

THE DEVELOPMENT AND VALIDATION OF
FORCED-CHOICE SCALES MEASURING ATTITUDES
TOWARD LEADERSHIP METHODS

Thesis for the Degree of M. A.
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AN ABSTRACT

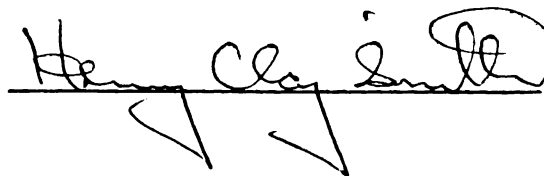
Submitted to the College of Science and Arts
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fulfillment of the requirements
for the degree of

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Approved

A handwritten signature in black ink, appearing to read "Henry Clay Smith", is written over a horizontal line. Below the line, there are two large, stylized, downward-pointing strokes that resemble the letters "S" and "M" or "J" and "M".

ABSTRACT

The purpose of this study was to develop an objective test of attitudes toward methods of successful leadership which would be useful in the selection of leaders, in the evaluation of leadership training programs, and in the further exploration of the nature of leadership. The successful leadership methods were revealed in a series of studies by the Survey Research Center at the University of Michigan, and consisted of employee-orientation, delegation of authority, differentiation of the leader's role, and creation of teamwork.

A separate scale of 30 items was constructed for each of the four leadership methods by item analysis of a longer experimental form. The 220 subjects who participated in the study were college psychology students. Thirteen additional measures were obtained for one group of students to investigate the relationships of these measures to scores on the scales. The effects of human relations training on scale scores were determined by means of a before and after administration to an industrial psychology class, with a general psychology class for a control.

The repeat reliability correlations of the scales ranged from .68 to .86, with the repeat reliability of the Total Score on the test .85. Each scale exhibited a fair degree of homogeneity, with the internal consistency correlations ranging from .48 to .86. The intercorrelations of the scales indicated that the scales measure two relatively independent attitudes, one involving an employee-orientation, a belief in the delegation of authority and a belief in the importance of teamwork, and the other involving a differentiation of the leader's role. These two attitudes are similar to the "Consideration" and "Initiating Structure" attitudes

found in studies by E. A. Fleishman. An indication of the validity of the test was demonstrated by the significant correlations of all the scales with grades in an industrial psychology course in which the leadership methods were covered. The validity also was shown by the significant increase in mean Total Score after the industrial psychology course, with the control group of general psychology students showing no gain.

The conclusions of the study were as follows:

(1) Reliable forced-choice scales were developed which gave evidence of being valid measures of the following two independent attitudes toward leadership methods:

1. A leader should take an interest in his subordinates as individuals, not merely consider them as instruments to get out production, should delegate authority, and should create teamwork.
2. A leader should play a role different from that of his subordinates, spending more time in planning and other supervisory activities.

(2) There was some evidence which suggested that a person having the attitudes measured by the scales was a good judge of people, and had a good knowledge of the interests of people.

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This thesis is dedicated to my mother,
who has made it possible for me to
remain in school these past few years.

ACKNOWLEDGMENTS

I wish to thank my advisor, Dr. Henry Clay Smith, for the ideas and guidance necessary for this thesis. I appreciate the helpful suggestions of Dr. Frederic Wickert and Dr. Charles Hanley, my committee members, and thank Dr. Eugene Jacobson for his suggestions and his cooperation in the collection of part of the data.

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INTRODUCTION

The purpose of the present study was to develop an objective test of leadership attitudes that would be useful in the selection of leaders, in the evaluation of leadership training programs, and in the further exploration of the nature of leadership. The test was designed to measure attitudes toward subordinates, toward the delegation of authority, toward teamwork, and toward the value of a leader playing a different role from his subordinates. The present thesis reports the methods used in developing the scales and some evidence on their reliabilities, their relationships to other variables, and their validities. The subjects used in all phases of this study were college students.

The choice of the four attitudes used in the test was based on a series of research studies by the Survey Research Center (SRC) at the University of Michigan. In an attempt to determine which leadership methods were best for first line supervisors, they used work groups in a wide variety of business organizations: office workers in an insurance company (Katz, Maccoby, and Morse, 1951), laborers on railroad section gangs (Katz, Maccoby, Gurin, and Floor, 1951), and production workers in a tractor plant. Objective measures of the productivity of several work groups within each situation were developed. On the basis of this information, an equal number of the highest and lowest producing units were isolated. Then by means of questionnaires and content analyses of interviews involving the workers, the supervisors themselves, and their superiors, a search was instituted to determine the manner in which the methods of high and low-producing supervisors differed. Kahn and Katz (1953), summarizing the results of these studies, found impressive consistencies in the

methods employed by successful leaders in all situations. Their four major conclusions are listed below:

1. The successful leader is employee-oriented. He sees his workers as individuals in whom he is personally interested, rather than as mere instruments to get out the production.
2. The successful leader delegates authority.
3. The successful leader plays a differentiated role. He does not perform the same functions as the rank and file workers.
4. The successful leader creates teamwork.

The interview and questionnaire methods employed by the SRC, although productive of valuable concepts regarding leadership methods, do not lend themselves to application to practical leadership problems. The interviews require much time and considerable skill, and the questionnaires used were so short and so easy to fake that little confidence could be placed in their value as instruments in leadership selection and evaluation situations. It was hoped that the present study would lead to simpler and more useful instruments.

METHOD

A forced-choice scale was constructed for each of the four leadership methods. For each, a definition was first prepared, and then an item pool developed. A preliminary test form was constructed and administered, and after two revisions a final form was prepared.

Definition of the Scales

A more detailed and concrete definition was prepared for each of the four leadership methods found in the SRC studies. The publications of the studies furnished sufficient information to define the methods.

(1) Employee-orientation (EO)

The leader takes a personal interest in the worker. He considers the worker as an individual, not merely as an instrument to get out production. He stresses the "human relations" aspects of his job. He is concerned with motivating and training his workers.

The opposite of the employee-oriented leader is one who is production-oriented. He considers the workers primarily as instruments to get the work done. He emphasizes the production and technical aspects of his job.

(2) Delegation of authority (DA)

The leader sets up certain general conditions for workers and permits them to work out the details of how the work will be handled. He delegates authority and responsibility wherever possible.

The opposite of this leader is one who retains most of the authority himself, encourages his workers to check with him frequently before

proceeding, and generally supervises his workers closely. He is arbitrary concerning job procedures, and stipulates in detail how the work is to be handled.

(3) Differentiated role (DR)

The leader does not perform the same functions as the workers. He spends a good proportion of his time planning the work. Scheduling, organizing, communication, and training are emphasized.

The opposite of this leader is one who performs the same functions as the workers. He joins in on the work, and works right alongside the workers.

