Master's Theses   Theses and Dissertations

1968

Temperament Profile Similarity between Managers and Their Subordinates

Edwin J. Reidy
Loyola University Chicago

TEMPERAMENT PROFILE SIMILARITY BETWEEN

MANAGERS AND THEIR SUBORDINATES

by

Edwin J. Reidy

A Thesis Submitted to the Faculty of the Graduate School

of Loyola University in Partial Fulfillment of

the Requirements for the Degree of

Master of Arts

January

1968

VITA

Edwin J. Reidy was born in Chicago, Illinois on September 11, 1922.

After graduation from Leo High School in Chicago, he joined Armour and Company in March, 1940 as a stenographer and worked in that capacity until called into military service in January, 1943.

In December, 1946 he was honorably discharged from the United States Army decorated with two battle stars and the Bronze Star. He rejoined Armour and Company until September, 1947, when he entered St. Joseph's College, Collegeville, Indiana.

In January, 1949 he transferred to Loyola University, Chicago, and received the degree of Bachelor of Science in June, 1951. He began graduate studies at Loyola University immediately, and continued under a teaching fellowship until June, 1952.

From June, 1952 to September, 1952 he worked at the Chicago College of Optometry in teaching and research in their speed reading program. In October, 1952 he joined the Williams and Meyer Company, Chicago, as Personnel Manager and in March, 1953 moved to the Personnel Department of Crane Co.,

Chicago.

He returned to Armour and Company in September, 1959 as Personnel Manager of Armour Pharmaceutical Company, Kankakee, Illinois. In November, 1962 he moved to the corporate headquarters of Armour and Company, Chicago as the Manager of Manpower Development.

ACKNOWLEDGEMENT

The assistance and interest of Dr. Frank J. Kobler and
other members of the Loyola University staff is sincerely appre-
ciated.

The author is indebted to the division Personnel Managers
of Armour and Company and to the department managers who so
generously gave of their time and effort in participating in
the research. Particular gratitude is extended to Mrs. Heidi
Thompson and Mr. Ernest Froeml for their assistance, guidance
and encouragement.

The opinions expressed are those of the author and do
not necessarily represent the policy of Armour and Company.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

STATEMENT OF THE PROBLEM AND BACKGROUND

As in many other industrial organizations, in Armour and
Company the personnel department has the responsibility for
the initial recruiting and screening of job applicants. Hiring
specifications are used in the screening process which have
been mutually established between the unit manager who is to
employ the person and the personnel department.

Some of the specifications will be uniform for all jobs
based on a company policy or external requirements. Some
typical ones are minimum age due to the hazardous nature of
the work and/or state law, maximum age due to pension plan
provisions, minimum health standards, minimum intelligence
and education standards, citizenship and/or security clearance.

Additional hiring specifications are added to these to
fit particular job requirements. These will be specific kinds
of knowledge or skill expressed in terms of education or
experience, and higher than minimal levels of intelligence
and maturity.

There is one other factor which usually plays an important
role in the final choice between applicants, but which is

usually left unspecified or vaguely referred to. That is the personality characteristics acceptable to the hiring manager.

The personnel department screens for all of the agreed upon job specifications and refers the prospect candidates to the hiring department manager. He does not usually re-do the personnel department's screening. On highly technical jobs he may verify to his own satisfaction the knowledge and experience the applicant has, but to the greater extent his decision is based on his judgment of how suitable the applicant will be as a person with whom to work.

If the personnel department could find personality correlates between managers and their preferred subordinates, it could improve their applicant screening ability and decrease the expense and dissatisfactions that result from rejections of applicants who have pursued the job to the hiring point.

The present study of personality correlates between managers and their subordinates is based on the following hypotheses:

Hypothesis I

That managers use their own temperament traits as a selection pattern in expressing preference for subordinates.

Hypothesis II

That managers prefer subordinates whose temperament traits are more similar to their own.

CHAPTER II

RELATED RESEARCH

There has been a considerable degree of theoretical controversy concerning the nature of the relationship between personality similarity and attraction. It has been proposed that attraction is facilitated by either similarity, complementarity, or both (e.g., Levinger, 1964). The theoretical differences remain unresolved because the research findings have been sufficiently inconsistent as to provide support for the similarity hypothesis (Banta & Hertherington, 1963; Izard, 1960a, 1960b; Maisonneuve, 1954; Mehlman, 1962; Miller, Campbell, Twedt, & O'Connell, 1966; Murstein, 1961), for the complementary hypothesis (Cohen, 1956; Kerckhoff & Davis, 1962; Rychlak, 1965; Winch, Ktsanes, & Ktsanes, 1955), and for some combination of the two (Becker, 1964; Secord & Backman, 1964).

Two general designs have been utilized. In one approach, existing "real life" attraction pairs are selected and assessed with respect to one or more personality variables. Then the scores of the pairs are correlated. These correlations are often compared with similar correlations for random pairs from the same population or with pairs of mutually antagonistic

3

or mutually indifferent subjects.

In the second approach the personality measure or measures are obtained and then previously unacquainted subjects are selected on the basis of test scores and placed in a situation requiring a degree of interaction. Thus similar and dissimilar pairs or groups are created and their interpersonal responses are assessed following the interaction.

