assessing the impact of an interven-
tion, it has been important to consider this variable.

These studies, among the best designed in the literature, con-
centrated on measuring as dependent variables subordinate and trainee
perceptions of trainee's consideration and initiation of structure
behaviors. No attempt was made to relate the training to changes in
trainee beliefs about leadership or motivation to change one's leader-
ship style. Yet it may have been that the interventions had an effect
at these cognitive and motivational levels but not at the behavioral

level. A time lag between training and behavior change was noted in one of the studies. Perhaps cognitive or motivational measures might have predicted behavior change.

Cognitive and Motivational Structures

Early in this paper Cartwright's (1949) formulation of a behavioral change model was briefly described. It was theorized that cognitive, motivational, and behavioral structures appropriate to the desired behavior must be present before the actual behavior occurs. The former two structures are discussed now, while the latter will be discussed in the next section.

This author conceived of the cognitive and motivational structures as being in the domain of attitude and attitude change theory. According to Triandis, this area of social psychology appeared to have two main theoretical camps. Instrumentality-valence analysis models made up one orientation; in these the attitude toward a psychological object was defined as a composite of the perceived instrumentality of that object to the subject's goals, weighted by the subject's evaluation of those goals. Triandis (1971) placed M. B. Smith, Cartwright, Fishbein, and the Michigan School of Carlson, Peak, Rosenberg, Walker, and Heynes all as working within this framework. Miner and Dachler (1973) cited studies in this tradition done by Lawler, Dachler, Graen, and Mobley.

The other theoretical orientation was that attitude had three components, the cognitive, affective, and conative; it was the combination of these three components that defined attitude. Researchers using this approach to a greater or lesser degree have been, according to Triandis (1971), Krech and Crutchfield, Newcomb, Turner and Converse, Secord and Bockman, Sherif, and Cantril. The instrumentality-valence model addressed itself to the cognitive component of the cognition-affect-conation model; a person had beliefs regarding the instrumentality of an act or object. In the process of providing an instrumental view of the world, the instrumentality-valence model addressed itself to affective components by considering valences of expected outcomes.

Cognitive structures and beliefs were essentially similar. Fishbein and Ajzen defined belief as the subject's perception that an object or person had certain characteristics, qualities, or attributes, or was related to some other concept, object, or person. Also, a belief was the subject's judgment that a given behavior, policy, or strategy had certain characteristics or led to certain goals, values, or other outcomes (Fishbein, Ajzen, 1972, p. 494). In order to induce a given cognitive structure in a person, it was conceived that the sender must send the message, the receiver must receive it wholly and accurately, and then accept it.

In leadership development programs, the above may have been quite a feat. In programs utilizing guest speakers, the messages related to the same topic have sometimes differed depending on the speaker. When the lecture, group exercise, or group discussion modes were used, there was some probability that the trainee never received the message or that he perceived it inaccurately; seldom if ever has there been testing of the student to determine acquisition of this belief structure.

Given that the belief structure sent by the instructors has been received and accepted accurately by the trainees, the next question concerned itself with the type and level of affect the participants held regarding the belief structure. Here was the core of attitude. This author considered Fishbein's conceptualization of attitude useful. Following Thurstone (1931), Fishbein conceived of attitude as a unidimensional level of affect for or against a psychological object (1967, p. 478). To put it another way, attitude was viewed as a compound in which the elements were beliefs and its affective value (i.e. attitude) was a function of the affective value of the constituent beliefs (Fishbein, Ajzen, 1972, p. 488). Although each belief suggested an attitude, the attitude itself could only be reliably abstracted from a consideration of the constellation of beliefs the individual held. Thus, if one had been measuring an individual's attitude regarding a leader's being considerate toward his followers,

one would have determined the beliefs forming the cluster "considera-tion," measured the affect for each of the separate beliefs, and finally obtained an overall score, which would have been defined as attitude toward considerate behavior in a leader.

The simple affect toward a belief structure did not denote com-pletely the motivational structure. A manager may have been kindly disposed to the belief that consideration is a mark of an effective leader, yet not have desired that he himself be considerate. The defi-nition of motivational structure included the instrumentality-value model of attitude referred to earlier. Only when a person believed that actions, based on a cognitive structure which he evaluated highly, led to a valued goal, could an appropriate motivational structure be said to exist. For example, if a participant in a leadership develop-ment program wished to become a more effective leader (goal or high value), if he believed considerate leaders were effective (belief), and if he believed he would be effective as a considerate leader (instru-mentality), he could be said to have the appropriate motivational structure for becoming more considerate.

An instrumentality-value analysis was not all that was neces-sary to explain a motivational structure, affect apart from instrumen-tality was essential. If in the example above, the participant evaluated considerate behavior for himself very low (which was a belief about the instrumentality and value of considerate behavior for

himself), but desired very much to be an effective leader and believed

that considerate leaders are effective, the motivational structure to

behave in a considerate manner may or may not be induced. Also, if he

had in his repertoire other beliefs about effective leaders, for ex-

·ample, structuring leaders are effective, which he evaluated highly,

the motivational structure for these older beliefs would remain high

and the motivational structure for consideration would not be induced.

If, however, he did not have these other, non-conflicting beliefs, in

all likelihood, the considerate motivational structure would be induced.

A motivational structure in its broadest sense has been con-

ceived of as a willingness or desire to engage in a general class of

behaviors with respect to a class of psychological objects. This was

not the same as a behavioral intention, which, according to Dulany

(1961), was the person's intention to perform a specific behavior in

a specific situation.

In examining the relationship between beliefs and attitudes,

between cognitive structures and motivational structures, it has been

possible to become quickly confused due to the diverse conceptual and

operational definitions used. However, from a tremendous amount of

research there seemed to emerge a consistent positive relationship

between cognitive structures and motivational structures on the whole.

Attitudes were formed on the basis of beliefs. A unidimensionally

defined attitude was related to a belief about the same psychological

object (Rosenberg, 1960; Fishbein, 1965, 1967; Fishbein and Ajzen, 1972).

There was no reason to expect that any specific belief would be

related to any specific behavior or behavioral intention simply because

of the multitude of intervening variables in the relationship, particu-

larly the type of motivational and behavioral structures involved.

The findings relating attitudes to behaviors have been incon-

sistent. Fishbein and Ajzen (1972, p. 528) reviewed twenty-four studies

investigating the influence of a given manipulation on attitudes and

behavior; nineteen reported different results, two reported the same

effects, and three reported no effects at all. In a review of sixty

other studies manipulating or measuring attitudes, fifteen studies re-

ported a positive relationship with behavior, fifteen found no relation,

and the remainder found relationships under some conditions but not

under others. Wicker, in a review of thirty studies, concluded it was

more likely that attitude be found unrelated or slightly related to

behavior (1969).

There were a number of reasons for these inconsistent findings.

Perhaps the most important related to operational definitions of atti-

tudes and of behaviors. Fishbein and Ajzen (1972) found over 500 dif-

ferent operations designed to measure attitudes; they stated that there

was little reason to believe that these were measuring the same thing,

or that many even reached acceptable psychometric standards. Behavioral

criteria used have ranged from the quite common single or repeated observations of a single act (where the general pattern of findings was non-significant results) to indices based on repeated measurements of different behaviors. In the latter, significant positive relationships were common (Fishbein and Ajzen, 1972). Another reason for the inconsistent findings may have been that mediator variables, such as social norms, situational characteristics, expectancies about positive or negative reinforcements and personality characteristics, were present; these have not been systematically investigated.

Placing these variables and their relationships into the context of human relations training, it seemed reasonable to assume that the largest and most immediate impact should be observed in the cognitive structures of the participants. Inasmuch as these development programs espoused particular points of view and attempted to persuade participants to adopt certain attitudes, it seemed likely that motivational structures should be changed, but perhaps not to the same extent as cognitive structures.

Finally, there was less reason to find consistent changes in behaviors of participants. In addition to difficulties in measuring leadership behaviors accurately and reliably, there were many intervening variables possible in the relationship. For example, social norms, expectations of the participant's superior, peers, or subordinates were thought to have a large effect in determining behavior. The

participant may not have had the required behaviors in his skill repertoire, or he may have been unable to perform them without excessive energy cost.

Briefly summing up, general management or human relations training was conceived of as a rational-empirical strategy of change induction based on the views of the enlightenment and classical liberalism; findings from applied research were diffused through a linkage system to a user population. Cognitive structures, belief systems about the nature of reality, should have been considerably influenced by this strategy. Motivational structures, desires to engage in a general class of behaviors with respect to a class of psychological objects, were less likely to be influenced by human relations training: empirical evidence was not available on this matter. Empirical evidence on the impact of human relations training on behaviors of trainees provided mixed findings; impact varied as individual, group, organizational, and task factors related to the focal person varied. There were no empirical studies on the relationship between cognitive structures, motivational structures, and behaviors in a human relations training context.

Feedback and Goalsetting

This thesis was concerned with variations of leadership development programs. Human relations training was one strategy of change.

Feedback of pertinent information to the focal person regarding his leadership and placing him in a position to set goals were two other change strategies.

The data collection and feedback approach was based upon a normative, therapeutic model, and stemmed primarily from the Lewinian action research tradition (Chin, Benne, 1968, p. 58). An assumption of inadequate knowledge of the characteristics of system members by system members was made by the change agent. Attempts were made to heighten self-awareness of focal persons by providing information on the beliefs, attitudes, desires, or behaviors of significant organizational members (Lippitt, Watson, Westley, 1958, p. 47).

Research evidence indicated that feedback of superior, subordinate, or peer perceptions and expectations of trainee leader behavior did have a positive effect on both trainee attitudes and behaviors.

Ayers (1964) found that feedback to supervisors of their own LOQ scores and the norms for their peers was effective in accelerating the supervisors' thinking about their attitudes toward supervisory practices.

Daw and Gage (1967) found that feedback from teachers affected principal's behavior. Elementary school principals were informed how their teachers rated them and an ideal principal on twelve dimensions; other principals, similarly rated, had the information withheld. After a period of time thought sufficient by the experimenter to allow any

behavioral changes to be perceived by teachers, a second description of principals by teachers was obtained. Score changes indicated the principals who received feedback moved more toward teacher expectations than did those who did not receive feedback.

Data collected by the University of Michigan's Inter-Company Longitudinal Study from 14,800 respondents in 23 organizations have been analyzed in terms of the organizational development procedure that intervened between pre- and post-measures. Data handback, a treatment consisting of the obtaining of subordinate perceptions of leader, subordinate, and organizational characteristics and then the handing back to the work group supervisor the summary results, has produced significant changes, especially on the leadership indices of the measurement instrument, but only when climate is controlled (Bowers, 1973).

Goodacre (1963) reported an attempt to change management practices in regard to telling salaried subordinates what was expected of them, delegating responsibility, rewarding subordinates on the basis of performance, and openly communicating evaluations of subordinate performance to them. A questionnaire was given to 750 exempt subordinates which asked how well the managers did the above. There were four separate groups. The questionnaire was administered at a one-year interval. The experimental groups differed in the number of different treatments they received. These treatments were a new results-oriented performance appraisal program, individual feedback to the managers of

their subordinates' reactions to their management practices, and an
education program associated with the new appraisal program. The
department that had the greatest number of treatment variables changed
the most. It was not possible to isolate differential effects of the
variables.

The assessment center has been considered a management devel-
opment program in that it provided the assessee with exercises at
which to work, and in that it provided the assessee with feedback on
his performance. Although this selection-placement and development
program was becoming more common in the U.S., only two studies could
be found which evaluated the impact of the assessment on the trainee.

The Pacific Telephone and Telegraph Company was concerned if
there were any negative, long-range effects of the assessment center
upon unsuccessful assessees. A random sample of ninety-nine males were
given in-depth interviews by staff psychologists some time (exact time
not reported in secondary source) after an assessment center experience.
Of these, forty-seven were unsuccessful, that is, they were not promoted
after assessment. These unsuccessful assessees adjusted fairly con-
structively to the negative feedback, with thirty-eight percent using
some form of rationalization. Most appeared to have expanded their self
development activities.

Vogels (1973) studied the impact of assessment center experience
upon sixty males who were in their mid-thirties and potential managers

in a parts division of an automotive manufacturing firm. Independent variables were self-esteem, time, and assessment rating. Dependent variables were job performance and job satisfaction measured six months after assessment. Only one significant change was found: satisfaction with promotions declined for those assessees with high self-esteem who attained below median assessment ratings. Vogels suggested that these high self-esteem persons externalized to the promotion system their failure to obtain high assessments. No significant changes were found in job performance or job satisfaction for either high or low self-esteem assessees.

Management-by-objectives has been a popular technique which combined feedback of performance results with goalsetting. The descriptive, case study literature emphasized both the positive and negative results of the technique. One well-designed empirical study appeared in 1965 (Meyer, Kay, and French). The General Electric Company had a traditional performance appraisal program for its exempt employees. The personnel research group obtained permission to experimentally modify the appraisal interviews. Managers of a group of ninety-two appraisees, representing a cross section of salaried employees in a single plant, were asked to break the single appraisal interview into two, one for appraisal and suggestions, one for salary consideration. One half of the appraisees received a participative interview with mutual goalsetting, the other half received a

non-participative interview with superior imposed goals. Results showed that: 1) a more than average amount of criticism disrupted subsequent performance; 2) that mutual goalsetting resulted in more goal accomplishment than superior-imposed goals; and 3) that individuals accustomed to participation reacted more favorably to the participative interview than those not accustomed to participation. A subsequent field survey design, found attitudes to be more favorable among appraisees whose superiors used the new management-by-objectives appraisal than the attitudes of appraisees whose managers did not use it.

Two experiments tested the effectiveness of a new procedure for self-directed change in a self-analytic group and investigated the effects of variations in the change technique (Kolb, Winter, and Berlew, 1968). In both studies graduate students in industrial management selected personal change goals that could be measured in the group and worked to achieve them during weekly or biweekly group meetings. Initial commitment to achievement of the change goal was significantly related to change for $\underline{S}$s in both experiments. The twenty-five $\underline{S}$s in Experiment 1 who were in groups where exchange of feedback about the project was encouraged reported significantly more change than did the twenty-one $\underline{S}$s in groups where the projects were not discussed. In Experiment 2, where all fifty-four $\underline{S}$s were encouraged to discuss the projects, it was found that the amount of discussion of an individual's project in the group during the second half of the semester was

significantly related to both self-perceived change and to group leaders' ratings of change.

In field studies it has been difficult to readily determine if feedback or goalsetting regulated performance. Locke and Bryan (1969), in a laboratory study, attempted to separate the effects of knowledge qua knowledge from that of goalsetting using a 2 X 2 factorial design. The task was simple addition. The factors were knowledge of (raw) score (KR) vs. no knowledge of (raw) score (No KR), and hard vs. easy goals. Scores in the KR condition were given in such a form that they could not be used to set goals. The hard- and easy-goal $\underline{S}$s, on the other hand, were informed only of their progress in relation to a standard set by the experimenter. It was found that the hard-goal $\underline{S}$s worked significantly faster than the easy-goal $\underline{S}$s, but the KR and No KR groups did not differ in performance.

Two other studies established that feedback gave cues to performance, and in an ambiguous situation, was important in establishing mental sets or expectancies about future performance (Ilgren, 1971), and that it was the expectancy or anticipated satisfaction that best predicted subsequent goalsetting (Locke, Cartledge, and Knerr, 1970). Related research by Cummings, Schwab, and Rosen (1971) found that previous performance on a simple addition task exerted a significant positive impact on the goal levels set by $\underline{S}$s. When the effects of four forms of knowledge of results (KR) were compared it was found the

correct KR increased goal level significantly above that generated by No KR, while incomplete KR increased goal level insignificantly, and erroneous KR decreased goal levels below the level associated with No KR.

It was possible to determine the goals which trainees held regarding their behavior. It was thought that among trainees who received feedback on their past performance, those performance areas in which trainees set goals should have changed more than those in which trainees did not set goals. The impact of feedback should have been felt more heavily in the cognitive and motivational structures than the behavioral structure. The impact of goalsetting should have been felt throughout all structures. Beliefs should have become clearer and more defined, affect should have changed, and intentionality by definition should have changed. Furthermore, actual behaviors should have been changed most by goalsetting, less so by feedback, and even less by the cognitive inputs of general management training.

Cartwright's (1949) analysis of persuasion in the War Bond sales campaign suggested that a behavioral structure could be induced by placing the person in a decision situation. The necessity of making a decision in regard to a specific action would have brought the cognitive and motivational structures into salience. If the appropriate cognitive and motivational structures had been accepted by the person, the desired goalsetting and/or action would have resulted. The War

Bond campaign data illustrated this; the percentages of people buying bonds was much greater among those personally solicited than among those who were not. Furthermore, solicitation among people with favorable cognitive and motivational structures was much more likely to precipitate buying than it was among those persons with less favorable structures. Favorableness of cognitive and motivational structures was measured by the number of reasons a person could cite for buying bonds.

Within management training, the imposition of a behavioral structure, as placing the trainee in such a position as to decide to set or not set a goal for change, could be thought to be roughly equivalent to the above personal solicitation.

In summary, it was thought that an individual had cognitive structures which were in essence a belief system of what his world was like. He had motivational structures, which were tendencies or desires to engage in classes of behaviors. Motivational structures were closely related to cognitive structures. Finally an individual could be placed in a behavioral structure or situation which elicited acts related to the individual's motivational structure. Three strategies of changing leadership behaviors were considered: human relations training, feedback of characteristics of system members to the trainee, and goal-setting by the trainee (which is placing him in a behavioral structure). These strategies could be studied in terms of the impact they had on cognitive structures, motivational structures, and actual behaviors of

focal persons. If these change strategies were considered additively the author predicted that feedback alone would have a slight effect on cognitive structures, and that feedback and human relations training would have more effect on cognitive structures, a moderate effect on motivational structures, and some effect on actual behaviors, although the amount of effect on behavioral structures would be contingent upon the organizational climate of the focal person. If goalsetting were added to the feedback and human relations training, then the impact found in the feedback and human relations combination would be amplified.

The Measurement of Leadership

In the factor or dimensional approach to leadership, numerous variations on a theme of "consideration and initiation of structure" have been proposed (Hemphill, 1950; Hemphill and Coons, 1957; Halpin and Winer, 1957; Katz, 1950; Katz and Kahn, 1951; Kahn, 1958; Mann, 1962; Likert, 1961; Cartwright and Zander, 1960; Bowers and Seashore, 1966).

The Bowers and Seashore formulation, which they termed the "Four Factor Theory of Leadership" appeared to contain within itself all the dimensions postulated by the other theories, with the exception of those of Katz and Kahn. The dimensions Bowers and Seashore proposed

are Support, Interaction Facilitation, Goal Emphasis, and Work Facili-
tation. The former two together defined the more familiar "considera-
tion," and the latter two together defined the construct of "initiating
structure." Support was defined as behavior that enhanced someone
else's feeling of personal worth and importance. Interaction Facilita-
tion was behavior that encouraged members of the group to develop close,
mutually satisfying relationships. Goal Emphasis was behavior that
stimulated an enthusiasm for meeting the group's goal or achieving
excellent performance. And Work Facilitation was behavior that helped
achieve goal attainment by such activities as scheduling, coordinating,
planning, and by providing resources as tools, materials, and technical
knowledge.

The four scale, 13 item instrument measuring these supervisory
leadership factors had been subjected to extensive analyses and revi-
sions. In a recent form the alpha of the four supervisory scales
ranged from .85 to .94. Each of the four scales had some unique vari-
ance, enough to be considered a measure of some distinguishable aspect
of leadership, although there was a considerable degree of overlap.
The degree of overlap between pairs of indices ranged from a low of 52%
shared variance for Supervisory Support and Interaction Facilitation,
to a high of 66% for Goal Emphasis and Work Facilitation. On the
average, for any pair of indices, about 60% of the variability in one
index duplicated variability in the other index, while 40% of the

variability in each index was independent of the other. Approximately 39% to 45% of the variance in any one supervisory factor could have been accounted for by a general factor that ran through all four factors (Taylor and Bowers, 1972, p. 54). The items were of the summated scale variety, and were so worded that they were intelligible to many different types of persons and could be applied to many situations. However, it was just this universality of the items that this researcher believed hindered acceptance by the respondent. Numerous post-administration interviews by the researcher with all organizational levels of respondents in an insurance company indicated dissatisfaction with the lack of precise item meanings.

As usually administered, the four scales were embedded in the larger "Survey of Organizations," of the Institute for Social Research. Subordinates were asked to indicate how they saw their boss as acting at present and how they would have liked to see him act. This information was usually computer tabulated and handed back to the supervisor. The feedback information was couched in terms of means, standard deviations, percentage of subordinates responding to each item response category, and profile lines showing the difference between Now and Like responses.

This instrument provided a basis for the measurement of leadership and leadership changes for this study. However, it did not have the capability of fulfilling all the study's needs.

The reader will recall that the literature reviewed dealt with persons in three different roles: the role of trainee or focal person, the role of subordinate of a focal person, and the role of superior of a focal person. The latter role was important in the context of what the focal person believed his superior expected of him.

The Seashore-Bowers instrument was not capable of measuring trainee or subordinate beliefs about effective leadership behavior, the trainee's desires for his own leader behavior, nor the trainee's perceptions of his present behavior. Nor was it capable of measuring the trainee's beliefs about his superiors' expectations. With the inclusion of additional scales based upon the same items, it should have been capable of performing the above. It was capable of obtaining subordinate perceptions of present and desired leader behavior. The constructs of initiating structure and consideration it measured were quite appropriate for this study.

At this point, the discussion turns from a literature review to the actual research study.

CHAPTER II

STUDY OBJECTIVES

Study objectives were:

A. To develop an instrument, based on the one built by Bowers and

Seashore to measure leadership, which would be capable of

assessing the following:

1. trainee beliefs about effective leadership,

2. subordinate beliefs about effective leadership,

3. trainee perceptions of present own leader behavior,

4. subordinate perceptions of trainee leader behavior,

5. trainee desires for own leader behavior,

6. subordinate desires for trainee leader behavior,

7. trainee perception of his superior's expectations
    for trainee's leader behavior.

B. To develop a means of giving the trainee feedback information

based on the above measurements. The information should

include:

1. subordinates' perceptions of trainee present leader behavior,

2. subordinates' desires for the trainee's leader behavior,

3. information on 1, 2 above, but for a large group of subordinates who report to the trainee's peers,

4. trainee's own perceptions of his leader behaviors,

5. trainee's own desires for his leader behaviors,

6. information on 4, 5 above, but for trainee's peers,

7. trainee's peers' beliefs about effective leadership.

C. To set up the following treatment levels and to test hypotheses based upon them.

1. Treatments were:

Group G--Feedback of information contained in B above, human relations training, and placement in a goalsetting situation.

Group T--Feedback and a human relations training program.

Group F--Feedback to trainee.

Group C--No treatment, only posttest data collected.

2. Hypotheses were:

Hypothesis 1: Among the four groups, after the treatments, the group which changes its cognitive structure most toward behaving in a considerate and structuring manner will be G, followed in order by T, F, and C.

Hypothesis 2: Among the four groups, after the treatments, the group which changes its motivational structure most toward behaving in a considerate and structuring manner will be G, followed in order by T, F, and C.

Hypothesis 3: Among the four groups, after the treatments, the group which changes most toward behaving in a considerate and structuring manner will be G, followed in order by T, F, and C.

Hypothesis 4: Within group G, Ss who set goals will change more toward behaving in a considerate and structuring manner than Ss who do not set goals.

Hypothesis 5: Ss who perceive their superiors as expecting more considerate and structuring leadership of them will become more so than those who do not perceive this.

Hypothesis 6: Within the entire sample, the relationship between Ss' cognitive structures and behaviors will be lower than the relationship between Ss' motivational structures and behaviors.