(4) Creates teamwork (CT)

The leader works toward creating a spirit of teamwork within the work group. He has pride in his work group, and feels satisfaction with the accomplishments of the group. He feels he belongs in the group. He encourages the workers to work as a group rather than individually.

The opposite of this leader is one who has no feeling of belonging, nor pride in his work group. He stresses individual effort, incentives, and rewards.

Item Pool

On the basis of the definitions of the four leadership methods, statements expressing the methods were constructed. In addition to statements created by the author, statements from tests and questionnaires in the literature were revised for use. The same procedure was followed in constructing statements which expressed the opposite

of the methods. These latter statements were constructed so as to appear as favorable as the statements expressing the methods. The construction of statements produced 81 different statements expressing the methods and 81 different statements expressing the opposite of the methods. Each statement expressing a leadership method then was paired randomly with a statement expressing the opposite of that same method. Each different statement was used only once. The pairs of statements are referred to as the test items. This original item pool produced 33 items for the EO scale, 18 for DA, 15 for DR, and 15 for CT, a total of 81 items.

Subjects

All subjects were students at Michigan State University in 1960. The tests were group administered during regular class periods. The general psychology class was in an introductory course, and contained mostly sophomores. The industrial psychology class was in the introductory course in industrial psychology. The general psychology course was a prerequisite for the industrial psychology course. The groups of subjects are shown in Table I.

TABLE I
SUBJECTS

Class	Term	N	Per Cent Males	Data Collected
General Psychology	Winter 1960	19	68	Preliminary form
Industrial Psychology	Winter 1960	100	85	Experimental form, 13 other measures
General Psychology	Spring 1960	24	62	Final form, before and after course
Industrial Psychology	Spring 1960	77	84	Final form, before and after course

Preliminary, Experimental, and Final Forms

The construction of the three forms of the test used in the study is reported in this section, along with a description of how each form was used.

Preliminary form

In order to increase the number of items, additional pairings were made from the original item pool. As in the original pairings, statements of a method were paired only with statements expressing the opposite of that same method. The preliminary test contained 135 items. (See Appendix A.) There were 30 items for each scale, except for EO which contained 45. For each scale, the correct statement was alternative 1 in $\frac{1}{2}$ of the items and alternative 2 in the other half, to control for response set. The order in which the correct statement was placed as alternative 1 or alternative 2 was determined with a table of random numbers. The order in which items from the four scales appeared was randomized subjectively by the author.

This preliminary form was administered to a co-educational introductory general psychology class of 19 persons. A item was revised if more than 15 persons chose one alternative statement over the other. This was a crude attempt to eliminate items in which one statement had a higher preference. This preference is sometimes referred to as the "social acceptability" of the item (Anastasi, 1954, p. 542). Items in which one statement had a higher preference would not be expected to discriminate between people who favored that leadership method and those who were opposed to the method.

Experimental form

In an attempt to have enough items to survive strict standards to be applied in a subsequent item analysis, the revised preliminary form was lengthened from 135 to 180 items by additional pairings of the original statements. Each scale contained 45 items. (See Appendix B.) Control for response set and randomization of items were performed in the same manner as in the preliminary form.

The experimental form was administered to 100 students in the co-educational Psychology of Business and Personnel course, which is the first course in industrial psychology. Item analysis was used to select the 30 best items from each scale (Thorndike, 1949). Each scale was item analyzed separately. The 27 per cent of the students who scored highest and the 27 per cent of the students who scored lowest on the scale were determined. Item counts of correct responses were made for each group. The 30 items which showed the greatest discrimination between the high and low groups were retained. A new scoring key was constructed for these best 120 items. The answer sheets were rescored on these 120 items only. These 120 items comprise the final form of the test.

The 100 students who took the experimental form also took several other tests during the term as part of an ongoing research project of which this thesis is a part. Thirteen additional measures on these students were available. The relationships between these measures and the scales were investigated in an effort to explore further the nature of leadership. The leadership scores used in the analysis were those obtained from the rescoring on the best 120 items of the experimental form. The 13 additional measures are described in a later section.

Final form

The 120 items, 30 in each scale, selected by item analysis of the experimental form comprise the final form (See Appendix C). The order in which items from the four scales appear is random. For each scale, the correct statement is alternative 1 for half the items, and alternative 2 for the other half, to control for response set. The questionnaire requires 20-30 minutes to administer. Scoring keys are available for either machine or hand scoring of the I. B. M. answer sheets. The scoring key is presented in Appendix D.

The final form was administered to two psychology classes during the Spring term. Twenty-four students in an introductory General Psychology class comprised one group. Seventy-seven students in the same industrial psychology course that was used Winter term for the item analysis comprised the other group. This course was taught by a different instructor Spring term. Each class took the test near the beginning of the term, and again near the end.

An estimate of the validities of the scales was obtained by the retesting of the industrial psychology class 7 weeks after the first testing. The course content included supervision, worker and manager efficiency, motivation of personnel, and other topics of the human relations in industry type. The retesting of the general psychology class 4 weeks after their first testing served as a control since no material relevant to the scales was taught in the course.

Other Measures

The 13 other measures which were available for the 100 Winter term industrial psychology students are described below.

(1) Age.

(2) Sex.

(3) Grade in present industrial psychology course.

This was a score consisting of the sum of the first two examination scores. This score did not include the final examination because the data analysis was begun before this grade was available.

(4) American Council on Education Psychological Examination for College Freshmen (ACE).

The total score on this test served as a measure of the subject's general intelligence (Michigan State University, 1954-59).

(5) Trumbo Test of the Ability to Predict Behavior.

The test contains six cases, each consisting of a few sentences describing an actual person. The subject predicts the behavior of this person by marking 15 statements about the person true or false. The scoring is based on the actual behavior of that person. The corrected odd-even reliability of the 120 item test was $r = .77$ (Trumbo, 1955).

(6) Suppression-repression scale.

An unpublished scale measuring the extent to which a person will admit unfavorable or unpleasant thoughts and actions. Items are similar to the MMPI L (lie) scale. The reliability and validity of this scale have not been determined. (See Appendix E.)

(7) Cline Movie Prediction Test.

This test is similar to the Trumbo Prediction Test, except that the subject sees a short sound motion picture of the person, and then answers several types of items predicting the behavior of the person. The reliability of the test was .71, computed from the Spearman-Brown formula based on variances (Cline, 1958).

(8) Scientific values scale.

This unpublished scale measures the extent to which a person believes in the value of science. The internal consistency (odd-even) was $r = .78$, and the repeat reliability after six weeks was also $r = .78$ (Hershey, 1958).

(9) Stereotype accuracy test.