The populations from which the subjects of these studies have been drawn are for the most part college students and engaged or married couples. Rosenfeld and Jackson (1959) used subjects who were adults employed in industry but who had peer relationships. There are no published studies using industrial subjects having manager-subordinate relationships.

The key study from which all the research has followed on attraction between marriage partners was Winch's (1955). He argued that the principle of complementarity explains their attraction for one another. In twenty-five couples married less than two years he found that an important dimension in the complementarity of their choice was the "assertive-receptive" dimension. That is, the high "assertives" tended not to marry persons who are like themselves, but rather persons who are high "receptives." In a later study of twenty-nine couples, Banta and Hetherington (1963) found

evidence for similarity of needs in mate selection but no
consistent evidence for complementarity was found. Byrne
and Blaylock (1963) reported that a sample of husbands and
wives tended to be similar in certain important attitudes
but that assumed similarity between two spouses was signifi-
cantly higher than actual similarity.

Newcomb (1961, Ch. 11) attempted to predict attraction
between roommates from their separate replies to an attitude
inventory that was completed before arriving on campus. He
reports, however, that,'We failed completely to find support
for the prediction (p. 216)." Rosenfeld and Jackson (1959)
studied objective similarity and showed that similarity on
three scales from the Guilford-Zimmerman Temperament Survey
(sociability-unsociability, ascendence-submissiveness,
security-insecurity) were significantly related to friendship
ratings of female office employees. In a later study,
Rosenfeld and Jackson (1965) reconfirmed their finding that
similarity of personality influenced friendship choice but
also that it varied with the length of acquaintance. Signi-
ficant positive relationship between similarity of personality
and friendship was formed only among less well acquainted
persons. This finding was consistent with Izard's (1963)
studies contrasting college freshmen and seniors. He found

personality correlates with friendship less significant for seniors than freshmen. This could also be explained, however, by the increased social and emotional maturity on the part of the seniors. Perhaps the more mature person has less need to see his personality characteristics reflected in his friends.

Some interesting theoretical conclusions were drawn by Hoffman (1958) in reviewing the research which demonstrated mental resemblance between friends. He points out that these conclusions were based on studies where friendship was already existent at the time of the study. Therefore, causal relations, if such existed, between friendship choice and personality similarity were ambiguous. He raised the question whether people select each other as friends because they are similar, or whether they become more similar because of the interactions connected with their friendship. He compared profiles obtained on the Guilford-Zimmerman Temperament Survey to form groups of college students composed of similar personalities and groups composed of dissimilar personalities. These groups worked together throughout the semester taking a course together. The results of a sociometric questionnaire in the final laboratory session did not reveal a significant difference in personal attraction between the

homogenous and non-homogenous groups. Hoffman and Maier (1966)
reconfirmed this finding with measures of attractiveness for
members taken at the fifth, eighth and eleventh weeks.

In a study of thirty pairs of best friends who had
chosen each other from a group of 200 high school and college
students, Izard (1960a) found that people who are attracted
to each other over an extended period of time have personality
profiles that are significantly more similar than those of
subjects paired at random. He postulated that the personality
similarity facilitated interpersonal positive affect which is
an important determiner of interpersonal behavior. In effect,
this creates a rational bridge between the studies which
attempt to explain interpersonal attraction on the basis of
similarity between personality structures and the more recent
theory of interpersonal congruency as described by Backman
and Secord (1961). Congruency theory places the focus in the
interaction process itself. While the congruency theory
as such is not tested in this study, the findings can be re-
lated to it.

The sociometric ranking technique used in this study
is derived from sociometry, a method advanced by Moreno (1934)
for analyzing the feeling or preference relationships among
the members of a human group. The original sociometric

device as modified by various investigators has been used in measuring the effects of psychotherapy, social adjustment and leadership potential. Sociometric measures have been found reliable and significantly related to such criteria as academic grades, ratings of superiors, and on-the-job ratings. Izard (1959) presents three studies supporting the assumption that sociometric measures reflect meaningful personality variables which are reliably measured in terms of observable behavior.

The Guilford-Zimmerman Temperament Survey (1949) (G-ZTS) had its origin in 1930 when Guilford first suggested that Spearman's technique for testing general, group and specific factors might apply to analysis of personality traits. Three years later he published his attempt to use Thurstone's method of factor analysis identifying four factors of personality.

By 1938 Thurstone had extended and developed his technique and Guilford re-examined his data. The outcome of this work was the Guilford-Martin Inventory of Factors GAMIN -- General Activity, Ascendency, Masculinity, Inferiority Feelings, and Nervousness.

The Guilford inventories STDCR -- Social Introversion, Thinking Introversion, Depression, Cycloid, Rhathymia

(carefree vs. serious) -- and GAMIN have been used in a wide variety of practical situations, chiefly in counseling services and research activities. Guilford continued his work and ultimately combined his STDCR and GAMIN and the Guilford-Martin Personnel Inventory into a single instrument, the Guilford-Zimmerman Temperament Survey. The objectives in planning this tool were: (1) a single booklet of items; (2) a single answer sheet; (3) an efficient scoring method; (4) a coverage of the traits proven to have the greatest utility and uniqueness; and (5) condensation and omission of trait scores where intercorrelations are sufficiently high.