CHAPTER III

METHODOLOGY

In short, the effects of four different levels of treatment
were compared on upper-level civil service executives divided into four
groups of approximately 15 each. Dependent variables of $\underline{Ss}$' attitudes
toward leadership, $\underline{Ss}$' and subordinates' perceptions of leader behavior,
as measured in a modified pre- and posttest administration of a ques-
tionnaire instrument, were analyzed for treatment effects. The instru-
ment itself was evaluated for construct validity.

Instrumentation

Two pre-treatment questionnaires were constructed; one was for
$\underline{Ss}$, and one for their subordinates. The $\underline{Ss}$' questionnaire (Appendix A)
was designed to measure cognitive structures or beliefs about effective
leadership, motivational structures or desires for one's own personal
leadership in one's present job situation, and perceptions of own
leadership behavior in one's present job situation. The subordinates'
form of the instrument (Appendix B) was designed to measure subordinates'
cognitive structures or beliefs about effective leadership, motivational

structures or desires for the leadership of one's superior vis-a-vis oneself, and perceptions of the actual leadership behavior of one's superior in the present job situation. Thus there were three major scales within each questionnaire, and the trainee and subordinate questionnaire forms complemented one another.

The instruments designed for post-intervention use were duplicates of the pre-intervention instruments in terms of basic scales. However, the trainee or S questionnaire also had questions which assessed changes in trainee cognitive structures, goals, behaviors, and environment; these were in open-ended scale format. The trainee instrument also had a twelve-item scale which assessed the trainee's perceptions of his superior's expectations for trainee leadership behaviors (Appendix C). The subordinate form of the instrument also had an open ended question about changes the subordinate perceived in the trainee's behavior during the period between measurements (Appendix D).

Within each scale were twelve items categorized in two subscales based on the Bowers and Seashore Four Factor Theory of Leadership (1966). These items were adaptations of those normally used in the Bowers-Seashore instrument; changes were intended to make the questions more restrictive in meaning, thereby hopefully reducing a high positive response bias and also increasing variance. While the Bowers-Seashore instrument separated out all four constructs, this instrument collapsed the constructs into two, consideration and initiating

structure. This was deemed desirable inasmuch as basic construct validity of the instrument had yet to be assessed; as noted earlier, the Bowers-Seashore instrument had a considerable degree of scale intercorrelation. A five-choice, summated scale format was used. Following the 36 item main body of the questionnaire were biographical items of logical relevance to the research.

Determination of scale validity started with the computation of item-total scale intercorrelations on the consideration and initiation of structure subscales. This provided empirical evidence for the rationally based assignment of items to subscales. Construct validity of the instrument was assessed through the use of a multitrait-multimethod matrix. Campbell and Fisk (1959) suggested that both convergent and discriminant validity be assessed completely in order to better understand the extent to which the operational definitions of constructs reflect the constructs. In this instance the traits in the matrix were consideration and initiating structure behaviors of the trainee. Only these two scales were used in the matrix as they were the only two scales in which both trainees and subordinates were referring to the activities of the focal person. To have attempted convergent validity coefficients for the motivational structure scales would have been illogical, for then one would have been comparing trainees' own desires for the focal person's behavior and subordinates' own desires for the focal person's behavior; these were two different things. This also

held true for the cognitive structure scales. The methods were self-

reports of trainees and reports of the subordinates of trainees. The

matrix was set up as shown in Table 1.

TABLE 1.--The Multitrait-Multimethod Matrix Used to Assess Construct
Validity of the Behavior Scale of the Instrument.

Traits		Method 1		Method 2	
		A_1	B_1	A_2	B_2
Method 1	A_1	( )			
	B_1	**	( )		
Method 2	A_2	—	##	( )	
	B_2	##	—	**	( )

Note.--Trait A refers to the Initiating Structure Behavior Scale.
Trait B refers to the Consideration Behavior Scale. Ss' responses were
denoted by Method 1, subordinate responses were denoted by Method 2.
The convergent validity coefficients are the two values denoted by
underlining. The reliability coefficients are the four values denoted
by parentheses. The heterotrait-monomethod coefficients are the two
values denoted by **. The heterotrait-heteromethod coefficients are
the two values denoted by ##.

In this assessment of the instrument the reliability coeffi-

cients for each subscale were first examined; they should have been

high. Also, if one reliability coefficient was much higher than

another, the convergent validity coefficient of the two together might

have emphasized and exaggerated the method variance of the high one. A second factor considered was the standard deviation of the scales; a curtailment of range would have depressed the reliability coefficients and intercorrelations.

Next the convergent and discriminant validity were examined. Summary statistics for assessing significance of differences between intercorrelations were not appropriate for this study. The intent was to assess the present instrument so that it might be improved and to determine the degree of credibility of the main results of this study. Were this a study which evaluated a fixed, published instrument, as the SBDQ or the LOQ, then perhaps a multimethod factor analysis (Jackson, 1969) might have been appropriate.

Convergent validity was shown by the values which are underlined in Table 1; the higher these values the better, and they must have been at least significantly higher than zero. Convergent validity is the degree to which the results of two or more methods of measuring the same stimulus agree with one another. The methods may be different in that the persons providing the observations have different roles or in that the scoring procedures are different. In this instance, the respondents had different roles.

Assessing discriminant validity involved the following comparisons. Each convergent validity coefficient should have been higher than the heterotrait-heteromethod coefficients lying in its column or

row. Secondly for any given variable, the convergent validity coefficients should have exceeded the monomethod-heterotrait coefficients.

Crossvalidation was possible in this study. Measurements were taken at two different points in time with some relatively small differences in the respondent samples. The above matrix was evaluated for each of the administrations. Although the actual values of the coefficients were expected to vary between the two matrices, the patterns should have remained stable.

The Setting

The Personnel Management Program Service, Michigan State University, provided the Michigan Civil Service Commission with an Executive Development Program . The course consisted of sixty hours of classroom time, with seven half-day sessions of three hours each, and six full-day sessions of six and one half hours each. The program ran from March 7 to May 30, 1973. Focus was on three topical areas:

1. The Management Process
   The Role of an Executive
   Planning and Organizing
   Setting Goals and Objectives for Results
   Decision Making
   Management of Management Time

2. The Management of People
   Motivation
   Communicating and Reviewing Performance
   Leadership Styles and Climate

Job Satisfaction and Enrichment
Organizational and Team Development

3. State of Michigan Management Programs
   Civil Service Programs
   New Management Systems

Varied yet rather traditional techniques were used. The greatest amount of time was spent in lecture and lecture-discussion format. Here the speakers, some of whom were of national reputation and with credentials in psychology, acted as experts giving out information. One to two hours out of most four-hour blocks of instruction involved either group discussion, role-playing, simulation exercises, or leadership style analysis. For example, the New Truck Dilemma was used in the decision-making session, The Desert Survival Problem was used to illustrate points in the Team Development session, and the Profile of Organization Characteristics was used to illustrate leadership styles.

Sample

The sample consisted of upper-level government executives (GS-14 and above) from all functions of the state of Michigan. Table 2 shows sample size and method of selection in each treatment condition.

TABLE 2.--Sample Size in Each Treatment Level and Method of Selection.

Treatment level or group	Final N	Selection Method
G	11	Ss participated in training course, Spring, 1973, on Tuesdays.
T	18	Ss participated in training course, Spring, 1973, on Wednesdays.
F	14	Superiors of Ss in Group G and T selected these Ss. They were considered next in order for similar training as Ss in Groups G and T were receiving.
C	18	Ss participated in training course, Fall, 1973.

Focal persons in Groups T and G were participants in the Executive Development Program in Spring 1973. As one half of the participants attended sessions on Tuesdays and the other half on Wednesdays, this served as the basis of selection of persons into groups G and T. At the time of assignment to treatment conditions there was no information available to the experimenter which indicated that any factor relevant to the experimental design was either responsible for persons attending the Tuesday rather than Wednesday session or discriminated between these persons. There were initially 59 persons in these two classes; 29 persons were in the G group, and 30 persons were in the T group. The total population of managers in the state government at this level was approximately 2000.

Focal persons in group F were obtained by asking the superiors of 51 of the persons in Groups G and T to ask another of their immediate subordinates to participate in the study. This subordinate was to be the next to be sent to a training program similar to the Executive Development Program. Letters requesting the additional research subjects were hand carried to their superiors by the persons in groups G and T (Appendix E).

The fourth (C) group of 18 $\underline{S}$s was assigned to a posttest only, no treatment level. These 18 persons, of a total of 22 managers in the Fall 1973 Executive Development Program, volunteered to participate in return for $\underline{E}$ providing them with information about their leadership. No persons who were part of group F were included in this no treatment group.

An examination of the biographical data of the $\underline{S}$s showed them to be, on the average, 40 to 49 years of age, college graduates, and to have previously attended two to three seminars or programs dealing with their supervisory skill development. They had served the State of Michigan for 10 to 20 years, and had been in their present job less than five years but more than three. They had ten or more years of supervisory experience and most had either asked their superior to be involved in a training program in the indefinite future or gladly accepted when asked to participate by their superiors.

Subordinates of the focal persons, as a group and on the average, were in the age range of 30 to 50 years and had either had some college or had graduated from college. They had attended two supervisory skill development seminars or programs, and most had less than four direct subordinates but more than one. Their supervisory experience ranged from three to ten years. They had been in Michigan state government for 10 to 20 years and in their position for three to five years. They had been direct subordinates of their present managers for from two to five years.

The question of sampling as related to external validity was addressed. Were these Ss systematically different from other high level executives in the state government? Since sampling from the population was not random, there was that possibility. Data on this issue were not readily available. However, one could argue that executives were constantly being trained, and most expected to receive leadership training within their careers; these persons were simply involved in an ongoing organization activity.

Randomization was another issue that was addressed. Were there significant differences between groups as initially sampled? As seen in Table 2 the method of assigning persons to groups varied. Since the method of assigning persons to groups was not a random method, the possibility of systematic differences on pertinent variables existed. However the argument referred to in the previous paragraph applied here

also. These persons were involved in an ongoing organizational activity, some were trained in Spring 1973, some were trained in Fall 1973, and others were considered next in order for training by their own superiors. Data were available to assess group differences. Leadership data for $\underline{S}$s in groups G, T, and F based on the pretest questionnaire administration were analyzed; results are in the Results section of this paper; comparisons of these data for group C with the other three groups would have been meaningless as the data were gathered at two different times and organizational maturity may have caused differences between the groups. Biographical data could, however, be compared for all four groups. While biographical information was not central to the question, it did provide additional insights and also information on group C. The product of this examination is also presented in the Results section.

Subject attrition was a critical factor. Table 3 shows attrition from the initial contact sample for each of the four groups. The % return was computed by dividing the first number in each row into the last number in each row. Perhaps for group F a more realistic return rate than the .27 presented was .47. This .47 was the quotient obtained by dividing the number of persons who agreed to be pretested into the number of persons with complete posttest data. While 51 requests to participate were passed on to superiors of the Spring course

participants, it was not known how many of these superiors had other subordinates or had requested these subordinates to participate. '

TABLE 3.--Attrition from the Initial Sample.

Group	Pretest request sent (n)	Agreed to be pretested (n)	Pretest data complete (n)	Posttest request sent (n)	Posttest data complete (n)	% return
G	29	27	24	24	11	38
T	30	30	29	29	19	63
F	51	30	26	26	14	27 (47)
C				22	18	82

The major reason for the drop between the n's in the "Agreed to be pretested" column and in the "Pretest data complete" column was the S had less than three persons return completed subordinate forms of the instrument. To obtain feedback of subordinate perceptions of his behavior, the S had to have had at least three subordinate forms of the instrument completed. If Ss in groups G, T, and F did not receive feedback, they had to be dropped from the study.

The decision of some persons who received feedback packets to not participate in the posttest caused the most serious drops in group sizes. In group F one S retired from public service, one S said his

work group was too busy to participate further, and one $\underline{S}$ said he had not enough subordinates, time or confidence in the instrument to participate further. In group T, one person transferred to another job and became too busy to participate. Outside of these few persons, no other $\underline{Ss}$ who dropped out of the study communicated with the experimenter after being sent the second set of materials. One reminder letter was sent to all $\underline{Ss}$ who were in the posttest group and who did not return any completed questionnaires. The most serious drop in size occurred in group G, which also was involved in the most treatment levels and hence the most work.

This attrition raised serious questions of sampling differences between groups as finally constituted. Sampling differences were assessed by examining biographical and pretest leadership style data on persons in each group who had complete posttest data. The products of this examination are presented in the Results chapter.

Design

The experimental design is summarized in the following table:

TABLE 4.--The Experimental Design.

Group	3/6, 7 Start Training / Pretest	5/9-14 Feedback_1	5/10 Goal Setting Situation_1	5/30 End Training	7/26 Goal Setting Situation_2	10/2 Posttest	1/18/74 Feedback_2
G	X	X	X	X	X	X	X
T	X	X		X		X	X
F	X	X				X	X
C						X	X

Time and Activity (Year is 1973)

(X in the table above indicates that data were collected.)

Dependent measures were based upon the questionnaire instrument. The instrument was administered to both the focal person and to from three to six of his immediate subordinates. In the event the S did not have three direct subordinates, he was allowed to obtain the responses of a co-worker who knew him well. Instructions simply requested S to choose from three to six subordinates who reported to him directly, including secretaries. Responses, coded for the S's name, were recorded on standard multiple choice answer sheets and then mailed back to the researcher. Both S and his subordinates were told, through the instructions on the instrument, that their answers would be anonymously reported back to the S. The subordinate form of the questionnaire instructed the respondent that his responses for feedback purposes would be grouped and averaged with those of at least two other persons who reported directly to S. In situations where fewer than three persons reported on S, he was informed that he would only receive information of a general nature, and no information directly pertinent to his subordinate's responses.

Feedback of pretest data was given on May 9-14. Format for the feedback package is in Appendix F. Groups T and G received their data in a one hour session as part of the training day. The researcher conducted the sessions; attempts were made to not present more information than that which would be given to Group F in written form. To further even out differences between groups T, G, and F in feedback

presentation, the answers to questions asked by Groups T and G were written and included in F's feedback (Appendix G).

Ss in Group G were placed in a goalsetting situation by including a questionnaire (Appendix H) in their feedback packet. This requested them to set numerical goals for change on any item(s) they wished, and to send the questionnaire back to the researcher. If they wished to set no goals, they were to return the empty questionnaire. Of the twenty-four persons who were given the goalsetting exercise, only five returned it to the researcher. In view of the low response rate, the author thought that the exercise was not perceived by many as a goalsetting instrument, that is, it may not even have entered their cognitive structures. It was included with quite a bit of other information in the feedback packet. To guard against this possibility, a second exercise (Appendix I) was sent to the non-respondents on July 24. Twelve of nineteen letters were returned. Thus the total return rate was seventeen of twenty-four or 71%.

Ss in Group C completed the instrument at the time of the post-intervention measurement, but received no treatment, were not aware that they were involved in this study, and were considered a posttest only control group.

Feedback of post-treatment leadership behaviors and desires, and also, of the results of the study was given to members of all four groups in return for their cooperation (Appendix J). Reports were

also made to the School of Labor and Industrial Relations, Michigan State University and to the Training Division, Civil Service Department, State of Michigan.

Data Analysis

The exact method of data analysis for the testing of the hypotheses was dependent upon the results of the scale validation and the results of the analysis of pretest data for sampling differences between the treatment groups. Only those scales which demonstrated sufficient construct validity, as outlined earlier, could be used in testing for sampling differences between groups and for hypothesis testing.

The determination of the degree of equality between groups was to have been done by performing a multivariate analysis of variance, followed by univariate analyses of variance if necessary, on all validated scales assessing cognitive structures, motivational structures, and behaviors of $\underline{S}$s in groups G, T, and F; pretest data were to have been used. Group C had only posttest data available. This, as mentioned earlier, was unsuitable for the present analysis. Behaviors assessed by both the $\underline{S}$ himself and his subordinates were included in the analysis.

Multivariate analysis of variance (MANOVA) followed by uni-

variate analyses of simple main effects (ANOVA) are recommended when

there are a number of dependent variables (Hummel and Sligo, 1971).

MANOVA has the advantage of treating dependent variables as a set and

performing a single F test for the effect under consideration; this

allows one to control alpha levels during any subsequent ANOVA per-

formed on the dependent measures. The problem with simply conducting

a series of ANOVAs on dependent measures without first performing a

MANOVA is that spuriously significant F ratios may result due to in-

flated alpha levels resulting from intercorrelated dependent variables.

Generally, if a MANOVA is significant, one or more subsequent ANOVAs

will also be significant. Because of the significant multivariate

test, one is more confident that significant univariate tests are not

spuriously so.

Given that the scales demonstrated sufficient validity and

given that pretest scores showed no significant group sampling differ-

ences, then hypotheses 1, 2, and 3 could have been tested. A MANOVA

using pre-posttest difference scores would have been conducted with

the following eight dependent measures:

1. Cognitive Structure, Initiating Structure, as perceived by
   trainee.

2. Cognitive Structure, Consideration, as perceived by trainee.

3. Motivational Structure, Initiating Structure, as perceived by
   trainee.

4. Motivational Structure, Consideration, as perceived by trainee.

5. Initiating Structure Behavior, as perceived by trainee.

6. Consideration Behavior, as perceived by trainee.

7. Initiating Structure Behavior, as perceived by subordinates.

8. Consideration Behavior, as perceived by subordinates.

Pretest scores were not collected from Group C. This control group was used to provide a maturation only comparison group the members of which were not sensitized to thinking about leadership in terms of the instrument prior to the posttest. This type of control group, however, opens the experimental design to a source of internal invalidity; the design was not complete in the sense that there was no comparison group which received the pretest but did not get feedback. Another group which received the pretest condition but no feedback would in a certain sense have rounded out the experimental design. Nevertheless, it was decided not to attempt to get such a group not only because of the excessive time cost of pretesting to the organization and the difficulty of explaining what was going on and motivating subjects but also because of policy toward subjects on the part of the experimenter and sponsoring organizations to have all $\underline{Ss}$ receive some fairly immediate return, in the form of feedback, for their cooperation. So a design was used which contained a no pretest control group.

The lack of pretest scores for group C then posed a problem in data analysis. Analysis options were at least three: 1) Use only

posttest scores in the analysis; although this option would have used

data from all four groups and provided a conservative test of the

hypotheses, it would not have controlled for initial (pre-treatment)

status differences. 2) Use only groups G, T, and F in the analysis,

that is, use only the kind of control group represented by group F and

then base analyses of treatment effects on difference scores. This is

a reasonably powerful analysis method, but provides no way of eliminat-

ing the effect of feedback (present in all three groups T, G, and F).

3) Estimate on some rational basis what the pretest scores for group C

with no feedback would have been and then use difference scores for

all four groups in the analysis. No one of these choices is ideal.

All these methods were used in order to develop as complete as

possible an understanding of the available treatment effects. Choice

(3), a not very orthodox design, was included because it attempted to

control for both pre-treatment (initial) status differences and pos-

sibly strong feedback effects. Choice (3), because of its somewhat

unorthodox nature, then, needs fuller explanation. It presumably may

be used when certain conditions in the data and sampling are fulfilled:

1) There should be no reason to in any way suspect that groups G, T,

F, and C were drawn from different populations. 2) Measured differ-

ences on the dependent variables between the means on G, T, and F on

the pretest should not be significant. 3) The distribution of esti-

mated scores for C should closely approximate the distribution of

pretest scores of groups G, T, and F combined in terms of mean and standard deviation; the pre-posttest correlation should be approximately equal between G, T, F, combined with C. 4) Finally, the $\underline{S}$s' perceptions of their bosses' expectations for their leadership behavior (BOSXPECTS), used in hypothesis 5 as an independent variable, should not be significantly related to pretest scores of groups G, T, and F.

With respect to condition number one, the earlier description of the way subjects were selected for the several groups gave no reason to believe that the subjects were in any way different from one group to the next. The second mentioned condition, no significant differences between groups, applied to all the above mentioned analysis methods and was not unique to this particular one. The third condition was under the control of the experimenter. The fourth requirement for the use of these estimated scores was that BOSXPECTS was not significantly related to pretest dependent measures, that is, that an independent variable was not an a priori covariate of any dependent variables. This was a simple logical requirement. The statistical analysis here was simply to correlate each of the three dependent variables with BOSXPECTS. If all these requirements were met, the estimated pretest scores could be used in the testing of hypotheses 1, 2, 3, and 5.

Pretest scores for Group C could have been generated in either of two equivalent ways. The leanest, most stripped down way would

have involved making a series of assumptions and writing corresponding

equations to arrive at scores with characteristics that fitted the

assumptions. The second, more roundabout way was to go through a

series of actual transformations of scores to arrive at what were for

all practical purposes the same end point. The second way, which was

the one used, had the advantage at the time, it was believed, of making

the assumptions more explicit and the steps in the process more under-

standable.

This relatively roundabout method, then, was as follows. For

each of the scales:

1. Obtain the mean and standard deviation of pretest scores for

   groups G, T, and F combined.

2. Obtain the pre-posttest correlation for scores in groups G,

   T, and F combined.

3. Obtain the estimated individual pretest scores for group C by

   taking a sample of scores from the total set of pretest scores

   of groups G, T, and F. This sample, the N for which was the

   same as that of group C, that is, 18, was constructed so as to

   have the same mean and standard deviation as that of the com-

   bined G, T, and F groups.

4. Obtain the pre-posttest correlation for the final sample score

set and the actual posttest scores for group C. Estimated

pretest scores were reassigned to individual $\underline{S}$s until the

estimated pretest-actual posttest correlation of group C

closely approximated that of combined group G, T, and F.

The resulting pairing of estimated pretest scores and actual posttest scores in group C provided an adequate (same mean, standard deviation, and conservative pre-posttest correlation) estimate for certain purposes of what would have been obtained had actual pretest data been gathered on group C. It should be noted that analyses performed with these estimated scores were limited to groups and not individuals. The usual cautions relating to the use of change scores in individual subjects were therefore not applicable to the group-level analyses of this study.

Now that the group C pretest problem has been in a certain sense handled, it is possible to return to the main plan with respect to data analysis. If the F-ratio resulting from the MANOVA testing hypotheses 1, 2, and 3 was not significant, no further analyses should have been performed. If the F-ratio was significant, then a separate univariate test on each of the dependent variables should have been performed. Table 5 shows the general ANOVA design and Figure 1 illustrates the hypothesized treatment effects. It can be seen from

the figure that group G was expected to show the greatest treatment effect, followed in order by groups T, F, and C.

TABLE 5.--General Model for Univariate Analyses of Variance Used in Testing Hypotheses 1, 2, and 3.

Source of Variation	SS	df	MS	F
Treatments		k-1		
Within Treatments		k(n-1)		
Total		kn-1		
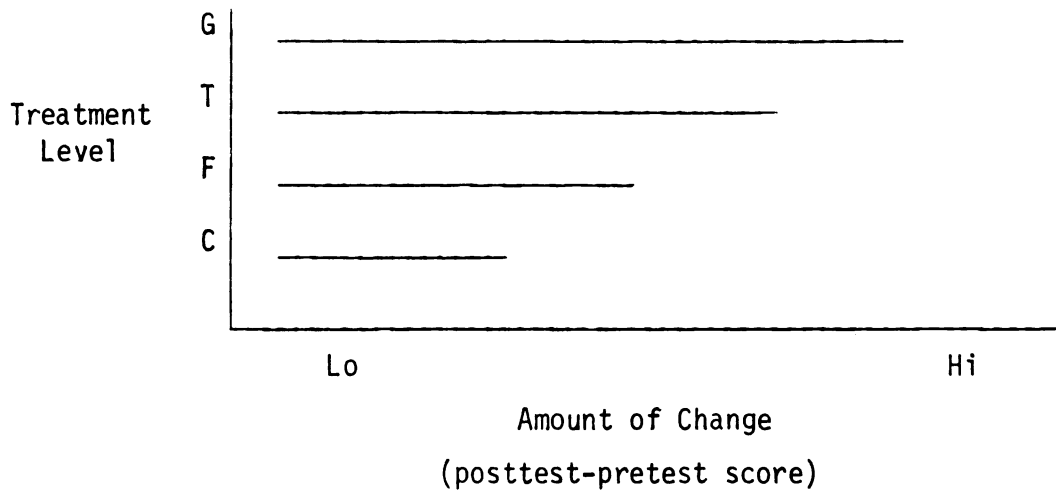
Fig. 1.--Hypothesized Treatment Effects.

