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## An Investigation of the Relationship between Interpersonal Behavior, Level of Communication, and Divergence from the Group Using the Leary Method

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AN INVESTIGATION OF THE RELATIONSHIP BETWEEN INTERPERSONAL  
BEHAVIOR, LEVEL OF COMMUNICATION, AND DIVERGENCE  
FROM THE GROUP USING THE LEARY METHOD

MARILYN KOLTON

A Dissertation Submitted to the Faculty of the Graduate  
School of Loyola University in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

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1969

## LIFE

The author was born in Chicago on March 26, 1944. She enrolled in the College of Arts and Sciences of Loyola University in June, 1962. She completed majors in French and psychology and received the B.S.S.S. degree with Special Honors in January of 1966.

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The author has received a N.I.M.H. postdoctoral fellowship in the social sciences at Western Behavioral Sciences Institute and will work under the directorship of Dr. Carl Rogers.

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## CHAPTER I

### INTRODUCTION

A continual problem in the area of personality research has been the theoretical conception and empirical measurement of the individual's self concept. Since the time of James, the multifacet nature of man's self has been recognized. For James (1890):

In its widest possible sense...a man's Self is the sum total of all he can call his, not only his body and his psychic powers but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, his yacht and bank account (p. 291).

The self consisted of the material Self, social Self, spiritual Self, and the pure Ego. Man was further thought to have "as many social selves as there are individuals to recognize him and carry an image of him in their mind" (p. 294). James thought that man discloses a different aspect of himself in different relationships. He is one person to his children, another to his fellow workers and superiors, and still different in intimate relationships. In some sense, "From this results what practically is a division of man into several selves" (p. 294).

Charles Horton Cooley (1902) distinguished man's empirical Self and his social Self. A social Self is a reflected or looking-glass self. Man's "self idea" according to Cooley, has three principal elements: "the imagination of our appearance to the other person; the imagination of his judgment of that appearance, and some sort of self-feeling" (p. 184).

Cooley also recognized the difficulty in measuring the self concept:

It should be evident that the ideas that are associated with self-feeling and form the intellectual content of the self cannot be covered by any simple description, as by saying that the body has such a part in it, friends such a part,



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plans so much, etc., but will vary indefinitely with particular temperaments and environments. The tendency of the self, like every aspect of personality, is expressive of far-reaching hereditary and social factors, and is not to be understood or predicted except in connection with general life (p. 185).

Both James and Cooley also emphasize that feelings about self are an integral aspect of the self.

George Herbert Mead, building closely on the work of James and Cooley, conceptualized the self as essentially a social structure which arises in social experience through the process of communication. The self for Mead (1934) consisted of various elementary selves:

We carry on a whole series of different relationships to different people. We are one thing to one man and another thing to another. There are parts of the self which exist only for the self in relationship to itself. We divide ourselves up in all sorts of different selves with references to our acquaintances. We discuss politics with one and religion with another. There are all sorts of different selves answering to all sorts of different social reactions (p. 219).

The self becomes fully developed when the elementary selves become integrated into a unified self. Mead also distinguished the "I" or reacting aspect of the self from the "me" which is the internalized attitudes of the community.

The earlier emphasis on man as a social self was overwhelmed by the impact of psychoanalytic theory. Freud chose to investigate the private side of personality and to explore the unconscious. The neo-Freudians, however, soon reacted to a view of man as exclusively an inner man, and attempted an integration of the personal, interpersonal, social and cultural aspects of man. Horney (1937) and Fromm (1955) questioned whether in fact social conditions created pathology. Sullivan (1940) saw all of human behavior as taking place in an interpersonal context and defined mental disorder as faulty interpersonal relationships.

Contemporary personality theorists have also explored the relationship between private and public aspects of self. Sarbin (1954) has conceptualized empirical selves which function as foci of cognitive organization throughout the developmental process. He distinguishes the somatic self ( $S_1$ ), the receptor-effector self ( $S_2$ ), the primitive construed self ( $S_3$ ), the introjecting self ( $S_4$ ) and the social self ( $S_5$ ). The social self is capable of taking the role of the other and assigns to itself the "reflected appraisals" of others. For Sarbin, "the self is what the person 'is,' the role is what the person 'does'" (p. 244).

Rogers (1951) and other existential psychologists have discussed the self in phenomenological terms. Theorists such as Rogers have stressed that integration of the various aspects of the self is related to adjustment. He states:

It would appear that when all of the ways in which the individual perceives himself -- all perceptions of the qualities, abilities, impulses and attitudes of the person, and all perceptions of himself in relation to others - are accepted into the organized conscious concept of the self, then this achievement is accompanied by feelings of comfort and freedom from tension which are experienced as psychological adjustment (p. 364).

In a similar view, Cameron (1947) attributes the basis of much frustration and many conflicts to the fact that "no man ever fuses all his self-reactions together into a single, unambiguous coherent whole" (p. 102).

A continual problem within personality research has been how to integrate the various unconscious, private, and social aspects of self into an adequate description of personality. A theoretical and methodological approach to personality evaluation developed by Timothy Leary offers such an integration. The Interpersonal System of

Personality Diagnosis has its background in the writings of the social interactionist tradition as represented by Mead and in the writings of Sapir. The interpersonal aspect of the system draws on the basic idea of interpersonal communication found in the writings of Fromm, Horney, and most essentially Harry Stack Sullivan.

In this study, the Leary Interpersonal System is used as a means of investigating the relationship of private self to social self. The self concept is examined from the perspective of self description of interpersonal behavior. Intrapersonal traits as measured on the MMPI and values will also be compared to self descriptions. In this sense, the study attempts to investigate the multifacet nature of man's self concept as reflected in interpersonal perceptions.

## CHAPTER 2

### STATEMENT OF THE PROBLEM

The Leary system of Interpersonal Diagnosis of Personality is based on a theoretical framework in which personality is postulated to be "the multilevel pattern of interpersonal response (overt, conscious, or private) expressed by the individual" (Leary, 1957, p. 15). Five levels of personality data are operationalized within the system: I. The Level of Public Communication; II. The Level of Conscious Description; III. The Level of Private Symbolization; IV. The Level of the Unexpressed Unconscious; and, V. The Level of Values. The first four levels differ in the subject's conscious accessibility to the data and awareness of his interpersonal impact on others. These levels increase in depth of personality measurement from conscious to unconscious interpersonal themes, and from public, overt aspects of behavior to the more private, unexpressed areas. Level V is a measure of consciously reported values. Since an individual's value system may be expressed at varying levels of consciousness, Level V is not defined as the deepest level of personality.

On the theoretical assumption that personality is most accurately characterized by measurement of personality at differing levels of consciousness, the five levels are operationally defined according to the source of data. The personality data at each level is converted into the interpersonal variable system of the Leary method. The variable system consists of sixteen interpersonal traits which summarize all personality characteristics in interpersonal terms. These traits are systematically