This will be the subject of a forthcoming Master of Arts thesis (Zavala, 1960). The subject chooses the responses to the items which he thinks were made by a specified population of people. The scoring is based on the actual responses of these groups. The test-retest reliability was $\underline{r} = .56$ for the total score. The total score is the sum of the scores on the following four subtests, each containing 30 items:

(10) Man stereotype.

Undergraduate men in a Midwestern University were asked whether they liked or disliked each of a large number of different occupations, school subjects, amusements, and kinds of people. The subject marks the one of the four in each item which he thinks was liked by most students. The test-retest reliability of this scale was $\underline{r} = .59$.

(11) Woman stereotype.

The subject chooses which one of the four occupations, amusements, or types of people in each item was liked by the most of the several thousand women who were given the same items. The test-retest reliability was $\underline{r} = .44$.

(12) Male-female stereotype.

The subject chooses the one occupation, amusement, or action of the four in each item which he thinks was liked by the most women and the fewest men; that is, the interest that showed the greatest sex difference. This scale had a test-retest reliability of $\underline{r} = .37$.

(13) Age stereotype.

The subject marks each interest given with a (1) if he thinks it was liked most by 15 year olds, with a (2) if liked most by 25 year olds, and (3) if liked most by 55 year olds. The test-retest reliability was $\underline{r} = .46$.

RESULTS

First are summarized data bearing on the scales and their relationships to each other. Then are reported the results bearing on their relationships to other measures. The results of a study to measure the validity of the scales by assessing the influence of human relations training on the scale scores is presented. Finally, norms for college students are reported.

Repeat Reliability

The test-retest reliabilities for the 25 general psychology students, with four weeks between administrations, are given below.

EO	$r = .78$
DA	$r = .86$
DR	$r = .75$
CT	$r = .68$
Total Score	$r = .85$

Internal Consistency

Internal consistencies of the scales were computed by Kuder-Richardson formula #20 using the data from the first testing of the 77 students in the Spring term industrial psychology class.

EO	$r_{tt} = .70$
DA	$r_{tt} = .86$
DR	$r_{tt} = .48$
CT	$r_{tt} = .54$
Total score	$r_{tt} = .86$

Intercorrelations of the Scales

Intercorrelations of the scales were found for the 100 Winter term industrial psychology students. They are given in Table II.

TABLE II
INTERCORRELATIONS OF THE SCALES

	EO	DA	DR	CT
DA	.69			
DR	.13	.12		
CT	.68	.46	.16	
Total score	.87	.82	.41	.78

Factor Structure

In an effort to determine the simple structure underlying the 18 measures available for the 100 Winter term industrial psychology students, a principal axis factor analysis with a quartimax orthogonal rotation was performed on these measures. The factor analysis and the correlations between the 18 measures were done on the Michigan State Iterative Computer (MISTIC). Five factors were identified. The leadership scales loaded heavily on two factors. EO, DA, CT, and the Total Score were the major variables defining one factor. DR, the Cline Prediction Movie, and the Scientific Values scale were the major variables defining another factor. The factor loadings for all variables on these two factors are presented in Table III.

This factor analysis suggests, as does a glance at Table II, that the scales measure two relatively independent attitudes, one consisting of EO, DA, and CT, and the other consisting of DR.

TABLE III
FACTOR LOADINGS FOR ALL EIGHTEEN VARIABLES ON THE
TWO FACTORS DEFINED BY THE LEADERSHIP SCALES

Variable	Factor	
	I	II
EO	-.88	.04
DA	-.82	.09
DR	-.35	-.49
CT	-.79	.02
Total Score	-.98	-.09
Course Grade	-.43	.19
Trumbo Prediction Test	-.33	.31
Cline Prediction Movie Test	-.02	-.47
Male Stereotype Accuracy	.11	-.07
Female Stereotype Accuracy	.01	.00
Male-Female Stereotype Accuracy	-.28	.06
Age Stereotype Accuracy	.06	-.12
Total Stereotype Accuracy Score	-.04	-.07
Age	-.04	-.24
Sex	-.14	-.15
ACE	-.12	.31
Suppression-Repression Scale	.02	-.08
Scientific Values Scale	-.12	.67

Correlations With Other Measures

Several significant correlations were found between the scales and the other measures available for the 100 Winter term industrial psychology students. They are summarized in Table IV.

Non-significant correlations are not presented.

TABLE IV
SIGNIFICANT* CORRELATIONS BETWEEN THE SCALES
AND OTHER MEASURES AVAILABLE

Variable	EO	DA	DR	CT	Total Score
Course grade	.23	.33	.27	.25	.38
Trumbo Prediction Test	.33	.25			.27
Stereotype Accuracy (M - F)		.26		.22	.21
Stereotype Accuracy (Men)		-.24	.20		

* Significant at 5% level or better.

Effects of Training

The effects of training in material related to the scales were used as an indirect measure of the validity of the scales.

The effects of training in human relations on scale scores are reported in Table V for the Spring term industrial psychology students. Included in Table V are scores for the control group of Spring term general psychology students who received no human relations training between testings. Differences between the before and after scores were tested for statistical significance by the matched-group t test (Edwards, 1954, p. 278).

TABLE V
MEAN SCORES ON THE SCALES FOR TWO GROUPS OF STUDENTS
BEFORE AND AFTER PSYCHOLOGY COURSES

Scale	General Psychology N = 24			Industrial Psychology N = 77		
	Before	After	Diff.	Before	After	Diff.
EO	17.54	17.21	-0.33	19.48	21.68	2.20**
DA	14.12	15.38	1.26	15.02	20.64	5.62**
DR	20.79	19.17	-1.62*	23.23	23.80	0.57
CT	20.75	20.42	-0.33	20.96	21.90	0.94
Total Score	73.21	72.17	-1.04	78.68	88.01	9.33**

** Significant at 1% level.

* Significant at 5% level.

Norms

Table VI contains the normative data for the final form of the test. These norms are based on the two groups in this study which took the final form. The general psychology class was one of several sections which were taught that term. Since the assignments to the various sections were made randomly, this class was a representative sample of introductory psychology students at Michigan State University. The industrial psychology class was also a representative sample of introductory industrial psychology students at Michigan State University since there was only one section taught that term, and there is no reason to believe that this group was not typical of the groups taking this course other terms.

Although these norms are for college students, they might lend themselves to application in some industrial and business situations, especially for recent college graduates in supervisory training programs.

