SELF - OTHER DIFFERENTIATION : FIELD DEPENDENCE AND ASSUMED SIMILARITY TO OTHERS

> Thesis for the Degree of M. A. MICHIGAN STATE UNIVERSITY DANIEL M. WEGNER 1971





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ABSTRACT

SELF-OTHER DIFFERENTIATION: FIELD DEPENDENCE AND ASSUMED SIMILARITY TO OTHERS

By

Daniel M. Wegner

This study investigated extensions of psychological differentiation theory involving the perception and prediction of others. In particular, the amount of similarity a person assumes to other people and the actual number of persons in a given sample to whom he assumes similarity were related to his level of differentiation. Accuracy in the prediction of others behavior was hypothesized to be unrelated to the field dependence-independence dimension. Based on an hypothesis equating field dependence and social dependence, self versus other oriented values were assessed in relation to differentiation. Field dependence-independence was tested with three instruments: the embedded figures test; the closure flexibility (concealed figures) test; and the block design subscale of the Wechsler Adult Intelligence Scale. The bank of tests was given to sixty-three undergraduates at Michigan State University.

The results of the study indicated that (1) field dependent persons assume more similarity to others in a prediction situation and in simple self-report than do field independent persons; (2) No difference in predictive accuracy was found between field dependent and field independent persons, and a tendency was found for those persons near the middle of the differentiation continuum to be better predictors of the behavior of others than were persons at the extremes;; and (3) self-values versus other-values were not significantly related to differentiation, suggesting that moral evaluation is independent of this cognitive style.

These results extend psychological differentiation theory to include the fields of empathy (assumed similarity to others) and accuracy in the prediction of others behavior (empathic accuracy). Future research was suggested involving the refinement of instruments introduced in this study, and further definition of variables within the field dependence-social dependence framework.

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A THESIS

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TABLE OF CONTENTS

																				Page
LIST	OF	TAB	LES	•	•	•	•	•	•	•	•	•	•	•	•	•	٠	•	•	iv
list	OF	APPI	ENDI	CES	5.	•	•	•	٠	•	٠	•	•	•	•	•	•	•	•	v
INTRO	DUC	TIO	N.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1
	Pa	sych	olog	gica	al	Dif	fer	ent	iat:	ion	•	•	•	•	•	•	•	•	•	1
		sum									•	٠	٠	٠	٠	٠	٠	•	•	4
		leld			ler	ice,	So	cia	1 D	epei	nde	nce	, a	nd	Ass	ume	d			
	S	imila	arit	ty	٠	٠	٠	٠	٠	٠	•	٠	•	•	٠	٠	٠	٠	٠	6
METHO	DD.	•	•	•	•	•	•	٠	•	•	•	•	•	٠	•	•	٠	•	٠	9
	Sı	ıbje	cts	•	•	•	•	•	•	•	•	•	•	٠	•	•	•	•	•	9
	I	istr			-	•	٠	•	٠	•	•	•	٠	•	٠	٠	٠	٠	•	9
						l Fi							•	٠	٠	•	٠	•	•	9
						Fle					ace	ale	d F	igu	res) T	est	(C	FT)	10
						sig					•	٠	•	•	٠	٠	٠	٠	٠	11
						Dia							pat	hic	Ac	cur	acy	٠	٠	11
						ila							•	•,	•	•	٠	٠	٠	13
	~				ior	al .	Att	itu	de(Que	sti	onn	air	e (BAQ).	٠	٠	•	14
	P	.0060	lure	э.	٠	•	٠	٠	•	٠	٠	٠	٠	٠	٠	•	٠	٠	٠	15
RESUI	LTS	•	٠	•	•	•	٠	•	٠	•	•	•	•	٠	•	٠	•	•	•	16
DISCU	JSS]	ION	•	•	•	•	•	•	•	•	٠	•	•	•	•	٠	•	•	•	21
REFER	REN	CES	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	25
APPEN	IDIC	CES	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	27

LIST OF TABLES

Tab	le	Page
1.	Means and standard deviations of all measures by sex	16
2.	Intercorrelation matrix of three field dependence measures, three measures of assumed similarity, and measures of self- other values, predictive accuracy, and actual similarity	18
3.	Intercorrelation matrix of all measures for males	27
4.	Intercorrelation matrix of all measures for females	28

•

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LIST OF APPENDICES

Appendix														Page	
A. Tables 3 and 4	•	•	•	•	•	•	•	•	•	•	٠	•	٠	27	
B. Copies of Test Forms	•	٠	٠	•	•	•	٠	•	•	•	•	٠	٠	29	

INTRODUCTION

This study was designed to test extensions of the theory of psychological differentiation with regard to person perception. In particular, the relationship between empathy -- the tendency to assume similarity to others -- and level of differentiation was tested.

Psychological Differentiation

The theory of psychological differentiation as proposed by Witkin (1954, 1962, 1965) has produced a vast amount of research integrating the disciplines of perception and personality. As first conceived, the field dependence-independence dimension related to individual differences in perception. The field dependent person's perception is strongly dominated by the over-all organization of the field, and parts of the perceptual field are experienced as "fused." For the field independent person, parts of the field are experienced as discrete. Witkin has amassed considerable evidence that a tendency toward one or the other ways of perceiving is a consistent, pervasive characteristic of an individual's perception.

Field dependent and field independent modes of perception were assessed by Witkin (1962) on the basis of performance on four perceptual tests: (a) the rod-and-frame test (RFT), (b) the embedded figures test (EFT), (c) the body-adjustment test (BAT), and (d) the room-adjustment test (RAT). All but the EFT involved perception of the upright in ambiguous situations in which correct perception of the upright indicated the ability to overcome misleading field cues -- field independence. Individuals who were misled by the incorrect

field were labeled field dependent. The EFT was a measure of the ability to recognize a simple geometric figure within the embedding context (field) of a complex figure. Failure to do this correlated with attention to misleading field cues in the RFT, BAT, and RAT (Witkin, 1954).

The identification of field dependence-independence as a cognitive style was based on findings relating these consistencies in perception to similar consistencies in intellectual and social functioning. Bennett (1956) found that field independent individuals had greater articulation of body concept than did field dependent individuals. Other evidence suggesting the generality of the field dependence-independence dimension has been cited by Witkin (1965) in support of the following conclusion:

...at one extreme there is a consistent tendency for experience to be global and diffuse -- the organization of the field as a whole dictates the manner in which its parts are experienced. At the other extreme there is a tendency for experience to be delineated and structured -- parts of a field are experienced as discrete and the field as a whole organized. To the opposite poles of the cognitive style we may apply the labels 'global' and 'articulated'.

There are also consistent sex differences within the field dependence - independence dimension, with males more field independent (Witkin, 1962).

The purpose of the present study was to extend and test hypotheses put forth by Witkin (1954, 1962) that field independent persons would have a well developed sense of separate identity, whereas field dependent persons would rely on external sources for definition of their attitudes, judgements, sentiments, and views of themselves. In other words, the field independent person would see

himself as different, articulated, and as an individual in the social context. The field dependent person would see himself as reflected in others, and would be extremely dependent on the social environment for self-definition.