The form of the statement of the items is unusual for inventories of this type. Items are stated affirmatively rather than in question form, using the second person pronoun. Guilford felt that the avoidance of the first person personal pronoun should do something to allay resistance and to increase the operation of the projective principle. The second person pronoun was preferred to the first because it was believed that the statement would seem thus less personal to the examinee. Guilford pointed out that since it is a historical fact that the personality inventory grew out of the interview method, his tool is in essence a systematic, impersonal interview which can be scored.

Estimates of total-score reliabilities were made in various ways, based upon samples of 523 male college students and 329 female students. Kuder-Richardson Formulas were applied to the data for men and women separately and combined. Odd-even and first half-second half correlations were obtained for a random sample of 100 men. The reliability range is from .75 to .87. The estimates of standard error of the obtained scores range from 2.2 to 2.6 and indicate that in general any obtained score does not differ by more than 5 points from the corresponding true score.

The male sample of the scores upon which the norms were based included many veterans, consequently the age range for them was from 18 to 30 with a mean of about 23. There are no very marked sex differences except in trait (m), masculinity.

The internal validity or factorial validity of the scores is fairly well assured by the foundation of factor-analysis studies plus the successive item-analyses directed toward internal consistency and uniqueness.

The factor descriptions are summarized here from Guilford-Zimmerman's own report. In each case unless otherwise specified, the high-scoring individual is described.

G. General Activity: Energetic, rapid-moving, rapid-working person who likes action and may sometimes be impulsive.

11

O. Objectivity: Takes an objective, realistic view of things; alert to his environment and can forget himself; not beset with suspicions, hypersensitivity, unwarranted sympathies, anxieties or feelings of guilt.

F. Friendliness: Agreeableness: Low scoring individual is easily aroused to agressive action. High scoring person is friendly and compliant.

P. Personal Relations: Cooperativeness, tolerance. Low scoring person is given to critical faultfinding generally; has little confidence or trust in others; self-centered and self-pitying.

The authors claim that the scale descriptions are derived from validation information and clinical experience. Although this literature is meager, studies have been reported in which the G-ZTS or its predecessors have been shown to be related to other accepted personality inventories (Gilbert, 1950) and to external criteria of success among clinical psychology students (Kelly & Fiske, 1951).

In the survey the alternative responses to each item are the familiar "yes," "?" and "no." The responses "yes" and "no" are preferred to "true" and "false" for the reason that with the latter responses some examinees become too concerned about the actual truth of statements where actually

their more spontaneous response, dictated to some extent by
feelings, would probably be more diagnostic.

The use of the "?" alternative was determined by unpub-
lished studies. Since the "?" answers are ordinarily given
a weight of zero, they influence a trait score in a negative
direction. So, the forced-choice method might have a tendency
to raise all the trait scores somewhat. In his study of the
forced-choice method, Linden (1958) did not find this result.

An interesting and important feature of test taking has
been reported by Voss (1958). His work is from the stand-
point of the relationships of response sets. The relation-
ship among three "test taking habits" or response sets was
investigated. The types are: (1) the use of one category
of response more frequently than other categories; (2) the
tendency to give normative responses; and (3) the tendency
to give socially desirable responses. Each of the three
response sets was found to be independent of the other two.
Analysis of the relationship of these sets to the trait
scales of the MMPI and the G-ZTS indicated that most of the
scales were strongly affected by these three types of bias.

The author is aware of the possibility of bias in the
present study. However, the Guilford-Zimmerman is no more
vulnerable to bias than are other similar tools. If bias

turns out to be obvious in the existing study, interpretation
will be made accordingly.

CHAPTER III

THE PROCEDURE

Subjects

The subjects of this study were employees of Armour and Company located in units that were organizationally separate from one another and most frequently geographically separate also. They were managers from various levels of the organization hierarchy and the subordinates they supervise. The term group (G) refers to a manager and all the subordinates that report directly to him. Nineteen groups were studied covering one hundred twenty-one subordinates. In Table 1 it shows the G's ranged in size from one of four subordinates to one of twelve subordinates with the median between five and six. (See Table 1.)

Data Gathering Technique

Each manager was approached personally and asked for his cooperation in the study to help the experimenter (E) complete his masters degree requirements. The managers were people in the organization over whom E had no direct or indirect supervision or close working relationship. The managers were assured that no other use would be made of the data and that

their anonymity would be protected in compiling the results.
Only two managers refused to cooperate out of twenty-one
approached.

Table 1

Frequency Distribution of Group Size
by Number of Subordinates

No. of subordinates	Group size frequency	Total subordinates
4	1	4
5	8	40
6	4	24
7	1	7
8	3	24
9	0	0
10	1	10
11	0	0
12	1	12

Members of the personnel departments (PDMs) were used by E to solicit the participation of the subordinates of the cooperating managers. E explained to the PDMs that the study was to complete a thesis requirement and was not to become part of an individual's personnel record information. There was a high degree of interest expressed by the PDMs in collecting the necessary data as the results could contribute to their knowledge about personnel selection. Copies of the results of the study were promised to them.