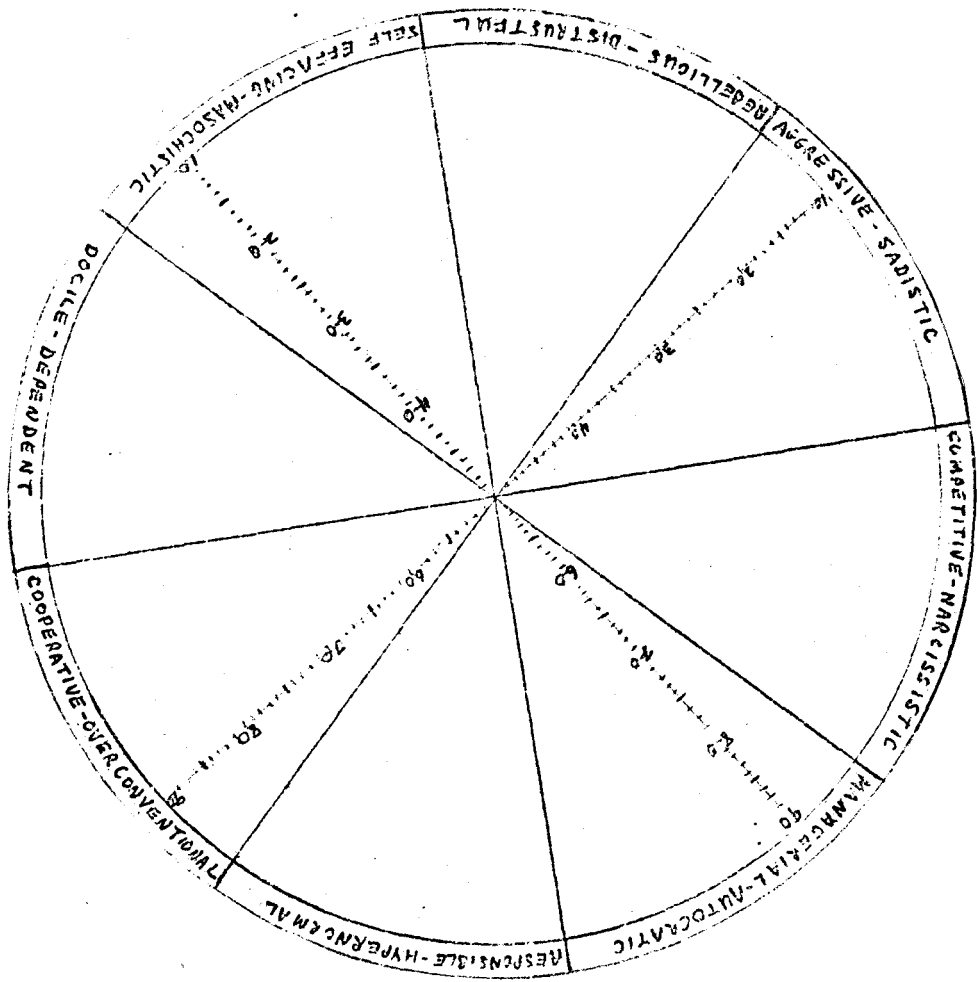
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related on a circular continuum which takes into account both adjustive and maladjustive intensity of behavior. The circular representation of interpersonal behavior is based on a two dimensional grid. Dominance-submission is defined as the vertical axis and hostility-affection as the horizontal axis. The interpersonal factors are expressed as combinations of these four nodal points in terms of octants of the circle. The sixteen interpersonal variables are represented on the standardized grid presented in Figure 1.

The chief source of personality data within the interpersonal system is the Leary Interpersonal Adjective Check List (IACL). The IACL was specifically developed as a personality test of interpersonal behavior for the Leary system. This adjective check list when rated for self gives a description of personality at Level II and when rated by others for a subject gives a measure of personality at Level I - sociometric.

In addition to Leary's IACL, another instrument which provides multilevel personality data is the MMPI; in fact, Leary postulates specific relationships between the two scales. Level I interpersonal ratings based on the MMPI are thought to be closely related to Level I sociometric ratings and to Level II self ratings made on the Adjective Check List.

The Interpersonal System of Personality is a relatively recent development which grew out of a research program at Kaiser Foundation Hospital under the direction of Leary in the mid-fifties. Members of the research team (Freedmen, Leary, Ossorio and Coffey, 1951; Leary and Coffey, 1955; La Forge and Sucek, 1955; La Forge, Leary, Naborsek, Coffey and Freedmen, 1954; and Leary and Harvey, 1956) were actively involved



**Fig. 1. Classification of Interpersonal Behavior into Sixteen Variable Categories.**

in publishing research related to theoretical, methodological, and practical aspects of the system both during and following its development. During this time, Leary referred to the perplexing issues of validation in personality research and the resulting difficulties involved in validating his complex, multilevel personality system. He commented that:

The validation of a system for personality research requires an approach to the idea of validity different from that of a test-constructor, who is concerned with the measurement of a single aspect of personality. No single criterion for one of the new systematic variables exists. There should, of course, be some concern with problems of correspondence between presently accepted measures of those we propose. Moreover, there should be predictable relationships among the novel variables. Finally, there should be relationships to extra-systematic variables of practical importance (LaForge, Leary, Naborsek, Coffey, and Freedman, 1954).

Leary's own approach to the validation of the system involved doing a series of partially validating studies leading to the gradual accumulation of data which would result in the development of more complex pattern analyses. Leary based several of these studies on the relationship between MMPI clinical categories and Level II self ratings (Leary and Coffey, 1955). In a discussion of alternative methods of validation, Leary (1955, p. 121) states that the "technique of comparing interpersonal diagnosis at Levels I and II with criteria that are independent of the system" is an "illustration of one type of validating procedure." A homogeneous pattern of interpersonal behavior at Levels I and II is used as a means of partial validation for the methodology.

In the four validating studies based on this procedure, the subjects were patients participating in group therapy at Kaiser Foundation Psychiatric Clinic. This method of validation by a comparison of Level I profiles based on the MMPI and Level II profiles from IACL self ratings

was not reported for a group of normal subjects. Because the relationship between these two instruments as measures of Levels I and II has not been validated for a normal population, it is questionable whether methodology based on a clinical sample can be directly transferred to a normal group.

Leary's own criterion for the development and selection of interpersonal variables stresses the need for the validation of the system using a normal group. In outlining the guiding principles of his personality research he stresses that:

Variables...should reflect with equal facility 'normal' or 'adjusted' functioning and abnormal or pathological behavior. It is our belief that the variables of human behavior to be described are equally meaningful and valid through all reaches and types of activity, unlike many personality variables now in current use, which were devised to describe and explain pathological behavior and which lose emphasis and meaning when applied to less aberrant types of behavior (Freedman, Leary, Ossorio and Coffey, 1951).

Normal subjects were used in validation studies of single levels or single octants at one level. Normal groups, however, were not used in major studies on the relationships between the various levels or in the standardization of the Interpersonal System. Reviews of the Interpersonal System (Baumrind, 1960; Bentler, 1965) have stressed that this basic validation data must be compiled in order to increase the potential usefulness of the system.

The present study will investigate several of the issues which have been mentioned in relation to the validation of the Interpersonal System of Personality. As Leary has stated, the complexity of the system makes a critical test of validity impossible. Consequently, this research cannot



be strictly called a validation study. Rather, it is an investigation of the use of the system for normal subjects. The study examines whether the present methodology of interpersonal measurement at Level I and II can be applied to normal groups as well as a psychiatric population. The research also relates other personality factors, MMPI clinical profiles and value profiles to interpersonal ratings by self and others, and to Level II self ratings.

A comparison of interpersonal profiles at Levels I and II will be made. MMPI derived interpersonal profiles at Level I will be compared to Level I sociometric ratings by others, and to Level II self ratings. It is hypothesized that agreement will be found between Level II self ratings and Level I sociometric ratings. MMPI derived Level I scores are not expected to show significant agreement with Level I sociometric ratings. A closer relationship is expected between Level I MMPI scores and Level II self scores since both measures are self ratings. These findings would suggest that MMPI derived scores would not be useful in predicting interpersonal behavior of normal subjects.

Leary has also stated that predictable relationships between interpersonal variables and extra-systematic variables of practical importance should be found. Leary and his associates and other researchers using the Interpersonal System have not attempted to investigate the relationship of interpersonal ratings to other personality variables. There is no research reported in the psychological literature that relates other personality factors to interpersonal ratings in the Interpersonal System.

This present study investigates the relationship of interpersonal descriptions of self and others to personality factors. Two types of

variables that are not necessarily at an interpersonal level, MMPI clinical scores and value profiles will be compared to interpersonal ratings. It is hypothesized that a predictable relationship can be found between interpersonal perceptions and personality characteristics. It is felt that perceptions of self and others are influenced by such factors as pathology on the MMPI and shared values on the Allport-Lindzey-Vernon Study of Values.

Another factor that has not been investigated in studies of interpersonal perceptions is the relation of subject's characteristics to group norms. Similarity or difference of subject's scores from the group norm may affect both his own interpersonal perceptions and the way he is perceived by others. The relationship of this variable, which will be referred to as deviance or nondeviance from the group norm, to interpersonal perceptions will be examined.