Various attempts to validate Witkin's "field dependency social dependency" hypothesis have appeared in the literature. Dana and Goocher (1959) found that field dependent subjects (selected by performance on the EFT) scored higher on "succorance" and lower on "autonomy" and "dominance" as measured by the Edwards Personal Preference Scale than did field independent subjects. Solar, Davenport, and Bruehl (1969) used pairs of subjects, a field dependent \underline{S} and a field independent \underline{S} , selected on the basis of their performance on the RFT and the Thurstone Concealed Figures Test. Each pair was asked to cooperate in setting the rod to true vertical in the RFT. The mean displacement from true vertical of the pair working together was in every case in the direction of greater field independence than the mean of the scores of the two individuals working alone. Results were explained on the basis of field dependent persons' conformity.

Linton (1955) found that field dependent \underline{Ss} , as measured by an index score composed of performance on the BAT, RAT, and EFT, tended to change their judgements in the direction of conformity with a confederate's judgement in the autokinetic movement situation. Konstadt and Forman (1965) found that field dependent \underline{Ss} were more attentive to others than were field independent \underline{Ss} . Messick and Damarin (1964) reported that persons with global cognitive style were more attentive to faces in an incidental learning situation.

This type of evidence suggests the salience of the social context for the self-definition and behavior of the globally oriented individual.

Assumed Similarity to Others

A person's empathy with another is his tendency to assume that another person's feelings, thoughts, and behavior are similar to his own (Smith. 1966). Of course. individuals are similar to each other in respects that vary with each individual. However, the tendency to assume greater or less similarity to others than is actually the case can significantly affect accuracy in the prediction of others behavior. Various studies as summarized by Smith (1966) have identified some of the major processes which determine empathy. He pointed out that identification, attraction, generalization, and familiarity all relate to assumed similarity. He also indicated that the tendency to assume similarity or dissimilarity to others was a relatively consistent property of an individual's social perception, and that differences in personality existed between high empathizers and low empathizers. Chance and Meaders (1960) asked subjects to give their own and predict others responses to the Edwards Personal Preference Scale. Significant differences in need scores were found between high and low empathizers. In particular, low empathizers (those typified by little assumed similarity to others) were expressive. dominating, independent, aloof, and aggressive. High empathizers were inhibited, submissive, dependent, gregarious, and unaggressive. Cronbach (1955) stated that the assumed similarity measures reflect a general orientation toward others, and the fact that significant behavioral correlates have been found for assumed similarity suggests that a generalized mental set exists which influences both

test and non-test behavior.

Aside from assumed similarity, measures of predictive accuracy and actual similarity can be extracted from the person-prediction paradigm. These variables are comparisons of three sets of responses: 1) the subject's self-response; 2) the self-response of another person or the average response of a group; and 3) the subject's prediction of the other person's or group's response. Assumed similarity has been operationalized as the similarity of the subject's selfresponse to the response he predicted for others. Predictive accuracy -- empathic accuracy -- is assessed through the comparison of the actual responses of others and the subject's prediction of their response. Actual similarity is the similarity between the subject's self-response and the actual self-response of the person or persons whose behavior the subject has tried to predict.

Any personality measure may be used to obtain these three variables through the application of the prediction paradigm which has been outlined. In this situation, the subject is often briefed about the individual to be predicted. This briefing may be an actual meeting with the person, a tape-recorded interview, a written biography, or any other type of interpersonal communication. In the prediction of group responses, often only the name of the group is used to alert the subject to the locus of response. Prediction of the response of large demographically defined groups has been used not only as a measure of predictive variables, but of stereotype accuracy, assumed similarity to stereotyped groups, and actual similarity to such groups. Both types of prediction -- individuals and groups -- were used in the present study.

Smith (1966) cited studies which have found consistent high correlations between assumed similarity and actual similarity scores; however, only small correlations have been found between assumed similarity and predictive accuracy scores. Thus, great or small assumed similarity does not enhance accuracy of prediction, but level of assumed similarity is a good indication of actual similarity.

Apart from the prediction paradigm, a second measure of assumed similarity was investigated in the present study. Rather than a measure of the amount of similarity assumed to a person or group, it required the subject to make a choice between the responses "similar to me" and "not similar to me" regarding a number of personal acquaintances. This set of dichotomous choices provided a self-report measure of the <u>number</u> of people to whom the subject assumed similarity.

The person who assumes much similarity to others is identifiable in various testing situations. His personality -- the empathic personality -- is, in summary, characterized by a general orientation toward others, dependence in social situations, and a highly developed need for social interactions. Furthermore, the high empathizer predicts others behavior no better than does the low empathizer, the compromise being empathy tailored to the situation.

Field Dependence, Social Dependence, and Assumed Similarity

The portrait of the empathic personality is strikingly similar to that of the field dependent personality operating in social interactions. A person who finds self-definition in his social context, as does the field dependent individual, must assume much

similarity to others. According to Smith (1966), "We empathize with those with whom we identify."

Generalization is an important process for the high empathizer. When a person finds that he has some characteristics in common with another person, he tends to perceive himself as having other characteristics like that person (Stotland, et al., 1961). The field dependent person who sees a person as slightly similar to himself soon forms a global view: similarity is generalized. The field independent person who sees a person as slightly similar to himself can differentiate these similarities from the social field and not assume greater similarity than what he first perceived.

Deductions can also be made concerning the predictive accuracy dimension and psychological differentiation. Differentiation implies certain relations within the cognitive sphere. It has been shown by Witkin (1962) and Bieri (1955) that differentiation and cognitive complexity are extremely similar dimensions. Differentiation implies the ability or propensity to distinguish fine differences between cognitions. Within this frame of reference, the findings of Leventhal (1957) that no difference existed between cognitively simple and cognitively complex judges in predictive accuracy become very important. The same outcome may be true in the case of the field dependent versus field independent individual's predictive accuracy.

In short, the following particular hypotheses were derived for evaluation in the present experiment:

1. Field dependent individuals will assume greater similarity to others than will field independent individuals in a prediction situation, and field dependent individuals will assume similarity

to more other people than will field dependent individuals.

2. Field dependent persons will value self-definition from others over internal self-definition, with the opposite being true for field independent persons.

3. No difference in empathic (predictive) accuracy will be found between field dependent and field independent persons.

METHOD

Subjects

Sixty-three undergraduate students enrolled in introductory psychology classes at Michigan State University served as subjects. They were given extra credit for participating in what they were told was a study of cognitive style. Forty of the <u>S</u>s were female and twenty-three were male.

Instruments

Three tests of field dependence were used: the embedded figures test (EFT), the closure flexibility (concealed figures) test (CFT), and the block design test (BD). The measures of assumed similarity to others were: the assumed similarity (AS) scale of the Revised Diagnostic Test of Empathic Accuracy, and the role similarity form (RSF). Self-other values were measured with the Behavioral Attitude Questionnaire (BAQ). Predictive accuracy (PA) and actual similarity to others (ACS) were also assessed with the Revised Diagnostic Test of Empathic Accuracy. The instruments are outlined individually in the following description.

The Embedded Figures Test (EFT). Fisrt developed by H. A. Witkin (1950) as a variation of the Gettschaldt figures, the EFT indicates level of differentiation according to a subject's ability to overcome an embedding context or field. Numerous studies (Witkin, 1954, 1962; Marlowe, 1958; and Goodenough and Karp, 1961) have found substantial correlations (ranging from .30 to .80) between the embedded figures test and other tests of field dependence such as the rod-and-frame test and the body-adjustment test. On each of

twelve items on the test the subject is shown a simple geometric form and then is required to trace the location of that form in another more complex form. The subject cannot see both figures simultaneously but is allowed to examine the simple form as often as needed. In this way memory does not play a large part in forming the discrimination. The test score is the number of seconds required to locate the embedded figure totaled across all items with a three-minute time limit for each individual item. Thus the higher an individual's score, the more field dependent he is.