If mean pretest scores of groups G, T, and F were significantly different from one another, then hypotheses 1, 2, and 3 could not have been tested.

Hypothesis 4 stated that within group G, trainees who set goals would change more toward behaving in a considerate and structuring manner than trainees who did not set goals. This hypothesis would have been tested best by dividing group G into subgroups as follows: persons who set goals on the Initiation of Structure scale versus persons who did not; persons who set goals on the Consideration scale versus those who did not. However, when this was done, the following resulted: Total group size was eleven. All persons who set goals on the Initiating Structure scale also set goals on the Consideration scales. Goal setting sub-group size was nine, leaving two persons in the non-goal set group. Statistical tests for treatment effects with this group would have been difficult to interpret because of the too low total N and vastly different treatment group sizes. As a result it was decided to combine the two persons in the no-goal sub-group of group G, with seven persons randomly selected from group T to achieve equal-sized groups. Group T had received the same treatment level as G, with the exception of not being asked to set goals down on paper. This makes group T persons conceptually similar to the two persons in the no-goal sub-group. Moreover, had all 18 members of group T been combined with the two no-goal group G persons, the size of the analysis groups would

have been quite disparate for statistical analysis. The appropriate statistical test was a MANOVA with four dependent measures. These were pre-posttest difference scores based on $\underline{Ss}$' reports of initiating structure and consideration behavior and subordinates' reports of the same. If the MANOVA was significant, univariate analyses of variance should have been performed.

Hypothesis 5 stated that $\underline{Ss}$ who perceived their superiors as expecting more considerate and structuring leadership would become more so than those who did not perceive this. The posttest included a scale measuring the $\underline{S}$'s perception of his immediate superior's desires for his leadership (BOSXPECTS). The groups were all considered as one, and were split into high and low expected consideration and expected initiation of structure groups; these median splits were based upon scores on the respective sub-scales of the aforementioned scale. MANOVA followed if necessary by ANOVAs was the appropriate statistical test.

Hypothesis 6 stated that the relationship between trainee cognitive structures and behaviors would be lower than the relationship between trainee motivational structures and behaviors. As the pretest sample was larger than the posttest, pretest data should have been used, and separate analyses should have been done in the Initiating Structure and Consideration subscales. Correlation coefficients should have been computed for the following variable pairs:

1. Trainee reported Cognitive Structures and trainee reported Motivational Structures.

2. Trainee reported Cognitive Structures and trainee reported Behaviors.

3. Trainee reported Cognitive Structures and subordinate reported trainee Behaviors.

4. Trainee reported Motivational Structures and trainee reported Behaviors.

5. Trainee reported Motivational Structures and subordinate reported trainee Behaviors.

   Both trainee and subordinate reports of trainee behaviors

should have been used to provide independent estimates.

CHAPTER IV

RESULTS

Scale Validation

The scale validation procedure followed the convergent-
discriminant validity strategy outlined earlier. There were three
basic, twelve-item scales measuring beliefs about effective leadership,
desires for effective leadership in the focal person, and perceptions
of leadership actions in the focal person. Each of the three basic
scales had equal-sized subscales measuring a priori defined constructs
termed consideration and initiating structure. Responses of both focal
persons and their subordinates were obtained; this operation was done
both before and after the treatment, with the exception of Group C
from which only post-treatment scores were obtained. An examination
of item-scale correlations, interscale correlations, internal consis-
tency reliabilities, and multitrait-multimethod matrices led to the
conclusion that the instrument scales lacked sufficient reliability and
were not related among one another as had originally been conceptual-
ized. The instrument was rescaled. The initiating structure and
consideration subscales were combined; the beliefs and desires scales

were combined. The result was a 24-item attitudes toward leadership scale and a 12-item perceptions of leadership acts scale. Another set of validation analyses was performed on these new scales.

Initially the twelve core items, which are repeated in different formats in the belief, desires, and behaviors scales, were separated into two equal-sized subscales, consideration and initiating structure. The separation of items was done on the basis of the face validity of the items and the placement of fairly similar items in the Bowers and Seashore instrument. The left-hand three columns of Table 8 show the number of items and the original scale placements.

Item-scale correlation matrices (Appendix K) were developed for both groups of respondents and for both administrations of the instrument. This set of results indicated that most items were highly related to both initiating structure and consideration scales, and also there was little differentiation between items initially assigned to the separate beliefs and the desires scales.

Table 6 presents the interscale correlations with alpha reliabilities in the diagonal. Note that the correlations are corrected for unreliability in the appropriate scales by means of the formula $r_{TG} = r_{tg}/\sqrt{r_{tt}r_{gg}}$. It can be seen that the IS and CN scales correlate very highly, and that the belief and desires scales correlate very highly. Alpha reliabilities, especially in regard to CN subscales, need considerable improvement.

TABLE 6.--Interscale Correlation Matrices with Alpha in the Diagonal.

Scale	BIS	BCN	NIS	NCN	LIS	LCN
Pretest, Subject sample, N = 85						
BIS	.60					
BCN	.98	.48				
NIS	.63	.28	.69			
NCN	.36	.69	.98	.50		
LIS	1.05	.95	.37	.21	.74	
LCN	.78	1.33	.12	.67	1.07	.48
Posttest, Subject sample, N = 64						
BIS	.61					
BCN	.98	.53				
NIS	.98	.71	.71			
NCN	.50	.83	.93	.67		
LIS	.96	.94	.71	.55	.79	
LCN	.64	1.10	.63	.87	1.03	.73
Pretest, Subordinate Sample, N = 371						
BIS	.59					
BCN	.75	.46				
NIS	.30	.26	.80			
NCN	.25	.56	.99	.59		
LIS	1.05	.60	.38	.28	.69	
LCN	.72	1.20	.31	.34	.79	.57
Posttest, Subordinate Sample, N = 262						
BIS	.64					
BCN	.89	.51				
NIS	.36	.19	.81			
NCN	.34	.62	.94	.55		
LIS	1.04	.78	.37	.38	.70	
LCN	.85	1.29	.24	.60	.95	.60

Note: Correlation coefficients are corrected for unreliability. Scale codes are as defined in Table 8.   IS refers to the initiating structure subscale; CN refers to the consideration subscale.   B refers to the belief scale; N refers to the behavior or 'now' scale; L refers to the desires or 'like' scale.

The construct validity of the behavior scale (items 13 to 24) of the instrument was assessed through the use of the multitrait-multimethod matrix outlined earlier in Table 1. For reasons presented in the Methods chapter similar analyses were not performed on the Beliefs and Desires scales. Table 7 presents the completed multitrait-multimethod matrices.

Alpha reliability coefficients are neither high nor stable for scores of subjects; these were based upon an N = 62. The subordinate group alphas were stable, but the consideration scale alphas were low; both of these were computed on an N = 249. In general, the alpha of the initiating structure scale was considerably higher than that of the consideration scale. Earlier it was reported that alphas of the scales measuring four factors in the Bowers-Seashore instrument, using subordinate responses, ranged from .85 to .94. This instrument's comparable alphas on two factor scales ranged from .55 to .81. Apparently the modifications to the Bowers-Seashore items which this researcher performed had an adverse effect on reliability. Also of interest was the standard deviation of the scales; the possible range of scale scores was 0.00 to 4.00. The standard deviations indicated no major curtailment of range which would have depressed reliabilities and intercorrelations.

TABLE 7.--Construct Validity of the Behavior Scale.

| | Traits | Methods | | | |
| | | Subjects | | Subordinates | |
		IS_1	CN_1	IS_2	CN_2
		Pretest Data			
Subjects	IS_1	(.69)			
	CN_1	.98	(.50)		
Subordinates	IS_2	.27	.58	(.80)	
	CN_2	.27	.64	.90	(.59)
s.d.		.47	.50	.41	.32
		Posttest Data			
Subjects	IS_1	(.71)			
	CN_1	.88	(.67)		
Subordinates	IS_2	.43	.03	(.81)	
	CN_2	.58	.48	.99	(.55)
s.d.		.48	.53	.40	.38

Note: Trait IS refers to the initiating structure scale; trait CN refers to the consideration scale. Subject responses are denoted by Subject; subordinate responses are denoted by Subordinates. Alpha reliability coefficients are enclosed in parentheses, and convergent validity coefficients are underlined. Scale standard deviations (s.d.) are at the bottom of each matrix. Correlation coefficients are corrected for unreliability.

The convergent validity coefficients were low and not stable across administrations. Discriminant validity was assessed by comparing a convergent validity coefficient with the two heterotrait-heteromethod coefficients in its column and row and also by comparing it to the single heterotrait-monomethod coefficient in its column or row. The monotrait-monomethod coefficient should have been higher than any of these three coefficients. An examination of the data showed this ideal situation not to have existed for either trait in either administration. On the contrary, the heterotrait-monomethod coefficients, which approach unity, considerably exceeded their respective convergent validity coefficients. There was some evidence, therefore, that self-reports of focal person behavior and observer reports were not measuring the same thing. This was evidenced by the low convergent validity and the extremely high heterotrait-monomethod coefficients. However, it was just this inconsistency between responses of trainees and their subordinates that necessitated the use of both methods in hypothesis testing in this study so as to gather as much different information as possible about treatment effects.

On the basis of this analysis it was decided to rescale the 36 item instrument into a 24-item scale measuring attitudes toward leadership and a 12-item scale measuring perceptions of leadership behavior. The attitude scale consists of the items 1 to 12 from the old beliefs scale and items 25 to 36 from the old desires scale. The

behaviors scale consists of the same items as the old behavior scale

(13 to 24). Items are no longer grouped into clusters termed initiating structure and consideration. Table 8 shows the items which are in the original and revised scales.

TABLE 8.--Original and Revised Scales.

| Item | Original Scales | | Revised Scales |
	Subscale	Major Scale	Major Scale
1-6	Initiating Structure	Belief (BIS)	
7-12	Consideration	Belief (BCN)	Attitude
			Toward
25-30	Initiating Structure	Desire (LIS)	Leadership
31-36	Consideration	Desire (LCN)	(ATT)
13-18	Initiating Structure	Behavior (NIS)	Behavior
19-24	Consideration	Behavior (NCN)	(BEH)

Table 9 presents the item-scale correlation coefficients for both administrations and both groups of respondents.

Table 10 presents the interscale correlations for both administrations and both groups of respondents.

Note the general instability of the coefficients between administrations. The subordinate ATT-S ATT coefficient was negative in the pretest and positive in the posttest; the discussion centered around Table 14 refers to this. The subordinate BEH-S BEH coefficients in

TABLE 9.--Item-Scale Correlations on the Revised Scales.

The coefficients which lie within the solid rectangles are the item-scale coefficients which were computed for the items designated as belonging to that scale. They have been corrected for the inclusion of the item in the scale.

Item-Scale Correlations, Pretest, Subordinate Sample, N = 357.

Scale	__Item__								
	01	02	03	04	05	06	07	08	09
ATT	33	42	40	41	38	23	21	29	26
BEH	10	11	09	11	12	19	04	10	12
	10	11	12	13	14	15	16	17	18
ATT	33	32	32	21	14	20	20	15	27
BEH	09	24	22	59	61	54	56	41	41
	19	20	21	22	23	24	25	26	27
ATT	14	07	25	15	27	24	38	38	52
BEH	16	55	39	40	35	46	18	20	16
	28	29	30	31	32	33	34	35	36
ATT	34	45	31	23	41	32	46	25	33
BEH	09	15	11	-01	19	08	12	35	19

Item-Scale Correlations, Posttest, Subordinate Sample, N = 255.

Scale									
	01	02	03	04	05	06	07	08	09
ATT	47	48	37	46	43	28	28	30	42
BEH	21	14	05	21	08	21	07	17	09
	10	11	12	13	14	15	16	17	18
ATT	42	36	29	16	11	15	23	20	23
BEH	16	21	10	58	55	56	59	49	44
	19	20	21	22	23	24	25	26	27
ATT	20	14	25	18	19	18	40	49	55
BEH	10	56	31	41	23	45	19	19	11
	28	29	30	31	32	33	34	35	36
ATT	44	45	35	34	55	38	50	30	43
BEH	24	15	26	04	21	07	13	26	25

TABLE 9.--(Cont'd).

Item-Scale Correlations, Pretest, Subject Sample, N = 85.

Scale					Item				
	01	02	03	04	05	06	07	08	09
ATT	40	35	43	37	45	35	11	43	32
BEH	23	12	30	12	25	16	-04	22	33
	10	11	12	13	14	15	16	17	18
ATT	46	44	43	24	12	32	15	13	04
BEH	04	27	05	50	52	43	32	52	20
	19	20	21	22	23	24	25	26	27
ATT	21	20	24	-01	08	20	58	53	53
BEH	12	51	44	27	21	17	15	11	16
	28	29	30	31	32	33	34	35	36
ATT	49	59	43	20	42	24	45	36	36
BEH	02	21	21	12	12	27	02	24	-11

Item-Scale Correlations, Posttest, Subject Sample, N = 62.

	01	02	03	04	05	06	07	08	09
ATT	35	32	49	45	35	30	32	37	29
BEH	37	33	29	41	19	25	17	50	31
	10	11	12	13	14	15	16	17	18
ATT	61	33	41	39	16	46	59	43	26
BEH	52	02	31	53	40	56	53	43	21
	19	20	21	22	23	24	25	26	27
ATT	35	48	32	35	22	24	60	61	66
BEH	20	55	36	48	36	49	28	39	39
	28	29	30	31	32	33	34	35	36
ATT	63	54	37	47	62	43	56	41	47
BEH	35	31	36	37	50	36	37	37	31

TABLE 10.--Interscale Correlation Matrices with Alpha in the Diagonal, Revised Scales.

Respondent	Scale	PRETEST			
		Subject		Subordinate	
		ATT	BEH	ATT	BEH
Subject	ATT	.85			
	BEH	.33	.74		
Subordinate	ATT	-.23	-.05	.81	
	BEH	-.15	.17	1.04	.82
		POSTTEST			
Subject	ATT	.89			
	BEH	.74	.80		
Subordinate	ATT	.56	.47	.86	
	BEH	.31	.37	.64	.81

Note: Coefficients are corrected for unreliability. Scale codes are defined as in Table 8. Pretest N = 78; Posttest N = 60 for Ss. Pretest N = 329; Posttest N = 246 for subordinates.

both administrations were positive but low to moderate in magnitude. The alpha reliabilities increased to an acceptable level. ATT-BEH coefficients had a high magnitude in the subordinate sample.

Table 11 presents the means and standard deviations of pretest and posttest scores for Ss (pretest N = 78, posttest N = 60) and for subordinates (pretest N = 329, posttest N = 246). Subjects used in the calculation of Tables 10 and 11 data differed in many cases from those

who were in the final analysis groups for hypothesis testing; persons

in Group C were not included in pretest data and a substantial number

of cases which were in the pretest dropped out of the experiment before

completing the posttest. Conservatively, it would be best to use the

data presented in these two tables in scale analysis only and not for

making inferences about sampling or hypothesis testing.

TABLE 11.--Means and Standard Deviations of Scale Scores.

Respondent	Scale	Pretest (N = 78)		Posttest (N = 60)	
		Mean	S.D.	Mean	S.D.
Subject	ATT	2.83	.42	2.93	.38
	BEH	2.49	.45	2.44	.42
Subordinate	ATT	2.62	.26	2.51	.55
	BEH	2.35	.36	2.21	.55

Sample Characteristics

The sample was described in the preceding chapter. Questions

which were left unanswered related to differences between treatment

groups as initially sampled and as finally constituted.

A MANOVA was performed on pretest scores of persons in

Groups G, T, and F who were in the sample in Spring 1973 after

completing the pretest. The dependent measures were the same as those used in testing hypotheses, that is, Ss' attitudes and both Ss' and subordinates' reports of Ss' behavior. The resulting F-ratio was not significant (multivariate F = 0.489, df of 6 and 146, p < .82). A visual analysis of means and standard deviations on pertinent biodata showed no differences between groups so a statistical test of significance was not performed. It was concluded that there were no differences on variables of interest between the groups as initially sampled.

The question of differences between groups as finally constituted was similarly addressed. A visual examination of the biodata of the four groups showed so little difference between groups as to make statistical analysis of these data unnecessary. A MANOVA was executed on the dependent measure pretest scores. The resulting F was not significant (F = 0.64, df of 6 and 78, p < .70). It was concluded there was no significant differences between groups as finally constituted on the variables of interest.

The reader will recall the description in the Methods chapter regarding obtaining estimated pretest scores for group C in the hypothesis testing. Table 12 presents data showing the mean, standard deviation, and estimated pretest-actual posttest correlation of scores in group C as closely approximating the mean, standard deviation and pre-posttest correlation of scores in groups G, T, and F combined.

TABLE 12.--Comparison of Pretest Scores.

Scale	Respondent	Groups G,T,F (N = 44)			Group C* (N = 18)		
		$\bar{X}$	S.D.	r	$\bar{X}$	S.D.	r
BIS	Subject	3.05	.46	.52	3.05	.48	.51
BCN	Subject	2.85	.41	.30	2.88	.37	.30
LIS	Subject	3.13	.53	.54	3.13	.53	.53
LCN	Subject	2.93	.49	.54	2.93	.41	.55
NIS	Subject	2.41	.43	.52	2.40	.43	.52
NCN	Subject	2.43	.55	.52	2.43	.55	.52
NIS	Subordinate	2.25	.34	.47	2.24	.37	.46
NCN	Subordinate	2.46	.29	.42	2.46	.29	.43

Note: r refers to the pre-posttest correlation.
* pretest scores for group C are estimates based on the method outlined in Chapter III.

In view not only of these low coefficients but also of the opportunity provided by the data and previously described and met assumptions to estimate scores on a rational basis for C, all three methods of analysis described in the Methods chapter were used.

Hypothesis Testing

Hypotheses 1, 2, and 3 dealt with the effects of treatment level upon various deepndent measures. Hypotheses 1 and 2 dealt with

the effects of treatment level upon cognitive and motivational structures. With the new scales, these could not be tested in their original form. All the items which were thought to measure cognitive and motivational structures were combined into a new scale, leadership attitude; it was possible to test the effects of treatment levels upon this single construct. The two hypotheses were combined into one and restated: Among the four groups after the intervention, the group which changes its attitude most toward behaving in a considerate and structuring manner will be G, followed in order by T, F, and C. Hypothesis 3 could be tested as stated originally.

Hypothesis 3 was tested by a MANOVA comparing post minus pretest (estimated pretest scores were used for C) difference scores of groups G, T, F, and C on leadership attitudes and behaviors as perceived by $\underline{S}s$ and behaviors as perceived by subordinates. The MANOVA showed no significant differences between treatments (multivariate F-ratio = 1.296, df of 9 and 139, p < .24). The hypothesis was not supported. Mean post minus pretest difference scores are reported in Table 13.

However, the reader will note that in Table 10 the corrected correlation coefficient between $\underline{S}s$ and their subordinates on the attitude scale was -0.23 in the pretest and +0.56 in the posttest. This finding hinted at the possibility that while mean scores did not change, the relationships of scores within groups did. Further

correlational analyses were performed with the scores of the actual Ss
and their subordinates used in the hypothesis testing (Table 14).

TABLE 13.--Mean Post Minus Pretest Difference Scores.

Dependent Measures	Treatment Group				X̄
	G	T	F	C*	
Leadership Attitudes	-.25	.03	-.10	-.28	-.15
Behavior, S reported	.16	.20	.09	-.03	.11
Behavior, Subordinate reported	-.10	.13	-.06	.01	-.02

*pretest scores are estimates.

TABLE 14.--Attitude Scores of Ss and Their Subordinates.

Group	Respondent	Pretest		Posttest	
		X̄	$r_{S,sub}$	X̄	$r_{S,sub}$
G	S / Subordinate	3.08 / 2.67	+.48	2.90 / 2.65	+.86
T	S / Subordinate	2.93 / 2.67	-.40	2.92 / 2.73	+.34
F	S / Subordinate	3.04 / 2.56	+.09	2.90 / 2.65	+.55

This correlational analysis demonstrated that attitudes of $\underline{S}$s and their subordinates did become more concordant with one another across all three groups, and more so in group T than G or F. Of course, no pretest information was available on group C for this type of analysis.

A MANOVA using only the posttest scores of groups G, T, F, and C was not significant (multivariate F-ratio = 0.75, df of 9 and 138.9, p < .66). Also a MANOVA using difference scores for only groups G, T, and F was not significant (multivariate F-ratio = 1.19, df of 6 and 78, p < .32).

Hypothesis 4 was tested by a MANOVA comparing 9 $\underline{S}$s who set goals with 9 $\underline{S}$s who did not set goals. The hypothesis was not supported (multivariate F-ratio = 0.321, df of 3 and 14, p < .81). Table 15 shows the mean post minus pretest difference scores.

TABLE 15.--Mean Post Minus Pretest Difference Scores, Goalsetting Hypothesis.

Dependent Measures	Treatment Group	
	Goal	No Goal
Leadership Attitudes	-.10	-.14
Behavior, $\underline{S}$-reported	.23	.08
Behavior, Subordinate reported	-.03	.03

Hypothesis 5 regarding the impact of BOSXPECTS ($\underline{S}$s' perceptions

of $\underline{S}$s' bosses' expectations for $\underline{S}$s' leadership style) was partially

supported but with reservations. Table 16 summarizes the results of

the analyses.

TABLE 16.--Summary of Results, Hypothesis 5.

Method of Analysis	Dependent Variable	Effect Significant at .05 level?		
		Intervention Level	BOSXPECTS	Interaction
4 X 2	ATT	No	Yes	Yes, G
Difference	S-BEH	No	Yes	No
Scores	Sub-BEH	No	No	---
3 X 2	ATT	No	Yes	Yes
Difference	S-BEH	No	Yes	No
Scores	Sub-BEH	No	Yes	No
4 X 2	ATT	No	Yes	No
Posttest	S-BEH	No	No	---
Scores	Sub-BEH	No	No	---

Correlation between BOSXPECTS and dependent variables on pre- and
posttest.

Dependent Variable	Pretest	Posttest
ATT	.19	.76
S-BEH	.06	.60
Sub-BEH	-.15	+.15

Note the posttest correlations of the dependent variables and BOSXPECTS. These correlations, which are uncorrected for unreliability in their respective scales, indicate that $\underline{S}$s may be responding with a general set.

Table 17 illustrates the design and cell frequencies for the 4 X 2 MANOVA using difference scores.

TABLE 17.--Design of MANOVA for Hypothesis 5.

		Treatment Level				Row Frequency
		G	T	F	C	
BOSXPECTS	High	6	11	8	6	31
	Low	5	8	6	12	31
Column Frequency		11	19	14	18	62

Table 18 provides the observed mean difference scores.

As earlier reported, there was no main effect due to intervention levels (multivariate F = 1.63, d.f. of 9 and 127, p < .113). The MANOVA testing the main effect of perceived BOSXPECTS was significant (multivariate F = 6.72, d.f. of 3 and 52, p < .000). Univariate tests which were subsequently conducted are shown in Table 19.