The PDMs spoke to the subordinates of the cooperating managers singly or in groups using the following standardized description: "A member of the personnel department is completing his masters degree by writing a thesis and needs to collect some test data. Your manager has agreed to assist him and has agreed to having each of his subordinates asked to cooperate. All the test results would remain anonymous and would not become part of the personnel department's records. It involves your completing this survey questionnaire which should take about 45 minutes." No subordinate refused to cooperate in the study.

Questions from the managers and subordinates about the nature of the study were deferred saying that to answer that question might influence the results, but that it would be

answered after the study was complete. The Guilford-Zimmerman
instructions were read aloud: "In this booklet you will find
a number of statements. Read each statement carefully. If
the statement is true, or if you agree with it, mark answer
'yes' on your sheet. If the statement is more false than
true, or if you disagree with it, mark 'no.' If you cannot
decide between 'yes' and 'no' you may mark '?.' But avoid
doing this if possible. Be sure to answer every item. There
are no 'right' or 'wrong' answers in the usual sense of a
high score being necessarily the best. The purpose of this
survey will be served best if you describe yourself and
state your opinion as accurately as possible. You may notice
that many items are similar. Actually no two items are
exactly alike. Notice that the numbering of items on the
answer sheet follows across the rows rather than down the
columns."

The managers and the subordinates took the test unsuper-
vised at a time and place convenient to them. As it would
not be possible for Gs to have the test administered under
supervised conditions, it was believed preferable to have
the administration uniformly non-supervised. The managers
and the subordinates turned their completed tests in to the
PDM.

As soon as the manager turned in his test he was asked by the PDM to, "List all the subordinates who report directly to you on this piece of paper and then numerically rank them on the basis of whom you most like to work with. Make rank number one the person you most like to work with and the last ranking person the one you least like to work with. These are comparative rankings, of course, and it's obvious that the bottom rank does not necessarily mean you don't like to work with that person. It's only his standing in relationship to the others in that group." As the PDMs were all people with whom the managers have frequent occasion to discuss the performance and salary of their subordinates it was believed that their rankings would not be influenced by their having to reveal the data to the PDMs.

Analysis and Statistical Treatment

The G-ZTS was scored for each person in the group. Each subordinate's profile was then compared with his manager's profile and, through a statistical method developed by Cronbach and Gleser (1953), a D^2 score was computed. This D^2 score is a measure of the dissimilarity between profiles and is computed through the following formula:

$$D_{12}^2 = \sum_{j=1}^{k} \left(x_{j1} - x_{j2} \right)^2$$

j = the variates: inactivity, impulsiveness, submissiveness, shyness, depression, subjectivity, hostility, thoughtlessness, intolerance, femininity (of emotions and interests)

k = the number of variates - 10

x_{j1} = the score of person 1 on variate

This formula was chosen over the other commonly used techniques of Q sort and product moment correlations between persons, because it takes into account the differences in scatter between profiles. Formulas which are not influenced by the scatter of scores can produce highly unreliable comparisons between profiles when they are relatively flat.

The subordinates were then ranked by their D^2 scores and correlated with their manager's ranking, computing ρ (rho) for each group. Since the scales were not interval scales, a non-parametric correlation was used. The two measures which were applicable were the Spearman rank correlation coefficient rho, and the Kendall rank correlation coefficient tau. Both are suitable with variables which can be measured on an

ordinal scale. They are equally powerful in rejecting null
hypotheses, having 91 percent power-efficiency when compared
with Pearson's <u>r</u>. The Spearman was developed earlier, is
perhaps the better known and is somewhat easier to compute.
Its formula is:

$$r = \frac{1 - 6\,\Sigma(D^2)}{N(N-1)}$$

<u>Rho</u> was then tested for significance (t).

The groups were then divided by <u>rho</u> into four combined
groups as follows:

A. those with positive correlation significant at .05 level
   or better;

B. those with positive correlation but not significant at
   .05;

C. those with no relationship;

D. those with negative correlation but not significant at
   .05.

Trait means and standard deviations for the managers of
the combined groups were computed using the following formula:

$$\overline{X}\ (\text{mean}) = \frac{\Sigma X}{N}$$

$$\sigma\ (\text{standard deviation}) = \sqrt{\frac{\Sigma x^2}{N}}$$

The significance of the differences between combined group managers' means ($\bar{X}$) on each trait was submitted to t test using the following formula:

$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{\sqrt{\dfrac{\sigma_1^2}{N_1-1} + \dfrac{\sigma_2^2}{N_2-1}}}$$

The four combined groups were then graphed to inspect for any directional differences between the groups.

The combined groups were then further combined into two major groups by putting combined groups A and D together, and combined groups B and C together. The means, standard deviation and the significance of the difference between the standard deviations were computed using the same formulas cited above for these new combined major groups.

CHAPTER IV

RESULTS

As can be seen from Table 2, out of nineteen groups of managers and subordinates, only three showed a significant positive correlation between manager-subordinate profile similarity and the manager's ranking of the subordinates on his preference for working with them. There were no significant negative correlations.

In other words, only a few managers definitely preferred subordinates whose temperament traits as measured by this test were more similar to their own, and no managers definitely preferred subordinates in relation to the degree of dissimilarity between their temperament profile and their subordinate's. (See Table 2.)

The managers were then combined into four groups along a continuum from managers having a positive significant correlation between profiles and preference, to managers having a positive but not significant, to managers having virtually no correlation, to managers having a negative but not significant correlation. (See Table 3.)