A third factor to be examined in this study is the effect of length of interpersonal interaction on interpersonal perceptions made by group members. Two groups of volunteers were used in the study. One group has had only six weeks of contact with each other while members of the other group have worked together for years.

The study questions whether differences in perceptions of self and others will be found for the long term versus the short term group. An additional aspect of this question is whether the long term and short term groups will differ in the effect that personality factors such as pathology and shared values have on interpersonal perceptions. With greater interpersonal contact, members would have greater knowledge of each other and also would have had more time to develop relationships. At the same time,

extended contact might lead to the development of interpersonal conflicts. Intrapersonal pathology of members may have had more expression and its effect on interpersonal relationships might be greater in the long term group.

Levels I and II are basically measures of self concept. At Level I, an aspect of the self referred to as the social self (Brownfain, 1952; Sarbin, 1952) is being tapped. At Level II, a measure of the private self is being obtained. Personality measurement at these two levels partakes of the methodological difficulties of measuring self concept. At the same time, the results may also be applied to other studies dealing with the relationship of perceptions by self and others.

## CHAPTER 3

### REVIEW OF RELATED LITERATURE

In order to understand the relationship between Level I, the level of Public Communication and Level II, the level of Conscious Communication, Leary's theoretical conceptualization of personality must first be examined. He states that, "In our theoretical system of organization of personality data, the total personality is considered to consist of three levels, the public, the conscious, and the private" (1951, p. 146). The public, conscious and private levels of personality are defined as follows:

The public level of personality data consists of ratings of how an individual behaves, ratings of the effect an individual has upon others. These judgments, possessing known reliability, are made by trained observers or by fellow experimental subjects. They are independent of the subjective reports of the individuals being rated regarding the meaning of their own behavior. Thus a unit of social or interpersonal behavior may be classified by observers in a way very different from the way in which it would be classified by the subject of the activity under observation.

The conscious level of personality data consists of ratings of what the subject says about himself or "others" at a level of apparent conscious awareness. His descriptions of himself and others, the traits he attributes to self and others, are obtained from a variety of sources and then are classified with known reliability. In categorizing these views of self and others the rater is not concerned with the accuracy of the individual's perceptions or descriptions or with potential deeper meanings underlying them. At this level we are interested only in the subject's perceptions at the level at which he is expressing himself.

The private level of personality data consists of ratings of projective material, such as TAT stories or accounts of dreams, which are divided into views of self and others and then categorized in accord with the same set of variables used to classify data at the conscious level. It should be noted that

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data constituting the private level of personality are not considered to be uniformly unconscious or entirely at variance with data of the conscious level.

...Simply, it is considered likely that some projective data will contain material of which the subject is partly or completely unaware at the level of conscious description, i.e., Level II (Freedman, Leary, Ossorio, and Coffey, 1951, pp. 147-148).

Leary is concerned with conceptualizing the complexity of human nature. While the division of personality into layers of accessibility of data is theoretically well founded, the division of personality into public, conscious, and private does not offer clearcut distinctions between various aspects of personality.

Conceptualizations of self that are conscious to an individual may be made public to others or harbored privately, within the self. Private personality data may be accessible or inaccessible to consciousness. Data derived from projective techniques may be at a symbolic level. Consequently, a more adequate division of personality would be into objective, subjective or private, projective, and symbolic levels.

A conceptualization of personality layers similar to the proposed one is given by Hansmann and Getzels (1953). The authors describe the various levels of accessibility of data as follows:

We may picture personality as containing different layers or strata, varying in their degree of accessibility to observation from outside and to self observation, and also in acceptability to the person himself. Applying this scheme to the motivational and emotional tendencies and their objects, we can postulate a number of levels which differ in the degree of ease with which their context can be recognized by the person as his own and directly experienced in physical or verbal behavior. Closest to the surface would be the attitudes, feelings, beliefs, which he is willing to express in public; they may be followed by the semi-public attitudes and feelings, those that he might reveal to friends and intimates, but not to everyone. Still more private are those beliefs, or those recurring strivings and feelings of which the person is well aware but which he is very reluctant to share with anybody; some of the conscious

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fantasies and daydreams may belong to this level. Less accessible still are the strivings and fantasies that might be called semi-conscious: thoughts and feelings that we may glimpse only occasionally, frightening fantasies that are quickly pushed away, attitudes that we are unwilling to admit even to ourselves, though we may suspect having them. Beyond this lies the spheres of unconscious feelings and fantasies of which we may never become aware; if they ever appear in consciousness, as e.g., in dreams, they do not have phenomenally the character of being our own. We need not postulate that the total content of the 'deeper levels' is made up of feelings and attitudes that have been disowned and repressed because of their internal or social inacceptability, even though we know that such unacceptable feelings gravitate away from the region of clear consciousness (p. 282-283).

Leary (1957) does take into consideration two further levels in his book on the Interpersonal System. These are: Level IV, the level of the Unexpressed, and Level V, the level of Values. Level IV traits are those which are omitted at public, conscious and private levels, and seen similar to repressed tendencies. Level V is a measure of the individual's value system and traits at this level are expressed at various levels of consciousness.

Leary defines Level I as being concerned with interpersonal communication, with what one person communicates to another. The basic concept is the interpersonal mechanism, which is defined as the interpersonal function of a unit of behavior. The chief consideration is the interpersonal motivation as measured by its impact on others. The question (Leary, 1955, p. 148) asked at this level is: "What is this person doing to the other? What kind of relationship is he attempting to establish through this particular behavior?" Figure 2 presents the sixteen interpersonal themes into which behavior is classified, along with an explanation of the relationship between variables.

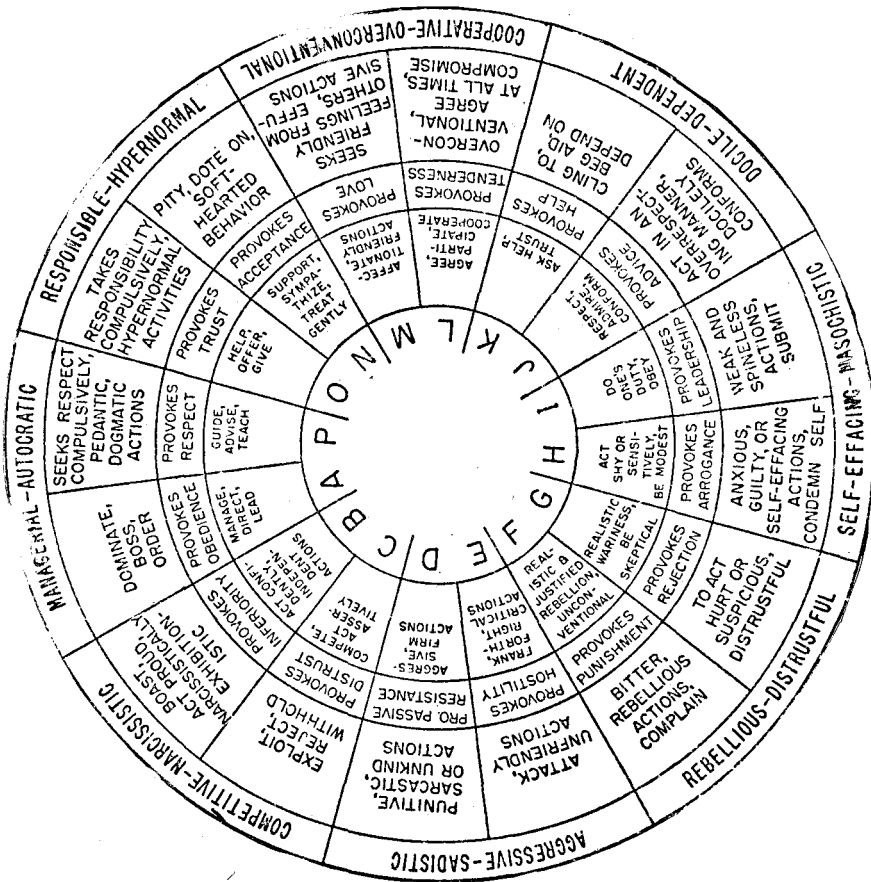


Fig. 2. Interpersonal Themes at Level I.