Witkin (1969) reported odd-even reliabilities, corrected by the Spearman-Brown method, ranging between .71 and .92, and a test-retest reliability of .89 after a three-year interval.

The Closure Flexibility (Concealed Figures) Test (CFT). Very similar to the EFT, this measure was developed from the Gottschaldt figures by Thurstone (1944) as a test of the ability to see a given configuration which is embedded in a larger, more complex configuration. Closure flexibility has been found to be a good indicator of field dependence (Bayman, 1951; Marlowe, 1958; and Witkin et al., 1962), differing from the EFT mainly in method of administration. Each item consists of a simple figure which is presented on the left of the page and followed by a row of four complex drawings to the right. The subject must check those complex figures which contain the given figure in its original size and orientation, and indicate with a zero those complex figures which do not contain the given figure. Final score is the number of correct answers minus the number of incorrect answers given in a period of twelve minutes with a possible maximum score of 196. Thurstone (1944) reported Spearman-Brown split-half

reliabilities in the range of .78 for large samples, while Pemberton (1951) reported reliability of .94 on the present form of the test. The test is scored in the direction of field independence, so field dependent persons have low scores.

<u>The Block Design Test (BD)</u>. A subscale of the Wechsler Adult Intelligence Scale, the block design test has been found to correlate very highly with measures of differentiation. Goodenough and Karp (1961), in a factorial study of field dependence and intellectual functioning, found that the block design test loaded highly on a factor which included high loadings on the EFT and the rod-and-frame test. The test consists of various reference designs which must be copied with two-colored blocks. The reference design apparently forms an organized field that must be analyzed and broken up for effective performance. Witkin (1962) acknowledged the usefulness of this scale in the measurement of differentiation.

Each item of the scale has a time limit with added bonus points for solution times under certain limits. Total possible score is 48. Wechsler (1955) reported odd-even Spearman-Brown reliabilities from .82 to .86 for large samples. High score indicates field independence.

<u>The Revised Diagnostic Test of Empathic Accuracy.</u> This test contains three measures: predictive accuracy (PA), assumed similarity (AS), and actual similarity (ACS). Based in part on the Empathy Inventory of Livensparger (1965), H. C. Smith designed this measure with four parts: 1) empathy with the typical man; 2) empathy with the typical woman; 3) empathy with Naomi Warren, a particular woman; and 4) empathy with Harold Warren, a particular man. Items in the first two parts consisted of various interests from the Strong Vocational Interest Blank such as "Algebra" and "Real estate salesman"

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Ir po th for males and "Bank teller" and "True story magazine" for females. For the twelve items in the first part, four responses were possible:

Mark "1" if you like the interest and also think the typical man would like it.

Mark "2" if you dislike the interest and also think the typical man would dislike it.

Mark "3" if you like the interest but think the typical man would dislike it.

Mark "4" if you dislike the interest but think the typical man would like it.

For the twelve items in the second part, the same responses were used, with replacement of "typical man" in the set of responses by "typical woman."

Parts three and four were headed by short paragraphs (approximately 100 words) describing Naomi Warren and Harold Warren in terms of demographic variables and personal interests. These were followed by a different set of twenty-five personality items in each part, which had been previously answered by the Warrens. The possible responses in part three were:

Mark "1" if you think the statement is true or more true than false of yourself, and also think that Naomi answered true.

Mark "2" if you think the statement is false of yourself, and also think that Naomi answered false.

Mark "3" if you think the statement is true of yourself and think that Naomi answered false.

Mark "4" if you think the statement is false for yourself and think Naomi answered true.

In part four, "Naomi" was replaced with "Harold" in the set of responses. All fifty items in parts three and four were selected from the Prutebob Personality Inventory.

Three scores were obtainable from each subject's set of

responses. Predictive accuracy (PA) was assessed with respect to ' stereotypes of the typical man and woman and individual predictive accuracy regarding the actual responses of Harold and Naomi Warren. Actual similarity (ACS) score was the number of self-responses a subject made which were the same as the self-responses of the typical man and woman and the Warrens. Assumed similarity (AS), the crucial measure in the present paper, was scored as the number of responses "1" and "2" made by the subject. For each item, these two responses indicated that the subject's self-report and prediction were the same.

The Spearman-Brown odd-even reliabilities for the AS, ACS, and PA scales in the present study were .64, .76, and .59, respectively.

The Role Similarity Form (RSF). Another measure of assumed similarity -- the role similarity form -- consisted of a list of fifteen roles from the Role Construct Repertory Test (Rep test) of Kelly (1955). The subject was instructed to fill in the name of a personal acquaintance who fit each role definition. Then the subject was simply asked to divide the names into two groups, listing in one column those individuals (by number) he felt were most similar to him, and in the other those he felt were least similar to him. In this forced dichotomous choice situation, total score was the number of people listed as similar.

The Kelly Rep test format was used to obtain a population of personal acquaintances to which the subject could respond. The RSF had not previously been validated and was constructed specifically for the present study. Pest-experimental interviews (during debriefing) with subjects showed that their interpretations of the categories "similar" and "dissimilar" were very simple, and that the categories were semantically clear to the subjects. Earlier

validation and checking of internal consistency was not possible and the RSF in its present form had a Kuder-Richardson #20 reliability of .28.

Another scoring of this instrument was derived through a post hoc item analysis, subsequently referred to as the parent items of the RSF. This involved the two items which had the highest partwhole correlations; the roles of mother and father. Scoring was simply two points for both parents listed as "similar", one point for either parent, and zero if the subject did not list either parent as "similar." The use of this scale was justifiable in that the parental relationships serve as the model for most other relations with people, and are therefore central to person perception. The two items had a correlation of .51 with each other.

The Behavioral Attitude Questionnaire (BAQ). This measure of self-values versus other-values was developed by McKinney (1971) in the form of a dichotomous forced-choice sentence completion test. A factor analysis of an earlier measure yielded the present scale. Two sentence stems, "I think it would be better if I..." and "I think it would be worse if I..." were followed by thirty dichotomous choices each. For instance, a sentence could be completed with "trusted my friends" or "showed maturity". These choices had been previously equated for social desirability, with thirty-two of the sixty choices involving the self-other value dimension and the other twenty-eight choices being used as fillers. McKinney reported Kuder-Richardson #20 reliability for this scale of .70 for a large sample and twoweek test-retest reliability of .82. The present study found a K-R #20 reliability of .68. The test is scored in the direction of other-values, so high score indicates other-values and low score

indicates self-values.

Copies of the Closure Flexibility Test, the Revised Diagnostic Test of Empathic Accuracy, the Role Similarity Form, and the Behavioral Attitude Questionnaire are contained in Appendix B.

Procedure

The instruments were administered individually by a single experimenter, requiring approximately 1.5 hours for each subject. Order effects were balanced by randomly ordering the tests for each subject. In particular, the CFT and EFT were expected to interact because of learning effects; therefore the EFT was given prior to the CFT for thirty-two subjects and the CFT was given first to the remaining thirty-one subjects.

For the individually administered scales (EFT and ED), each subject was taken to a small experimental room in order to minimize distractions from other subjects who were filling out the paper and pencil tests in a larger room. After finishing all the tests, each subject was thoroughly debriefed and pledged to secrecy pending the conclusion of the experiment.