TABLE VI
NORMS FOR GENERAL AND INDUSTRIAL
PSYCHOLOGY STUDENTS

General Psychology N = 24			Industrial Psychology N = 77			
Scale			Before Course		After Course	
	Mean	S. D.	Mean	S. D.	Mean	S. D.
EO	17.54	4.91	19.48	4.12	21.68	5.24
DA	14.12	7.70	15.02	6.48	20.64	6.90
DR	20.79	3.90	23.23	2.94	23.80	5.06
CT	20.75	3.98	20.96	3.84	21.90	9.52
Total Score	73.21	14.13	78.68	11.96	88.01	16.26

DISCUSSION

Reliability and Internal Consistency

The scales have satisfactory test-retest reliabilities, ranging from .68 to .86. The total score has a test-retest reliability of .85. Each scale exhibits a fair degree of homogeneity, with the internal consistency correlations (Kuder-Richardson) ranging from .48 to .86. The total score internal consistency is .86, indicating that the total test also is quite homogeneous. The fact that the test-retest reliabilities of the DR and CT scales are considerably higher than their internal consistencies suggests that each of these two scales measures several somewhat different attitudes fairly reliably.

Intercorrelations of the Scales

The intercorrelations of the scales indicate that the four scales primarily measure two independent attitudes, one involving an employee orientation, a belief in the delegation of authority and the importance of teamwork, and the other a belief in the differentiation of the leader's role. The fact that the test divides into two relatively independent dimensions while the internal consistency indicates a homogeneous test can be a result of the fact that three-fourths of the items on the test are in the one dimension. The factor analysis also indicates this separation into two primary attitudes, although it is confounded by the fact that it was based on 13 variables in addition to the scales.

This division of the four scales into two primary factors does not conflict with the findings of the SRC, since at that time they did not test for the independence of the methods they found related to successful

leadership. Support for these two factors of attitudes toward leadership methods is given in a study by Fleishman (1953). Starting with descriptions of nine a priori categories of leader behavior, he constructed a questionnaire of attitudes of the leader which revealed two primary dimensions, "Consideration" and "Initiating Structure." Inspection of the items in his questionnaire and the test in the present study suggests that the factor containing the EO, DA, and CT scales corresponds roughly to Fleishman's "Consideration" factor, and the DR scale corresponds roughly to the "Initiating Structure" factor. A suggestion for further research would be to compare a group's responses to both these measures to find whether they measure the same attitudes.

The Scales and Other Measures

The significant correlations between the scales and the other measures available for the Winter term industrial psychology students were presented in Table IV and are discussed below.

Course Grade

All the scales showed positive significant correlations with grades in the Winter industrial psychology class. This serves as evidence of the validity of the scales, since human relations content was taught in the course. This is discussed more fully in the section on Validity.

Trumbo Prediction Test

Trumbo's thesis suggests that a good judge of people is one who is genuinely interested in understanding rather than using people. This finding supports the present findings of correlations with the Trumbo test of .33 for EO and .25 for DA.

Stereotype Accuracy Test (M-F)

The DA and CT scales correlated significantly with the Male-Female scale of the Stereotype Accuracy Test. Since the correlations were low (.26 and .22) and the reliability of the Male-Female scale was low (.37), these results can be only taken as suggestive that a person who believes in delegating authority and creating teamwork has a good knowledge of the differences in interests between men and women.

Stereotype Accuracy Test (Men)

The DR scale correlated significantly with the Men scale of the Stereotype Accuracy test. This indicates that people with a belief in the leader playing a role different from that of the worker has a good knowledge of the interests of men. The DA scale correlated negatively with this Men scale, indicating that a person who believes in delegating authority has a poor knowledge of the interests of men. This seems to contradict the other evidence that a person who believes in the delegation of authority is a good judge of people (Trumbo Test) and especially the evidence that he has a good knowledge of the differences in interest between men and women. The low correlation (-.24) and only fair reliability of the Men scale (.59) could lead to the rejection of this result as a chance effect.

Validity

Two indirect measures of the validities of the scales are discussed. One is the correlation of the scales with grade in an industrial psychology course, and the other is the effect of the human relations training received in the industrial psychology class.

Correlations Between Scales and Course Grade

All scales correlated significantly with grades in the Winter term industrial psychology course. The correlations ranged from .23 to .33 with the Total Score correlating .38 (Table IV). Since the scales were designed to measure attitudes toward leadership methods, and these leadership methods were taught in the course, the students making better grades in the course would be expected to know which methods were best for leaders. The fact that scores on the scales are related to course grades indicates that the scales do indeed measure attitudes toward these methods of leadership. All the scales then may be said to exhibit some validity, since this evidence shows that they measure what they were constructed to measure. One must realize, of course, that a person may know which methods are best without actually using the methods, or even believing in them. Anytime the effects of training are used to validate attitude scales this problem is encountered.

Effects of Training on Scale Scores

Additional evidence of the validity of the scales is shown by the significant increase in mean Total Score for the Spring term industrial psychology class (Table IV). The control group of Spring term general psychology students did not show a significant change in mean score. The increase in mean score, therefore, can be attributed to the human relations material taught in the course. If people increase their score on the scales after human relations training dealing with these methods, the scales appear to be measuring attitudes toward these methods, and therefore a certain validity is suggested.

The validity shown in this study is more impressive when it is recalled that a different instructor taught this course in the Spring.

The scales, therefore, exhibit validity on two separate samples of industrial psychology students, taught by two different instructors. In one group, positive correlations were found with course grades, and in the other group increases in scores on the scales were found as a result of taking the course.

When the individual scales were tested for significant gains, the DA and EO scales were the only ones showing large enough gains to be statistically significant. The other scales both showed gains which, although not statistically significant, contributed to the significant gain in Total Score. The DA scale also showed the highest validity in the previous section on correlations with course grades. It furthermore had the highest repeat reliability and internal consistency of the scales. The DA scale appears to be the best scale of the test, followed by EO, with DR and CT the least reliable and valid.

SUMMARY AND CONCLUSIONS

The purpose of this study was to develop an objective test of attitudes toward methods of successful leadership which would be useful in the selection of leaders, in the evaluation of leadership training programs, and in the further exploration of the nature of leadership. The successful leadership methods were revealed in a series of studies by the Survey Research Center at the University of Michigan, and consisted of employee-orientation, delegation of authority, differentiation of the leader's role, and creation of teamwork.

A separate scale of 30 items was constructed for each of the four leadership methods by item analysis of a longer experimental form. The 220 subjects who participated in the study were college psychology students. Thirteen additional measures were obtained for one group of students to investigate the relationships of these measures to scores on the scales. The effects of human relations training on scale scores were determined by means of a before and after administration to an industrial psychology class, with a general psychology class for a control.

The repeat reliability correlations of the scales ranged from .68 to .86, with the repeat reliability of the Total Score on the test .85. Each scale exhibited a fair degree of homogeneity, with the internal consistency correlations ranging from .48 to .86. The intercorrelations of the scales indicated that the scales measure two relatively independent attitudes, one involving an employee-orientation, a belief in the delegation of authority and a belief in the importance of teamwork, and the other involving a differentiation of the leader's role. These two attitudes are similar to the "Consideration" and "Initiating Structure" attitudes found in studies by E. A. Fleishman. An indication of the validity of

the test was demonstrated by the significant correlations of all the scales with grades in an industrial psychology course in which the leadership methods were covered. The validity also was shown by the significant increase in mean Total Score after the industrial psychology course, with the control group of general psychology students showing no gain.