Table 2

Correlation Between Profile Similarity and Rank
Order of Preference of Subordinates

Group	N	(rho)
1	10	+ .770*
2	5	+1.000*
3	8	+ .797*
4	5	+ .700
5	8	+ .524
6	12	+ .427
7	7	- .063
8	4	- .200
9	5	+ .100
10	8	- .143
11	6	+ .086
12	5	- .100
13	6	- .029
14	6	- .143
15	5	- .500
16	5	- .500
17	25	- .429
18	5	- .700
19	5	- .200

* Significant at .01 level.

Table 3

Groups Divided by <u>Rho</u> into Four Combined Groups
Along a Continuum from Positive
to Negative Correlation

Combined groups	A		B		C		D	
Rho	+1.	+.7[a]	+.6	+.2	+.1	-.1	-.2	.6
No. of groups	3		3		8		5	

[a]Only groups with correlations significant at 1% level
are included in this group. One correlation of .700 which
was not significant was included in Group B.

This was done to see if there were any significant
temperament trait differences between the managers who tend
to prefer subordinates with temperaments more similar to
their own, and the managers who tend to prefer subordinates
with temperaments more dissimilar to their own. This could
lead to identifying some possible causal factors for the
difference inherent in the manager's temperament.

In Table 4 it is shown that significant differences in
the temperament trait "Social Interest - Sociability" appear

between the managers who prefer subordinates most similar to themselves in temperament (Group A) and the managers who show no temperament-preference relationship (Group C) or a tendency to a negative relationship (Group D). There were no significant differences found in traits between Group B and any other group, or between Groups C and D.

By the sociability scale, the author is describing the person's social boldness. This is more easily understood if it is thought of as the opposite of shyness and seclusiveness. The managers in Group A are significantly different from the managers in Groups C and D in that they are more at ease with others, enjoy the company of others and readily establish intimate rapport. The managers in Groups C and D are more withdrawn, reserved and hard to get to know.

The chart of the means of the traits for each of the combined groups shown in Fig. 1 revealed that Groups A and D tended to move together and Groups B and C tended to move together. To confirm this observation, the profiles for each of the combined groups were then compared with one another using the Cronbach Gleser formula for D^2 referred to above.

Table 4

t Scores for Testing Significant Differences Between Managers of Combined Groups

Compared combined groups	General Activity; Energy	Restraint; Seriousness	Ascendence; Social Boldness	Social Interest; Sociability	Emotional Stability	Objectivity	Friendliness; Agreeableness	Thoughtfulness; Reflectiveness	Personal Relations; Cooperation	Masculinity (of emotions and interest)
A - B df = 4	.30	.76	.92	.91	.63	1.54	1.26	0	2.11	.30
A - C df = 9	.79	.58	1.33	3.53*	2.11	1.75	1.14	1.05	2.02	.24
A - D df = 6	.48	.01	.17	4.23*	1.91	.31	.41	.07	.05	.38
B - C df = 9	.96	.44	.37	.02	.45	.52	.10	1.27	.02	.12
B - D df = 6	.13	1.15	1.10	.10	.17	1.39	.64	.93	.99	.66
C - D df = 11	1.27	.94	1.53	.11	.33	1.62	.56	1.99	1.28	.67

*Significant at greater than .01 level.

FIG. 1   PROFILE CHART FOR THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

For high-school, college, and adult ages

	G	R	A		S	E	O	F		T	P	M		CENTILE RANK	NEAREST T SCORE
C SCORE	General Activity Energy	Restraint Seriousness	Ascendance Social Boldness (M)	(F)	Social Interest Sociability	Emotional Stability	Objectivity	Friendliness Agreeableness (M)	(F)	Thoughtfulness Reflectiveness	Personal Relations Cooperativeness	Masculinity (M)	Femininity (F)		
10	30 29 28	30 29 28 27	30 29 28	30 29 28 27	30	30 29	30 29	30 28 26	30 29 28	30 29 28	30 29	30 29	0 1	99	75
9	27 26	26 25	27 26	26 25 24	29	28 27	28 27	25 24	27 26	27 26	28 27	28 27	2 3		70
8	25 24	24 23	25 24	23 22 21	28 27	26 25	26 25	23 22 21	25 24	25 24	26 25	26 25	4 5	95 90	65
7	23 22	22 21	23 22	20 19	26 25	24 23	24 23	20 19	23 22 21	23 22	24 23	24	6 7	80	60
6	21 20	20 19 18	20 19 18	18 17 16	24 23 22	22 21 20	22 21 20	18 17 16	20 19 18	21 20	22 21 20	23 22	8 9	70	55
5	19 18 17	17 16 15	17 16 15	15 14 13	21 20 19	19 18 17	19 18 17	15 14 13	17 16 15	19 18 17	19 18 17	21 20	10 11	60 50	50
4	16 15 14	14 13 12	14 13 12	12 11	18 17 16 15	16 15 14 13	16 15 14	12 11 10	14 13 12	16 15 14	16 15 14	19 18	12 13	30	45
3	13 12 11	11 10	11 10	10 9 8	14 13 12 11	12 11 10 9	13 12 11 10	9 8 7	11 10 9	13 12 11	13 12	17 16 15	14 15	20	40
2	10 9 8	9 8 7	9 8 7	7 6	10 9 8 7	8 7 6	9 8 7	6 5	8 7	10 9 8	11 10 9	14 13 12	16 17 18	10 5	35
1	7 6	6 5	6 5	5 4 3	6 5 4	5 4	6 5	4 3	6 5	7 6 5	8 7 6	11 10 9	19 20		30
0	5 3 2 1	4 3 2 1	4 3 2 1	2 1 0	3 2 1 0	3 2 1	4 3 2 1	2 1 0	4 3 2 1	4 3 2 1	5 3 2 1	8 5 2	21 23 25		25
			M	F				M	F			M	F		
	Inactivity Slowness	Impulsiveness Rhathymia	Submissiveness		Shyness Seclusiveness	Emotional Instability Depression	Subjectivity Hypersensitiveness	Hostility Belligerence		Unreflectiveness	Criticalness Intolerance	Femininity Masculinity			