TABLE 18.--Mean Post Minus Pretest Difference Scores, Hypothesis 5.

Dependent Measure	Perceived BOSXPECTS	Treatment Level				mean	r_{bs}
		G	T	F	C		
Leadership ATTITUDES	High	.16	.03	-.07	.03	.43	.54
	Low	-.74	.04	-.14	-.45	-.42	
	Difference	.90	-.01	.07	.48	.85	
BEHAVIORS S-reported	High	.38	.26	.31	.22	.51	.63
	Low	-.12	.11	-.21	-.15	-.50	
	Difference	.50	.15	.52	.37	1.01	
BEHAVIORS Subordinate reported	High	.02	.18	.02	.04	.23	.23
	Low	-.24	-.06	-.16	-.02	-.22	
	Difference	.26	.24	.18	.06	.45	

Note: The mean is in standard score form.

TABLE 19.--Univariate ANOVA for Perceived BOSXPECTS Effect.

Dependent Measure	Source	d.f.	MS	F	p	$\frac{d}{s.d.}$
ATTITUDE	Between	1	1.39	13.53	.001	1.12
	Within	54	.10			
BEHAVIOR S-reported	Between	1	1.90	13.01	.001	1.00
	Within	54	.15			
BEHAVIOR Subordinate reported	Between	1	.32	2.85	.097	0.47
	Within	54	.11			

d/s.d. is the difference between high and low BOSXPECTS groups expressed in standard deviation units.

Both the attitudes of S and his reported behaviors changed differen-
tially depending upon his perceived BOSXPECTS; behaviors of S as
reported by subordinates did not.

Interaction effects were involved in the attitude dimension.
A MANOVA with the three dependent measures was conducted for interac-
tion effects and the F ratio was significant (multivariate $F = 2.06$,
df of 9 and 127, $p < .038$). Univariate tests which were subsequently
conducted are shown in Table 20.

TABLE 20.--ANOVAs for Interaction of BOSXPECTS and Treatment Levels.

Dependent Measure	Source	d.f.	MS	F	p
ATTITUDE	Between	3	.59	5.71	.002
	Within	54	.10		
BEHAVIOR S reported	Between	3	.12	.82	.49
	Within	54	.15		
BEHAVIOR Subordinate reported	Between	3	.02	.22	.89
	Within	54	.11		

A significant interaction effect occurred in the attitude scale but not
in the other two scales. This indicated that changes in trainee re-
ported behavior were related to perceived BOSXPECTS as a main effect

with no significant interactions. Changes in attitudes were moderated by trainee perceived BOSXPECTS but within certain treatment levels. To determine where the interactions were occurring, a series of Scheffe' tests were conducted. The Scheffe' test is recommended as a post hoc analysis procedure when the overall ANOVA is such that the null hypothesis can be rejected and when one is interested in studying contrasts for an interaction effect. This very conservative test is robust with respect to violations of homoscedasticity, and can be used with unequal cell frequencies. Contrasts between treatments G vs. T, G vs. F, G vs. C were significant at the .05 level. Contrasts between treatments T vs. F, T vs. C, F vs. C, G plus T vs. F plus C were not significant.

Table 21 presents the difference between the high and low BOSXPECTS groups' change scores, expressed in standard deviation units, in the ATT and S-reported BEH variables.

TABLE 21.--Differences Between High and Low BOSXPECTS Groups' Change Scores, Expressed in Standard Deviation Units, in the ATT and S-Reported BEH Variables.

Dependent Measure	Group			
	G	T	F	C
ATT	2.81	.21	.21	1.49
S-reported BEH	1.05	.37	1.36	.97

Analyses of the data using difference scores of only groups

G, T, and F yielded the following results. There was no main effect

due to intervention level (multivariate F-ratio = 1.43, df of 6 and 72,

p < .21). There was a significant effect of perceived BOSXPECTS;

Table 22 shows the univariate tests. All three groups showed signifi-

cant effects upon all three dependent measures. Interaction effects

were involved in the attitude variable (univariate F-ratio = 7.55, df

of 2 and 38, p < .002), but not in the other two variables. The results

of the analyses on the attitude and S-reported behaviors were as ex-

pected, based on the results of the previous method of analysis; however,

TABLE 22.--Univariate ANOVAs for Perceived BOSXPECTS Effect, Groups
G, T, F only.

Dependent Measure	Source	d.f.	MS	F	p	$\frac{d}{s.d.}$
ATTITUDE	Between	1	.64	6.01	.019	.98
	Within	38	.11			
BEHAVIOR S reported	Between	1	1.34	8.95	.005	1.00
	Within	38	.15			
BEHAVIOR Subordinate reported	Between	1	.35	4.15	.049	.65
	Within	38	.08			

d/s.d. is the difference between high and low BOSXPECTS groups ex-
pressed in standard deviation units.

the significant main effect on the subordinate-reported behavior var-

iable was not expected. Table 23 presents the difference between the

high and low BOSXPECTS groups' change scores, expressed in standard

deviation units, in the subordinate-reported BEH variable.

TABLE 23.--Differences Between High and Low BOSXPECTS Groups' Change
Scores, Expressed in Standard Deviation Units, in the
Subordinate Reported BEH Variable.

| Dependent | Groups | | |
Measure	G	T	F
Subordinate reported BEH	1.24	.75	.63

Finally, a 4 X 2 MANOVA with three dependent variables using

posttest scores only was conducted. The main effect of intervention

level was nonsignificant (multivariate F-ratio = 1.19, df of 9 and

126, p < .31). The main effect of BOSXPECTS was significant (multi-

variate F-ratio = 16.53, df of 3 and 52, p < .000). Subsequent ANOVA's

were conducted, and a significant effect was found on the ATT variable

(univariate F-ratio = 50.16, df of 1 and 54, p < .000). This was not

unexpected for the correlation coefficient between BOSXPECTS and post-

test ATT was .76. No other significant main effects or interaction

effects were found.

Refer back to Table 16 for the summary of findings regarding hypothesis 5.

Hypothesis 6, which dealt with the relation between $\underline{S}$'s cognitive and motivational structures and his behavior, could not be tested. The new scales combined the items which were to separately have defined cognitive and motivational structures. All that could be done was to summarize the relationship between attitudes toward leadership and perceived behaviors (Table 24).

TABLE 24.--Relationship between ATT and BEH.

Scale	ATT	BEH $\underline{S}$ reported	BEH Subordinate reported
		Pretest	
ATT	1.00		
BEH, $\underline{S}$ reported	.33	1.00	
BEH, Subordinate reported	-.15	.17	1.00
		Posttest	
ATT	1.00		
BEH, $\underline{S}$ reported	.74	1.00	
BEH, Subordinate reported	.31	.37	1.00

Note: The coefficients are product-moment coefficients which have been corrected for unreliability of scales.

As was mentioned regarding Tables 10 and 11, the persons from whom the data were collected were not in all cases the same as those persons used in testing hypotheses 1 to 5; inferences from this table regarding treatment effects are not warranted.

CHAPTER V

DISCUSSION

In overview, an instrument was constructed to measure beliefs about effective leadership, desires for trainee's leadership, and perceptions of leader behavior. The instrument was a modification of the one built by Bowers and Seashore which was reported to measure four dimensions of leadership centering around the constructs of consideration and initiating structure. A final sample of 63 high level state government managers were exposed to four levels of leader development programs: (F) feedback to $\underline{S}$s of subordinate perceptions of $\underline{S}$'s leadership behaviors and also information on the leadership attitudes and behaviors of $\underline{S}$s' peers, (T) data handback as above and a university sponsored general management training program, (G) data handback and general management training as above and placement of $\underline{S}$s into a situation requiring a decision to set or not set goals for improving their leadership behaviors, (C) no intervention. A pre-posttest design with three dependent variables, leadership attitudes of $\underline{S}$s (ATT), leadership behaviors as reported by $\underline{S}$s (BEH $\underline{S}$ reported), and leadership behaviors as reported by subordinates (BEH subordinate reported), was used.

The overall expectation regarding treatment effects was that intervention level G would have the greatest impact, followed in order of decreasing magnitude of effect by T, F, and C, and that changes on the ATT scale would have the greatest magnitude and be most frequently noted, followed in decreasing order by changes in the BEH S report scale and the BEH subordinate report scale. It was also expected that Ss' perceptions of their superior's expectations for Ss' leadership behavior (BOSXPECTS) would be related to changes on the dependent variables. Multivariate analyses of variance were performed.

There were no significant main effects of intervention level. BOSXPECTS was significantly related to changes in S reported behaviors, in all four levels of treatment and to changes in Ss' attitudes toward leadership in the goalsetting level (G). However, the correlations between BOSXPECTS and Ss' posttest attitude and self reported behavior scores were high. BOSXPECTS was significantly related to changes in subordinate reported behaviors when groups G, T, and F only were considered.

In regard to instrumentation, three major questions merit discussion. (1) Why were the a priori defined initiating structure (IS) and consideration (CN) scales highly related to one another when the literature generally reports these constructs to be independent? (2) Why were the correlations of subordinate reported and S reported behavior low? Were they not measuring the same stimulus? (3) Why

did the beliefs and the desires scales correlate so highly with one another?

The correlation coefficients for IS and CN reported in the Chapter IV approached unity when corrected for unreliability in their respective scales; the correlation was stable across administrations and samples. However, in the literature it had been generally assumed that the constructs are orthogonal and independent. Some possible explanations for this incompatibility can be tendered. First, the research literature was itself inconsistent in regard to the relationship of IS and CN. Lowen, Hrapchak, and Kavanagh (1969) in a survey of the literature found over two dozen independent studies with reported correlations ranging from +.70 to -.57; the more extreme correlations were often very significant because of their magnitude and sample size. There were correlations of considerable magnitude which held up under cross validation and in shifts from setting to setting. They concluded that the desired orthogonality of CN and IS remained undocumented, and that CN and IS could be interdependent under certain circumstances. Weissenberg and Kavanagh (1972) noted that studies using the LBDQ more often reported significant positive relationships between CN and IS while studies using the LOQ more often reported non-significant relationships. Therefore the literature was certainly not insistent that IS and CN are independent, and it may be that method of measurement played a part in determining the findings to date.

In regard to the instrument used in this study, each item was different in wording from the ones used in the Bowers-Seashore instrument and from those used in the LOQ and LBDQ. The meanings of constructs are by definition changed when items delineating the constructs are altered. Thus, by logical argument, this instrument did not measure the constructs CN and IS. On the other hand, the cores of the items used in the Bowers-Seashore instrument were retained. If the constructs CN and IS became highly interrelated with just three modifications, then perhaps one should question the practical and theoretical value of the constructs. Empirically, the present instrument could be cluster analyzed; perhaps something like the CN and IS dimensions would emerge. This may be a fruitful tactic for further research.

The low correlations between subordinates' and Ss' perceptions of leader behavior in the same stimulus person were disturbing but not without precedent. Graham and Oleno (1970) found that self-reported leader behaviors and subordinate descriptions of leader behavior were nonsignificantly related. Their instrument used items from Halpin and Winer (1957). The way a leader perceives his own behavior may be at variance with how his subordinates perceive it.

This, in addition to being related to differences in observer roles, also may be related to method of analysis. Subordinate scores were averaged across subordinates of a single S, that is, individual differences in perception and measurement variance were treated as

error variance. This resulted in more reliable measurements and a much easier analysis of treatment effects. However, at the same time some information was lost. This method assumed the leader has a stable style; the assumption may not be warranted. A contrasting assumption is that the leader's style varied across subordinates; hence, individual observer scores should not be averaged so as to retain the greatest amount and complexity of information. In this study analysis difficulties resided in treating each subordinate observer's score as a separate dependent variable; the averaging approach was therefore used. More methodological research is necessary regarding these two methods of treating individual scores. It seems that studies using a multi-method strategy most appropriately use the averaging procedure. At the very least both self reports and subordinate reports should be obtained; it would be better if these were obtained using more than one type of instrument. As an example, in gathering data for this study, open-ended questions were asked of both Ss and subordinates regarding changes in the Ss' behavior. The answers to these open-ended questions could be analyzed and then related to the data from the instrument scales used in this study. This procedure would provide data from four different methods.

The third question regarding instrumentation concerned the high relationship between the beliefs and desires scales which were designed to measure the hopefully rather different cognitive and motivational

structures of S̲s̲. The data analysis performed indicated that these
scales were highly interrelated, and might better be interpreted as
measuring a global dimension, attitude toward leadership. This finding
may be a methods artifact. It seems, though, that for practical pur-
poses, beliefs about effective leadership and personal desires for
one's own leadership style may be essentially the same. The review of
the social-psychological literature in Chapter I stated that a consis-
tent positive relationship existed between beliefs and attitudes. A
leader has beliefs that a certain leadership style is most effective
for leaders-in-general. For himself he is most likely to believe that
the style which is effective for leaders-in-general will be effective
for him. He wishes to be effective (another but highly related instru-
mental belief). Therefore he reports on the desires scale that he
would like to behave as do effective leaders-in-general. The belief,
the affect, and the instrumentality are highly related. This is not a
necessary relationship, however. If the S̲ has another belief, that his
boss expects him to behave in a way which is incongruent with S̲'s
belief and affect about effective leadership, the S̲ does not see the
effective leader-in-general style as instrumental; he will not have a
motivational structure consistent with his beliefs about effective
leadership-in-general. This kind of reasoning can be used in inter-
preting the finding that S̲s̲ reported they changed their behavior in the
way they perceived their bosses expected them to behave. The perception

that they were changing their behavior in a manner consistent with their bosses' expectations may have been the product of this perception of instrumentality.

This raises the matter of the relationship between scores on the scale measuring the Ss' perceptions of their bosses' expectations for their leadership (BOSXPECTS) and the scale measuring Ss' attitudes. Theoretically there should be a high positive relationship between the two scales if most Ss adopt attitudes which are instrumental in obtaining organizational rewards. This was found to be true.

Does a similar impact occur when Ss perceive their subordinates want them to change their leadership? This could be tested simply by correlating change in BEH scores with subordinates' pretest ATT minus BEH scores. Or, a 4 X 2 MANOVA with two dependent variables would provide slightly different information. The most powerful intervention situation should be one in which the following occur: 1) the difference between BOSXPECTS and S reported behavior is great, 2) the difference between subordinate ATT and subordinate reported behavior on the pretest is great, 3) S is in the G treatment condition. In this situation, the equilibrium in the field of forces operating upon S, in the Lewinian sense, is most likely to be upset and unfreezing of S should occur.

One can interpret the lack of significant findings for treatment level as a main effect in Lewinian terms. Simply, the treatments

used did not, in themselves, have sufficient force to upset the equi-
librium state of $\underline{S}$. When the theoretically most powerful treatment,
G, was combined with a powerful social-psychological factor, perceived
demand from a significant other, $\underline{S}$'s superior, then the equilibrium
state was sufficiently upset and attitude change occurred. Some be-
havior change also appears to have taken place as a co-occurrence with
high perceived demand from $\underline{S}$'s superior to change; this seems to have
been the case in treatment groups G, T, and F.

The high correlations between BOSXPECTS and posttest ATT and $\underline{S}$
reported BEH scores suggest, however, that an alternative explanation
may also be viable, that is, that BOSXPECTS, ATT, and $\underline{S}$ reported BEH
were really different measures of the same response set in the $\underline{Ss}$.

The analysis of difference scores in G, T, F, and C and the
analysis of posttest scores only in G, T, F, and C indicated that sub-
ordinates of $\underline{Ss}$, when their responses were averaged within work groups,
perceived no change in $\underline{Ss}$' behavior. As earlier mentioned, this could
be an artifact of the method of analysis; perhaps if the data were
analyzed in such a way as to take each individual subordinate's report
of $\underline{Ss}$' behavior into account individually, then the findings would
differ. Also this lack of impact could be explained by the low quality
of the observations; subordinates of $\underline{Ss}$ can be classified as untrained
participant-observers who did not know they were to fulfill this role
until after the events they were to observe had occurred. On the other

hand, the information asked is not recall of specific acts but recall of general response strategies of the S; a subordinate should be able to perform this type of recall at a reliable and accurate level.

Another explanation for the lack of perception of change in Ss by subordinates, other than the probability that Ss did not actually change, is that both Ss and subordinates perceived different behaviors of S as being important in the S-subordinate relationship. A S may have changed certain behaviors as a result of training, for example, increased the frequency of rewarding subordinates with "thank you." Subordinates, however, may not have attended to these more frequent behaviors; rather, they attended to the rate of Ss' punishing behaviors, which remained the same. The result was that the subordinates reported the Ss' behavior as unchanged. In this same line, S may have changed his behavior with only one subordinate, and, in averaging the data across the entire work group, the single subordinate's report of change was treated as error variance.

Another possible explanation is that both S and his subordinates changed at the same rate; thus, the relationship between them was perceived by the subordinates or by both parties to be the same. As an example, S may have increased the frequency of his listening to subordinates, but subordinates, aware that S was involved in some development to make him a better leader, already expected more listening to people behaviors and did not perceive the change.

Some $\underline{Ss}$ were more predisposed to change than others as measured by the pretest. The difference between a $\underline{Ss}$' behavior score and his attitude score on the pretest could be considered a rough indicator of his predisposition to change. An analysis in which $\underline{Ss}$ are split into two groups, high and low predisposition to change might show some differentiation on the dependent variables; the best dependent variable to use among those available here would be subordinates' posttest reports of $\underline{Ss}$' behavior.

A final possible explanation is that it takes longer than six months for the impact of interventions like these to be perceived by subordinates. This was the finding in the 1972 Hand, Richards, and Slocum study, where no change was noted three months after training but significant change was reported after 18 months. It is recommended that a follow-up be done on the $\underline{Ss}$ in this study in early 1975.

The analysis using difference scores of only G, T, and F showed significant changes in subordinate reported behavior in hypothesis 5 (BOSXPECTS). All three groups showed changes in the hypothesized direction. This seems an important finding at first glance, especially when one considers this in conjunction with the findings that BOSXPECTS is not related to subordinate reported behavior and that no main effects of treatment level were found to be significant. However, when one considers posttest scores alone for all four groups and when one considers difference scores for all four groups, one does not find

this significant result. One finds a significant main effect of BOSXPECTS only when the control group is not included in the analysis and the most powerful method of analysis is used. Because of this and because of the construct validity limitations in the instrument, this statistically significant finding may not be practically meaningful.

As further research that goes beyond what was attempted in this study, a number of variables should be investigated as possible mediators in the intervention-behavior change relationship. Readily at hand are data on several variables: $\underline{S}s'$ age, supervisory experience, number of subordinates, amount of previous leadership training, willingness to engage in the development program, and ratings of liking for the program. It may be possible to contact the $\underline{S}s$ still another time to obtain personality and situational data on the $\underline{S}s$, even though this would be ex post facto data collection.

In general, this research suggests that a rational-empirical approach to development of upper level executives is a high energy cost, low return strategy, if the criterion is behavior or attitude change as measured by the present instrument. Executives at this level of an organization probably have most of the information presented in a university-sponsored development program in their repertoire. The researcher can recall comments from $\underline{S}s$ to the effect that they were already aware of the information presented and were attempting to implement it; the value was in picking up odd bits of information and

in being told by authorities that what they were attempting to do was appropriate.

The data handback approach, in itself, is apparently too weak a technique. Bowers' (1972) report, referred to in Chapter I, that data handback causes significant changes in subordinates' reports of leadership when climate is controlled is not supported here. A Lewinian normative approach may be more effective; the Mann model of data feedback combined with intensive work group discussion of feedback results may be the minimum effective intervention level. The important thing is to increase understanding of the characteristics of system members and the system itself by system members. To this end, information sharing between organization members which deals with interpersonal relationships and organization demands is needed.

Another technique, management by objectives, provides, in its theoretically ideal form, clearer understanding of organization and individual objectives and performances. The interaction effect between setting goals and the focal person's perception of his superior's expectations for his leadership style lends support to the validity of the technique. In the goalsetting process a manager receives information on his superior's expectation for his performance; this brings into play norms and pressure from an authority figure, feedback of information on performance, participative goalsetting, and increased opportunity for the manager to learn his superior's (hopefully

effective) behavior which he can then imitate in interactions with his own subordinates. Unfortunately, not enough is known empirically about the impact of management by objectives.

In any event, the failing of this research study to discover practical treatment impact from the type of development program studied here is not surprising. Persons with a lifetime of successful inter-personal skills and management style development to date are hardly likely to change interpersonal and managerial styles drastically as a consequence of attending a meeting a week for several weeks. More powerful programs are needed to actually improve behaviors of managers, assuming, in fact, that there is reason for a great deal of improvement.

APPENDICES

APPENDIX A

PRETEST QUESTIONNAIRE, TRAINEE VERSION

APPENDIX A

PRETEST QUESTIONNAIRE, TRAINEE VERSION

Division of Organizational Research
Department of Psychology
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48823

Dear Sir:

Michigan State University is conducting an Executive Development Program for Michigan State Government. This program is designed to help high level executives further develop their leadership skills. A number of your fellow managers are now involved in this program; others, quite possibly yourself, will participate in similar programs at M.S.U. or other universities in the future.

You are invited to participate in an exercise from this program. The objective of this exercise is to help you know how your leadership practices compare with those of other State Government managers. In addition, another objective is for you to learn what changes, if any, take place in how you are meeting your leadership obligations as a result of your using the information received from the exercise.

This personalized look at your leadership characteristics and your ways of relating to your immediate subordinates--what could be the guts of your whole career as a manager in State Civil Service--will involve some effort on your part. You couldn't and probably wouldn't ever go to this trouble on your own. It becomes much easier when you know a number of your fellow managers throughout the state are doing the same thing, not to mention having the forms and computational work done for you.

Answers to some questions you will naturally have:

WHAT DO I HAVE TO DO?

(1) Take about a half hour now. Complete the attached check list, place it in the envelope provided, and mail it back to M.S.U.

(2) Ask at least three if possible and up to six of your immediate subordinates to fill out much the same checklist that you have filled out. They complete it in such a way that they show what they think about your leadership. They mail this directly to M.S.U., and you never see what any one of them individually said about you. Not many years ago few managers would think of asking subordinates to do this; nowadays these procedures are increasingly common. You have forms and information to give them so that the mechanics of the operation are simple enough. (If you don't have three subordinates, including your secretary, who report to you directly, ask some other persons with whom you regularly work to complete the checklist.)

Please see to it that your and your subordinates' check lists are mailed to M.S.U. on or before Wednesday, the 14th of March. This will expedite the computer analysis of your check lists.

(3) In early April you will be provided with both personalized and general results--how your leadership practices compare with those of other State Government managers at your level.

(4) In August 1973 you will go through the same procedure again, also with the check list.

We'll get the results of this second wave of operations to you reasonably soon afterwards and also give you a copy of the interpretive report of the whole project.

WHAT IF I DON'T WISH TO PARTICIPATE?

Experience has shown this to be a valuable development exercise. However, if you would rather not participate, simply return all the materials to your boss.

WHAT IF I NEED MORE INFORMATION?

Please call John Mietus in the Psychology Department at M.S.U., phone (517) 353-0686.

INSTRUCTIONS FOR CHECKLIST

This is a multiple-choice checklist. For each question first look through the answer possibilities and then choose the one that most closely matches the answer you want to give. For each item first circle your choice in the question booklet and then mark that choice on the machine scored answer sheet. We are asking you to mark your answers in both places so that both you and we have a copy of your answers.

Please answer all the questions.

Use a No. 2 lead pencil only; our scoring machine cannot read anything but marks made with No. 2 lead. Observe carefully these other important requirements for the machine scored answer sheet:

Make heavy black marks.
Erase cleanly any changes you wish to make.
Make no stray marks of any kind.
Try not to crease or fold the answer sheet; our scoring machine
    gets very uppity when it is fed crinkled paper.