RESULTS

Preliminary data analyses were carried out to check for possible systematic testing or sampling error. Table 1 shows means and standard deviations for all the test scores. These means are typical for a college population. None of the measures correlated significantly with order of administration, from first to last subject. Differences between means for performance on the EFT, ED, and CFT between males and females were not significant; however, separate correlational analyses for males and females were made and are showm in Tables 3 and 4 in Appendix A. No significant sex effects were found, so the data were pooled in the final analysis.

Measures	Ma	les	Fem	ales	Total			
	Mean	SD	Mean	SD	Mean	SD		
Field dependence								
Embedded Figures	412.4	233.10	492.3	210.69	436.1	220.69		
Block Design	42.0	5.07	39.8	5. 68	40.6	5.53		
Concealed Figures	96.4	23.72	86.2	23.34	89 .9	24.44		
Assumed similarity								
Role Similarity Form	7.8	1.99	8.6	1.98	8.3	2.01		
RSF; parent items	1.4	0.52	1.7	0.43	1.5	0.47		
Assumed Similarity	43.1	4.83	45•3	7.17	44.5	6.46		
Others	·····							
Self-Other Values (BAQ)	13.2	3. 85	15.7	4.26	14.8	4.27		
Predictive Accuracy	35.1	6.07	35.4	6.33	35•3	6.19		
Actual Similarity*	44.1	6.14	39.2	6.98	41.0	7.05		

Table 1. Means and standard deviations of all measures by sex.

*contained in the Revised Diagnostic Test of Empathic Accuracy.

As shown in Table 2, significant correlations were found between the three measures of field dependence-independence: EFT, CFT, and ED. The measures of assumed similarity, the role similarity form and the AS scale of the Revised Diagnostic Test of Empathic Accuracy, were not significantly correlated. The important results of this study are reported in terms of the experimental hypotheses. Level of significance was determined with a one-tailed test for relations that had been hypothesized and a two-tailed test for relations that had not been hypothesized.

Hypothesis 1, that field dependent persons would assume greater similarity to others than would field independent persons, and that field dependent persons would assume similarity to more other people than would field independent persons, was partially confirmed. In particular, significant correlations were found between performance on the EFT and BD, and assumed similarity to others in a prediction situation (AS). The correlation between field dependence as measured by the CFT and assumed similarity (AS), although not significant, was in the predicted direction. Field dependence scores on the EFT and CFT were significantly correlated with the tendency to assume similarity to many people, as measured by the role similarity form (RSF). Prediction of this type of assumed similarity according to block design (BD) scores was not significant, but was in the predicted direction. A multiple regression analysis was performed with EFT. CFT, and BD scores as predictors of the dependent variables AS score (assumed similarity scale) and RSF score (role similarity form). The multiple R was .39, (p < .05). (The significance of this correlation was determined by calculation of an F value in an analysis of variance of high and low groups with the EFT, CFT, and BD scores as

Table 2. Intercorrelation matrix of three field dependence measures, three measures of assumed similarity, and measures of self-other values, predictive accuracy, and actual similarity to others.¹

	EFT	BD	CFT	RSF	RSFP	AS	BAQ	PA
Field dependence								
Embedded Figures Test.	-							
Block Design	•64+	-						
Concealed Figures	.64+	•38+	-					
Assumed similarity								
Role Similarity Form.	.25*	•08	•27*	-				
RSF; parent items	•34+	.18	•11	•45‡	-			
Assumed Similarity ²	•24*	. 28 *	•14	.16	•03	-		
Others								
Other-values (BAQ)	03	•13	.01	.13	•18	•06	-	
Predictive Accuracy								
Actual Similarity ²	10	24*	15	17	•07	01	-•35**	•46**

* p<.05

****** p < .01

+ p<.005

‡ p not determined; part-whole correlation within the RSF.

1. Field dependence measures were scored in the direction of greater field dependence; the AS, RSF, and RSFP were scored in the direction of greater assumed similarity to others; the BAQ was scored in the direction of other-values; this was to simplify analysis of the direction of correlation coefficients.

2. These scales were from the Revised Diagnostic Test of Empathic Accuracy.

independent variables and AS and RSF scores as dependent variables.)

Another measure of assumed similarity was defined during the present study, following an item analysis of the role similarity form. Two items of the RSF -- those pertaining to the roles of mother and father -- were found to be the best indicator of RSF score, although they were not significantly correlated with AS score. However, a very significant positive correlation was found between the score on these two items and field dependence as measured by the EFT ($r=.3^4$, p < .01 for a two-tailed test). The correlations between CFT and ED scores and these two items were small but in the same direction. Regarding the RSF as a whole, it is important to note that its K-R #20 reliability was only .28. Thus the correlations of field dependence and other measures with it were nearly as high as its reliability, and if the correlations were corrected for attenuation, they would indicate the possible true magnitude of the effects.

Hypothesis 2, that field dependent persons would value selfdefinition from others over internal self-definition, more than field independent persons, was not confirmed. Consistently small and insignificant correlations were found between self-other values as measured by the BAQ and all three measures of field dependence. However, an interesting negative relationship was found between selfvalues and actual similarity (ACS) scores on the Revised Diagnostic Test of Empathic Accuracy. It was found that those with self-values were significantly higher in actual similarity to others.

Hypothesis 3, that no difference in predictive accuracy would be found between field dependent and field independent persons, was confirmed. No significant differences in predictive accuracy (PA) were found between field dependent and field independent persons

for all three measures of field dependence. Regarding the relation between differentiation and predictive accuracy, the lack of significant correlation only means that no <u>linear</u> relation exists. To test for non-linear relations, an eta-square analysis was performed using the EFT and the CFT as predictors of predictive accuracy (PA) score. Eta-square was near zero with EFT as predictor of PA score. However, with CFT score as predictor of PA score, eta-square was .19 (p<.05). The data were divided into five groups on the basis of CFT score, with the first group being most field dependent (lowest CFT score) and the last group most field independent. These groups ranked from low to high CFT score had predictive accuracy means of 34.1, 35.5, 34.8, 39.5, and 32.1 respectively. These means indicate a significant non-linear relationship between field dependence-independence as measured by the CFT and predictive accuracy measured by the Revised Diagnostic Test of Empathic Accuracy.

Another important set of results regarding the AS, ACS, and PA scales was found. Actual similarity (ACS) was not significantly correlated with assumed similarity as measured by AS score or RSF score, however both actual similarity (ACS) and assumed similarity (AS) had significant and positive relationships with predictive accuracy (PA).

DISCUSSION

As might be expected, the results cast some light on the issues which gave rise to the study, but at the same time they generate additional questions. The most important finding was the relation between field dependence and assumed similarity to others. Field dependent persons assumed greater similarity to generalized others, particular others, and also assumed similarity to more people than did field independent persons. They also tended to assume similarity to their parents, whereas field independent persons did not. Further study of this relationship may do much to clarify the developmental aspects of differentiation. The relationship between field dependence and assumed similarity is actually a logical extension of the theory of psychological differentiation as proposed by Witkin (1954, 1962). Articulated individuals are able to differentiate themselves from others, and assume dissimilarity to most people. In fact, they may assume less similarity than is actually the case. Cognitively complex (Bieri, 1955) and able to perceive fine differences between stimuli, the field independent individual assumes little similarity to others because he is aware of so many differences and dimensions of variability among people.