MEANS OF TRAITS

Legend:
Group A ————
Group B ————
Group C ————
Group D ————

Table 5 reveals that Groups B and C had the most similar profiles and Groups A and D had the next most similar profiles.

Table 5

Comparison of Profile Similarity (D^2 Scores)
Between Combined Groups

(The lower the D^2 score, the less dissimilarity.)

	A	B	C	D
A	X	148.11	152.28	66.50
B	X	X	43.14	85.68
C	X	X	X	88.36
D	X	X	X	X

On this basis, these groups of managers were then further combined into the A/D Group and the B/C Group. The difference between the means of each of the traits of these combined groups was then tested and they were found to differ significantly (5% level) on subjectivity-objectivity. The B/C Group of managers was more objective than the A/D Group. By the objectivity scale, the author is describing a person who is more "thick skinned," has less egoism. It is contrasted with

being hypersensitive, self-centered, or "touchy."

CHAPTER V

CONCLUSIONS

In this study of temperament profiles and managers' pre-
ferences for subordinates, Hypothesis I is not fully supported.
In only three cases out of nineteen was there a significant
correlation between the manager's own temperament profile and
those of the subordinates he most preferred to work with. In
all three cases of significant correlation, however, the
correlation was positive. That is, those managers with a high
temperament-preference relationship with their subordinates
prefer the subordinates with temperaments similar to their
own rather than dissimilar. This would tend to support the
principle of similarity as operative rather than the principle
of complementarity such as Winch's (1955) studies on married
couples found.

The studies of Rosenfeld and Jackson (1959) which used
the Guilford-Zimmerman to relate to friendship among female
office employees also found similarity significantly related.
The difference between this study and Rosenfeld's study,
however, is rooted in the question of whether individuals
can be compared on the basis of single traits taken out of a

whole temperament profile, or whether the whole profile similarity must be examined. In the author's instructions on interpretation he describes different meaning for a high scoring trait when it is accompanied by a high or low score in another trait. So the traits have meaning primarily in relationship to one another. For that reason, in this study total profile similarity was used as the measure.

In this study all of the subordinates had already been "selected" by their manager. That is, they were already working for him, some for many years. Whether the similarities in temperament were a cause or an effect of the relationship is not dealt with here. Izard's (1960b) study of mutual friendship among college students demonstrated that actual personality similarity was an antecedent of unilateral socio-metric choice. Whether it is a cause or an effect, it could be hypothesized that managers who preferred subordinates with temperaments similar to their own would "reject" subordinates with temperaments greatly dissimilar to their own, or they would be "caused" to become more similar. This would in effect shrink the amount of disparity that existed between the manager and subordinate profiles. This study clearly did not reveal such a strong dynamic force existent. The profiles ranged from negative to positive with almost an even

split and only the three positive ones significant. The
findings support Hoffman's (1958) results in finding that
temperament similarity or dissimilarity does not play a
significant role in interpersonal attraction.

In one major respect this study differs from all the
other published studies, and that is in the role relation-
ships between the subjects. The manager-subordinate relation-
ship is far more complex than a "friendship" relationship.
The task or work the manager needs to get accomplished is
dependent to a large extent on the knowledge, skill and
attitude existent in the subordinate. The manager's
admiration of these qualities may override their temperament
differences.

Those managers who did have significant preferences
for subordinates with similar profiles differed significantly
in temperament from all the other managers in the areas of
sociability. They tended to be persons with a high social
interest, who had a tendency to reach out to other people.
All of them ranked at or above the 90 percentile in this
trait. Izard (1960a) postulated that personality similarity
facilitated interpersonal positive affect which is an
important determiner of interpersonal behavior. While this
study did not compare each trait of each subordinate with
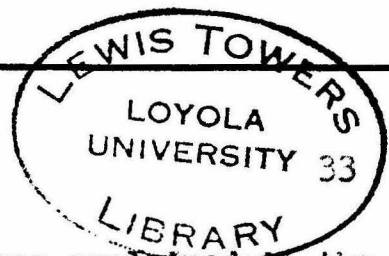
his manager's individual traits for reasons explained in the
criticism of Rosenfeld's study, it would seem reasonable to
expect that the kind of temperament the other person had
would be high in the personal value hierarchy of the person
who had high social interest himself. This kind of consider-
ation really leads us from simply studying structure similarity
to account for choices, to an examination of the dynamics of
the interaction as the basis. In the study by Secord and
Backman (1961) two conditions which promote attraction were
found. They were perceived similarity of the other person
to self, and interpersonal congruency. Interpersonal congru-
ency is defined as a state existing when perceived self and
self as ego imagines he is perceived by the alter, are
congruent. Research in this area would seem to hold more
promise for explaining manager-subordinate preferences, but
would not provide us with a prediction base for personnel
department selection.