The conclusions of the study were as follows:

(1) Reliable forced-choice scales were developed which gave evidence of being valid measures of the following two independent attitudes toward leadership methods:

1. A leader should take an interest in his subordinates as individuals, not merely consider them as instruments to get out production, should delegate authority, and should create teamwork.
2. A leader should play a role different from that of his subordinates, spending more time in planning and other supervisory activities.

(2) There was some evidence which suggested that a person having the attitudes measured by the scales was a good judge of people, and had a good knowledge of the interests of people.

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APPENDIX B

LEADERSHIP QUESTIONNAIRE

DIRECTIONS:

Write your full name on your answer sheet now.

This is a questionnaire to obtain your attitudes toward methods of leadership. It is not a test, and there are no right or wrong answers.

In each question are two statements of things that a leader can do. Choose the one that you feel it is more important for him to do. If you feel that both alternatives are poor, choose the one you think is less poor. Mark your choice on your answer sheet after the number of that question. Work rapidly and record your first impressions.

It is more important for a leader:

1. (1) To have the confidence of his workers.
(2) To impress upon each worker the importance of turning out as much work as possible.
2. (1) To assign workers to particular tasks.
(2) To let the workers do the job the way they want to, so long as they accomplish the objectives.
3. (1) To make it a point to have a worker do a job over if it was done wrong.
(2) To allow kidding between workers while on the job.
4. (1) To have a thorough understanding of the jobs of his workers.
(2) To schedule the work to be done.
5. (1) To be proud of his work group.
(2) To organize the work to be done individually rather than by groups wherever possible.
6. (1) To know something about his workers' home lives.
(2) To tell inefficient workers to get busy.
7. (1) To plan his day's activities in some detail.
(2) To set an example by working hard himself.
8. (1) To prefer workers who work well alone.
(2) To stress being ahead of competing work groups.
9. (1) To give the workers the power to act independently of him.
(2) To break the work load down into separate and clearly defined job duties for each worker.
10. (1) To treat all workers alike and according to the rules.
(2) To be aware of the feelings of his workers.
11. (1) To try to get reasonable changes made in the work when the workers desire them.
(2) To have a good understanding of the jobs of his workers.
12. (1) To allow workers to make decisions concerning their work.
(2) To check up on his workers frequently.

13. (1) To have his group meet together to set group goals.
(2) To discourage talking between workers while on the job.
14. (1) To be accepted by his workers.
(2) To point out the rules and policies in situations where complaints arise.
15. (1) To stick to a decision once he has made it.
(2) To let a worker who is passed over in a promotion know why.
16. (1) To get high work out put from the workers.
(2) To stand up for his workers.
17. (1) To be an authority in the type of work the group does.
(2) To explain the reasons for changes.
18. (1) To work hard all the time.
(2) To organize new practices and procedures.
19. (1) To make it clear that he is the leader of the group.
(2) To leave it up to each worker to take his share of the work and get it done.
20. (1) To call the group together to discuss the work.
(2) To work right along side the workers.
21. (1) To act as he thinks best, regardless of the views of the workers.
(2) To feel like "one of them" in the work group.
22. (1) To let the workers set their own pace, as long as they finish the job on time.
(2) To give workers the responsibility to make decisions about the work only in minor matters.
23. (1) To be trained in the basic technical knowledge that he needs in his department.
(2) To be trained in ways to deal with his workers efficiently without causing friction.
24. (1) To have the worker find out the best job methods by experience.
(2) To tell poor workers when their work isn't measuring up to what it should be.
25. (1) To keep his workers happy.
(2) To get his reports in on time.
26. (1) To know how hard each worker is really working.
(2) To know what his workers are thinking.
27. (1) To make decisions independently of the group.
(2) To really be a part of his work group.
28. (1) To give detailed instructions on just the way to do each job.
(2) To have the workers settle by themselves most problems they meet on the job.
29. (1) To point out the rules and policies in situations where complaints arise.
(2) To try to arrange for transfers for workers that desire them.
30. (1) To get things done on the basis of his own initiative.
(2) To stress cooperation among his workers.

16. (1) To know how hard his unit is really working.
(2) To know what his workers are thinking.
17. (1) To make decisions independently of the group.
(2) To really be a part of his work group.
18. (1) To give detailed instructions on just the way to do a job.
(2) To have the workers muddle by themselves with problems they meet on the job.
19. (1) To point out the rules and policies in situations where compliance is
arise.
(2) To try to arrange for transfers for workers that desire them.
20. (1) To get things done on the basis of his own initiative.
(2) To stress cooperation among his workers.
21. (1) To pitch right in with the workers.
(2) To plan the work.
22. (1) To prefer workers who are agreeable and willing to follow rules.
(2) To prefer workers who don't need much supervision.
23. (1) To get his men to work together.
(2) To show no favoritism toward his own work group.
24. (1) To authorize his workers to exercise a high degree of authority and
responsibility in making decisions.
(2) To supervise his workers closely.
25. (1) To maintain a frank, informal relationship with his workers.
(2) To have a neat, well-regulated department.
26. (1) To realize that a worker knows when he is a sucker without being told.
(2) To try out new ideas in the work group.
27. (1) To figure ahead on what should be done.
(2) To perform the same functions as the workers wherever possible.
28. (1) To have scheduled rest periods.
(2) To have workers take their rest periods when they wish.
29. (1) To take an interest in the worker as a person.
(2) To be more sensitive to the needs of management than to those of his
workers.
30. (1) To get a worker interested in his job by praising his progress.
(2) To get his paperwork done properly.
31. (1) To be warm toward his workers.
(2) To be dominant.

31. (1) To pitch right in with the workers.
(2) To plan the work.
32. (1) To prefer workers who are agreeable and willing to follow rules.
(2) To prefer workers who don't need much supervision.
33. (1) To get his men to work together.
(2) To show no favoritism towards his own work group.
34. (1) To authorize his workers to exercise a high degree of authority and responsibility in making decisions.
(2) To supervise his workers closely.
35. (1) To maintain a frank, informal relationship with his workers.
(2) To have a neat, well-regulated department.
36. (1) To realize that a worker knows when he is a slacker without being told.
(2) To try out new ideas in the work group.
37. (1) To figure ahead on what should be done.
(2) To perform the same functions as the workers wherever possible.
38. (1) To have scheduled rest periods.
(2) To have workers take their rest periods when they wish.
39. (1) To take an interest in the worker as a person.
(2) To be more sensitive to the needs of management than to those of his workers.
40. (1) To get a worker interested in his job by praising his progress.
(2) To get his paperwork done properly.
41. (1) To be warm toward his workers.
(2) To be dominant.
42. (1) To be the most technically skilled member of the work group.
(2) To meet with the workers to consider proposed changes.
43. (1) To teach his workers new things.
(2) To attempt to make his job only slightly different from the jobs of the workers.
44. (1) To prod his workers toward achievement and effort.
(2) To help individual workers adjust to the work group.
45. (1) To realize that most workers take little pride in what their work group accomplishes.
(2) To have workers work with whom they wish if possible.
46. (1) To have close friends among his workers.
(2) To realize he can do nothing to reduce absenteeism.
47. (1) To yield to others in a discussion.
(2) To have the workers dependent upon him.
48. (1) To spend over half his time in supervisory activities such as planning and scheduling.
(2) To make prompt, firm decisions.