Conversely, the field dependent person does not attend to many dimensions of variation, sees others as similar to himself, and according to Witkin (1962), allows his self-concept to be defined by others. His assumption of similarity to others is a statement of his view of the world; other people are not seen as particulate or as varying along more than a few dimensions.

The finding that predictive accuracy was non-linearly related to differentiation holds considerable promise for future research. Although the results of the present study were somewhat equivocal regarding this relationship, there is logical support for the hypothesis that field dependent and field independent persons are less accurate predictors of others behavior than are persons midway between the two extremes. A possible explanation for this effect is that field dependent persons assume too much similarity to others, and field independent persons assume too little similarity to others. The result is a deficit in predictive accuracy for both types of persons. The implications of this hypothesis for therapy and clinical prediction are overwhelming, although further study is necessary.

Hypothesis 2 stated that field dependent persons would value self-definition from others over internal self-definition, more than field independent persons. No such relationship was found, using the Behavioral Attitude Questionnaire as a measure of self versus other values. Contrary to the proposals of Witkin (1962), field dependence-independence may not conform to every self-other dimension. Self-other values, equated for social desirability, are separate from the conformity and social dependence variables which have been shown to vary with differentiation. Moral development and locus of moral evaluation may be totally independent of level of differentiation. Further research is needed to clarify and delineate the self-other dimensions involved in differentiation, and those which are not related to it.

Refinement of the testing instruments is another important task for future research. The role similarity form (RSF), which measures the number of personal acquaintances to whom a person

assumes general similarity, must be revised for use as a reliable instrument in the future. In particular, the inclusion of both well-liked roles and disliked roles may have contributed to the poor internal consistency of the scale. Smith (1966) pointed out that people seldom assume similarity to those whom they dislike. Two items of the fifteen-item RSF were roles normally disliked, and therefore had the lowest part-whole correlations of all the items.

This leads to another tentative hypothesis. It may be true that since assumed similarity is only valid with respect to wellliked persons, assumed dissimilarity to disliked persons is another measure of the same phenomenon. This would indicate an evaluative dimension; a tendency to assume similarity or dissimilarity in accord with the perceived "goodness" or "badness" of the person being evaluated. Furthermore, an interesting parallel to differentiation theory can be drawn. A field dependent person, who has been shown to assume similarity to liked persons may also assume dissimilarity to disliked persons. The field independent person, using more than the good-bad dimension, differentiates with other dimensions as well. Thus he would assume less similarity to liked others, and less dissimilarity to disliked others. Theoretical implications of this model for cognitive style, predictive accuracy, and balance formulations were discussed by Wegner (1971). The present paradigm is useful for future research on the evaluative dimensions used by field dependent and field independent persons.

The final relationship to be discussed in the present study concerns the components of empathic accuracy. Contrary to the various findings cited by Smith (1966), no relation was found between individual differences in assumed similarity and actual similarity.

AS and ACS scores both correlated positively with predictive accuracy, but did not correlate significantly with each other. This finding may be rejected as possible sampling or testing error, contingent on replication with the same instrument, or it can be explained as a reversal of previous findings because of the administration of the test in the context of other related tests.

In conclusion, it can be stated that significant evidence was found for the field dependency-social dependency hypothesis, especially involving the role of assumed similarity to others in the global cognitive style. Also indicated was the important role of differentiation in predictive accuracy. Few reversals were found, and they were discussed in terms of the reliability and validity of the tests that were used.

24

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APPENDIX A

TABLES 3 AND 4

	EFT	BD	CFT	RSF	RSFP	AS	BAQ	PA	ACS
EFT	-								
BD	•73	-							
CFT	.65	•41	-						
rsf	•16	•19	07	-					
RS FP	.40	•37	.15	•52	-				
AS	•49	•57	.22	•16	•19	-			
BAQ	19	.01	14	•26	•30	•14	-		
PA	•16	•16	.05	26	•04	•31	.06	-	
ACS	•23	13	•09	19	•15	05	24	•45	-

Table 3. Intercorrelation matrix of all measures for males.

	EFT	BD	CFT	RSF	RSFP	AS	BAQ	PA	ACS
EFT	-								
BD	•57	-							
CFT	.61	•32	-						
RSF	.27	03	•34	-					
RSFP	•25	.0	.01	•37	-				
AS	.11	•15	•07	•13	09	-			
BAQ	02	•11	04	•0	•01	03	-		
PA	13	27	23	•0	•11	•42	.03	-	
ACS	20	21	18	08	•17	•08	29	•52	-

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Table 4. Intercorrelation matrix of all measures for females.

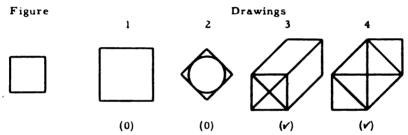
APPENDIX B

COPIES OF TEST FORMS

	Please fill in:	
CLOSURE FLEXIBILITY		
(Concealed Figures)	Date	Age Student #
(Form A)	Test Booklet #	

Developed by: L.L. Thurstone, Ph.D. and T.F. Jeffrey, Ph.D. . The Psychometric I aboratory . The University of North Carolina Directions:

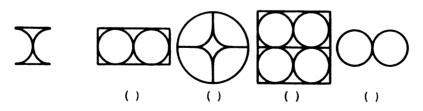
The row of designs below is a sample item of this test. The parts have been labeled to make description easier. These labels do not appear in the test items. The left hand design in each row is the figure. You are to decide whether or not the figure is concealed in each of the four drawings to the right. Put a check mark (\checkmark) in the parentheses under a drawing, if it contains the figure. Puta zero (0) in the parentheses under a drawing, if it does not contain the figure. Look at the row of designs below.



In the row above a zero (0) has been written in the parentheses under drawing 1. The first drawing is a square but it is larger than the figure. Azero (0) has been written under drawing $\underline{2}$. Although the second drawing contains a square of exactly the same size as the figure, it has been turned. Check marks (*) have been written under the third and fourth drawings since they each contain a square of exactly the same size as the figure and have not been turned. It does not matter that the figure contained in drawings three and four is on a different level from the figure at the left.

Sample:

Here is another example for practice. Try it.



You should have placed check marks (\checkmark) in the parentheses under the first and third drawings and zeros (0) in the parentheses under the second and fourth drawings.

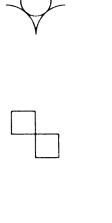
WHEN YOU GET THE SIGNAL TO BEGIN, turn the page and mark more problems of the same kind. Work as fast and as accurately as you can, but do not guess. Wrong answers will count against you. You are not expected to finish in the time allowed. You will have exactly ten minutes to do as much as you can.