When the combined groups of managers' profiles were
compared for similarity, they gracefully divided into two
groups. The A/D Group was managers from opposite ends of
the continuum, i.e., those who had a significant positive
correlation between temperament and preference and those with
the most negative (though not significant) correlation. As

a group, these managers were found to be significantly different from the B/C Group in the trait characteristic of subjectivity-objectivity. They were much more subjective with a mean score at around the 40 percentile, while the B/C Group, who showed no preference-similarity correlation (or some positive but not significant), showed much higher objectivity at around the 55 percentile. Low scores on this scale mean the individual is very sensitive to others, and high scores the opposite. This would seem to fit the behavioral tendency of these two groups in their expression of subordinate preference. The manager who tends to select as subordinates those dissimilar to himself, is not acting differently in this respect than a manager who selects similar subordinates. They differ only from those who apparently use no pattern related to their own temperament.

CHAPTER VI

SUMMARY

The purpose of this study was to determine whether
business managers prefer subordinates whose temperament
traits are more similar to their own or more dissimilar to
their own. It was hypothesized that there was a relation-
ship between the managers' preference for subordinates and
their temperament profiles, and that managers would prefer
subordinates whose temperaments were more similar to their
own.

Review of the literature revealed two antithetical
answers to the question of why Person A and Person B find
each other attractive and each other's company a satisfying
experience. One is that attraction is facilitated by the
similarity of a variety of characteristics between A and
B. The other is the complementarity of characteristics
between A and B. These theoretical differences have been
unresolved because the research findings have been sufficiently
inconsistent to confirm either answer. Some studies have
been unable to find any relationship between personality

35

similarity and attraction, and others that similarity is
associated with attraction only under limited conditions or
only in specific groups with respect to a few variables.
Attraction has also been found to vary as a function of such
determinants as propinquity, the reinforcing properties of
the situation, attitude, perceived similarity, the temporal
length of the relationship and the respective status of
each individual.

Two research designs have been used generally. One
design is to use already chosen pairs such as friends,
fiances and spouses, and compute correlations between one
or more of their personality variables. These correlations
are then compared with similar correlations for random pairs
from the same population. In the other approach, the
personality measurement is obtained and then previously
unacquainted subjects are selected on the basis of test
scores and placed in a situation which requires some degree
of interaction. Thus similar and dissimilar pairs are
created and their interpersonal responses are assessed
following the interaction.

This study used the former approach. No previous
study had used industrial managers and their chosen subor-
dinates as the pairs for research.

Subjects for the study were nineteen managers and their one hundred and twenty-one subordinates. The technique used was to give the Guilford-Zimmerman Temperament Survey to all the managers and subordinates, and then ask the managers to rank their subordinates on the basis of with whom they most liked to work.

The temperament profiles were then compared for similarity by computing D^2 scores. The subordinates were then ranked for profile similarity with their manager and this ranking compared with their manager's preference ranking by computing ρ (rho). Only three out of nineteen managers were found to have a significant correlation between their profile similarity and preference rankings, and those were all positive.

The managers were then grouped according to the amount and direction of correlation that existed between their temperament and preference and compared with each other in temperament. This was done to see if any causal factors could be inferred for their differences in behavior from their temperament differences. It was found that the managers with the significant correlations differed from the no correlation managers and the negative correlation managers in the trait "social interest - sociability." Using the author's definition for this trait, this was found to provide a rational base for

this difference in behavior.

The profiles for these combined groups of managers were then compared, and the managers having the highest positive correlation and the highest negative (though not significant) correlations were found to have more similar temperament profiles with each other than with the managers who had no correlations or positive but not significant correlations. When the temperament traits of these two groups were compared, it was found that the managers in the high positive , highest negative group differed significantly from the managers in the other group in that they tended to be more subjective.

The results of this study indicate that the managers' preference for subordinates cannot be accounted for entirely on the basis of temperament similarity or dissimilarity, though with managers with a high sociability characteristic this may be a stronger influence.

Attraction responses have been shown to be multi-determined -- that a number of variables are operating. It would appear then that only if the variable under investigation is of sufficient strength to override all other independent variables or if the other variables happened to covary with it would the similarity hypothesized be confirmed. The strong social interest - sociability trait in the managers

having the significant similarity profiles with their preferred
subordinates could be the kind of trait which could produce
such an overriding effect. Other variables inherent in the
work situation of the subjects in this study such as role
expectancy, nature of the work to be done and the level of
skill or knowledge of the subordinate could also influence
the manager's choice of subordinates and suggests areas for
further exploration. This is consistent with Byrne, Griffitt
and Stefaniak's (1967) position that an unknown number of
variables are potentially operative which need to be identified
and systematically controlled to reach any definitive conclu-
sion on the role of similarity or complementarity of personality
in the phenomenon of attraction.