49. (1) To groom his men for promotion.
(2) To have a complete knowledge of the technical aspects of his job.
50. (1) To realize that the usefulness of the product he is making is of little concern to most workers.
(2) To show the worker where his is wrong without offending him.
51. (1) To let workers take time out from the monotony when they wish.
(2) To allow workers to make decisions only when given explicit authority by the leader.
52. (1) To have a complete knowledge of the technical aspects of his job.
(2) To attempt to place workers on jobs that they desire whenever possible.
53. (1) To delegate authority to his workers.
(2) To assign responsibilities and duties daily in the form of specific tasks.
54. (1) To take an interest in the worker as a person.
(2) To maintain definite standards of performance.
55. (1) To use individual rewards for work well done.
(2) To encourage workers to help each other out on the job.
56. (1) To explain the duties and responsibilities of each worker's job to him.
(2) To spend some of his time helping get the work done.
57. (1) To help his workers with their personal problems when they ask.
(2) To exert more influence in goal-setting than most of the workers do.
58. (1) To realize that most workers do not have any feeling of loyalty to their work group.
(2) To put the group's welfare above any member in it.
59. (1) To do the important jobs himself.
(2) To give his workers as much responsibility as they can handle.
60. (1) To let his workers know how well they are doing their jobs.
(2) To have one worker in the group that speaks up for the men when they want something.
61. (1) To attempt to get at the basis for personal dislikes in the work group.
(2) To influence the workers more than they influence him.
62. (1) To be skilled in his field of work.
(2) To praise the worker whenever a job is well done.
63. (1) To criticize poor work when necessary.
(2) To be friendly toward his workers.
64. (1) To promote a group spirit of teamwork.
(2) To reward the good worker.
65. (1) To emphasize getting the work done.
(2) To go back on a decision if one of the workers shows him where he was wrong.
66. (1) To have his workers do their work the way they think is best.
(2) To rule with a firm hand.

67. (1) To speak in a manner not to be questioned.
(2) To get along well with his workers.
68. (1) To decide in detail how the work shall be done by the workers.
(2) To let workers make decisions whenever they feel competent.
69. (1) To encourage slow workers to work harder.
(2) To give his workers additional training.
70. (1) To spend a considerable percentage of his time planning.
(2) To be respected as a man of high technical skill in the field.
71. (1) To approve each task before permitting the worker to start another task.
(2) To let his workers make all routine daily decisions.
72. (1) To have his workers take pride in their work group's accomplishments.
(2) To see that the group produces.
73. (1) To create a pleasant work atmosphere.
(2) To see that people are working up to capacity.
74. (1) To let the workers decide how to do each task.
(2) To encourage his workers to check with him frequently about the work.
75. (1) To emphasize meeting deadlines.
(2) To do personal favors for his workers.
76. (1) To be proud of the work record of his group.
(2) To create friendly competition among his workers.
77. (1) To set up all projects himself.
(2) To depend on the workers to work out the details of when and how the work will be handled.
78. (1) To take care of workers problems right away.
(2) To stress meeting deadlines.
79. (1) To be interested in what the workers achieve.
(2) To draw a definite line between himself and the work group.
80. (1) To have the loyalty of his workers.
(2) To maintain definite standards of performance.
81. (1) To make decisions independently of the group.
(2) To be proud of his work group.
82. (1) To always work hard.
(2) To schedule the work to be done.
83. (1) To put the group's welfare above any member.
(2) To organize the work to be done individually rather than by groups whenever possible.
84. (1) To check up on his workers frequently.
(2) To yield to others in a discussion.

85. (1) To know something about his workers' home lives.
(2) To stick to a decision once he has made it.
86. (1) To explain the reasons for changes.
(2) To work right alongside his workers.
87. (1) To assign workers to particular tasks.
(2) To allow workers to make decisions concerning their work.
88. (1) To act as he thinks best, regardless of the views of his workers.
(2) To stress being ahead of competing work groups.
89. (1) To be an authority in the type of work the group does.
(2) To tell poor workers when their work isn't measuring up to what it should be.
90. (1) To let the workers set their own pace, as long as they finish the job on time.
(2) To break the work load down into separate and clearly defined job duties for each worker.
91. (1) To get high work output from his workers.
(2) To be accepted by his workers.
92. (1) To make it clear that he is the leader of the group.
(2) To have the workers settle by themselves most problems they meet on the job.
93. (1) To have his group meet together to set group goals.
(2) To prefer workers who work well alone.
94. (1) To perform the same function as the workers whenever possible.
(2) To plan the work.
95. (1) To prefer workers who don't need much supervision.
(2) To give detailed instructions on just the way to do each job.
96. (1) To stand up for his workers when they make a mistake.
(2) To get his reports in on time.
97. (1) To call the group together to discuss the work.
(2) To attempt to make his job only slightly different from the jobs of the workers.
98. (1) To discourage talking between workers on the job.
(2) To feel like "one of them" in the work group.
99. (1) To prefer workers who are agreeable and willing to follow rules.
(2) To let workers take time out from the monotony occasionally.
100. (1) To be the most technically skilled member of the work group.
(2) To figure ahead on what should be done.
101. (1) To try to arrange for transfer for workers that desire them.
(2) To have a neat, well-regulated department.
102. (1) To be respected as a man of high technical skill in the field.
(2) To spend over half his time in supervisory activities such as planning and scheduling.