Try to fill the checklist out in privacy.

On the back of the machine scored answer sheet, in the space provided, write in your name and mailing address. This is so we can return to you your personalized results.

Mail the completed machine scored answer sheet, in the 9X12 envelope provided, no later than Wednesday, March 14 to the Division of Organizational Research, Department of Psychology, Michigan State University, East Lansing, Michigan 48823.

The exercise booklet, with your answers in it, is yours to keep. You will need it as a reference when you receive the results in early April.

O.K.? Here we go!

We get a lot of information about the way we should act as managers from many different sources. Popular magazines, technical journals, and newspapers all contain articles describing competent leadership; leadership training programs tell us to act in certain ways toward our subordinates; we can't help but observe the way our superiors and other managers in State Government handle themselves. As a result, we all have in our minds the way in which the EFFECTIVE MANAGER should act toward his immediate subordinates.

For questions 1 to 12, mark what is the way the EFFECTIVE MANAGER, other than yourself, in the State Government at your level, SHOULD ACT toward his IMMEDIATE SUBORDINATES.

NOTE: Look these answer possibilities over carefully. Answer each of the following questions by circling the number under the answer you wish to give. Then mark the appropriate space on the separate answer sheet.

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

1. To what extent should the effective manager go to the extra trouble to encourage his immediate subordinates to give their best effort?   1 2 3 4 5

2. Although it will probably mean a lot of extra work for both the manager and subordinate, to what extent should they together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?   1 2 3 4 5

3. To what extent should the manager take extra time to keep his subordinates informed about important matters affecting their work, even though his guess is that this additional information will help their morale more than their performance?   1 2 3 4 5

4. If a subordinate's performance is adequate, to what extent should the manager work with him to improve it?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

5. To what extent should the manager be open to the suggestions of a subordinate, even though in the past some of his suggestions have not been too practical?   1 2 3 4 5

6. To what extent should the manager offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?   1 2 3 4 5

7. To what extent should the manager allow an immediate subordinate to choose his work methods, even though the manager does not think the chosen methods are going to work very well?   1 2 3 4 5

8. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent should the manager attempt to build his immediate work group including himself, into a high performance work team?   1 2 3 4 5

9. To what extent should the manager use staff meetings to solve problems of vital concern to his immediate work group?   1 2 3 4 5

10. To what extent should the manager stop what he is doing, not let himself be interrupted, and really listen when a subordinate comes in to talk to him?   1 2 3 4 5

11. To what extent should the manager listen to and counsel a subordinate regarding non-work-related personal difficulties?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

12. How friendly and easy to approach should the manager
be, even though this may sometimes be uncomfortable
or distasteful to him personally?   1 2 3 4 5

- -

We have to manage in a particular job, with subordinates,
peers, and superiors each of whom has certain needs,
competencies, and expectations. We have to adapt our
leadership to the situation. For items 13 to 24, please
indicate the ACTUAL relationship that exists NOW between
you and your immediate subordinates.

13. To what extent do you go to the extra trouble to
encourage your subordinates to give their best effort?   1 2 3 4 5

14. Although it probably means extra work for both your-
self and your subordinate, to what extent do the two
of you together clearly define the subordinate's work
goals and objectively measure the degree to which
they are attained?   1 2 3 4 5

15. To what extent do you take extra time to keep your
subordinates informed about important matters affect-
ing their work, even though your guess is that this
additional information may help their morale more
than their performance?   1 2 3 4 5

16. If a subordinate's performance is adequate, to what
extent do you work with him to improve it?   1 2 3 4 5

17. To what extent are you open to the suggestions of
your subordinates, even though in the past some
suggestions may not have been too practical?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

18. To what extent do you offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?   1 2 3 4 5

19. To what extent do you allow your immediate subordinates to choose their work methods, even though you may not think the chosen methods are going to work very well?   1 2 3 4 5

20. Although this involves a lot of extra time, effort and patience on everyone's part, to what extent do you attempt to build your immediate work group, including yourself, into a high-performance work team?   1 2 3 4 5

21. To what extent do you use staff meetings to solve problems of vital concern to your immediate work group?   1 2 3 4 5

22. To what extent do you stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?   1 2 3 4 5

23. To what extent do you listen to and counsel subordinates regarding their non-work-related personal difficulties?   1 2 3 4 5

24. How friendly and easy to approach are you, even though this may sometimes be uncomfortable or distasteful to you?   1 2 3 4 5

- -

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

That's good. Now we would like you to answer questions 25 to 36 with another frame of mind.

In your particular situation, what is the way you would like to manage your subordinates (who report directly to you?)

25. To what extent would you like to go to the extra trouble to encourage your subordinates to give their best effort?   1 2 3 4 5

26. Although it would probably mean extra work for both yourself and your subordinate, to what extent would you like to have the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?   1 2 3 4 5

27. To what extent would you like to take the extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional information may help their morale more than their performance?   1 2 3 4 5

28. If a subordinate's performance is adequate, to what extent would you like to work with him to improve it?   1 2 3 4 5

29. To what extent would you like to be open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?   1 2 3 4 5

30. To what extent would you like to offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

31. To what extent would you like to allow your immed-
iate subordinates to choose their work methods, even
though you may not think the chosen methods are
going to work very well?   1 2 3 4 5

32. Although this involves a lot of extra time, effort
and patience on everyone's part, to what extent
would you like to attempt to build your immediate
work group, including yourself, into a high-performance
work team?   1 2 3 4 5

33. To what extent would you like to use staff meetings to
solve problems of vital concern to your immediate work
group?   1 2 3 4 5

34. To what extent would you like to stop what you are
doing, not let yourself be interrupted, and really
listen when a subordinate comes in to talk to you?   1 2 3 4 5

35. To what extent would you like to listen to and counsel
subordinates regarding their non-work-related personal
difficulties?   1 2 3 4 5

36. How friendly and easy to approach would you like to
be, even though this may sometimes be uncomfortable
or distasteful to you?   1 2 3 4 5

- -

That finishes the main part of the exercise. If you would, please
answer the following items about yourself. They are included to aid
in the analysis of the results.

37. How old are you now?

    1. 60 or older.
    2. 50 to 59 years.
    3. 40 to 49 years.
    4. 30 to 39 years.
    5. 20 to 29 years.

38. How much formal education have you had?

    1. Completed doctoral degree.
    2. Completed master's degree.
    3. Graduated from college.
    4. Had some college work.
    5. Graduated from high school.

39. How long have you been with Michigan State Government?

    1. 20 or more years.
    2. Less than 20 years.
    3. Less than 10 years.
    4. Less than 5 years.
    5. Less than 1 year.

40. How long have you been in your present position?

    1. 10 or more years.
    2. Less than 10 years.
    3. Less than 5 years.
    4. Less than 3 years.
    5. Less than 1 year.

41. How much experience have you had in supervisory jobs?

    1. 10 years or more.
    2. Less than 10 years.
    3. Less than 3 years.
    4. Less than 1 year.
    5. None.

42. At this time, what is the total number of subordinates, including your secretary, who report to you directly?

    1. 8 or more.
    2. Less than 8.
    3. Less than 4.
    4. One.
    5. None.

43. How many management or supervisory development programs, seminars, or conferences have you attended in your whole career?

    1. More than 3.
    2. Three.
    3. Two.
    4. One.
    5. None.

- -

That does it. Do you have both the exercise booklet and the machine scored answer sheet completed? . Did you fill in the information on the back of the machine scored answer sheet? Great! The results will be given to you in a few weeks as mentioned earlier.

APPENDIX B

PRETEST QUESTIONNAIRE, SUBORDINATE VERSION

APPENDIX B

PRETEST QUESTIONNAIRE, SUBORDINATE VERSION

Division of Organizational Research
Department of Psychology
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48823

Dear Sir or Madam:

Michigan State University is conducting an Executive Development Program for the Michigan State Government. You and your manager are invited to participate in an exercise from the program.

The objective of the exercise is to provide your boss with information on how his leadership practices compare with those of other State Government managers at his level. Another objective is for him to learn what changes, if any, take place in how he meets his leadership obligations as a result of using the information he receives.

This personalized look at his leadership characteristics--what could be at the guts of his, and your own, career in the State Government--depends heavily on you. You and your peers who report directly to him are the only persons who can give an accurate and complete picture of his leadership practices. Also, research indicates that an important influence on the way a leader acts and thinks are the expectations and desires of his immediate subordinates.

For these reasons you are asked to fill out the attached checklist. The exercise asks information on your beliefs about the effective manager, on how you see your boss acting now, and how you would like to see him act toward yourself.

Some questions you will have:

WHAT DO I HAVE TO DO? Simply fill out the attached checklist. Mail the machine scored answer sheet back to M.S.U. in the envelope provided. Do this no later than Wednesday, March 14, so that your answers can be included in the computer analysis.

WHEN DOES MY BOSS GET HIS INFORMATION? Early in April, possibly before that.

I'D RATHER NOT HAVE HIM KNOW MY OWN ANSWERS. HOW IS THIS TO BE HANDLED? Your responses will be grouped and averaged with those of other persons who report directly to him. If less than three of his subordinates (or other persons he might ask to complete the checklist) mail in their answers, your boss will get no information about his own leadership style. Of course all personal information will be treated confidentially and according to a professional code of ethics.

WHAT IF I DON'T WISH TO PARTICIPATE? Experience has shown this to be a valuable development tool, for both manager and subordinates alike. However, if you would rather not participate, it would probably be best for you to return the booklet to your manager, requesting that he select another subordinate.

WILL I GET ANY INFORMATION ON THE RESULTS? Not directly. However, you might ask your boss, in mid-April, for any information of a general nature. He will have data on how other managers in general in State Government act toward their subordinates, and also non-personal information on how these managers' subordinates responded to the checklist. Your own manager's personal leadership practices information is for his private use; it is up to him to decide whether or not to make it available to his subordinates and others.

WHAT IF I NEED MORE INFORMATION? First ask your manager. If he cannot provide an answer, call John Mietus in the Department of Psychology at Michigan State University, phone (517) 353-0686.

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INSTRUCTIONS FOR CHECKLIST

This is a multiple choice checklist. For each question first look through the answer possibilities and then choose the one that most clearly matches the answer you want to give. Mark that choice in the appropriate space on the machine scored answer sheet.

Please answer all questions.

Please use a No. 2 lead pencil; our scoring machine cannot read anything but No. 2 lead marks. Also:

Make heavy black marks.

Erase cleanly any change you wish to make.

Make no stray marks.

Try not to crease or fold the answer sheet; our scoring machine gets very uppity when fed crinkly paper.

Fill out the checklist in privacy if you can.

It is not necessary to fill in any identifying information on the front of the answer sheet. We have already assigned a computer code number to the answer sheet: this code number is one of a series that identifies your manager. However, as we will ask you to fill out the checklist again in August, please write your position title on the back of the machine scored answer sheet. This will allow us to match the two checklists from both administrations. Do this now.

Mail the answer sheet in the envelope provided no later than Wednesday, March 14.

The exercise booklet is yours to keep. It may prove helpful as a reference in the future.

O.K.? Here we go!

We get a lot of information about the way we should act as managers from many different sources. Popular magazines, technical journals, and newspapers all contain articles describing competent leadership; leadership training programs tell us to act in certain ways toward our subordinates; we can't help but observe the way our superiors, and other managers in State Government handle themselves. As a result, we all have in our minds the way in which the EFFECTIVE MANAGER should act toward his immediate subordinates.

For questions 1 to 12, mark what is the way the EFFECTIVE MANAGER, other than your boss, in the State Government at your boss's level, SHOULD ACT toward his IMMEDIATE SUBORDINATES.

NOTE: Look these answer possibilities over carefully. Answer each of the following questions by circling the number under the answer you wish to give. Then mark the appropriate space on the separate machine scored answer sheet.

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

1. To what extent should the effective manager go to the extra trouble to encourage his immediate subordinates to give their best effort? 1 2 3 4 5

2. Although it will probably mean a lot of extra work for both the manager and subordinate, to what extent should they together clearly define the subordinate's work goals and objectively measure the degree to which they are attained? 1 2 3 4 5

3. To what extent should the manager take extra time to keep his subordinates informed about important matters affecting their work, even though his guess is that this additional information will help their morale more than their performance? 1 2 3 4 5

4. If a subordinate's performance is adequate, to what extent should the manager work with him to improve it? 1 2 3 4 5

5. To what extent should the manager be open to the suggestions of a subordinate, even though in the past some of his suggestions have not been too practical? 1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

6. To what extent should the manager offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?

1 2 3 4 5

7. To what extent should the manager allow an immediate subordinate to choose his work methods, even though the manager does not think the chosen methods are going to work very well?

1 2 3 4 5

8. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent should the manager attempt to build his immediate work group including himself, into a high performance work team?

1 2 3 4 5

9. To what extent should the manager use staff meetings to solve problems of vital concern to his immediate work group?

1 2 3 4 5

10. To what extent should the manager stop what he is doing, not let himself be interrupted, and really listen when a subordinate comes in to talk to him?

1 2 3 4 5

11. To what extent should the manager listen to and counsel a subordinate regarding non-work-related personal difficulties?

1 2 3 4 5

12. How friendly and easy to approach should the manager be, even though this may sometimes be uncomfortable or distasteful to him personally?

1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

Your boss has to manage in a particular job, with
subordinates, peers, and superiors each of whom has
certain needs, competencies, and expectations. He
has to adapt his leadership to the situation. For
items 13 to 24, indicate the ACTUAL relationship
that exists NOW between your boss and yourself.

13. To what extent does your manager go to what seems
like extra trouble to encourage you to give your
best effort?   1 2 3 4 5

14. Although it probably means extra work for both
your manager and yourself, to what extent do the
two of you together clearly define your work goals
and objectively measure the degree to which they
are attained?   1 2 3 4 5

15. To what extent does your manager take extra time to
keep you informed about important matters affecting
your work, even though you sometimes feel that he
thinks this additional information may help your
morale more than your performance?   1 2 3 4 5

16. If a subordinate's performance is adequate, to what
extent does your manager work with him to improve it?   1 2 3 4 5

17. To what extent is your manager open to the sugges-
tions of his subordinates, even though you have a
feeling that he thinks some of the suggestions in
the past may not have been too practical?   1 2 3 4 5

18. To what extent does your manager offer unrequested
help to his subordinates when they have difficulty in
solving a technical or administrative problem?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

19. To what extent does your manager allow you to choose your own work methods, even though you sometimes feel that he may not think the chosen methods are going to work very well?　　1 2 3 4 5

20. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent does your manager attempt to build his immediate work group, including himself, into a high-performance work team?　　1 2 3 4 5

21. To what extent does your manager use staff meetings to solve problems of vital concern to his immediate work group?　　1 2 3 4 5

22. To what extent does your manager stop what he is doing, not let himself be interrupted, and really listen when you come in to talk to him?　　1 2 3 4 5

23. To what extent does your manager listen to and counsel you regarding non-work-related personal difficulties?　　1 2 3 4 5

24. How friendly and easy to approach is your manager, even though you have reason to suspect that this may sometimes be uncomfortable or personally dis-tasteful to him?　　1 2 3 4 5

Thank you. Now please answer questions 25 to 36 with another frame of mind.

In your particular situation, what is the way _you would like_ your manager to relate to you and his other immediate subordinates?

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

25. To what extent would you like your manager to go to the extra trouble to encourage you to give your best effort?

1 2 3 4 5

26. Although it would probably mean extra work for both your manager and yourself, to what extent would you like to have the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

1 2 3 4 5

27. To what extent would you like your manager to take extra time to keep you informed about important matters affecting your work, even though you may sometimes think that he feels this additional information may help your morale more than your performance?

1 2 3 4 5

28. If a subordinate's performance is adequate, to what extent would you like your manager to work with him to improve it?

1 2 3 4 5

29. To what extent would you like your manager to be open to the suggestions of his subordinates, even though you may have a feeling that he thinks some of the suggestions in the past may not have been too practical?

1 2 3 4 5

30. To what extent would you like to have your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

31. To what extent would you like to have your manager
allow you to choose your own work methods, even
though you may sometimes feel that he may not think
the chosen methods are going to work very well?   1 2 3 4 5

32. Although this involves a lot of extra time, effort,
and patience on everyone's part, to what extent
would you like to have your manager attempt to
build his immediate work group, including himself,
into a high-performance work team?   1 2 3 4 5

33. To what extent would you like to have your manager
use staff meetings to solve problems of vital con-
cern to your immediate work group?   1 2 3 4 5

34. To what extent would you like to have your manager
stop what he is doing, not let himself be inter-
rupted, and really listen when you come in to talk
to him?   1 2 3 4 5

35. To what extent would you like your manager to listen
to and counsel you regarding non-work-related per-
sonal difficulties?   1 2 3 4 5

36. How friendly and easy to approach would you like
your manager, even though you may have reason to
suspect that this may sometimes be uncomfortable
or personally distasteful to him?   1 2 3 4 5

- -

Please answer the following questions. They are to aid in the analysis
of the results.

37. How old are you now?

    1. 60 or older
    2. Less than 60.
    3. Less than 50.
    4. Less than 40.
    5. Less than 30.

38. How much formal education have you had?

    1. Completed doctoral degree.
    2. Completed master's degree.
    3. Graduated from college.
    4. Had some college work.
    5. Graduated from high school.

39. How long have you been with Michigan State Government?

    1. 20 or more years.
    2. Less than 20 years.
    3. Less than 10 years.
    4. Less than 5 years.
    5. Less than 1 year.

40. How long have you been in your present position?

    1. 10 or more years.
    2. Less than 10 years.
    3. Less than 5 years.
    4. Less than 3 years.
    5. Less than 1 year.

41. How much experience have you had in supervisory jobs?

    1. 10 or more years.
    2. Less than 10 years.
    3. Less than 3 years.
    4. Less than 1 year.
    5. None.

42. At this time, what is the total number of subordinates who report to you directly?

    1. 8 or more.
    2. Less than 8.
    3. Less than 4.
    4. One.
    5. None.

43. How many management or supervisory development programs, conferences, or seminars have you attended in your whole career?

    1. More than 3.
    2. Three.
    3. Two.
    4. One.
    5. None.

44. How long have you worked as a direct subordinate for your present manager?

    1. 5 or more years.
    2. Less than 5 years.
    3. Less than 3 years.
    4. Less than 18 months.
    5. Less than 6 months.

- -

That completes the checklist. Did you complete the information on the back of the machine-scored answer sheet? Great. The results, anonymously of course, will be given to your manager in a few weeks. Thanks.

APPENDIX C

POSTTEST QUESTIONNAIRE, TRAINEE VERSION

APPENDIX C

POSTTEST QUESTIONNAIRE, TRAINEE VERSION

Division of Organizational Research
Department of Psychology
Michigan State University
East Lansing, Michigan 48824

October, 1973

Last Spring you and some of your subordinates filled out the Leadership Practices Exercise and received feedback about how you and other managers like yourself in State Government lead the work of others. You've had some time to weigh the feedback information, and to try new ways of increasing your effectiveness as a leader.

Now is the time to find out how you personally, and the other managers as a group, have changed since last Spring. If you and some of your direct subordinates go through the Leadership Practices Exercise again, it will be possible for us to put this new information together with the earlier results and show you what changes you have made in the way you lead.

Also, you will recall that a number of your peers were in an Executive Development Program at Michigan State University last Spring. We'll assess for you the ways in which you and others like yourself who were not in the Executive Development Program changed in relation to those managers who were in the program. This kind of comparison often gets interesting and surprising results.

But before we can do this you must provide us with the information from the Leadership Practices Exercise. You are already familiar with the procedure. You fill out the Exercise, and ask from three to six of your direct subordinates also to fill it out about you. When the persons involved in the Exercise have sent the necessary material back to us, we analyze the answers and mail you a personalized packet of feedback information.

Specifically, the questionnaire which you fill out is the one to which this note is attached. It is on blue colored paper and it has a blue colored answer sheet. Your subordinates' questionnaires are on white paper and have lavender colored answer sheets. It will take you a bit longer this time to fill out the questionnaire because we are asking you, in addition to the familiar questions, to indicate what changes you have made in the way you lead.

The three to six subordinates (or other person with whom you work regularly, in the event you don't have three direct subordinates) do not have to be the same as the ones who filled out the questionnaire last Spring. However, it would greatly increase the accuracy of your own personal feedback data if they either are the same or at least are in the same jobs.

If the person or persons you ask are not your direct subordinates, please indicate to them that the wording of the questions may be a bit inappropriate (eg. to what extent does your boss . . .); however there are directions where needed in the questionnaire to make clear what this type of respondent should do.

Inasmuch as we have no coercive control over when or if you return the completed questionnaire, it doesn't make any sense to set a deadline for returns. To give you an idea of what is probably reasonable, we should like to begin computer analysis of all returned forms by the end of October.

O.K.? If you have any questions either drop me a note at the address on the letterhead or call me at (517) 353-6422 or 353-0686.

Expectantly,

John R. Mietus

INSTRUCTIONS FOR CHECKLIST

This is a multiple-choice checklist. For each question first look through the answer possibilities and then choose the one that most closely matches the answer you want to give. For each item mark your choice on the machine scored answer sheet.

Please answer all the questions.

Please use a No. 2 lead pencil; the scoring machine can read nothing but marks made with No. 2 lead. Observe carefully these other important requirements for the machine scored answer sheet:

Make heavy black marks.
Erase cleanly any change you wish to make.
Make no stray marks of any kind.
Try not to crease or fold the answer sheet; the scoring machine gets very uppity when it is fed crinkled paper.

Try to fill out this checklist in privacy.

Return both this booklet and the completed answer sheet in the addressed envelope.

O.K.? Here we go!

We get a lot of information about the way we should act as managers from many different sources. Popular magazines, technical journals, and newspapers all contain articles describing competent leadership; leadership training programs tell us to act in certain ways toward our subordinates; we can't help but observe the way our superiors and other managers in State Government handle themselves. As a result, we all have in our minds the way in which the EFFECTIVE MANAGER should act toward his immediate subordinates.

For questions 1 to 12, mark what is the way the EFFECTIVE MANAGER, other than yourself, in the State Government at your level, SHOULD ACT toward his IMMEDIATE SUBORDINATES...

NOTE: Look these answer possibilities over carefully. Answer each of the following questions by marking the appropriate space on the separate answer sheet.

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

1. To what extent should the effective manager go to the extra trouble to encourage his immediate subordinates to give their best effort?   1 2 3 4 5

2. Although it will probably mean a lot of extra work for both the manager and subordinate, to what extent should they together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?   1 2 3 4 5

3. To what extent should the manager take extra time to keep his subordinates informed about important matters affecting their work, even though his guess is that this additional information will help their morale more than their performance?   1 2 3 4 5

4. If a subordinate's performance is adequate, to what extent should the manager work with him to improve it?   1 2 3 4 5

5. To what extent should the manager be open to the suggestions of a subordinate, even though in the past some of his suggestions have not been too practical?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

6. To what extent should the manager offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem? 1 2 3 4 5

7. To what extent should the manager allow an immediate subordinate to choose his work methods, even though the manager does not think the chosen methods are going to work very well? 1 2 3 4 5

8. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent should the manager attempt to build his immediate work group including himself, into a high performance work team? 1 2 3 4 5

9. To what extent should the manager use staff meetings to solve problems of vital concern to his immediate work group? 1 2 3 4 5

10. To what extent should the manager stop what he is doing, not let himself be interrupted, and really listen when a subordinate comes in to talk to him? 1 2 3 4 5

11. To what extent should the manager listen to and counsel a subordinate regarding non-work-related personal difficulties? 1 2 3 4 5

12. How friendly and easy to approach should the manager be, even though this may sometimes be uncomfortable or distasteful to him personally? 1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

We have to manage in a particular job, with subordinates, peers, and superiors each of whom has certain needs, competencies, and expectations. We have to adapt our leadership to the situation. For items 13 to 24, please indicate the ACTUAL relationship that exists NOW between you and your immediate subordinates.