ABSTRACT

It was hypothesized that managers use their own temper-
ament traits as selection patterns in expressing preference
for subordinates, and that they prefer subordinates whose
temperament traits are more similar to their own. Nineteen
managers whose subordinates ranged in number from four to
twelve for a total of one hundred twenty-one subordinates
took the Guilford-Zimmerman Temperament Survey (G-ZTS). The
G-ZTS profiles of the subordinates were compared with their
managers' by computing D^2 scores and ranked for similarity.
The managers also ranked the subordinates on the basis of
with whom they most liked to work. Correlation (rho) was
computed between the profile similarity rankings and the
preference rankings, and only three were found significant,
all of which were positive. These three managers were found
to differ significantly from all other managers on the trait
"social interest-sociability." Comparison of managers having
highest correlation, whether negative or positive, with the
managers having the lowest correlations showed the high
correlation managers as being significantly more subjective.

40

REFERENCES

Backman, C. W., & Secord, P. F. Personality theory and the problem of stability and change in individual behavior: an interpersonal approach. Psychol. Rev., 1961, 68, 21-32.

Banta, T. J., & Hetherington, M. Relations between needs of friends and fiances. J. abnorm. soc. Psychol., 1963, 66, 401-404.

Becker, G. The complementary-needs hypothesis, authoritarianism, dominance and other Edwards Personal Preference Schedule Scores. J. Pers., 1964, 32, 45-56.

Byrne, D., & Blaylock, Barbara. Similarity and assumed similarity of attitudes between husbands and wives. J. abnorm. soc. Psychol., 1963, 67, 636-640.

Byrne, D., Griffitt, W., & Stefaniak, D. Attraction and similarity of personality characteristics. J. abnorm. soc. Psychol., 1967, 5, 82-90.

Cohen, A. R. Experimental effects of ego-defense preference on interpersonal relations. J. abnorm. soc. Psychol., 1956, 52, 19-27.

Cronbach, L. J., & Gleser, G. C. Assessing similarity between profiles. Psychol. Rev., 1953, 50, 456-473.

Gilbert, C. The Guilford-Zimmerman Temperament Survey and
certain related personality tests. J. appl. Psychol.,
1950, 34, 394-396.

Guilford, J. P., & Zimmerman, W. S. The Guilford-Zimmerman
Survey Manual of Instructions and Interpretation. The
Psychological Corporation. 1949.

Hoffman, L. R. Similarity of personality: a basis for inter-
personal attraction? Sociometry, 1958, 21, 300-308.

Hoffman, L. R., & Maier, N. R. F. An experimental reexamin-
ation of the similarity attraction hypothesis. J. pers.
soc. Psychol., 1966, 3, 145-152.

Izard, C. E. Personality correlates of sociometric status.
J. appl. Psychol., 1959, 43, 89-93.

Izard, C. E. Personality similarity and friendship. J. abnorm.
soc. Psychol., 1960, 61, 47-51. (a)

Izard, C. E. Personality, similarity, positive affect and
interpersonal attraction. J. abnorm. soc. Psychol., 1960,
66, 484-485. (b)

Izard, C. E. Personality similarity and friendship: a
follow-up study. J. abnorm. soc. Psychol., 1963, 66,
598-600.

Kelly, E. L., & Fiske, D. W. The prediction of performance
in clinical psychology. Univ. of Michigan Press, 1951.

Kerckhoff, A. C., & Davis, K. E. Value concensus and need
complementarity in mate selection. Amer. sociol. Rev.,
1962, 27, 295-303.

Levinger, G. Note on need complementarity in marriage.
Psychol. Bull., 1964, 61, 153-157.

Linden, J. D. The development and comparative analysis of
two forced-choice forms of the Guilford-Zimmerman Temper-
ament Survey. Dissertation Abstr., 1958, 18, No. 2199.

Maisonneuve, J. A. A contribution to the sociometry of
mutual choices. Sociometry, 1954, 17, 33-46.

Mehlman, B. Similarity in friendships. J. soc. Psychol.,
1962, 57, 195-202.

Miller, N., Campbell, D. T., Twedt, H., O'Connell, E. J.
Similarity, contrast and complementarity in friendship
choice. J. pers. soc. Psychol., 1966, 3, 3-12.

Moreno, J. L. Who Shall Survive? Nervous and Mental Disease
Publication Company, Washington, D. C., 1934.

Murstein, B. I. The complementary need hypothesis in
newly weds and middle-aged married couples. J. abnorm.
soc. Psychol., 1961, 63, 194-197.

Newcomb, T. M. The Acquaintance Process. New York: Holt,
Rinehart & Winston, 1961.

APPROVAL SHEET

The thesis submitted by Mr. Edwin J. Reidy has
been read and approved by the director of the thesis.
Furthermore, the final copies have been examined by
the director and the signature which appears below
verifies the fact that any necessary changes have been
incorporated, and that the thesis is now given final
approval with reference to content and form.

The thesis is therefore accepted in partial fulfill-
ment of the requirements for the degree of Master of
Arts.

October 3, 1967
_____
Date

Frank Shobler
_____
Signature of Adviser