Interpersonal motives are hypothesized to be expressed in a large percentage of interactions in an automatic, reflex manner. Leary states that:

They are so automatic they are often unwitting and often at variance with the subject's own perception of them. The meaning of any interaction is therefore a difficult one to isolate and measure. It is frequently un verbalized and so subtle and reflex as to escape articulate description (1955, p. 148).

In early discussions of the Interpersonal system (Freedman, Leary, Ossorio, and Coffey, 1951; LaForge and Suczek, 1955; LaForge, Leary, Naboisek, Coffey and Freedman, 1954; Leary, 1955; Leary and Coffey, 1955) Level I data was obtained strictly by ratings made by observers. The authors (Freedman, Leary, Ossorio and Coffey, 1951, p. 149-150) emphasized that "an important methodological consideration in the rating of interpersonal mechanisms is the locus of observation or frame of reference for the judgments of the rater." They quote Bales as representing the perspective of the observer for obtaining a measurement of a personality at Level I:

The observer attempts to take the "role of the generalized other" with regard to the actor. That is, the observer tries to think of himself as a generalized group member, or, insofar as he can as the specific other to whom the actor is talking, or toward whom the actor's behavior is directed, or by whom the actor's behavior is perceived. The observer then endeavors to classify the act of the actor according to its instrumental or expressive significance to that other group member. In other words the observer attempts to put himself in the shoes of the person the actor is acting toward and then asks himself: "If this fellow (the actor) were acting toward me (a group member) in this way, what would his act mean to me?...or what does his act reveal to me about him or his present emotional or psychological state?..." The observer assumes that in any given interaction the group member to whom the actor is talking is trying to put himself in the actor's shoes, and that by this process the group member helps himself to arrive at an understanding of what the actor is trying to do...The



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observer assumes that the other, or group member, is attempting to empathize with the actor and, at the same time, is testing his own reaction to what he perceives--all of this as a basic process in communication. The observer carries the complication one step further by trying to empathize with the other or group member as the group member perceived the actor. All categories are described in terms which assume the point of view of the group member toward whom the action is directed. The actor...is the actor as seen by the others, as seen in turn by the observer. Although this point of view is theoretically complicated, in practice there seems to be little confusion about it, apparently because it is so similar to the point of view from which we ordinarily apprehend action when we are one of the participants.

From this quote, the Level I source of personality data can be seen as clearly defined methodologically through ratings from the standpoint of an observer. The source of data consisted of ratings of behavior by professional, trained observers or by fellow subjects or patients through sociometric ratings or ratings in social situations such as group psychotherapy or recreation.

In Interpersonal Diagnosis of Personality, however, Leary (1957) added another measure of Level I behavior. The introduction of the MMPI was based on a practical situation; there was frequently no opportunity to observe patients in extended interaction with others. A measure of the patients' symptomatic behavior was also felt to have a functional value since:

Every psychological symptom seems to have an interpersonal meaning; i.e., implications as to what the patient is communicating through the symptom, and what the patient expects to be done about it, etc. Symptoms are usually the overt reason for the patient coming to the clinic; they express an interpersonal message (Leary, 1957, p. 107).

While the practical and functional reasons for the addition of a measure based on the MMPI can be appreciated, this change in perspective from the viewpoint on an objective observation of overt behavior to a

subjective report has come under much criticism.

Wiggins (1965) criticizes the methodological weakness of this substitution. In his review of the Leary method for the Sixth Mental Measurement Yearbook, he commented that the use of selected MMPI clinical and special scales as a substitute for sociometric ratings was highly questionable. He stated that original correlations between sociometric ratings of interpersonal behavior for each octant with octant scores from the MMPI scales were inconsistent and small and would not lead to the expectation that the measurements could substitute for each other.

Wylie (1960) also comments negatively on this major shift in approach.

She states:

We note that Level I (interpersonal impact of the subject on others) is in practice usually measured by S's self report score on certain combinations of MMPI items. This use of self report to index behavior as seen by others is stated to be a matter of practical necessity or convenience, rather than being operationally desirable. It is used despite the fact that these self reports apparently do not always correlate highly with the following external ratings of S's behavior which Leary considers more appropriate operational definitions of Level I: sociometric ratings from check lists by fellow patients or trained observers; and ratings by trained personnel of the patient's minute-to-minute behavior in a social situation (p. 82).

Two major theoretical issues are also involved in the substitution of a subject rated MMPI for ratings made by observers using the interpersonal method. First, a self rating from the subject is being substituted for a rating made by an observer. Social stimulus value is being measured as perceived by the subject through MMPI scores. In the latter method, the impact of public interpersonal behavior is being assessed as it is experienced by the other. In an early discussion of interpersonal communication, Leary (1955) stressed the importance of

measuring public interpersonal behavior from the perspective of the other:

The instrument employed to measure interpersonal reflexes is another human being. Since interpersonal behavior is a functionally important dimension of personality, it is measured directly in terms of the actual social impact that the subject has on others (1955, p. 157).

A second major theoretical issue stems from the instruments used to measure Level I behavior. It cannot be assumed that MMPI items are as direct a measure of public interpersonal behavior as are ratings made on the Interpersonal rating scale. The MMPI has generally been considered a measure of private, structural personality characteristics at an intrapersonal level. Leary, however, has stated that the interpersonal mechanisms are regarded as "process variables of personality as distinguished from structural variables of personality...They are regarded as descriptive of immediate interpersonal processes, the 'personality in action', so to speak" (Freedman, Leary, Ossorio, and Coffey, 1951, p. 156). While personality traits measured by the MMPI find expression in interpersonal relationships, it is difficult to infer how and to what extent these characteristics affect interpersonal processes. It can be hypothesized that some persons manage fairly good control of symptoms while others give more direct expression of personal concerns in interpersonal relationships. In a validation study, Leary and Coffey (1955) found that only six of the eight interpersonal categories were related to psychiatric categories based on MMPI clinical scales. The autocratic-managerial and the competitive-narcissistic interpersonal modes were found to have no psychiatric equivalent.

The use of the MMPI at Level I seems inconsistent with Leary's desire to develop a system of personality that is equally descriptive of normal or adjustive aspects of behavior as well as maladjustive responses. Since Leary states that the Interpersonal System has two basic functions, one clinical and one research oriented, an alternative would be to restrict the use of the MMPI at Level I to clinical situations. The Interpersonal System, however, has been more widely used as a research than clinical tool. Since the MMPI is a readily available instrument, it would be useful if the MMPI as a measure of Level I behavior could be validated for normal groups.

Level I MMPI scores will be compared with scores at Level I and sociometric ratings by others on the ACL with scores on the Interpersonal Adjective Check List at Level II. For this reason, the theoretical and methodological nature of Level II must also be examined.

Level II of the Interpersonal Dimension of Personality is defined as the Level of Conscious Communication. At this level, the subject's conscious descriptions of self and others are measured; the interpersonal themes which he attributes to himself and others are the focus. An idea of the individual's phenomenological interpersonal world is gained in this way. The basic unit of measurement at this level is the interpersonal trait, which is "formally defined as the interpersonal motive attributed by the subject to himself or another in his conscious reports" (Leary, 1957, p. 135). Interpersonal traits are structural variables, enduring tendencies, to perceive potential interpersonal behavior of self and others in a certain manner. In this sense:

These...structural elements of personality may be thought of as conscious or private tendencies to perceive and respond selectively to certain classes of environmental stimuli, as the "perceptual readinesses" of Tolman or the "parataxic" processes of Sullivan (Freedman, Leary, Ossorio, and Coffey, 1951).

The interpersonal themes expressed at Level II are represented in Figure III.

There are four methods which provide Level II data. These are: ratings by trained personnel of the verbal content from diagnostic interviews (Level II-Di) and of therapy interviews (Level II-Ti); scores from the Interpersonal Check List (Level II-C) in which self and other ratings are obtained; and ratings from autobiographical material (Level II-A).