49. (1) To make it clear that he is the leader of the group.
(2) To have the workers settle by themselves most problems they meet on the job.
50. (1) To have his group meet together to set group goals.
(2) To prefer workers who work well alone.
51. (1) To perform the same function as the workers whenever possible.
(2) To plan the work.
52. (1) To prefer workers who don't need much supervision.
(2) To give detailed instructions on just the way to do each job.
53. (1) To stand up for his workers when they make a mistake.
(2) To get his reports in on time.
54. (1) To call the group together to discuss the work.
(2) To attempt to make his job only slightly different from the jobs of the workers.
55. (1) To discourage talking between workers on the job.
(2) To feel like "one of them" in the work group.
56. (1) To try to arrange for transfer for workers that desire them.
(2) To have a neat, well-regulated department.
57. (1) To be respected as a man of high technical skill in the field.
(2) To spend over half his time in supervisory activities such as planning and scheduling.
58. (1) To be the most technically skilled member of the work group.
(2) To explain the reasons for changes.
59. (1) To get things done on the basis of his own initiative.
(2) To feel like "one of them" in the work group.
60. (1) To check up on his workers frequently.
(2) To let the workers do the job the way they want to, so long as they accomplish the objectives.
61. (1) To really be a part of his work group.
(2) To use individual rewards for work well done.
62. (1) To let his workers know how well they are doing their jobs.
(2) To spend some of his time helping get the work done.
63. (1) To break the work load down into separate and clearly defined job duties for each worker.
(2) To have workers take their rest periods when they wish.
64. (1) To make prompt, firm decisions.
(2) To spend a considerable percentage of his time planning.
65. (1) To have the workers settle by themselves most problems they meet on the job.
(2) To have scheduled rest periods.
66. (1) To make decisions independently of the group.
(2) To get his men to work together.

121. (1) To let his workers know what they are doing and what to do.
(2) To have the worker know what his job is and what to do.
122. (1) To see that the group produces.
(2) To get his men to work together.
123. (1) To see that people are working properly.
(2) To mix with his workers.
124. (1) To feel he believes in his group.
(2) To realize that most workers do not know what to do in their work group.
125. (1) To have his workers do the work the way they know is best.
(2) To have the worker dependent upon him.
126. (1) To be proud of the work record of his group.
(2) To stress individual incentives.
127. (1) To get the work done ahead of time.
(2) To be friendly toward his workers.
128. (1) To realize that a worker knows when he is a slacker without being told.
(2) To explain the duties and responsibilities of his job to each worker.
129. (1) To give the worker the power to act independently of him.
(2) To approve each task before permitting the worker to start another task.
130. (1) To set an example by working hard himself.
(2) To spend a considerable percentage of his time planning.
131. (1) To draw a definite line between himself and the work group.
(2) To promote a group spirit of teamwork.
132. (1) To speak in a manner not to be questioned.
(2) To create a pleasant work atmosphere.
133. (1) To be interested in what his workers think of.
(2) To create competition among his workers.
134. (1) To encourage his workers to check with him frequently about the work.
(2) To let the workers decide how to do each task.
135. (1) To deal primarily with the work.
(2) To deal primarily with the workers.

67. (1) To pass along to his workers information from higher management.
(2) To help get the work done.
68. (1) To stress cooperation among his workers.
(2) To show no favoritism towards his own work group.
69. (1) To give detailed instructions on just the way to do each job.
(2) To let workers take time out from the monotony occasionally.
70. (1) To have his workers do their work the way they think is best.
(2) To assign responsibilities and duties daily in the form of specific tasks.
71. (1) To be respected as a man of high technical skill in the field.
(2) To schedule the work to be done.
72. (1) To have his workers take pride in their work group's accomplishments.
(2) To discourage talking between workers on the job.
73. (1) To reward the good worker.
(2) To encourage workers to help each other out on the job.
74. (1) To feel he belongs in the group.
(2) To get things done on the basis of his own initiative.
75. (1) To groom his men for promotion.
(2) To maintain definite standards of performance.
76. (1) To show no favoritism toward his own work group.
(2) To really be a part of his work group.
77. (1) To teach his workers new things.
(2) To help get the work done.
78. (1) To do the important jobs himself.
(2) To have workers take their rest periods when they wish.
79. (1) To be sensitive to the needs of management.
(2) To maintain a frank, informal relationship with his workers.
80. (1) To organize new practices and procedures.
(2) To have one worker in the group that speaks up for the men when they want something.
81. (1) To set up all projects himself.
(2) To let his workers make all routine daily decisions.
82. (1) To have his workers work with whom they wish if possible.
(2) To use individual rewards for work well done.
83. (1) To be trained in the basic technical knowledge needed in his department.
(2) To keep his workers happy.
84. (1) To meet with the workers to consider proposed changes.
(2) To pitch right in with the workers.
85. (1) To help his workers with their personal problems when they ask.
(2) To encourage slow workers to work harder.

86. (1) To discourage strong friendships from forming within the group.
(2) To have his workers take pride in their work group's accomplishments.
87. (1) To see that the group produces.
(2) To get his men to work together.
88. (1) To see that people are working up to capacity.
(2) To have the confidence of his workers.
89. (1) To feel he belongs in his group.
(2) To reward the good worker.
90. (1) To have his workers do the work the way they think is best.
(2) To have the worker dependent upon him.
91. (1) To be proud of the work record of his group.
(2) To stress individual incentives.
92. (1) To get the work done on time.
(2) To be friendly toward his workers.
93. (1) To realize that a worker knows when he is a slacker without being told.
(2) To explain the duties and responsibilities of each worker's job to him.
94. (1) To give the worker the power to act independently of him.
(2) To approve each task before permitting the worker to start another task.
95. (1) To set an example by working hard himself.
(2) To spend a considerable percentage of his time planning.
96. (1) To speak in a manner not to be questioned.
(2) To create a pleasant work atmosphere.
97. (1) To be interested in what his workers achieve.
(2) To create friendly competition among his workers.
98. (1) To encourage his workers to check with him frequently about the work.
(2) To let the workers decide how to do each task.
99. (1) To act as he thinks best, regardless of the views of his workers.
(2) To be proud of his work group.
100. (1) To give the workers the power to act independently of him.
(2) To assign workers to particular tasks.
101. (1) To allow workers to make decisions concerning their work.
(2) To prefer workers who are agreeable and willing to follow rules.
102. (1) To stress being ahead of competing work groups.
(2) To organize the work to be done individually rather than by groups wherever possible.
103. (1) To be an authority in the type of work the group does.
(2) To pass along to his workers information from higher management.