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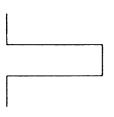
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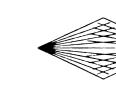














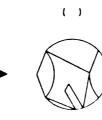
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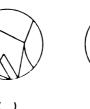
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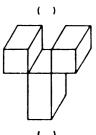
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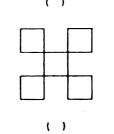


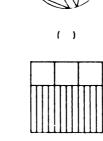


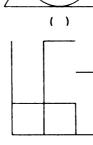








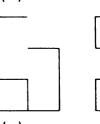




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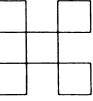






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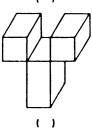






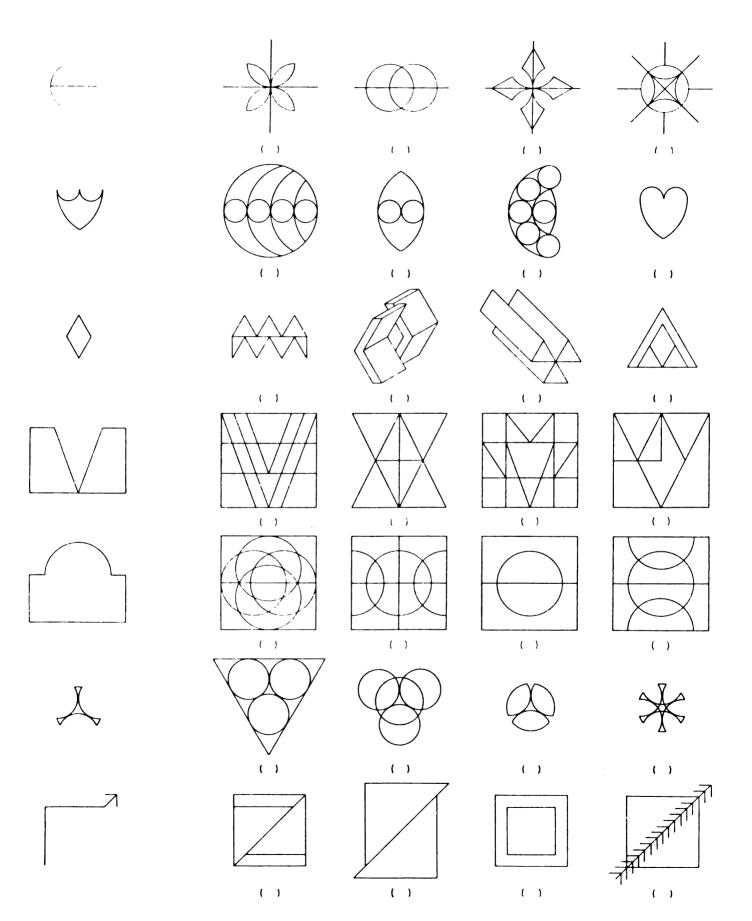
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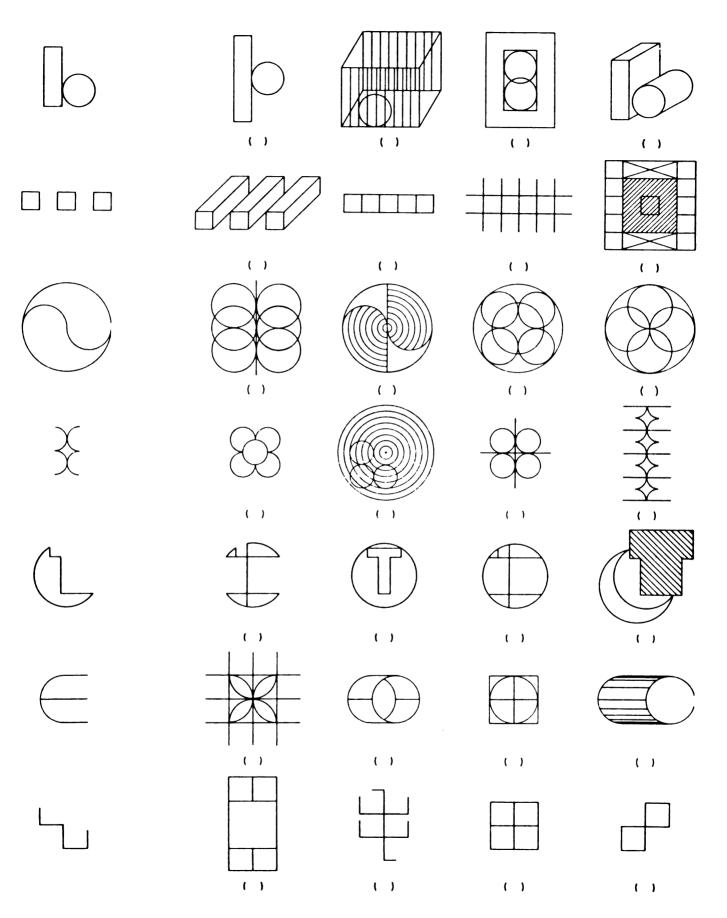


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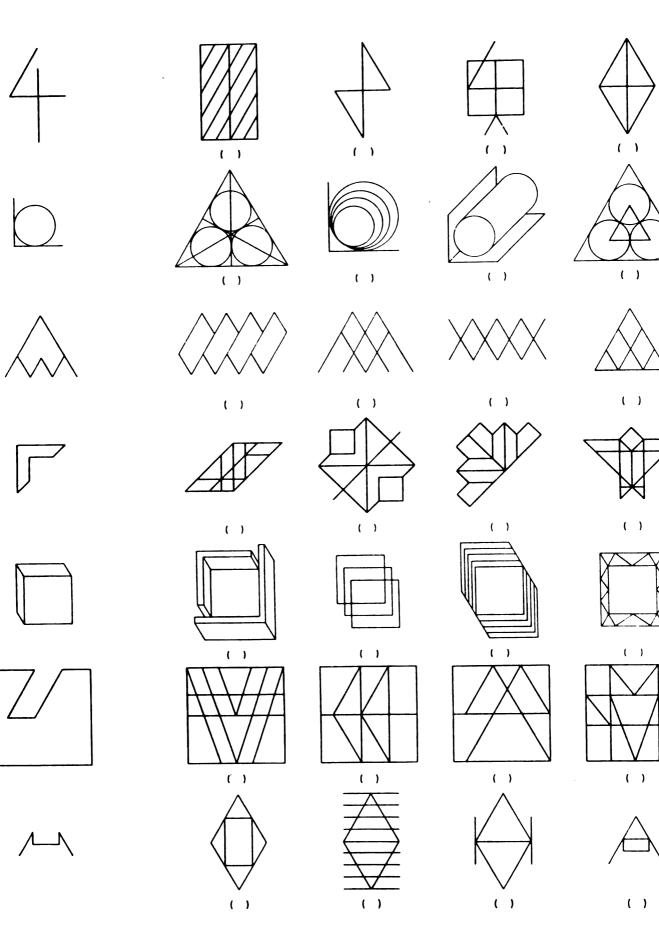
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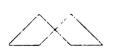


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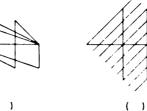












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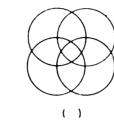
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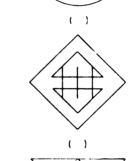
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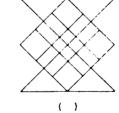
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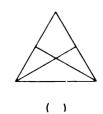
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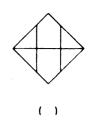
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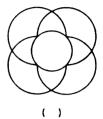
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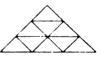








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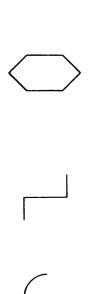
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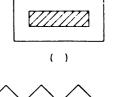




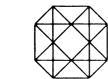




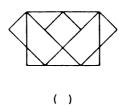
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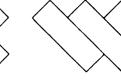




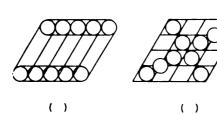
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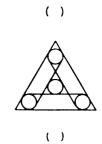