The chief instrument used to measure Level II behavior is the Interpersonal Adjective Check List, (LaForge and Suczck, 1955) which was specifically designed for use within the Interpersonal System. The IACL consists of 128 items; 16 adjectives are related at four varying degrees of intensity to each of the octants. These adjectives are represented on the interpersonal grid of Figure III. The least intense items are located on the inner ring and most intense items on the outer ring. Subjects can rate the IACL for self, significant others, and ideal self.

Test-retest reliability correlations for a two-week interval are based on a sample of 77 obesity patients. The correlations averaged .73 for 16ths (adjustive and maladjustive division of each octant) and .78 for octant reliability. Leary (1957) states that some unreliability which might depict changes in perception of self must be allowed for.

A study undertaken by Armstrong (1958) found the Leary Interpersonal Adjective Check List to have highly significant internal reliability.

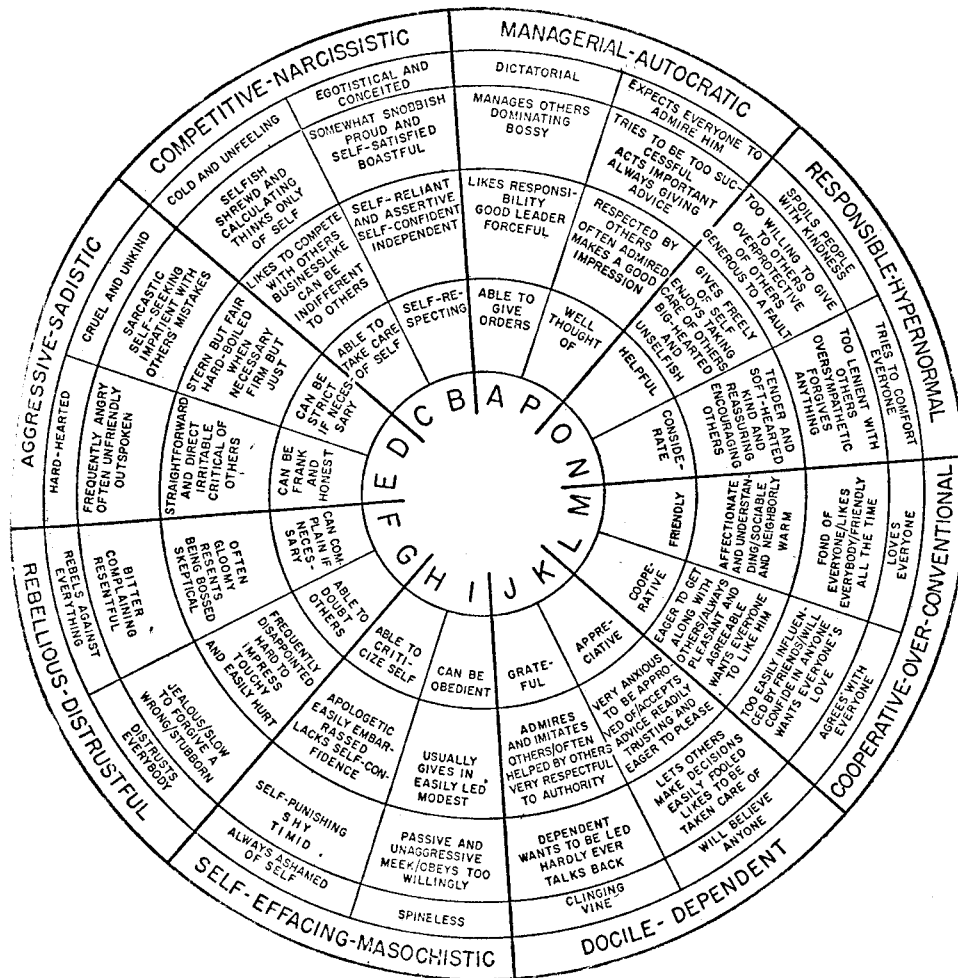


Fig. 3. Interpersonal Traits at Level II.

Six ratings from a group of 50 normals and from a group of 50 alcoholic males were the basis for Kuder-Richardson estimates of reliability. They were found to range from .953 to .976. No significant differences resulted between any of the twelve coefficients.

The relationship of interpersonal variables is based on Guttman's (1954) circumplex hypothesis that traits can have a circular order among themselves without beginning or end. Intervariable correlations test whether adjacent variables on the circular continuum are in fact more closely related than non-adjacent octants. Inter-octant and inter-sixteenth correlations for several samples (LaForge and Suczck, 1955) confirm the circular pattern. Significant negative correlations are not found between variables which seem opposite in characteristics. The authors explained this fact as a result of a response set to check "Yes." Negative correlations are found by dividing raw scores for octants by the total number of responses. On the basis of the theory of the Interpersonal system, however, appreciable negative correlations would not be expected. Traits within the inner ring of the octants are adaptive responses. According to Leary (1955), a normal person has a flexible range of responses and can call out a great variety of responses to meet varying situations.

No adequate normative data is available on the IACL. Some norms are presented for psychiatric outpatients (Leary, 1957). The lack of such basic data for a nonclinical population has weakened the applicability of the system to normal populations. By using a large, nonclinic population the present study takes a step in providing this necessary information.

Several factor analytic studies have been done on the Interpersonal Adjective Check List. Wiggins (1961) used a Thurstone centroid method of

factor extraction. Three orthogonal factors were found. Factor I is Leary's bipolar factor dominance-submission, which forms the axes of the interpersonal circular continuum, Octants AP, BC, and DE loaded positively and HI loaded negatively on this factor. The highest positive loading was on octant AP, managerial-autocratic. Factor II is the Lov (love) dimension or positive interpersonal orientation. The highest loading was for LM, cooperative-overconventional. Positive loadings were found for octants HI, JK, LM and NO. Factor III loads highest on the Hate or negative interpersonal orientation. The highest loading was for FG, rebellious-distrustful. For females, Factor I loads on DE, FG, HI, and JK. For males, octants BC, DE, FG and HI were positively loaded.

Briar and Bieri (1963) performed a factor rotation orthogonally based on the varimax technique. Three factors were again found. Factor I was found to be the dominance or Dom factor hypothesized by Leary but with strong overtones of aggression. Factor II was identified as the love or Lov factor of the Interpersonal System, although conformity was also found to be part of this factor. Factor III was defined as "inferiority feelings" and reflected submissive behavior.

The findings of both factor analyses give support to Leary's bases of the IACL. The two major factors, dominance and love, represent the vertical and horizontal axes respectively of the interpersonal continuum. The third factor is best understood as being based on ratings in octants tending to be equidistant between the Dom and Lov axes. This hypothesis is well founded since loadings for Factor III are highest on octants 4 and 5, which are the furthest points from octant 1, Dom, and octant 7, Lov.

Within the Interpersonal System of Personality, the necessity of obtaining a multilevel measurement of personality for accurate diagnosis



is stressed. Leary states that:

Many generalizations about results in personality research are simply crippled by an unilevel approach. This is particularly true in the case of psychiatric and psychosomatic studies. Statements to the effect that obese patients are dependent, neurodermatitis patients are guilty, and ulcer patients are passive, are quite limited in meaning. They seem to disregard the essential and basic concept of modern personality theory - that the human being is a complex, multilevel pattern of conflicting motives and behaviors (Leary, 1957, p. 41).

Variability in interpersonal patterns as measured at different levels is considered a rich source of clinical data. Leary (1957) operationally defines forty-eight indices of variation based on low discrepancy and high discrepancy between ratings at the various levels. Wiggins (1965), however, has criticized the lack of standards to assess whether the same variables are present at different levels makes the system difficult to validate. A significant question is whether convergent or discriminate validation would be assessed.

The present study will investigate the use of the MMPI as a measure of Level I as compared to Level I sociometric data and Level II self ratings on the ACL.

In the original validation of the Interpersonal System of Personality, Leary (1955) relied heavily on the use of the MMPI as a validation of scoring obtained from the Interpersonal Adjective Check List. He gives the following rationale for his approach:

This comparison may also be considered a kind of validation of the interpersonal diagnostic system since we have demonstrated that it is systematically related to an independent criterion-- psychiatric categories as measured by the MMPI. This is, in fact, the classic technique of validation in clinical research-- comparison with another test (Leary and Coffey, 1955, p. 120).