104. (1) To see that the group produces.
CT (2) To be interested in what the workers achieve.
105. (1) To have the worker find out the best job methods by experience.
DA (2) To meet with the workers to consider proposed changes.
106. (X) To be proud of the work record of his group.
CT (2) To prefer workers who work well alone.
107. (X) To explain the duties and responsibilities of each worker's
DA job to him.
(2) To pitch right in with the workers.
108. (X) To plan his day's activities in some detail.
DA (2) To perform the same functions as the workers whenever possible.
109. (1) To create friendly competition among his workers.
CT (2) To have his group meet together to set group goals.
110. (X) To organize new practices and procedures.
DA (2) To make his job similar to the jobs of his workers.
111. (X) To be skilled in training.
DA (2) To set an example by working hard himself.
112. (1) To do the important jobs himself.
DA (2) To let the workers decide how to do each task.
113. (X) To get his men to work together.
CT (2) To draw a line between himself and the work group.
114. (1) To approve each task before permitting the worker to start another.
DA (2) To let workers make decisions when they feel competent.
115. (1) To set up all projects himself.
DA (2) To leave it up to each worker to take his share of the work and get it done.
116. (X) To feel he belongs in the group.
CT (2) To stress individual incentives.
117. (X) To depend on the workers to work out the details of when and how the
DA work will be handled.
(2) To decide in detail how the work shall be done by the workers.
118. (1) To work right alongside his workers.
DA (2) To try out new ideas in the work group.
119. (X) To let the workers set their own pace, as long as they finish the job
DA on time.
(2) To make it clear that he is leader of the group.
120. (X) To go back on a decision if one of the workers shows him where he was wrong.
EO (2) To emphasize getting the work done.

- 178. (1) To discourage strong friendships from forming within the group.
(2) To encourage workers to help each other out on the job.
- 179. (1) To deal primarily with the work.
(2) To deal primarily with the workers.
- 180. (1) To make it clear that he is leader of the group.
(2) To let the workers set their own pace, as long as they finish the job on time.

APPENDIX D

LEADERSHIP QUESTIONNAIRE

DIRECTIONS:

Write your full name on your answer sheet now.

This is a questionnaire to obtain your attitudes toward methods of leadership. It is not a test, and there are no right or wrong answers.

In each question are two statements of things that a leader can do. Choose the one that you feel it is more important for him to do. If you feel that both alternatives are poor, choose the one you think is less poor. Mark your choice on your answer sheet after the number of that question. Work rapidly and record your first impressions.

It is more important for a leader:

1. (1) To assign workers to particular tasks.
(2) To let the workers do the job the way they want to, so long as they accomplish the objectives.
2. (1) To make it a point to have a worker do a job over if it was done wrong.
(2) To allow kidding between workers while on the job.
3. (1) To know something about his workers' home lives.
(2) To tell inefficient workers to get busy.
4. (1) To give the workers the power to act independently of him.
(2) To break the work load down into separate and clearly defined job duties for each worker.
5. (1) To treat all workers alike and according to the rules.
(2) To be aware of the feelings of his workers.
6. (1) To be accepted by his workers.
(2) To point out the rules and policies in situations where complaints arise.
7. (1) To get high work out put from the workers.
(2) To stand up for his workers.
8. (1) To be an authority in the type of work the group does.
(2) To explain the reasons for changes.
9. (1) To make it clear that he is the leader of the group.
(2) To leave it up to each worker to take his share of the work and get it done.
10. (1) To call the group together to discuss the work.
(2) To work right along side the workers.
11. (1) To act as he thinks best, regardless of the views of the workers.
(2) To feel like "one of them" in the work group.
12. (1) To make decisions independently of the group.
(2) To really be a part of his work group.
13. (1) To point out the rules and policies in situations where complaints arise.
(2) To try to arrange for transfers for workers that desire them.

14. (1) To pitch right in with the workers.
DA (2) To plan the work.
15. (X) To authorize his workers to exercise a high degree of authority and responsibility in making decisions.
DA (2) To supervise his workers closely.
16. (X) To maintain a frank, informal relationship with his workers.
EO (2) To have a neat, well-regulated department.
17. (X) To be warm toward his workers.
EO (2) To be dominant.
18. (1) To be the most technically skilled member of the work group.
DA (2) To meet with the workers to consider proposed changes.
19. (X) To teach his workers new things.
DA (2) To attempt to make his job only slightly different from the jobs of the workers.
20. (1) To realize that most workers take little pride in what their work group accomplishes.
OT (2) To have workers work with whom they wish if possible.
21. (X) To yield to others in a discussion.
DA (2) To have the workers dependent upon him.
22. (X) To spend over half his time in supervisory activities such as planning and scheduling.
DA (2) To make prompt, firm decisions.
23. (X) To let workers take time out from the monotony when they wish.
DA (2) To allow workers to make decisions only when given explicit authority by the leader.
24. (1) To have a complete knowledge of the technical aspects of his job.
EO (2) To attempt to place workers on jobs that they desire whenever possible.
25. (X) To take an interest in the worker as a person.
EO (2) To maintain definite standards of performance.
26. (X) To explain the duties and responsibilities of each worker's job to him.
DA (2) To spend some of his time helping get the work done.
27. (X) To help his workers with their personal problems when they ask.
EO (2) To exert more influence in goal-setting than most of the workers do.
28. (X) To attempt to get at the basis for personal dislikes in the work group.
EO (2) To influence the workers more than they influence him.
29. (1) To criticize poor work when necessary.
EO (2) To be friendly toward his workers.
30. (X) To have his workers do their work the way they think is best.
DA (2) To rule with a firm hand.

APPENDIX E

H. C. Smith
November, 1959

SR Scale

- T F 1. Once in a while I get so angry that I feel like throwing and breaking things.
- T F 2. I often interpret the remarks of others in a personal way.
- T F 3. I spend very little time thinking about sexual matters.
- T F 4. I feel like getting revenge when someone has insulted me.
- T F 5. I am almost never jealous of other people's successes.
- T F 6. I sometimes feel contempt for the opinions of others.
- T F 7. I think nearly anyone would tell a lie to keep out of trouble.
- T F 8. I have sometimes corrected others, not because they were wrong, but only because they irritated me.
- T F 9. I feel that my sexual desires are almost as strong as my ambition.
- T F 10. I rarely lose control of my sexual impulses.
- T F 11. I like to know important people because it makes me feel important.
- T F 12. If it were not for the fear of disapproval I would violate certain social conventions.
- T F 13. I am not affected by flattery.
- T F 14. I almost never think of things too bad to talk about.
- T F 15. There are very few things about myself on which I am touchy.
- T F 16. I think about myself rather often.
- T F 17. My parents never made me do anything that I thought was very unreasonable.
- T F 18. I am seldom disturbed about sexual matters.
- T F 19. I don't really enjoy it when I persuade someone to do what I want.
- T F 20. I was afraid of the dark during one period of my childhood.
- T F 21. I usually plan and organize the details of any work that I have to undertake.
- T F 22. I sometimes have had dreams that I refused to talk about.
- T F 23. I almost never feel like swearing.
- T F 24. Most people are honest chiefly through fear of being caught.
- T F 25. My table manners are about as good at home as when I am out in company.
- T F 26. I like to become sexually excited.
- T F 27. I will have no difficulty controlling my sex desires until I am married.
- T F 28. I like to stick at a job or problem even when it seems as if I am not getting anywhere with it.
- T F 29. I have never really disliked any teacher.
- T F 30. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.

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