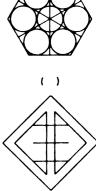






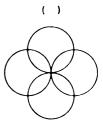




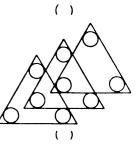


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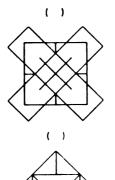


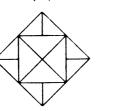
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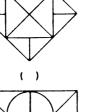
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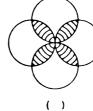
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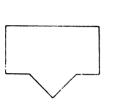
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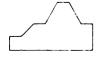


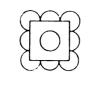


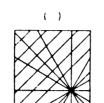


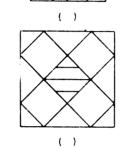


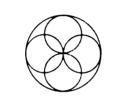
















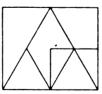


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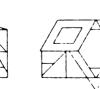


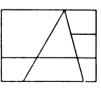








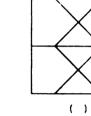




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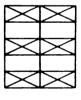




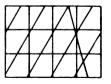
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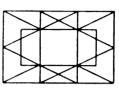
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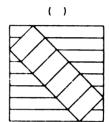
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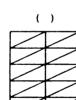












Revised Diagnostic Test of Empathic Accuracy

Your "empathy" is your tendency to assume similarity between yourself and others. That is when you empathize, you assume that another person's feelings are similar to your own. Without empathy we could not understand others. With empathy, however, we still sometimes misunderstand others because we incorrectly assume similarity.

This is a test of your empathic accuracy, the correctness of your assumptions of similarity and dissimilarity to others. The test has four parts: (1) empathy with the typical man; (2) empathy with the typical woman; (3) empathy with Naomi Warren, a particular woman; and (4) empathy with Harold Warren, a particular man.

Part I. YOU AND THE TYPICAL MAN

The replies of thousands of American men to each of the interests below have been analyzed. In making their replies they were asked to disregard as much as they could considerations of salary, social status, and possibilities of future advancement. They were asked to consider only whether they would like or dislike the interest, regardless of any necessary skills, abilities or training.

Ask yourself these two questions about each of the interests below:

- A. Do I like the interest more than I dislike it or do I dislike it more than I like it?
- B. Would the majority of American men say that they liked the interest more than they disliked it or would they say they disliked it more than they liked it?

<u>Mark "1"</u> (like-like)	If you <u>like</u> the interest and also think that the typical man would <u>like</u> it.
<u>Mark "2"</u> (dislike-dislike)	If you <u>dislike</u> the interest and also think the typical man would <u>dislike</u> it.
<u>Mark "3"</u> (like-dislike)	If you <u>like</u> the interest but think the typical man would <u>dislike</u> it.
Mark "4" (dislike-like)	If you <u>dislike</u> the interest but think the typical man would <u>like</u> it.
1. Auto salesman	7. Jeweler
2. Talkative people	8. Life insurance salesman
3. Civil Service employee	9. Pharmacist
4. Algebra	10. Real estate salesman
5. Dentist	11. Printer

12. Politician

6. Factory worker

Part II. YOU AND THE TYPICAL WOMAN

Proceed in this part exactly as in Part I, except this time you will compare your interests with those of the majority of <u>women</u>.

<u>Mark "1"</u> (like-like)	If you <u>like</u> the interest and also think the typical woman would <u>like</u> it.
<u>Mark "2"</u> (dislike-dislike)	If you <u>dislike</u> the interest and think the typical woman would also <u>dislike</u> it.
<u>Mark "3"</u> (like-dislike)	If you <u>like</u> the interest but think the typical woman would <u>dislike</u> it.
Mark "4" (dislike-like)	If you <u>dislike</u> the interest but think
	the typical woman would like it.
13. Proof reader	19. "True Story" magazine
14. Companion to elderly person	20. Stenographer
15. Accountant	21. Statistician
16. Bank teller	22. Teacher, commercial
17. Beauty specialist	23. Discussions of economic affairs
18. Artist's model	24. Governor of a state

Part III. YOU AND NAOMI WARREN

In the preceding section you assessed the similarity between yourself and the typical woman. Here you are to assess the similarity between yourself and a particular woman, Naomi Warren.

She is a forty year old wife of a social science professor and the mother of three children who are now in college. Naomi is the eldest of four sisters all of whom like to write. Naomi has published several children's books, another sister has published a novel, another sister is a newspaper reporter, and the other sister writes poetry. Naomi's daughter is planning to be a writer also. Naomi plays tennis, skates, skiis, and generally enjoys the outdoors. She enjoys cooking but is casual about her housekeeping. She is a member of several civic groups but dislikes speaking before a group.

Naomi answered "true" or "false" to all of the following items.

- <u>Mark "1"</u> If you think the statement is <u>true</u> or more true than false of yourself, and also think that Naomi answered <u>true</u>.
- Mark "2" If you think the statement is <u>false</u> for yourself, and also think that Naomi answered <u>false</u>.
- Mark "3" If you think the statement is <u>true</u> of yourself and think Naomi answered <u>false</u>.
- Mark "4" If you think the statement is <u>false</u> for yourself and think Naomi answered <u>true</u>.

- 25. I like to make a very careful plan before starting in to do anything.
- 26. I like to be with people who don't take life too seriously.
- 27. I always keep control of myself in an emergency situation.
- 28. I trust in God to support the right and condemn the wrong.
- 29. In matters of conduct I conform very closely to custom.
- 30. It is as important for a person to be reverent as it is for him to be sympathetic.
- 31. The idea of God means more to me than any other idea.
- 32. Women should have as much right to propose dates to men as men to women.
- 33. I tend to judge people in terms of their concrete accomplishments.
- 34. I like to have people around me practically all the time.
- 35. Quite a few things make me emotional.
- 36. I am moderate in my tastes and sentiments.
- 37. I like to discuss my emotions with others.
- 38. In the long run, science provides the best hope for solving the world's problems.
- 39. I am really only interested in what is useful.
- 40. Most of the time I am extremely carefree and relaxed.
- 41. I have frequently assumed the leadership of groups.
- 42. I never complain about my sufferings and hardships.
- 43. I have very strong likes and dislikes.
- 44. I spend a lot of time philosophizing with myself.
- 45. I am almost never extremely excited or thrilled.
- 46. I think that cremation is the best method of burial.
- 47. There are few things I enjoy more than being a leader of people.
- 48. Radical agitators should be allowed to make public speeches.

Part IV YOU AND HAROLD WARREN

Here you are to assess the similarity between yourself and Harold Warren, the 50 year old husband of Naomi.

Harold comes from a large family and his mother died when he was a young boy. Harold and his brothers were raised by an ambitious maiden aunt who was a school teacher and who insisted on his regular church attendance. However, he has not been to church for several decades. Politically, he is a democrat but he has never been active in politics. Like his wife, he is an enthusiastic participant in amateur sports and has never been seriously ill. He has also written several books and is a wide reader not only in his own field, but also in the fields of literature and philosophy.

Harold also completed the following items.

- <u>Mark "1"</u> If you think the statement is <u>true</u> or more true than false of yourself, and you also think that Harold answered <u>true</u>.
- <u>Mark "2"</u> If you think the statement is <u>false</u> of yourself, and also think that Harold answered <u>false</u>.
- <u>Mark "3"</u> If you think the statement is <u>true</u> of yourself, but think that Harold answered <u>false</u>.
- <u>Mark "4"</u> If you think the statement is <u>false</u> of yourself but think that Harold answered <u>true</u>.