In this article MMPI scores were used to derive a measure of Level II behavior, which is described in the study as "conscious self description

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according to the MMPI." Table 1 presents Leary's (Leary and Coffey, 1955) summarization of data for three validation studies.

There was a close correspondence of personality profiles as rated by fellow patients (Level I) and profiles obtained at Level II by self ratings on the Interpersonal Adjective Check List. The results of the ratings at Level I are presented in Figure 4. The results of ratings at Level II are presented in Figure 5.

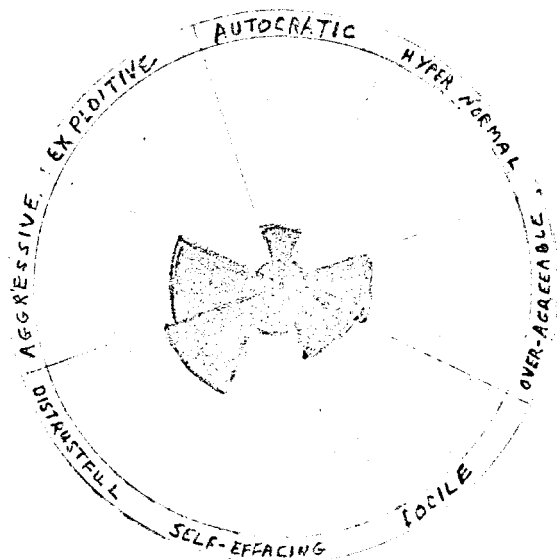
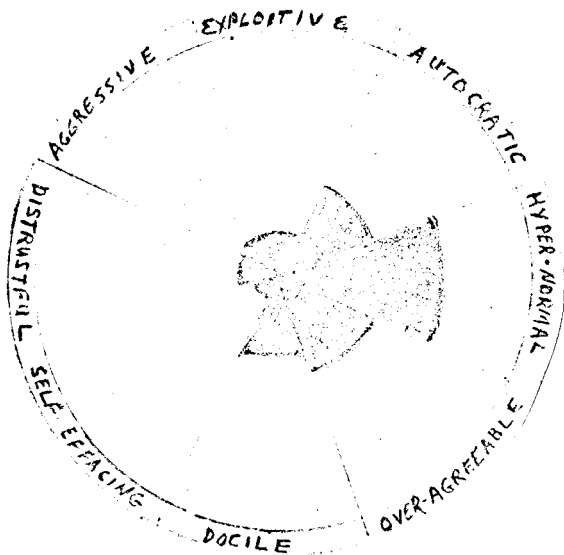
Leary and Coffey (1955) also use a third diagram which is based on a "set of MMPI ratios which predict to Level II" (p. 122). The results are obtained by the same arithmetical formulae published in the Leary (1957) book as a means of obtaining Level I data. Figure 6 presents the findings as well as the title of the diagram presented by the authors.

Leary's empirical basis for the substitution of data obtained from the MMPI to Level I has not been published. The close correspondence of MMPI data with the Level I ratings made by fellow patients in this study may have served as the basis for the translation of MMPI scores to a measure of Level I. It is significant, however, that Leary and his co-workers were uncertain at this point in the research as to which level the MMPI measure should be assigned. In the book later published on the system, MMPI scores were definitely assigned as a measure of Level I behavior. The rationale for the use of the MMPI at this level, as previously mentioned, was partly based on the practical considerations that ratings by others are less available (Leary, 1957). Leary also gives theoretical reasons related to interpersonal theory for the use of the MMPI at this level.

TABLE 1

Percentage of the Classes of Interpersonal Behavior Characteristic of Psychosomatic (N=30) and Nonpsychosomatic (N=49) Patients

Categories of Interpersonal Behavior	Psychosomatic patients			Nonpsychosomatic patients		
	I	II (ACL)	II (MMPI)	I	II (ACL)	II (MMPI)
Managerial Autocratic	20	13	23	10	4	9
Competitive Exploitive	7	13	3	4	6	23
Critical Aggressive	7	3	3	20	18	14
Skeptical Distrustful	7	7	7	22	24	14
Modest Self punishing	3	7	3	8	14	9
Trustful Dependent	13	7	3	14	10	16
Cooperative Overagreeable	17	7	13	18	8	2
Responsible Overgenerous	27	43	43	4	14	14



**Fig. 4. Percentage of Interpersonal Ratings at Level I (Behavior as Consensually Viewed by Fellow Group Patients) for 30 Psychosomatic (Left) and 49 Nonpsychosomatic (Neurotic) Subjects (Right). Length of circle radius equals 50 per cent.**

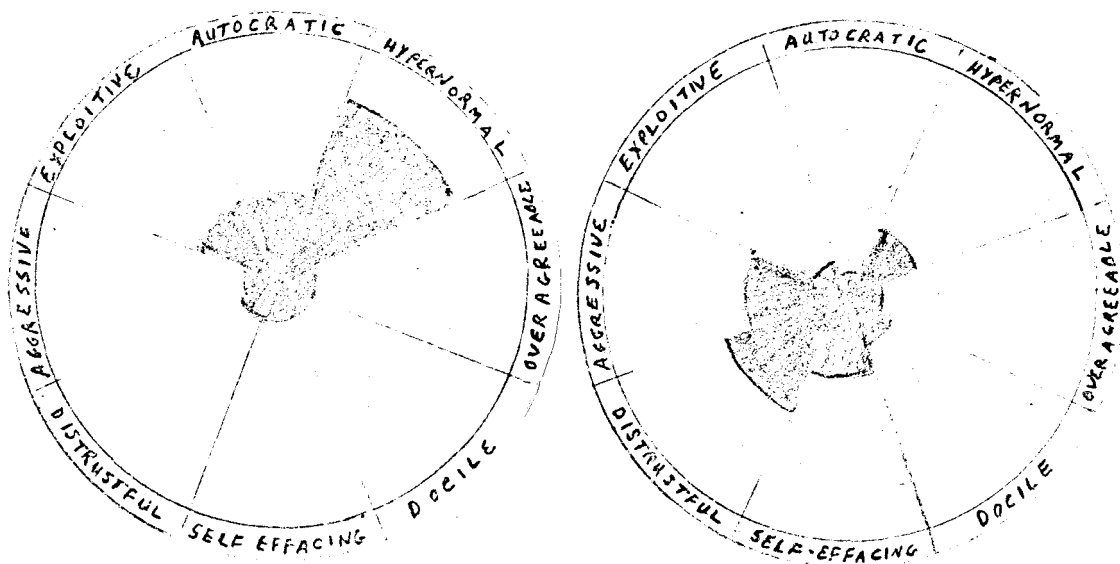


Fig. 5. Percentage of Interpersonal Ratings at Level II (Conscious Self-Description) for 30 Psychosomatic (Left) and 49 Length of Circle Radius Equals 50 Per Cent.

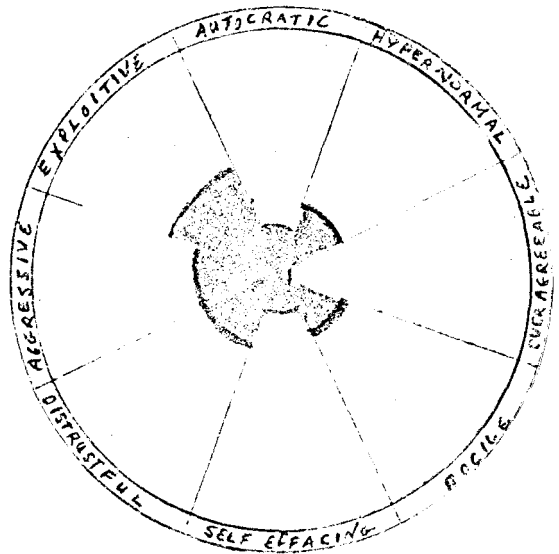
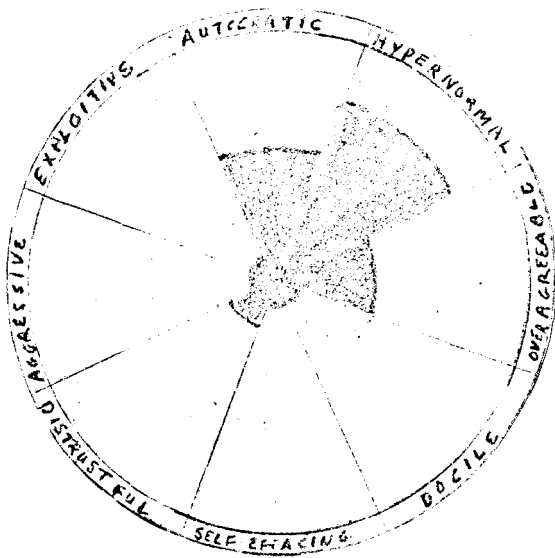


Fig. 6. Percentage of Interpersonal Ratings at Level II (Conscious Self-Description According to MMPI) for 30 Psychosomatic (Left) and 49 Neurotic Subjects (Right).