13. To what extent do you go to the extra trouble to encourage your subordinates to give their best effort? 1 2 3 4 5

14. Although it probably means extra work for both yourself and your subordinate, to what extent do the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained? 1 2 3 4 5

15. To what extent do you take extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional information may help their morale more than their performance? 1 2 3 4 5

16. If a subordinate's performance is adequate, to what extent do you work with him to improve it? 1 2 3 4 5

17. To what extent are you open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical? 1 2 3 4 5

18. To what extent do you offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem? 1 2 3 4 5

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

19. To what extent do you allow your immediate sub-ordinates to choose their work methods, even though you may not think the chosen methods are going to work very well? — 1 2 3 4 5

20. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent do you attempt to build your immediate work group, including yourself, into a high-performance work team? — 1 2 3 4 5

21. To what extent do you use staff meetings to solve problems of vital concern to your immediate work group? — 1 2 3 4 5

22. To what extent do you stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you? — 1 2 3 4 5

23. To what extent do you listen to and counsel sub-ordinates regarding their non-work-related personal difficulties? — 1 2 3 4 5

24. How friendly and easy to approach are you, even though this may sometimes be uncomfortable or dis-tasteful to you? — 1 2 3 4 5

- -

That's good. Now we would like you to answer questions 25 to 36 with another frame of mind.

In your particular situation, what is the way you would like to manage your subordinates (who report directly to you)?

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

25. To what extent would you like to go to the extra trouble to encourage your subordinates to give their best effort?   1 2 3 4 5

26. Although it would probably mean extra work for both yourself and your subordinate, to what extent would you like to have the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?   1 2 3 4 5

27. To what extent would you like to take the extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional information may help their morale more than their performance?   1 2 3 4 5

28. If a subordinate's performance is adequate, to what extent would you like to work with him to improve it?   1 2 3 4 5

29. To what extent would you like to be open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?   1 2 3 4 5

30. To what extent would you like to offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?   1 2 3 4 5

31. To what extent would you like to allow your immediate subordinates to choose their work methods, even though you may not think the chosen methods are going to work very well?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

32. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent would you like to attempt to build your immediate work group, including yourself, into a high-performance work team?　　　　1 2 3 4 5

33. To what extent would you like to use staff meetings to solve problems of vital concern to your immediate work group?　　　　1 2 3 4 5

34. To what extent would you like to stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?　　　　1 2 3 4 5

35. To what extent would you like to listen to and counsel subordinates regarding their non-work-related personal difficulties?　　　　1 2 3 4 5

36. How friendly and easy to approach would you like to be, even though this may sometimes be uncomfortable or distasteful to you?　　　　1 2 3 4 5

- -

We often act the way we think our boss wants us to.
For questions 37-48, indicate WHAT YOU THINK YOUR BOSS
EXPECTS OF YOU.

37. To what extent does your boss want you to go to the extra trouble to encourage your subordinates to give their best effort?　　　　1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

38. Although it would probably mean extra work for both yourself and your subordinate, to what extent does your boss want to have the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?   1 2 3 4 5

39. To what extent does your boss want you to take the extra time to keep your subordinates informed about important matters affecting their work, even though his guess is that this additional information may help their morale more than their performance?   1 2 3 4 5

40. If a subordinate's performance is adequate, to what extent does your boss want you to work with him to improve it?   1 2 3 4 5

41. To what extent does your boss want you to be open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?   1 2 3 4 5

42. To what extent does your boss want you to offer un-requested help to immediate subordinates who are having difficulty in solving technical or adminis-trative problems?   1 2 3 4 5

43. To what extent does your boss want you to allow your immediate subordinates to choose their work methods, even though he may not think they are going to work very well?   1 2 3 4 5

45. To what extent does your boss want you to use staff meetings to solve problems of vital concern to your immediate work group?   1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

46. To what extent does your boss want you to stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?   1 2 3 4 5

47. To what extent does your boss want you to listen to and counsel subordinates regarding their non-work-related personal difficulties?   1 2 3 4 5

48. How friendly and easy to approach does your boss want you to be, even though he feels this may sometimes be uncomfortable or distasteful to you?   1 2 3 4 5

- -

That finishes the main part of the exercise. Please answer the following questions in the spaces provided. They are included to aid in the analysis of the results.

For these questions, think about your leadership during this last spring and summer. This is the period for which we are assessing any changes that you might have made in the way you lead.

49. List anything significant which happened to, or around, you that might have had an impact on the way you manage people. Examples: new boss; reorganization; promotion; a new and really different subordinate, or perhaps a new office system.

50. How have your beliefs about good or effective leadership-in-general changed? Please be as specific as possible.

51. From time to time managers change their goals for becoming more effective as leaders. They may add new goals, discard some goals, or change goals. How have your goals and intentions for becoming a more effective manager changed recently? What goals have you changed?

52. What have you <u>actually changed</u> in the way you lead people? Please be specific; use examples if you can.

Thanks, that's it. Whew! We'll get feedback on this to you as soon as possible. One thing that really delays getting the results to you is the long wait before all respondents return their questionnaires. It would help a lot if you would remind those subordinates, to whom you gave the questionnaire, to fill it out as soon as they can.

Please indicate the address to which you wish your personal and rather confidential feedback packet to be sent.

☐ Same address as the one to which this questionnaire was sent.

☐ Other (Please write out completely, include zip code).

APPENDIX D

POSTTEST QUESTIONNAIRE, SUBORDINATE VERSION

POSTTEST QUESTIONNAIRE, SUBORDINATE VERSION

Division of Organizational Research
Department of Psychology
Michigan State University
East Lansing, Michigan 48824

October, 1973

Dear Sir or Madam:

Last Spring your immediate superior was told how his leadership practices compared with those of other State Government managers at his level. Perhaps you, through filling out a checklist called the Leadership Practices Exercise, anonymously contributed to providing him with information on how others in a position to know indicated they thought he leads at that time.

Your immediate superior has had some time to weigh the information provided him, to set whatever goals, if any, he may have decided upon regarding his manner of leading, and to try out new ways of behaving in his leadership responsibilities. Now is an appropriate time for him to find out in what ways he may have changed.

As you possibly did last Spring, you are asked to fill out the attached checklist. You may already be familiar with the form if you filled it out earlier on him. If you are not familiar with it, the Exercise asks information on your beliefs about effective leadership, on how you see your boss acting now, and on how you would like to see him act toward you.

After you and the others involved in the study fill out this form and return it to us at the university, say within the month of October, we will analyze the information and give your superior a new report. The report will show him how his direct subordinates see him as leading now and how they would like him to lead. It will also show him how his leadership compares with that of other managers in State Government, as well as any changes he has made in his leadership

behavior since early last Spring. And finally, the information will be used to evaluate in what ways the Executive Development Program of Michigan State University has helped executives like your boss increase their leadership effectiveness. It is always useful to measure the effectiveness of programs like these.

Your own responses will not be known by your boss or any one else in State Government. Your answers will be averaged in with those of other persons who responded about your superior. If fewer than three persons fill out the checklist, your boss will get no personal information. All information which you provide will be treated confidentially and according to the code of ethics of the American Psychological Association.

If for any reason you decide not to participate, it would be helpful if you return the booklet to your boss and ask that he select another person. However, if you are thinking of not filling out the checklist because of a less than good relationship with him, consider that giving him some feedback from a safe distance may be just the start he needs to build a better relationship.

If you need more information about this program or the forms involved, please first ask your boss. If you would rather not raise any questions with him or if he does not provide an adequate answer, call John Mietus at Michigan State University, phone (517) 353-6422 or 353-0686.

Note: In some instances persons other than the direct subordinate of the manager in question are asked to fill out the checklist. If you are not a direct subordinate of this manager, and if you feel you know how he acts in a leadership situation, please work through all of the checklist. Where necessary you will find appropriate instructions directed toward you.

INSTRUCTIONS FOR CHECKLIST

This is a multiple choice checklist. For each question first look through the answer possibilities and then choose the one that most closely matches the answer you want to give. Mark that choice in the appropriate space on the machine scored answer sheet.

Please answer all questions.

Please use a No. 2 lead pencil; our scoring machine cannot read anything but No. 2 lead marks. Also:

Make heavy black marks.

Erase cleanly any change you wish to make.

Make no stray marks.

Try not to crease or fold the answer sheet; our scoring machine gets very uppity when fed crinkly paper.

Fill out the checklist in privacy if you can. It should take 15 minutes to a half hour.

It is not necessary to fill in any identifying information on the front of the answer sheet. We have already assigned a computer code number to the answer sheet; this code number is one of a series that identifies your manager. However, please write your position title on the back of the machine scored answer sheet. Do this now.

Mail the machine-scored answer sheet in the addressed envelope provided.

The exercise booklet is yours to keep. It may prove helpful as a reference in the future.

O.K.? Here we go!

We get a lot of information about the way we should act as managers from many different sources. Popular magazines, technical journals, and newspapers all contain articles describing competent leadership; leadership training programs tell us to act in certain ways toward our subordinates; we can't help but observe the way our superiors, and other managers in State Government handle themselves. As a result, we all have in our minds the way in which the EFFECTIVE MANAGER should act toward his immediate subordinates.

For questions 1 to 12, mark what is the way the EFFECTIVE MANAGER, other than your boss, in the State Government at your boss's level, SHOULD ACT toward his IMMEDIATE SUBORDINATES.

NOTE: Look these answer possibilities over carefully. Answer each of the following questions by marking the appropriate space on the separate machine scored answer sheet.

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

1. To what extent should the effective manager go to the extra trouble to encourage his immediate subordinates to give their best effort? 1 2 3 4 5

2. Although it will probably mean a lot of extra work for both the manager and subordinate, to what extent should they together clearly define the subordinate's work goals and objectively measure the degree to which they are attained? 1 2 3 4 5

3. To what extent should the manager take extra time to keep his subordinates informed about important matters affecting their work, even though his guess is that this additional information will help their morale more than their performance? 1 2 3 4 5

4. If a subordinate's performance is adequate, to what extent should the manager work with him to improve it? 1 2 3 4 5

5. To what extent should the manager be open to the suggestions of a subordinate, even though in the past some of his suggestions have not been too practical? 1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

6. To what extent should the manager offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?   1 2 3 4 5

7. To what extent should the manager allow an immediate subordinate to choose his work methods, even though the manager does not think the chosen methods are going to work very well?   1 2 3 4 5

8. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent should the manager attempt to build his immediate work group including himself, into a high performance work team?   1 2 3 4 5

9. To what extent should the manager use staff meetings to solve problems of vital concern to his immediate work group?   1 2 3 4 5

10. To what extent should the manager stop what he is doing, not let himself be interrupted, and really listen when a subordinate comes in to talk to him?   1 2 3 4 5

11. To what extent should the manager listen to and counsel a subordinate regarding non-work-related personal difficulties?   1 2 3 4 5

12. How friendly and easy to approach should the manager be, even though this may sometimes be uncomfortable or distasteful to him personally?   1 2 3 4 5

- -

Your boss has to manage in a particular job, with sub-ordinates, peers, and superiors each of whom has certain needs, competencies, and expectations. He has to adapt his leadership to the situation. For items 13 to 24, indicate the ACTUAL relationship that exists NOW between your boss and yourself (if you are not a direct subordinate of the person whose leadership is being analyzed, indicate, as best as you can, the actual relationship that exists NOW between this person and his direct subordinates).

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

13. To what extent does your manager go to what seems like extra trouble to encourage you to give your best effort?

1 2 3 4 5

14. Although it probably means extra work for both your manager and yourself, to what extent do the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

1 2 3 4 5

15. To what extent does your manager take extra time to keep you informed about important matters affecting your work, even though you sometimes feel that he thinks this additional information may help your morale more than your performance?

1 2 3 4 5

16. If a subordinate's performance is adequate, to what extent does your manager work with him to improve it?

1 2 3 4 5

17. To what extent is your manager open to the suggestions of his subordinates, even though you have a feeling that he thinks some of the suggestions in the past may not have been too practical?

1 2 3 4 5

18. To what extent does your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

1 2 3 4 5

19. To what extent does your manager allow you to choose your own work methods, even though you sometimes feel that he may not think the chosen methods are going to work very well?

1 2 3 4 5

To a very little extent
To a little extent
To some extent
To a great extent
To a very great extent

20. Although this involves a lot of extra time, effort,
and patience on everyone's part, to what extent does
your manager attempt to build his immediate work
group, including himself, into a high-performance
work team?   1 2 3 4 5

21. To what extent does your manager use staff meetings
to solve problems of vital concern to his immediate
work group?   1 2 3 4 5

22. To what extent does your manager stop what he is
doing, not let himself be interrupted, and really
listen when you come in to talk to him?   1 2 3 4 5

23. To what extent does your manager listen to and
counsel you regarding non-work-related personal
difficulties?   1 2 3 4 5

24. How friendly and easy to approach is your manager,
even though you have reason to suspect that this
may sometimes be uncomfortable or personally dis-
tasteful to him?   1 2 3 4 5

- -

Thank you. Now please answer questions 25 to 36 with
another frame of mind.

In your particular situation, what is the way you would like
your manager to relate to you and his other immediate subordi-
nates? (Again, if you are not a direct subordinate of this
person, answer what is the way you would like this person to
relate to his direct subordinates.)

To a very little extent

To a little extent

To some extent

To a great extent

To a very great extent

25. To what extent would you like your manager to go to the extra trouble to encourage you to give your best effort?

1 2 3 4 5

26. Although it would probably mean extra work for both your manager and yourself, to what extent would you like to have the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

1 2 3 4 5

27. To what extent would you like your manager to take extra time to keep you informed about important matters affecting your work, even though you may sometimes think that he feels this additional information may help your morale more than your performance?

1 2 3 4 5

28. If a subordinate's performance is adequate, to what extent would you like your manager to work with him to improve it?

1 2 3 4 5

29. To what extent would you like your manager to be open to the suggestions of his subordinates, even though you may have a feeling that he thinks some of the suggestions in the past may not have been too practical?

1 2 3 4 5

30. To what extent would you like to have your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

1 2 3 4 5

31. To what extent would you like to have your manager allow you to choose your own work methods, even though you may sometimes feel that he may not think the chosen methods are going to work very well?

1 2 3 4 5

		To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

32. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent would you like to have your manager attempt to build his immediate work group, including himself, into a high-performance work team?   1 2 3 4 5

33. To what extent would you like to have your manager use staff meetings to solve problems of vital concern to your immediate work group?   1 2 3 4 5

34. To what extent would you like to have your manager stop what he is doing, not let himself be interrupted, and really listen when you come in to talk to him?   1 2 3 4 5

35. To what extent would you like your manager to listen to and counsel you regarding non-work-related personal difficulties?   1 2 3 4 5

36. How friendly and easy to approach would you like your manager, even though you may have reason to suspect that this may sometimes be uncomfortable or personally distasteful to him?   1 2 3 4 5

- -

Now a question that requires a written answer.

What changes has this person actually made, during the last spring and summer, in the way he leads his direct subordinates? Please be as specific as you can; use examples or incidents to illustrate if possible. Write your answer in the back of the machine scored answer sheet <u>below</u> your position title.

- -

Finally, please answer the following questions. They are to aid in the analysis of the results.

37. How old are you now?

    1. 60 or older.
    2. Less than 60.
    3. Less than 50.
    4. Less than 40.
    5. Less than 30.

38. How much formal education have you had.

    1. Completed doctoral degree.
    2. Completed master's degree.
    3. Graduated from college.
    4. Had some college work.
    5. Graduated from high school.

39. How long have you been with Michigan State Government?

    1. 20 or more years.
    2. Less than 20 years.
    3. Less than 10 years.
    4. Less than 5 years.
    5. Less than 1 year.

40. How long have you been in your present position?

    1. 10 or more years.
    2. Less than 10 years.
    3. Less than 5 years.
    4. Less than 3 years.
    5. Less than 1 year.

41. How much experience have you had in supervisory jobs?

    1. 10 or more years.
    2. Less than 10 years.
    3. Less than 3 years.
    4. Less than 1 year.
    5. None.

42. At this time, what is the total number of subordinates who report to you <u>directly</u>?

    1. 8 or more.
    2. Less than 8.
    3. Less than 4.
    4. One.
    5. None.

43. How many management or supervisory development programs, conferences, or seminars have you attended in your whole career?

    1. More than 3.
    2. Three.
    3. Two.
    4. One.
    5. None.

44. How long have you worked as a direct subordinate for your present manager?

    1. 5 or more years.
    2. Less than 5 years.
    3. Less than 3 years.
    4. Less than 18 months.
    5. Less than 6 months.

45. Are you a direct subordinate of the person on whom you filled out this checklist?

    1. Yes.
    2. No.

46. Did you fill out a checklist similar to this one last spring on this manager?

    1. Yes.
    2. No.

That completes the questionnaire. Would you return just the machine scored answer sheet in the addressed envelope provided? The results, anaonymously of course, will be given to your boss as soon as possible; this depends primarily on how soon the other respondents in the study fill out and return their answer sheets.

Thanks.

APPENDIX E

LETTER TO SUPERIOR OF TRAINEE REQUESTING

ADDITIONAL SUBJECT

APPENDIX E

LETTER TO SUPERIOR OF TRAINEE REQUESTING

ADDITIONAL SUBJECT

DIVISION OF ORGANIZATIONAL RESEARCH
DEPARTMENT OF PSYCHOLOGY
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan

Dear Sir:

In attending the Executive Development Program at Michigan
State University, your subordinate will have a unique opportunity to
assess his own leadership and compare it to that of his peers through-
out Michigan State Government. However, he needs your help in obtain-
ing some information for this exercise.

In the opening session of the M.S.U. program, your subordinate
was asked to complete a checklist describing his leadership behaviors
and judgments; he was also asked to have up to six of his subordinates
fill out a similar checklist about him. In less than a month, we will
give him general information on the leadership of other managers in
State Government at his organizational level and personalized informa-
tion on his own leadership style. Later in the year, he will be asked
to go through the exercise again. This will give him a better idea of
what changes he effected in his leadership in the interim period; it
will also provide us with one means of analyzing the Executive Devel-
opment Program.

WHAT ARE YOU ASKED TO DO?

Select another direct subordinate to complete the checklist
exercise. Why? A fairly large number of persons, including both
course participants and non-participants, should be surveyed to
obtain accurate information on the leadership behaviors and judgments
of state government managers at your subordinate's organizational
level. This information will be used as a guideline against which
your subordinate can compare his own leadership information.

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Please select another of your immediate subordinates whom you feel would be next in line to attend a similar executive development program. Give him the envelope materials which are self-explanatory. Ask him to complete the checklist exercise. Because of computer time constraints, we must ask that all checklist answers be sent to us no later than Wednesday, March 15.

Of course, the individual whom you select will also get information on his own leadership and that of other managers.

If the individual you select would rather not participate, please select another person. If you have no subordinates who wish to participate, or if you feel the exercise is not appropriate for your work group, simply return the materials to me at M.S.U. through your subordinate who is a participant in the Executive Development Program.

Feel free to look through the envelope materials. If you have any questions, please call me at M.S.U., phone (517) 353-0686.

Cordially,

John R. Mietus

APPENDIX F

FEEDBACK PACKET FOR TRAINEES, PRETEST RESULTS

APPENDIX F

FEEDBACK PACKET FOR TRAINEES, PRETEST RESULTS

Results of the

LEADERSHIP PRACTICES EXERCISE

for

_____

Spring 1973

Division of Organizational Research
Department of Psychology
MICHIGAN STATE UNIVERSITY

"Big fleas have little fleas
to plague, perplex and bite 'em.
Little fleas have lesser fleas,
and so on ad infinitum."

                    --R. R. Fielder

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HOW TO USE THE PROFILES AS A DEVELOPMENTAL TOOL

"Nearly all men die of their remedies,
and not of their illnesses."
—Molière

Look at Profile Sheet 1. On the right half of the page is a column of scales, each scale with scores from 1 to 5. The two zigzag lines (profile lines) running from scale to scale compare the collective judgments of your subordinates to each of the questions.

On the left side of the page is (1) a shortened form of the question, (2) the collective judgment (average) of your subordinates regarding that question, (3) and a percentage distribution of responses. The percentage distribution is only provided if five or more subordinates responded; its purpose is to give an idea of how concentrated or spread out the judgments were on the question.

Next, looking at the profile lines, find the questions where the NOW and LIKE lines are far apart. This reflects the aspects of your leadership where there is a discrepancy between what your subordinates feel you do and what they would like you to do. (If things look not too good, recall the words of Winston Churchill: "Nothing in life is so exhilarating as to be shot at without result.")

Detailed information on the various terms used in the profile sheets can be found in Appendix A. The actual questions used in the survey are listed in Appendix B; please refer to Appendix B before fixing in your mind the meaning of the shortened statements contained on the profile sheets.

The other profile sheets are meant to provide additional data which may be of interest to you or your subordinates. These sheets are similar in design to Profile 1, but contain quite different comparisons:

--Profile Sheet 3 compares how you lead with how your peers lead.

--Profile Sheets 5 and 6 do not show any of your personal data. You might consider showing them to your subordinates or boss even if you don't intend to share your personal profiles with anyone.

In September you'll be asked to go through the exercise again. Then you'll be given information on (1) what changes you made in your own leadership style and (2) how your changes compare with those of the other managers, both those executives in the Development Program and those who were not in it.

Following are your personal profile sheets:

Profile Sheet 1 compares what your subordinates see as

how you lead NOW
with
how they would LIKE to have you lead.

Profile Sheet 2 compares

what your SUBORDINATES see as how you lead now
with
what you YOURSELF see as how you lead now.

Profile Sheet 3 compares

how YOU lead now
with
how your PEERS lead now, both as seen by subordinates.

Profile Sheet 4 compares

how YOU would like to lead
with
how your PEERS would like to lead.

Profile Sheet 5 compares what ALL subordinates see as

how their bosses lead NOW
with
how they would LIKE to have their bosses lead.

Profile Sheet 6 compares

how your peers and you would LIKE to lead
with
how your peers and you think the "effective manager" SHOULD lead.