49. I think there are few more important things in life than money.

-4-

50. I am guided in all my conduct by firm principles.

51. Whenever I have to undertake a job I make out a careful plan of procedure. 52. Quite a few things make me emotional.

- 53. I tend to judge people in terms of their concrete accomplishments.
- 54. The European attitude toward mistresses is more sensible than ours.
- 55. In matters of conduct I conform very closely to custom.
- 56. I haven't yet reached any final opinion about the nature of God.
- 57. It is as important for a person to be reverent as it is for him to be sympathetic.
- 58. In the long run, science provides the best hope for solving the world's problems.
- 59. Radical agitators should be allowed to make public speeches.
- 60. Women should have as much right to propose dates to men as men to women.
- 61. I tend to accept the world as it is and not worry about how it might be.
- 62. I always keep my feet solidly on the ground.
- 63. I am really only interested in what is useful.
- 64. I prefer friends who have well developed artistic tastes.
- 65. I like to have people around me practically all the time.
- 66. I am cautious about undertaking anything which may lead to humiliating experiences.
- 67. There are few things I enjoy more than being a leader of people.
- 68. I am a rather carefree person.

- 69. I never complain about my sufferings and hardships.
- 70. I have sometimes corrected others, not because they were wrong, but only because they irritated me.
- 71. I have occasional difficulty getting the temperature of my bath the way I like it.

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72. I have very strong likes and dislikes.

Role Title List

Write the name of each of the persons indicated in the blanks below. If you cannot remember the name of a person, substitute the name of some other person when the role title suggests to you.

Bo not repeat names. If a role title appears to call for a duplicate name, substitute the name of another person whom the second role title suggests to you.

- 1. Nour mother or the person who has played the part of a mother in your lines
- 2. Nour father or the person who has played the part of a father in your life.
- 3. Your brother maarest your age. If you have no brother, the person who is nost like one.
- 4. Your sister nearest your age. If you have no sister, the person who is most like one.
- 5. A teacher you liked or the teacher of a subject you liked.
- 6. A teacher you disliked or the teacher of a subject you disliked.
- 7. Nour closest girl (boy) friend immediately before you started going with your wife (busband) or present girl (boy) friend. An old flame.
- 8. Your wife (husband) or closest present girl (boy) friend.
- 9. An employer, supervisor, or officer under whom you served during a paried of great stress.
- 10. A person with whom you have been closely associated, who for some unexplainable reason, appeared to dislike you.
- 11. The person when you have not within the past six months when you would most like to know better.
- 12. The person whom you would most like to be of help to, or whom you feel most soury for.

13. The most intelligent porson whom you knew personally.

14. The most successful person whom you know personally.

15. The rost intertating person whom you know personally.

Role Stallarity Porm

You now have a high of fitteen propie, which you will identify by only their putper darkey the following exceedes. Consider this list of people, and dende in h h of the people are nost smaller to you. Also, decide which of the people are least conter to you. We you will find two blanks, inside which you are to list (by moder) first, these who are similar to you, and in the second black, these who are not similar to you.

Don't use a special funct such as intelligence or sex to decide on your recoupling. Thy to simply use the general files of statisticy. You should not heave any of the people out of year groupings -- in other words, you should they each person as also ar simpler or discibiliar to you, and place the person in one of the provinces.

People sising to wet

Total valber of people cimilar:

Despis not similar to set

Total number of prople dissimilar:

The total module (similar people + dissimilar people) should be equal to 15. If it intt, go back to the role that and make sure you have included all of the prople in your proplets.

HORE: Plane serves the FORE CHIEF Light (providers page) from the test papers, and herp his. It has been no dorigh for your our information, to provide a basis for the succession on this page. The experimenters do not wish to ask you for any private information -- should you leave the list in the test universals, it will is disconded into listely. Answer the following questions with the alternative that is most true for you. Decord your choice on the attached IDM answer sheet by darkening the T² space if your answer is (a.) and the T² space if your ensure is (b.). These answer ALL of the questions.

I think it would be better if I

-]. a. worked hard b. were not impatient
- a. did ny friend a favor
 b. did what makes me happy
- 3. a. accomplished something worthwhile b. treated others with consideration
- 4. a. were not in a mean moodb. completed a task
- a. proved my honesty
 b. were seldom angry
- 6. a. trusted ry friendsb. shoved maturity
- 7. a. did what makes me happyb. did not misjudge situations
- 1. a. were not mad at others b. confided in my father
- 9. a. did not hurt other peopleb. did not feel inferior
-]). a. did something for my parentsb. achieved my expectations
-]]. a. completed a taskb. did something my father is proud of
-]2. a. did something for my parentsb. were not bossy
-]3. a. did something constructiveb. talked to my father
-]4. a. were not overly critical
 b. were always happy
-]5. a. did what my father likesb. did not upset others
-]0. a. did not hurt other neople b. vere a true friend
-]7. a. proved my honesty
 b. pleased others

-]3. a. were not in a mean moodb. were not bossy
-]9. a. did something constructive b. were not self centered
- 27. a. were not shyb. were not mad at others
- 2]. a. proved trustworthyb. did not feel inferior
- 22. a. helped someoneb. maintained my self integrity
- 23. a. defended my beliefs b. were loyal
- 24. a. were a true friendb. achieved satisfaction
- 25. a. did not upset othersb. were not overly critical
- 26. a. treated others honestly
 b. achieved happiness
- 27. a. were always happyb. did what my father likes
- 28. a. pleased othersb. were not envious of the achievements of others
- 20. a. showed interest in classb. confided in my father
- 3ⁿ. a. were capable of helping othersb. showed responsibility

I think it you'd be worse if I

- 3]. a. did not participate in activities that my friends enjoyb. disappointed my family
- 32. a. were not loyalb. were not honest with myself
- 33. a. did not appreciate my friendsb. did not complete a task
- 34. a. were moodyb. disappointed my family
- 35. a. ignored a friend b. were not dependable
- 36. a. were immatureb. were disrespectful

- 37. a. hurt someoneb. did something against what I believe
- 33. a. let unimportant things bother meb. did not live up to my own expectations
- 39. a. did not care about what I do b. were hypercritical
- 40. a. talked back to my mother (father)b. lost my temper
- 4]. a. did not care about what I dob. did not help my friends
- 42. a. liedb. were too critical of myself
- 43. a. did not do vell enoughb. made stupid mistakes
- 44. a. let someone downb. did wrong
- 45. a. neglected to do what I shouldb. did wrong
- 46. a. acted stupidb. failed to achieve something
- 47. a. did not help my friendsb. were insincere
- 48. a. did something against what I believeb. did not think before acting
- 49. a. idid not achieve according to my mother's expectationsb. did something my mother disapproves of
- 50. a. did not complete a taskb. did not pay attention to my friends
- 5]. a. did not participate in activities that my friends enjoy b. did not work hard enough
- 52. a. lied b. were not loyal
- 53. a. did not complete a taskb. were dull
- 54. a. were selfish h. neglected my responsibilities
- 55. a. were not doing as well as I canb. flunked out of school
- 56. a. disappointed my familyb. did not participate in activities that my friends enjoy

- 57. a. were impulsiveb. disobeyed my parents
- 58. a. let someone downb. did not appreciate my friends
- 59. a. were not dependableb. lacked character strength
- 60. a. were immatureb. were not honest with myself

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