Since the validation studies of the originators of the system, little research has been reported in the literature on the relationship between Levels I and II. A study by Klopfer (1961) attempted a cross-validation of Leary's public communication level. Predictions based upon the MMPI were compared with an independent predictor of Level I behavior. Thirty-one outpatients seen in an university clinic were given the MMPI and seen by a psychologist for an interview. The psychologist then filled out an Adjective Check List for each patient. The patients were compared on the basis of Dom and Lov scores as measured by the MMPI and IACL. The relationship between Lov scores as measured by the IACL and MMPI was validated but the relationship of dominance scores were not. Klopfer hypothesized that the inability to validate the Dominance dimension might stem from either the weakness of the system or the difficulty in clinically predicting Dom behavior. He indicated that further research was needed to define the degree to which the MMPI is predictive of Level I behavior. He made no attempt to deal with the theoretical soundness of measuring subject's preception of social stimulus behavior from MMPI scores.

An unpublished study by Kolton (1967) involved a multilevel measurement of personality at all five levels of the Leary system. MMPI scores were used as a measure of Level I behavior for a group of 57 normal females. Octant summary points at Levels I and II were in adjoining octants at approximately the same level of intensity. These findings are presented in Figure 7.

An examination of the pattern profiles for the eight octants revealed more symmetrical distribution in the pattern obtained at Level II and more

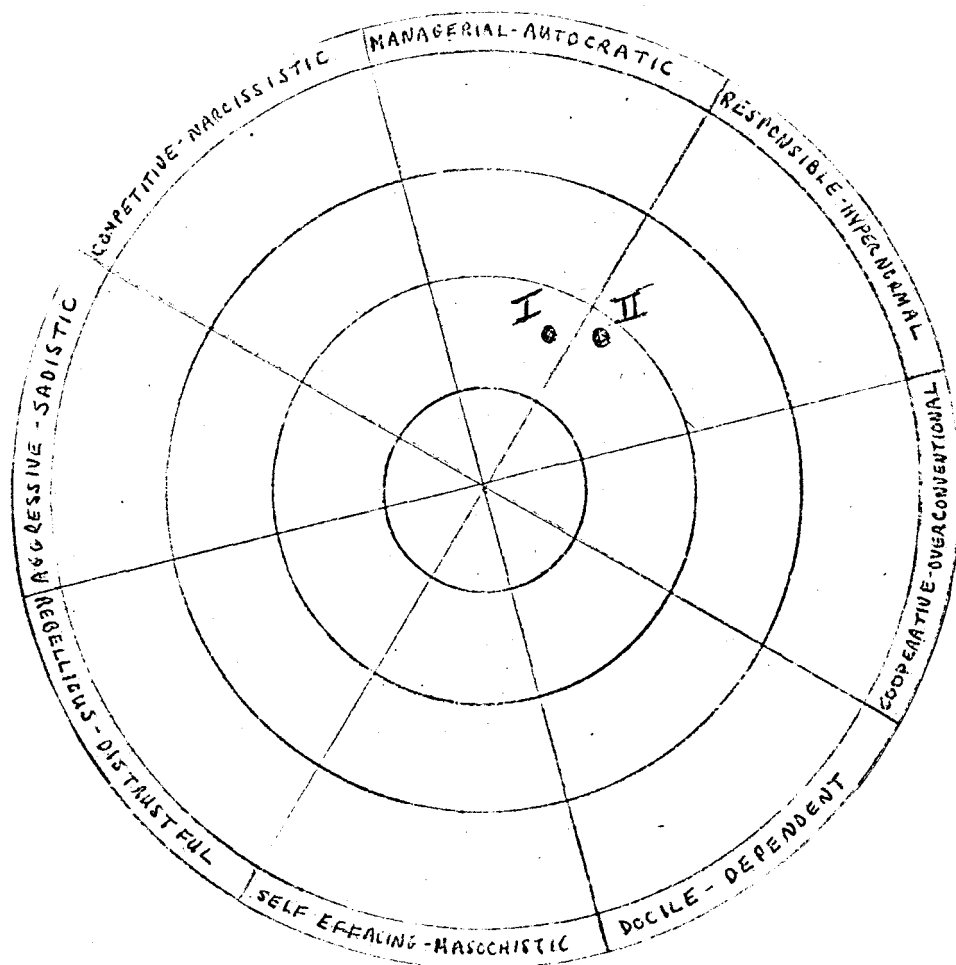


Fig. 7. Summary Profile at Level I (MMPI) and Level II (IACL) for Normal Female Subjects (N 57).



variability between octants for Level I. The meaning of the similarity for global octant summary, yet difference in variability for the individual octants, is difficult to assess. This finding, however, does suggest that both octant summary score and profile patterns by octants should be used in a cross validation study of the levels. Interpersonal profiles at Levels I and II are presented in Figures 8 and 9.

In the Kolton study, Level II diagnosis fell within the same octant, although at a lesser intensity, as the Level V, Values, profile. This finding suggests that discrepancies in self description obtained at Levels I and II might be evaluated in relation to the subject's ideal interpersonal behavior or values.

The only study in the psychological literature which investigates the degree of agreement between measures at Level I, the MMPI and sociometric ratings, and Level II as measured by the Interpersonal Check List, was done by Gynther (1962). A nonpsychiatric sample, 67 male subjects and 33 female subjects, participated in small class groups. Self ratings and ratings of other members of their group were made on the IACL. MMPI's were also administered and scored according to the Leary method. Criterion of agreement consisted of ratings falling within the same octant. This criterion is more stringent than Leary uses since Leary takes intensity of ratings into account. Gynther found that the percentage of ratings falling within the same octant for ratings derived from MMPI and sociometric, self descriptions and sociometric, and MMPI and self descriptions were 26, 46, and 21 respectively. A chi-square analysis of octant summary points (using octants 1, 8 and "other") derived from the MMPI and sociometric data (measures at Level I) did not differ significantly from