How ___ of your subordinates perceive your leadership NOW and how they would LIKE it. (Profile 1)

#	Average	% Distribution	to a very little extent — — — — to a very great extent
	Boss encourages best effort		
13.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
25.	Like . __ __ __ __ __ __		
	Sub's goals defined jointly		
14.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
26.	Like . __ __ __ __ __ __		
	Boss informs subordinates		
15.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
27.	Like . __ __ __ __ __ __		
	Boss helps sub. improve		
16.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
28.	Like . __ __ __ __ __ __		
	Boss open to suggestions		
17.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
29.	Like . __ __ __ __ __ __		
	Boss offers unrequested help		
18.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
30.	Like . __ __ __ __ __ __		
	Sub. chooses work methods		
19.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
31.	Like . __ __ __ __ __ __		
	Boss builds work team		
20.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
32.	Like . __ __ __ __ __ __		
	Boss uses staff meetings		
21.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
33.	Like . __ __ __ __ __ __		
	Boss listens to subordinates		
22.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
34.	Like . __ __ __ __ __ __		
	Counsels on personal issues		
23.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
35.	Like . __ __ __ __ __ __		
	Boss is friendly		
24.	Now . __ __ __ __ __ __		1--¹--2--¹--3--¹--4--¹--5
36.	Like . __ __ __ __ __ __		

How ___ of your subordinates perceive your present leadership compared
with how you yourself perceive it. (Profile 2)

	Response or Average	% Distribution	to a very little extent	to a very great extent
#				

Boss encourages best effort
13. You ___
13. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Sub's goals defined jointly
14. You ___
14. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss informs subordinates
15. You ___
15. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss helps sub. improve
16. You ___
16. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss open to suggestions
17. You ___
17. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss offers unrequested help
18. You ___
18. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Sub. chooses work methods
19. You ___
19. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss builds work team
20. You ___
20. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss uses staff meetings
21. You ___
21. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss listens to subordinates
22. You ___
22. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Counsels on personal issues
23. You ___
23. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

Boss is friendly
24. You ___
24. Sub. _._ ___ ___ ___ ___ ___   1--!--2--!--3--!--4--!--5

How your present leadership compares with that of your peers; both
profiles are based on responses of subordinates. (Profile 3)

#	Average		% Distribution			to a very little extent			to a very great extent	

Boss encourages best effort
13. You .
13. Peer 3.2 11 11 35 30 13   1--!--2--!--3--!--4--!--5

Sub's goals defined jointly
14. You .
14. Peer 3.1 10 15 37 29 10   1--!--2--!--3--!--4--!--5

Boss informs subordinates
15. You .
15. Peer 3.4 8 10 32 34 16   1--!--2--!--3--!--4--!--5

Boss helps sub. improve
16. You .
16. Peer 2.7 14 23 43 16 3   1--!--2--!--3--!--4--!--5

Boss open to suggestions
17. You .
17. Peer 3.7 2 6 36 39 17   1--!--2--!--3--!--4--!--5

Boss offers unrequested help
18. You .
18. Peer 2.9 11 19 44 18 8   1--!--2--!--3--!--4--!--5

Sub. chooses work methods
19. You .
19. Peer 3.7 3 4 29 43 20   1--!--2--!--3--!--4--!--5

Boss builds work team
20. You .
20. Peer 3.6 6 10 26 34 24   1--!--2--!--3--!--4--!--5

Boss uses staff meetings
21. You .
21. Peer 3.0 16 16 30 26 12   1--!--2--!--3--!--4--!--5

Boss listens to subordinates
22. You .
22. Peer 3.8 4 6 19 43 28   1--!--2--!--3--!--4--!--5

Counsels on personal issues
23. You .
23. Peer 2.3 39 19 24 10 8   1--!--2--!--3--!--4--!--5

Boss is friendly
24. You .
24. Peer 4.1 1 4 17 39 39   1--!--2--!--3--!--4--!--5

How you would LIKE to manage compared with how 82 of your peers would LIKE to manage; both profiles are based on self-reports. (Profile 4)

#	Response or Average	% Distribution					to a very little extent — — — to a very great extent
	Boss encourages best effort						
25.	You						1--!--2--!--3--!--4--!--5
25.	Peers 4.4	1	1	10	31	57	
	Sub's goals defined jointly						
26.	You						1--!--2--!--3--!--4--!--5
26.	Peers 4.4	0	1	7	40	51	
	Boss informs subordinates						
27.	You						1--!--2--!--3--!--4--!--5
27.	Peers 4.5	0	0	9	35	56	
	Boss helps sub. improve						
28.	You						1--!--2--!--3--!--4--!--5
28.	Peers 3.8	0	1	35	41	22	
	Boss open to suggestions						
29.	You						1--!--2--!--3--!--4--!--5
29.	Peers 4.1	0	0	23	41	35	
	Boss offers unrequested help						
30.	You						1--!--2--!--3--!--4--!--5
30.	Peers 3.3	5	9	48	26	13	
	Sub. chooses work methods						
31.	You						1--!--2--!--3--!--4--!--5
31.	Peers 3.4	5	4	44	37	11	
	Boss builds work team						
32.	You						1--!--2--!--3--!--4--!--5
32.	Peers 4.7	0	0	6	16	78	
	Boss uses staff meetings						
33.	You						1--!--2--!--3--!--4--!--5
33.	Peers 3.9	2	6	27	34	32	
	Boss listens to subordinates						
34.	You						1--!--2--!--3--!--4--!--5
34.	Peers 4.2	0	2	20	34	44	
	Counsels on personal issues						
35.	You						1--!--2--!--3--!--4--!--5
35.	Peers 2.7	16	22	41	15	6	
	Boss is friendly						
36.	You						1--!--2--!--3--!--4--!--5
36.	Peers 4.3	0	1	18	51	29	

How your peers manage NOW compared with the way their subordinates would LIKE them to manage; both profiles are based on responses of 379 subordinates. (Profile 5)

#	Average	% Distribution	to a very little extent ___ ___ to a very great extent
	Boss encourages best effort		
13.	Now 3.2	11 11 35 30 13	1--!--2--!--3--!--4--!--5
25.	Like 3.5	4 6 40 36 14	
	Sub's goals defined jointly		
14.	Now 3.1	10 15 37 29 10	1--!--2--!--3--!--4--!--5
26.	Like 4.0	1 2 21 46 30	
	Boss informs subordinates		
15.	Now 3.4	8 10 32 34 16	1--!--2--!--3--!--4--!--5
27.	Like 4.1	0 2 16 47 35	
	Boss helps sub. improve		
16.	Now 2.7	14 23 43 16 3	1--!--2--!--3--!--4--!--5
28.	Like 3.2	3 10 56 25 7	
	Boss open to suggestions		
17.	Now 3.7	2 6 36 39 17	1--!--2--!--3--!--4--!--5
29.	Like 3.8	1 1 35 47 17	
	Boss offers unrequested help		
18.	Now 2.9	11 19 44 18 8	1--!--2--!--3--!--4--!--5
30.	Like 3.2	4 14 51 24 7	
	Sub. chooses work methods		
19.	Now 3.7	3 4 29 43 20	1--!--2--!--3--!--4--!--5
31.	Like 3.7	2 6 32 44 16	
	Boss builds work team		
20.	Now 3.6	6 10 26 34 24	1--!--2--!--3--!--4--!--5
32.	Like 4.3	0 1 12 40 47	
	Boss uses staff meetings		
21.	Now 3.0	16 16 30 26 12	1--!--2--!--3--!--4--!--5
33.	Like 3.6	4 9 31 34 21	
	Boss listens to subordinates		
22.	Now 3.8	4 6 19 43 28	1--!--2--!--3--!--4--!--5
34.	Like 3.8	2 4 25 44 24	
	Counsels on personal issues		
23.	Now 2.3	39 19 24 10 8	1--!--2--!--3--!--4--!--5
35.	Like 2.0	40 27 24 8 1	
	Boss is friendly		
24.	Now 4.1	1 4 17 39 39	1--!--2--!--3--!--4--!--5
36.	Like 3.8	2 5 30 42 21	

How your peers would LIKE to manage compared with how they think the "EFFECTIVE manager" should manage; profiles based on responses of 82 managers. (Profile 6)

#	Average		% Distribution				to a very little extent
	Boss encourages best effort						
25.	Like 4.4	1	1	10	31	57	1--!--2--!--3--!--4--!--5
1.	Efct 4.3	0	1	16	37	46	
	Sub's goals defined jointly						
26.	Like 4.4	0	1	7	40	51	1--!--2--!--3--!--4--!--5
2.	Efct 4.4	0	0	7	49	44	
	Boss informs subordinates						
27.	Like 4.5	0	0	9	35	56	1--!--2--!--3--!--4--!--5
3.	Efct 4.4	0	0	10	44	46	
	Boss helps sub. improve						
28.	Like 3.8	0	1	35	41	22	1--!--2--!--3--!--4--!--5
4.	Efct 3.6	1	1	46	38	13	
	Boss open to suggestions						
29.	Like 4.1	0	0	23	41	35	1--!--2--!--3--!--4--!--5
5.	Efct 4.0	0	0	26	44	31	
	Boss offers unrequested help						
30.	Like 3.3	5	9	48	26	13	1--!--2--!--3--!--4--!--5
6.	Efct 3.2	6	6	57	21	10	
	Sub. chooses work methods						
31.	Like 3.4	5	4	44	37	11	1--!--2--!--3--!--4--!--5
7.	Efct 3.1	6	11	55	26	2	
	Boss builds work team						
32.	Like 4.7	0	0	6	16	78	1--!--2--!--3--!--4--!--5
8.	Efct 4.7	0	0	5	23	72	
	Boss uses staff meetings						
33.	Like 3.9	2	6	27	34	32	1--!--2--!--3--!--4--!--5
9.	Efct 3.9	1	4	28	39	28	
	Boss listens to subordinates						
34.	Like 4.2	0	2	20	34	44	1--!--2--!--3--!--4--!--5
10.	Efct 4.1	0	1	22	45	32	
	Counsels on personal issues						
35.	Like 2.7	16	22	41	15	6	1--!--2--!--3--!--4--!--5
11.	Efct 2.9	10	17	53	13	6	
	Boss is friendly						
36.	Like 4.3	0	1	16	35	48	1--!--2--!--3--!--4--!--5
12.	Efct 4.1	0	1	18	51	29	

(header: to a very little extent _ _ _ _ to a very great extent)

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APPENDIX A

EXPLANATION OF SOME ITEMS AND TERMS ON
THE PROFILE SHEETS

PROFILE LINE: a line connecting all the plotted average values or individual responses. Its purpose is to give the reader a quick visual impression of the data and to allow him to make comparisons.

AVERAGE: The average value of the selections of the five response options for each question. It is calculated in the following manner:

Response Option	times	Number of persons selecting that option	equals	Values
1	X	1	=	1
2	X	1	=	2
3	X	3	=	9
4	X	0	=	0
5	X	1	=	5
		Total = 6		Total = 17

The Average equals the Total Value divided by the Total Number of Persons, or 17 + 6 = 2.8.

RESPONSE: This is your own response to a particular question. In Profile Sheets 2 and 4 your individual response is compared with that of some group.

SHORTENED STATEMENTS of the original questions: these are to save you the trouble of frequently referring to the complete question. It is important to remember that these shortened statements do not adequately reflect the full meaning of the original questions. Refer to Appendix B before fixing in your mind the meaning of the shortened statements. Also recall that there are variations in meaning which persons attach to the same set of words; the meaning which you see in a question may not be the same meaning others attached to the question.

PERCENTAGE DISTRIBUTION: the percentage of persons who selected each of the five optional responses for each question. The information is given only when there were five or more respondents. Sometimes the percents will not add to 100%. If they do not, it is either the result of rounding percents to a whole number or because some individuals did not answer the question.

THE SAMPLE: eighty-two upper level executives in Michigan state government and 379 of their immediate subordinates. In some instances, rather than immediate subordinates, co-workers who knew the executive well responded to the questionnaire. Approximately two-thirds of the executives were enrolled in a development program at Michigan State University; the other third were executives who reported to the same boss as the enrollees, and thus were at about the same organizational level. A wide variety of departments and functions of state government are represented in the sample.

APPENDIX B

QUESTIONS ASKED IN THE EXERCISE

These are the questions which were asked of managers and their subordinates. Also, the shortened statements which are used in the profiles are included.

All questions have the same answer possibilities.

1. To a very little extent
2. To a little extent
3. To some extent
4. To a great extent
5. To a very great extent

* *

THE EFFECTIVE MANAGER SCALE

This scale contains questions which asked judgments about the way the effective manager, in Michigan state government and at a high organizational level, SHOULD act toward or with immediate subordinates. All responding managers were asked to make these particular judgments without including themselves in their thoughts, and all responding subordinates were asked to not include their boss in the judgments.

The exact same questions were put to both managers and subordinates.

----

1. Boss encourages best effort

1. To what extent should the effective manager go to the extra trouble to encourage his immediate subordinates to give their best effort?
----

2. Sub's goals defined jointly

2. Although it will probably mean a lot of extra work for both the manager and subordinate, to what extent should they together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?
----

3. Boss informs subs

3. To what extent should the manager take extra time to keep his sub-ordinates informed about important matters affecting their work, even though his guess is that this additional information will help their morale more than their performance?

----

4. Boss helps sub. improve

4. If a subordinate's performance is adequate, to what extent should the manager work with him to improve it?

----

5. Boss open to suggestions

5. To what extent should the manager be open to the suggestions of a subordinate, even though in the past some of his suggestions have not been too practical?

----

6. Boss offers unrequested help

6. To what extent should the manager offer unrequested help to an immediate subordinate who is having difficulty in solving a tech-nical or administrative problem?

----

7. Sub. chooses work methods

7. To what extent should the manager allow an immediate subordinate to choose his work methods, even though the manager does not think the chosen methods are going to work very well?

----

8. Boss builds work team

8. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent should the manager attempt to build his immediate work group, including himself, into a high performance work team?

----

9. Boss uses staff meetings

9. To what extent should the manager use staff meetings to solve problems of vital concern to his immediate work group?

----

10. Boss listens to subs.

10. To what extent should the manager stop what he is doing, not let himself be interrupted, and really listen when a subordinate comes in to talk to him?

    ----

11. Counsels on personal issues

11. To what extent should the manager listen to and counsel a subordinate regarding non-work-related personal difficulties?

    ----

12. Boss is friendly

12. How friendly and easy to approach should the manager be, even though this may sometimes be uncomfortable or distasteful to him personally?

* *

THE MANAGER NOW SCALE

This scale asks the same questions as asked above, but in a different frame of reference. Here the respondent is asked to indicate the actual present relationship that exists between the manager and subordinate in the respondent's own work group.

Although the same question meaning was put to both manager and subordinate, slight changes in wording were necessary. Both versions of the question are listed below, first the manager's version, then the subordinate's.

----

13. Boss encourages best effort

13. To what extent do you go to the extra trouble to encourage your subordinates to give their best effort?

13. To what extent does your manager go to what seems like extra trouble to encourage you to give your best effort?

    ----

14. Sub's goals defined jointly

14. Although it probably means extra work for both yourself and your subordinate, to what extent do the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?

14. Although it probably means extra work for both your manager and yourself, to what extent do the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

----

15. Boss informs subs.

15. To what extent do you take extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional iinformation may help their morale more than their performance?

15. To what extent does your manager take extra time to keep you informed about important matters affecting your work, even though you sometimes feel that he thinks this additional information may help your morale more than your performance?

----

16. Boss helps sub. improve

16. If a subordinate's performance is adequate, to what extent do you work with him to improve it?

16. If a subordinate's performance is adequate, to what extent does your manager work with him to improve it?

----

17. Boss open to suggestions

17. To what extent are you open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?

17. To what extent is your manager open to the suggestions of his subordinates, even though you have a feeling that he thinks some of the suggestions in the past may not have been too practical?

----

18. Boss offers unrequested help

18. To what extent do you offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?

18. To what extent does your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

----

19. Sub. chooses work methods

19. To what extent do you allow your immediate subordinates to choose their work methods, even though you may not think the chosen methods are going to work very well?

19. To what extent does your manager allow you to choose your own work methods, even though you sometimes feel that he may not think the chosen methods are going to work very well?

----

20. Boss builds work team

20. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent do you attempt to build your immediate work group, including yourself, into a high-performance work team?

20. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent does your manager attempt to build his immediate work group, including himself, into a high-performance work team?

----

21. Boss uses staff meetings

21. To what extent do you use staff meetings to solve problems of vital concern to your immediate work group?

21. To what extent does your manager use staff meetings to solve problems of vital concern to his immediate work group?

----

22. Boss listens to subs

22. To what extent do you stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?

22. To what extent does your manager stop what he is doing, not let himself be interrupted, and really listen when you come in to talk to him?

----

23. Counsels on personal issues

23. To what extent do you listen to and counsel subordinates regarding their non-work-related personal difficulties?

23. To what extent does your manager listen to and counsel you regarding non-work-related personal difficulties?

----

24. Boss is friendly

24. How friendly and easy to approach are you, even though this may sometimes be uncomfortable or distasteful to you?

24. How friendly and easy to approach is your manager, even though you have reason to suspect that this may sometimes be uncomfortable or personally distasteful to him?

* *

THE LIKE MANAGER TO BE SCALE

This scale asks the same questions as before, but again in a different frame of reference. Here the respondent is asked to indicate the relationship he would like to have exist between the manager and the subordinate in the respondent's own work group.

In addition to the shortened statement, both the manager's and the subordinate's versions of the questions are listed below, the manager's again being listed first.

----

25. Boss encourages best effort

25. To what extent would you like to go to the extra trouble to encourage your subordinates to give their best effort?

25. To what extent would you like your manager to go to the extra trouble to encourage you to give your best effort?

----

26. Sub's goals defined jointly

26. Although it would probably mean extra work for both yourself and your subordinate, to what extent would you like to have the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?

26. Although it would probably mean extra work for both your manager and yourself, to what extent would you like to have the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

----

27. Boss informs subs.

27. To what extent would you like to take the extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional information may help their morale more than their performance?

27. To what extent would you like your manager to take extra time to keep you informed about important matters affecting your work, even though you may sometimes think that he feels this additional information may help your morale more than your performance?

----

28. Boss helps sub. improve

28. If a subordinate's performance is adequate, to what extent would you like to work with him to improve it?

28. If a subordinate's performance is adequate, to what extent would you like your manager to work with him to improve it?

----

29. Boss open to suggestions

29. To what extent would you like to be open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?

29. To what extent would you like your manager to be open to the suggestions of his subordinates, even though you may have a feeling that he thinks some of the suggestions in the past may not have been too practical?

----

30. Boss offers unrequested help

30. To what extent would you like to offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?

30. To what extent would you like to have your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

----

31. Sub. chooses work methods

31. To what extent would you like to allow your immediate subordinates to choose their work methods, even though you may not think the chosen methods are going to work very well?

31. To what extent would you like to have your manager allow you to choose your own work methods, even though you may sometimes feel that he may not think the chosen methods are going to work very well?

----

32. Boss builds work team

32. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent would you like to attempt to build your immediate work group, including yourself, into a high-performance work team?

32. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent would you like to have your manager attempt to build his immediate work group, including yourself, into a high-performance work team?

----

33. Boss uses staff meeting

33. To what extent would you like to use staff meetings to solve problems of vital concern to your immediate work group?

33. To what extent would you like to have your manager use staff meetings to solve problems of vital concern to your immediate work group?

----

34. Boss listens to subs.

34. To what extent would you like to stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?

34. To what extent would you like to have your manager stop what he is doing, not let himself be interrupted, and really listen when you come in to talk to him?

----

35. Counsels on personal issues

35. To what extent would you like to listen to and counsel subordinates regarding their non-work-related personal difficulties?

35. To what extent would you like your manager to listen to and counsel you regarding non-work-related personal difficulties?

----

36. Boss is friendly

36. How friendly and easy to approach would you like to be, even though this may sometimes be uncomfortable or distasteful to you?

36. How friendly and easy to approach would you like your manager, even though you may have reason to suspect that this may sometimes be uncomfortable or personally distasteful to him?

* *

APPENDIX G

INFORMATION USED TO STANDARDIZE FEEDBACK

BETWEEN COMPARISON GROUPS, PRETEST FEEDBACK

APPENDIX G

INFORMATION USED TO STANDARDIZE FEEDBACK

BETWEEN COMPARISON GROUPS, PRETEST FEEDBACK

During the return of the feedback packages to your peers in the Executive Development Program the following questions were discussed.

1. How accurate or valid are the personal profiles?

The accuracy increases as the number of subordinates who responded about you goes from three to six. With five or six subordinates responding, you can be quite certain that you have a true reflection of the way they see you as leading. With three or four, you have a good approximation.

2. What interpretations might be made of Profile Sheet 5, which gives an overall impression of the way all managers at your level in Michigan state government lead?

Upward communication from subordinates to boss is excellent (questions 17, 29; 22, 34).
Downward communication from boss to subordinate could be improved (question 15, 27).
Staff meetings are not being used as effectively as subordinates think they could be used (question 21, 33).
Human relations (friendliness, consideration) is excellent (questions 22, 34; 23, 35; 24, 36).
Management-by-objectives has not been incorporated sufficiently as seen by more than 25% of the subordinates responding (question 14, 26).

You might wish to look at your own Profile Sheet 1 in this way.

3. What value is Profile Sheet 6?

For you as a practicing manager, not much. All it shows is that you and your peers want to lead in the way you believe the effective manager should lead. It is of important theoretical interest. We included it in your feedback to be sure you got your money's worth.

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4. Finally, if you have any questions about your feedback package, please call John Mietus, 353-0686, in the Psychology Department at M.S.U.

APPENDIX H

GOALSETTING EXERCISE, MAY 1973

APPENDIX H

GOALSETTING EXERCISE, MAY 1973

It often helps to set definite goals for changes one wishes to make in one's leadership behavior. Therefore this little exercise.

Use Profile Sheet 1 as a reference. Select the question(s) relating to those aspects of your leadership in which you would like to make changes. For these questions set numerical goals. Base these goals on the average responses you would like your subordinates to give when the questionnaire is administered again next September.

For example, if you would like to increase the joint goalsetting that you do with your subordinates, and if your NOW score is 3.2, your LIKE score is 4.3, and you think 3.8 would be an appropriate NOW score to get next September, write, on the back of this sheet, 3.8 on the line next to "Sub's goals defined jointly."

Then, if you would, please return the form to John Mietus in the envelope provided. Do this either by dropping it off at a subsequent program session or through the mail. The reason we are asking you to return the form to M.S.U. is so that we can better evaluate how the Executive Development Program helped you decide on changes to effect in your management practices.

Boss encourages best effort   _____

Sub's goals defined jointly   _____

Boss informs subordinates   _____

Boss helps sub. improve   _____

Boss open to suggestions   _____

Boss offers unrequested help   _____

Sub. chooses work methods   _____

Boss builds work team   _____

Boss uses staff meetings   _____

Boss listens to subordinates   _____

Counsels on personal issues   _____

Boss is friendly   _____

APPENDIX I

GOALSETTING EXERCISE, JULY 1973

APPENDIX I

GOALSETTING EXERCISE, JULY 1973

Division of Organizational Research
Department of Psychology
Michigan State University
East Lansing, Michigan 48823

July 26, 1973

<u>PERSONAL</u>

      As hard as it is for you to do now that you are enjoying summer weather, think back to last Spring and the Executive Development Program you were in. It was demonstrated to you then how powerful a tool setting goals for your personal improvement was for developing and sharpening your leadership skills. When your Leadership Practices Exercise feedback packet came back to you, you will remember that you not only got feedback on how you lead, but that built into the packet was practice in setting new goals. Looking ahead to this Fall, it should be possible for us to put a number of pieces of information together about your ability to lead the work of others and see what changes you and the others in your group achieved. We need to have you tell us, however, what goals, if any, you have set for yourself.

      So take just a moment now. Fill out the familiar very short form on the back of this letter and send it to me at M.S.U. As before, any information you provide is kept confidential.

                              Sincerely,

                              John R. Mietus

The information contained here is the same as was on Profile Sheet 1 in your Leadership Practices Exercise feedback packet. The red unbroken line shows how your subordinates or coworkers, on the average, saw you as presently leading. The green dashed line shows how they, on the average, would have liked to have seen you lead. The statements to the left are shortened versions of the questions to which they responded.

For any statement in which you are trying, or intend to try, to make a change in the way you lead, think of a numerical goal. Base this goal on how you would like your subordinates, on the average, to see you as leading when they answer the questions in the Leadership Practices Exercise again in late September. Mark an 'X' on the line at that numerical point. Do this for as many statement areas in which you really intend to try to change yourself. Under your particular circumstances, you may decide it is not necessary or even in your best interests to make any changes; for those items you are not going to change, make no marks.

If you have questions, call me at 353-6422 after August 6. Please mail this form back to me, even if you have decided not to set any goals now.

EXAMPLE: If you would like to increase the joint goal setting that you do with your subordinates, and if your NOW score (red unbroken line) is 3.2, your LIKE score (green dashed line) is 4.3, and you think 3.8 would be an appropriate NOW score to try to get from your subordinates or coworkers late next September mark an 'X' at 3.8 on the line next to "Sub's goals defined jointly."

Sub's goals defined jointly   1---¹---2---¹---3---¹---4---¹---5

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Boss encourages best effort   1----⊥----2---⊥---3---⊥---4---⊥---5

Sub's goals defined jointly   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss informs subordinates   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss helps sub. improve   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss open to suggestions   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss offers unrequested help   1---⊥---2---⊥---3---⊥---4---⊥---5

Sub. chooses work methods   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss builds work team   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss uses staff meetings   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss listens to subs.   1---⊥---2---⊥---3---⊥---4---⊥---5

Counsels on personal issues   1---⊥---2---⊥---3---⊥---4---⊥---5

Boss is friendly   1---⊥---2---⊥---3---⊥---4---⊥---5

APPENDIX J

FEEDBACK PACKET FOR TRAINEES, POSTTEST RESULTS

APPENDIX J

FEEDBACK PACKET FOR TRAINEES, POSTTEST RESULTS

Results of the

LEADERSHIP PRACTICES EXERCISE

for

_____

Fall 1973

Division of Organizational Research
Department of Psychology
MICHIGAN STATE UNIVERSITY

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MICHIGAN STATE UNIVERSITY East Lansing • Michigan 48823

Department of Psychology • Olds Hall

March 29, 1974

Dear

     Here are the results of our analyses of the information you provided by filling out the Leadership Practices Exercise last year.

     You and the other upper-level state government executives involved were considered subjects in an experiment to determine the short run impact of various kinds of leadership development programs or treatments. There were four different treatments, and each executive was in only one treatment. (1) Some executives received feedback last spring, in the form of profiles, about how their subordinates saw them leading, how they saw themselves leading, and how other state executives are seen as leading. (2) Some executives received feedback as above, and also Michigan State University's Executive Development Program last spring. (3) Some executives received feedback and the university program, as above, and also were asked last summer whether they would set leadership improvement goals for themselves. (4) Finally, some executives received no treatment at all; they simply filled out the Leadership Practices Exercise last fall.

     We were studying what short-term changes, if any, occurred in the executives' leadership attitudes and behaviors as measured by the Leadership Practices Exercise. The results were pretty much as expected. No single treatment had any more or less impact than any other treatment. That is, there were no practical changes in attitudes or behaviors when all executives involved in a treatment are considered as a group. (Of course, there was great variability in changes of individual executives). However, those executives who thought their bosses wanted them to change their style of leading also reported that they did change, and vice versa. Of those who changed, the ones who changed most were the ones who set goals for themselves.

In interpreting this you might look at it this way. Executives, who have achieved high level positions as have these persons, have done so because they are very good at doing certain things, one of which is managing people. As a group, these executives are already doing the right things in leading and should not be expected to change quickly or easily patterns of leading that they have developed over the years. The main value of the university course is in reinforcing the attitudes and behaviors these executives now have, and in helping them to make slow long-term changes.

The practical point for you here is that if you want someone to change fairly rapidly, a subordinate, for example, it is not enough just to send him off to a training course. You have to make your expectations known to him, and, ideally, jointly set goals for his new behaviors. This sounds like a lot, but that is what it takes.

Thanks again for your cooperation.

Cordially,

John R. Mietus

HOW TO USE THE PROFILES

Look at Profile Sheet 1. On the right half of the page is a column of scales, each scale with scores from 1 to 5. The zigzag lines (profile lines) running up and down the page and from scale to scale compare the collective judgments (average response) of your subordinates to each of the questions. On the left side of the page are shortened forms of the questions.

Profile 1 is designed to be used for the following purposes:

1. It reflects those aspects of the way you lead where there is a discrepancy between what your subordinates feel you do and what they would like to see you do. On each question, the less the distance between the two red lines, the more your leadership practices are "tuned" to the needs and expectations of your subordinates.

2. Profile 1 also reflects changes that you have made in the way you lead between March and October 1973. On each question, compare the red and green continuous profile lines; these show the way your subordinates saw you as presently leading when they filled out the checklist about you in March and October.

However just as you change, so do the needs and expectations of your subordinates also change. So to determine if you, as a leader, were meeting the needs of your subordinates better in October than in March, look at a question that is important to you. Measure the distance between the red lines (October). Measure the distance between the green lines (March). If the "October distance" is less than the "March distance," you have improved your leadership in that question area.

Notice, at the top of Profile Sheet 1, how many of your subordinates filled out the checklist about you. If the judgments of 5 or 6 subordinates who work with you daily are included, you may trust to some extent that the profiles reflect quite accurately your leadership. At the other extreme, if 3 persons responded, and 2 of these may have been subordinates at remote posts within the state, or 2 of the respondents may have been co-workers, consider the profiles as only rough approximations of your true leadership style.

The actual questions used in the survey are listed in the appendix. Please refer to these actual questions before fixing in your mind the meaning of the shortened statements contained on the profile sheets. On items that show important discrepancies, it could be worthwhile checking the actual question wording in the appendix for those items.

The other profile sheets are meant to provide additional data which may be of interest to you or your subordinates. These sheets are similar in design to Profile Sheet 1, but contain quite different comparisons:

--Profile Sheet 2 helps you determine any improvements you have made (in becoming more understanding of) the way you lead.

--Profile Sheet 3 compares how you lead with the leadership of other executives in state government at your level.

--Profile Sheet 4 compares the effectiveness of different management development programs, one of which you were in. It is through research like this that more effective programs can be designed.

This is the last feedback package you'll be getting. We hope that it will prove to be a useful and significant part of your development.

If you have questions, please call John Mietus, Department of Psychology, Michigan State University, leaving a message at (517) 353-0686.

PROFILE SHEET 1

How   of your subordinates
    perceived you leading in October (——————————RED——————————)
    and how they would LIKE you to lead (– – – – – RED– – – – – – – –)

COMPARED WITH

How   of your subordinates
    perceived you leading in March 1973 (——————GREEN——————————)
    and how they would have LIKED you to lead (– – – GREEN– – – – – –)

QUESTION NUMBERS AND RELATED SHORTENED STATEMENTS	to a very little extent	to a very great extent
Boss encourages best effort 13, 25	1---⊥---2---⊥----3---⊥----4---⊥----5	
Sub's goals defined jointly 14, 26	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss informs subordinates 15, 27	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss helps sub. improve 16, 28	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss open to suggestions 17, 29	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss offers unrequested help 18, 30	1---⊥---2---⊥----3---⊥----4---⊥----5	
Sub. chooses work methods 19, 31	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss builds work team 20, 32	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss uses staff meetings 21, 33	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss listens to subordinates 22, 34	1---⊥---2---⊥----3---⊥----4---⊥----5	
Counsels on personal issues 23, 35	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss is friendly 24, 36	1---⊥---2---⊥----3---⊥----4---⊥----5	

PROFILE SHEET 2

In October 1973
how your subordinates perceived you leading (- - - - RED - - - - -)
and how you yourself perceived your leading (—————— RED ——————)

COMPARED WITH

In March 1973
how your subordinates perceived you leading (- - - - GREEN - - - -)
and how you yourself perceived your leading (—————— GREEN ——————)

QUESTION NUMBERS AND RELATED SHORTENED STATEMENTS	to a very little extent	to a very great extent
Boss encourages best effort 13, 13	1---⊥---2---⊥----3---⊥----4---⊥----5	
Sub's goals defined jointly 14, 14	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss informs subordinates 15, 15	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss helps sub. improve 16, 16	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss open to suggestions 17, 17	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss offers unrequested help 18, 18	1---⊥---2---⊥----3---⊥----4---⊥----5	
Sub. chooses work methods 19, 19	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss builds work team 20, 20	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss uses staff meetings 21, 21	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss listens to subordinates 22, 22	1---⊥---2---⊥----3---⊥----4---⊥----5	
Counsels on personal issues 23, 23	1---⊥---2---⊥----3---⊥----4---⊥----5	
Boss is friendly 24, 24	1---⊥---2---⊥----3---⊥----4---⊥----5	

PROFILE SHEET 3

In October, how YOU were seen as leading (-Y—Y—Y—Y-)

COMPARED WITH

how YOUR PEERS were seen as leading   (-P- -P- -P- -P-)

Both profiles are based on the responses of subordinates. There are
     subordinates responding about you, and 379 subordinates responding
about 82 peers.

QUESTION NUMBERS AND RELATED SHORTENED STATEMENTS	to a very little extent	to a very great extent
Boss encourages best effort 13, 13	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Sub's goals defined jointly 14, 14	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Boss informs subordinates 15, 15	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Boss helps sub. improve 16, 16	1---ᴸ---2---ᴸ----3-⌐-ᴸ----4---ᴸ----5	
Boss open to suggestions 17, 17	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Boss offers unrequested help 18, 18	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Sub. chooses work methods 19, 19	1---ᴸ---2---ᴸ----3-⌐-ᴸ----4---ᴸ----5	
Boss builds work team 20, 20	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Boss uses staff meetings 21, 21	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Boss listens to subordinates 22, 22	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Counsels on personal issues 23, 23	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	
Boss is friendly 24, 24	1---ᴸ---2---ᴸ----3---ᴸ----4---ᴸ----5	

APPENDIX

QUESTIONS ASKED IN THE EXERCISE, THE RESULTS OF WHICH ARE REPORTED ON
THE PROFILE SHEETS

These are pertinent questions which were asked of managers and
their direct subordinates (or coworkers who knew them well). Also, the
shortened statements which are used in the profiles are included.

All questions have the same answer possibilities.

1. To a very little extent
2. To a little extent
3. To some extent
4. To a great extent
5. To a very great extent

* *

THE MANAGER NOW SCALE

This scale asks the respondent to indicate the actual present
relationship that exists between the manager and subordinate.

Although the same question meaning was put to both manager and
subordinate, slight changes in wording were necessary. Both versions
of the question are listed below, first the manager's version, then the
subordinate's.
----

13. Boss encourages best effort

13. To what extent do you go to the extra trouble to encourage your
     subordinates to give their best effort?

13. To what extent does your manager go to what seems like extra
     trouble to encourage you to give your best effort?
----

14. Sub's goals defined jointly

14. Although it probably means extra work for both yourself and your subordinate, to what extent do the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?

14. Although it probably means extra work for both your manager and yourself, to what extent do the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

----

15. Boss informs subs.

15. To what extent do you take extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional information may help their morale more than their performance?

15. To what extent does your manager take extra time to keep you informed about important matters affecting your work, even though you sometimes feel that he thinks this additional information may help your morale more than your performance?

----

16. Boss helps sub. improve

16. If a subordinate's performance is adequate, to what extent do you work with him to improve it?

16. If a subordinate's performance is adequate, to what extent does your manager work with him to improve it?

----

17. Boss open to suggestions

17. To what extent are you open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?

17. To what extent is your manager open to the suggestions of his subordinates, even though you have a feeling that he thinks some of the suggestions in the past may not have been too practical?

----

18. Boss offers unrequested help

18. To what extent do you offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?

18. To what extent does your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

----

19. Sub. chooses work methods

19. To what extent do you allow your immediate subordinates to choose their work methods, even though you may not think the chosen methods are going to work very well?

19. To what extent does your manager allow you to choose your own work methods, even though you sometimes feel that he may not think the chosen methods are going to work very well?

----

20. Boss builds work team

20. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent do you attempt to build your immediate work group, including yourself, into a high-performance work team?

20. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent does your manager attempt to build his immediate work group, including himself, into a high-performance work team?

----

21. Boss uses staff meetings

21. To what extent do you use staff meetings to solve problems of vital concern to your immediate work group?

21. To what extent does your manager use staff meetings to solve problems of vital concern to his immediate work group?

----

22. Boss listens to subs.

22. To what extent do you stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?

22. To what extent does your manager stop what he is doing, not let himself be interrupted, and really listen when you come in to talk to him?

----

23. Counsels on personal issues

23. To what extent do you listen to and counsel subordinates regarding their non-work-related personal difficulties?

23. To what extent does your manager listen to and counsel you regarding non-work-related personal difficulties? ·

----

24. Boss is friendly

24. How friendly and easy to approach are you, even though this may sometimes be uncomfortable or distasteful to you?

24. How friendly and easy to approach is your manager, even though you have reason to suspect that this may sometimes be uncomfortable or personally distasteful to him?

* *

THE LIKE MANAGER TO BE SCALE

This scale asks the same questions as before, but in a different frame of reference. Here the respondent is asked to indicate the relationship he would like to have exist between the manager and the subordinate in the respondent's own work group.

In addition to the shortened statement, both the manager's and the subordinate's versions of the questions are listed below, the manager's again being listed first.

----

25. Boss encourages best effort

25. To what extent would you like to go to the extra trouble to encourage your subordinates to give their best effort?

25. To what extent would you like your manager to go to the extra trouble to encourage you to give your best effort?

----

26. Sub's goals defined jointly

26. Although it would probably mean extra work for both yourself and your subordinate, to what extent would you like to have the two of you together clearly define the subordinate's work goals and objectively measure the degree to which they are attained?

26. Although it would probably mean extra work for both your manager and yourself, to what extent would you like to have the two of you together clearly define your work goals and objectively measure the degree to which they are attained?

----

27. Boss informs subs.

27. To what extent would you like to take the extra time to keep your subordinates informed about important matters affecting their work, even though your guess is that this additional information may help their morale more than their performance?

27. To what extent would you like your manager to take extra time to keep you informed about important matters affecting your work, even though you may sometimes think that he feels this additional information may help your morale more than your performance?

----

28. Boss helps sub. improve

28. If a subordinate's performance is adequate, to what extent would you like to work with him to improve it?

28. If a subordinate's performance is adequate, to what extent would you like your manager to work with him to improve it?

----

29. Boss open to suggestions

29. To what extent would you like to be open to the suggestions of your subordinates, even though in the past some suggestions may not have been too practical?

29. To what extent would you like your manager to be open to the suggestions of his subordinates, even though you may have a feeling that he thinks some of the suggestions in the past may not have been too practical?

----

30. Boss offers unrequested help

30. To what extent would you like to offer unrequested help to an immediate subordinate who is having difficulty in solving a technical or administrative problem?

30. To what extent would you like to have your manager offer unrequested help to his subordinates when they have difficulty in solving a technical or administrative problem?

----

31. Sub. chooses work methods

31. To what extent would you like to allow your immediate subordinates to choose their work methods, even though you may not think the chosen methods are going to work very well?

31. To what extent would you like to have your manager allow you to choose your own work methods, even though you may sometimes feel that he may not think the chosen methods are going to work very well?

----

32. Boss builds work team

32. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent would you like to attempt to build your immediate work group, including yourself, into a high-performance work team?

32. Although this involves a lot of extra time, effort, and patience on everyone's part, to what extent would you like to have your manager attempt to build his immediate work group, including himself, into a high-performance work team?

----

33. Boss uses staff meeting

33. To what extent would you like to use staff meetings to solve problems of vital concern to your immediate work group?

33. To what extent would you like to have your manager use staff meetings to solve problems of vital concern to your immediate work group?

----

34. Boss listens to subs.

34. To what extent would you like to stop what you are doing, not let yourself be interrupted, and really listen when a subordinate comes in to talk to you?

34. To what extent would you like to have your manager stop what he is doing, not let himself be interrupted, and really listen when you come in to talk to him?

----

35. Counsels on personal issues

35. To what extent would you like to listen to and counsel subordinates regarding their non-work-related personal difficulties?

35. To what extent would you like your manager to listen to and counsel you regarding non-work-related personal difficulties?

----

36. Boss is friendly

36. How friendly and easy to approach would you like to be, even though this may sometimes be uncomfortable or distasteful to you?

36. How friendly and easy to approach would you like your manager, even though you may have reason to suspect that this may sometimes be uncomfortable or personally distasteful to him?

* *

APPENDIX K

ITEM-SCALE CORRELATIONS, INITIAL SCALES

APPENDIX K

ITEM-SCALE CORRELATIONS, INITIAL SCALES

Tables Al to A4 present the entire item-scale correlation matrices for subordinates and for trainees. Those coefficients which lie within the solid rectangles are the item-scale coefficients which were computed for the items designated for the specified scale on an a priori basis during questionnaire construction. They have not been corrected for inclusion of the item in the scale.

Scales are coded as follows:

BIS: Items 1 to 6 measuring Beliefs about effective leadership in the Initiating Structure dimension.

BCN: Items 7 to 12 measuring Beliefs about effective leadership in Consideration dimension.

NIS: Items 13 to 18 measuring behavior (Now) of the trainee in the Initiating Structure dimension.

NCN: Items 19 to 24 measuring behaviors (Now) of the trainee in the Consideration dimension.

LIS: Items 25 to 30 measuring motivational structures (Like) of the respondent for the trainee's behavior in the Initiating Structure dimension.

LCN: Items 31 to 36 measuring motivational structures (Like) of the respondent for the trainee's behavior in the Consideration dimension.

TABLE A1.--Item-scale correlations, pretest, subordinates, N = 371.

	01	02	03	04	05	06
BIS	60	61	59	64	45	50
BCN	14	24	32	24	31	08
NIS	10	09	08	10	11	20
NCN	05	09	06	09	10	13
LIS	38	42	34	43	37	36
LCN	19	25	24	32	34	10

	07	08	09	10	11	12
BIS	03	30	23	20	29	19
BCN	57	40	45	58	54	55
NIS	-01	07	05	05	18	15
NCN	09	09	14	09	28	21
LIS	08	25	21	17	21	18
LCN	34	24	29	34	32	36

	13	14	15	16	17	18
BIS	20	10	13	20	00	25
BCN	12	08	11	09	14	14
NIS	80	80	72	80	52	62
NCN	54	56	52	46	47	38
LIS	22	16	20	23	10	30
LCN	16	06	21	13	20	14

	19	20	21	22	23	24
BIS	03	02	17	05	15	10
BCN	21	05	16	16	25	21
NIS	15	66	41	35	39	43
NCN	42	61	62	64	60	65
LIS	-02	06	17	06	18	13
LCN	19	03	26	17	29	24

	25	26	27	28	29	30
BIS	46	39	48	38	30	42
BCN	16	19	36	13	35	10
NIS	24	19	15	13	13	18
NCN	10	16	11	06	16	05
LIS	65	63	61	65	54	55
LCN	27	28	40	20	49	17

TABLE A1.--continued.

	31	32	33	34	35	36
BIS	14	32	23	31	25	18
BCN	36	33	33	42	27	31
NIS	-06	15	05	09	26	14
NCN	08	16	14	13	40	18
LIS	10	40	31	32	29	22
LCN	49	45	48	67	55	60

TABLE A2.--Item-scale correlations, pretest, trainees, N = 85.

	01	02	03	04	05	06
BIS	68	51	56	60	58	55
BCN	22	25	44	23	47	26
NIS	32	12	26	27	27	14
NCN	09	09	26	-06	17	14
LIS	51	35	39	42	35	37
LCN	14	26	28	19	33	27

	07	08	09	10	11	12
BIS	03	44	31	33	36	28
BCN	40	51	53	56	65	54
NIS	-03	22	27	01	10	-06
NCN	-05	18	32	06	38	15
LIS	09	45	32	40	32	40
LCN	17	21	32	45	45	43

	13	14	15	16	17	18
BIS	26	20	32	34	10	26
BCN	19	13	24	01	14	-11
NIS	71	74	62	63	58	47
NCN	43	45	43	20	52	16
LIS	24	10	27	22	07	07
LCN	10	-03	23	-07	12	-09

TABLE A2.--continued.

	19	20	21	22	23	24
BIS	-02	18	23	01	02	14
BCN	27	19	30	-05	18	14
NIS	09	58	50	30	18	11
NCN	37	64	72	44	51	45
LIS	10	19	09	-07	-07	18
LCN	34	10	21	06	15	20

	25	26	27	28	29	30
BIS	48	48	42	49	42	44
BCN	41	32	41	31	52	29
NIS	17	16	14	14	16	24
NCN	09	04	15	-10	21	13
LIS	73	75	64	66	61	60
LCN	47	38	41	35	57	35

	31	32	33	34	35	36
BIS	07	36	28	26	22	22
BCN	32	33	32	41	38	29
NIS	06	17	19	-01	03	-20
NCN	15	05	28	04	40	00
LIS	13	48	36	42	34	40
LCN	47	38	49	70	59	55

TABLE A3.--Item-scale correlations, posttest, subordinates, N = 262.

	01	02	03	04	05	06
BIS	63	67	59	67	57	64
BCN	26	32	36	35	38	18
NIS	21	17	07	20	04	21
NCN	15	10	05	18	08	16
LIS	46	51	36	45	34	37
LCN	33	38	33	35	32	21

TABLE A3.--continued.

	07	08	09	10	11	12
BIS	21	44	27	28	25	21
BCN	51	53	52	60	56	50
NIS	-01	13	06	11	09	04
NCN	13	17	14	21	26	15
LIS	25	41	19	29	26	13
LCN	29	46	31	50	44	34
	13	14	15	16	17	18
BIS	17	11	15	24	17	26
BCN	08	06	04	13	12	11
NIS	80	76	70	76	62	64
NCN	48	44	-47	44	49	39
LIS	22	12	16	27	17	28
LCN	07	05	15	16	18	14
	19	20	21	22	23	24
BIS	10	08	19	09	06	16
BCN	23	05	27	20	21	15
NIS	05	65	33	37	28	41
NCN	40	64	56	64	49	63
LIS	14	18	15	11	10	13
LCN	22	12	22	18	23	19
	25	26	27	28	29	30
BIS	39	46	46	52	42	41
BCN	24	27	44	33	35	19
NIS	20	20	09	23	08	25
NCN	12	13	11	19	16	18
LIS	66	13	66	64	55	59
LCN	34	42	52	38	48	26
	31	32	33	34	35	36
BIS	25	45	30	39	16	31
BCN	37	43	42	46	38	44
NIS	-03	17	04	05	18	18
NCN	11	21	12	21	28	25
LIS	29	56	33	39	26	32
LCN	51	65	48	67	52	64

TABLE A4.--Item-scale correlations, posttest, trainees, N = 64.

	01	02	03	04	05	06
BIS	59	59	58	64	61	50
BCN	31	27	42	35	43	20
NIS	46	43	37	46	31	27
NCN	25	15	19	31	09	13
LIS	41	31	50	48	35	27
LCN	23	09	43	32	18	24
	07	08	09	10	11	12
BIS	21	37	20	43	42	23
BCN	60	45	45	64	54	60
NIS	07	51	19	48	09	25
NCN	24	40	36	44	-01	29
LIS	27	32	21	58	30	38
LCN	34	36	37	56	26	39
	13	14	15	16	17	18
BIS	49	19	42	61	45	33
BCN	38	18	36	38	30	09
NIS	70	58	71	76	63	44
NCN	47	41	57	42	41	16
LIS	27	08	41	59	45	23
LCN	24	19	43	41	24	23
	19	20	21	22	23	24
BIS	23	28	22	12	18	12
BCN	46	41	31	21	24	17
NIS	20	57	36	43	37	46
NCN	46	70	68	65	58	63
LIS	26	37	21	36	13	17
LCN	34	53	37	42	26	29
	25	26	27	28	29	30
BIS	44	52	39	53	44	45
BCN	44	48	60	45	42	24
NIS	31	36	34	41	36	42
NCN	24	35	39	28	24	22
LIS	76	60	80	81	71	53
LCN	63	58	69	60	50	32

TABLE A4.--continued.

	31	32	33	34	35	36
BIS	30	44	24	30	21	30
BCN	53	52	31	44	44	34
NIS	30	45	22	33	24	32
NCN	41	50	46	34	43	26
LIS	50	63	44	61	42	53
LCN	61	70	67	75	62	62

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