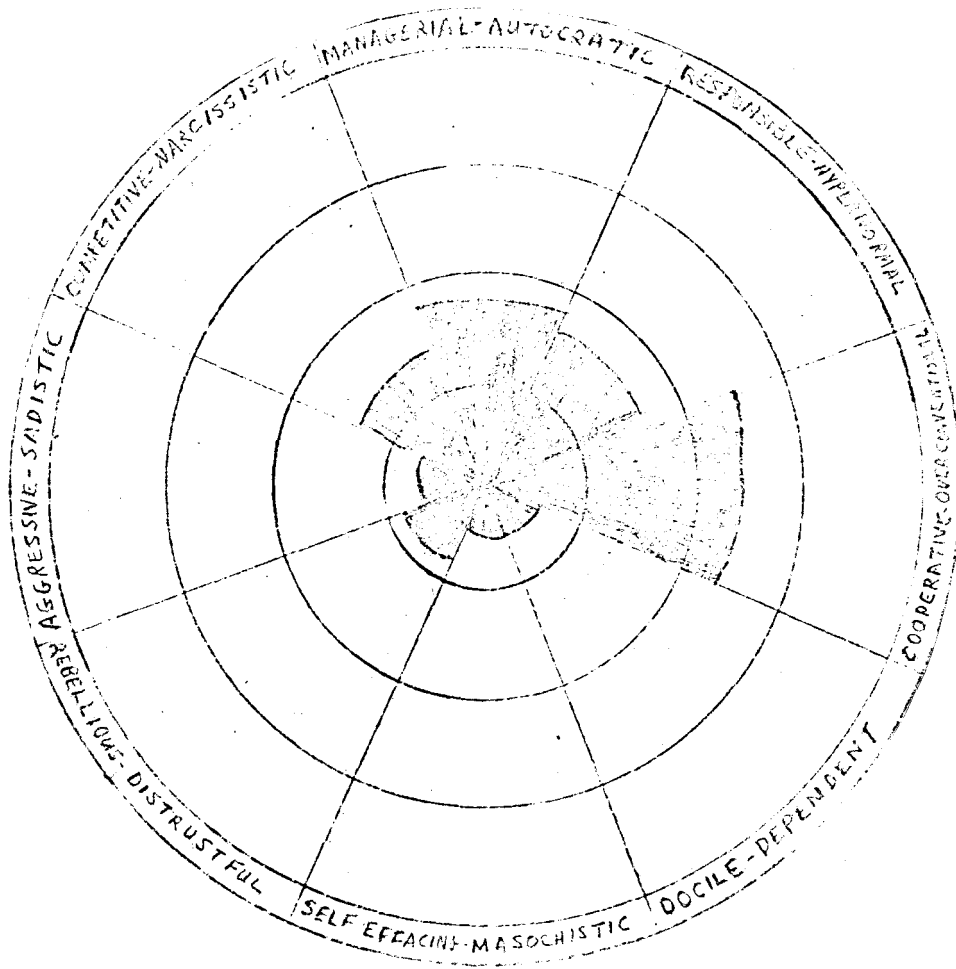


Fig. 8. Profile of Interpersonal Behavior at Level I as Measured by the MMPI.

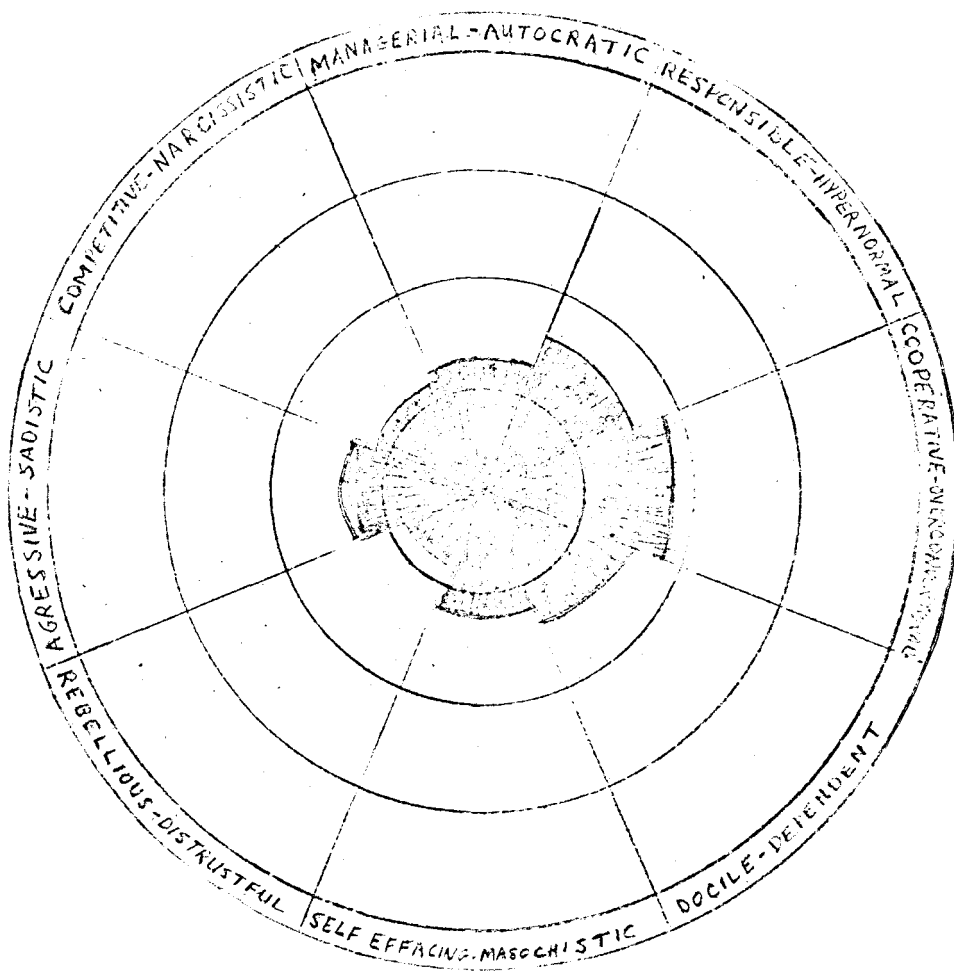


Fig. 9. Profile of Interpersonal Behavior at Level II Self as Measured by the IACL.

chance. Agreement between self ratings on the Adjective Check List (Level II) and sociometric ratings (Level I) was highly significant ( $\chi^2 = 13.89$ ,  $df = 4$ ,  $p < .01$ ). Octant scores derived from the MMPI (Level I) and self ratings (Level II) also showed significant agreement ( $\chi^2 = 9.52$ ,  $df = 4$ ,  $p < .05$ ). These findings would seem to suggest that the MMPI may, in fact, be a better measure of Level II behavior. Gynther concludes from his study that:

Operating within the framework of the Interpersonal System, one would predict more agreement between ratings presumably tapping the same level (MMPI and sociometric) than ratings supposedly tapping different levels (MMPI and self descriptions and sociometric and self description). Our contradictory findings cast doubt on Leary's assertion that those tests measure specified, distinct levels of behavior. These results also indicate that the positive MMPI-sociometric relationship found with psychiatric subjects does not hold with nonpsychiatric subjects (p. 107).

A related question is whether Leary's Levels I and II actually distinguish public versus private communication. The use of ratings by others on the ACL at Level I is probably most consistent with the concept of public communication. These ratings provide a measure of how the subject's interpersonal behavior does affect the other, what is publicly communicated. Another aspect of public communication not measured by the Leary system is a subject's perception of how others would rate him. This would involve having Ss fill out the ACL as they feel other members of the group would rate them. This rating could then be compared to ratings made by others. A measure of private communication could be obtained by having the subject rate the ACL for characteristics he feels others do not know about him.

The aspects of self concept at Levels I and II are similar to the distinction made between social or public self and private self made by

Brownfain (1952) and others. Kelman (1961) has hypothesized three processes of social influence that determine whether the individual expresses his private feelings or externalizes the socially acceptable. These processes are compliance, identification, and internalization. Compliance occurs when the individual adopts certain behavior because it produces a satisfying social effect. A similar process is involved at the level of public interpersonal behavior. The individual is concerned with the social impact of his behavior, the effect produced on significant others. Identification as defined by Kelman is related to Level II, Conscious Communication. Identification occurs when an individual adopts a role relationship that establishes or maintains a desired self definition. Likewise, Level II behavior involves a conscious self description and reflects identification with significant others. The third process, internalization, occurs when the behavior is consistent with the individual's value system and is similar to Level V, Values, of the Interpersonal System. Kelman states that these processes are related to the social situation and personality characteristics of the subject. Klein (1967) has experimentally demonstrated that subjects reacting differentially to conformity situations are characterized by different personality correlates. Subjects who conform consistently, hold the same opinions in public and private, have more general but superficial approval needs and are lower in self esteem and use regressive defenses. Subjects who show public without private conformity have a more limited approval need, use intellectual defenses and avoid emotional involvement. They are characterized as practically oriented, secure, and autonomous in their actions. Applying these findings to the Leary system, several conclusions can be drawn. Ratings at both

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levels may be effected by social situation variables. MMPI responses and IACL are more susceptible to social influence than are ratings by observers. Consequently, agreement between scores derived by the MMPI and IACL may be a reflection of these processes. Interpersonal Adjective Check List scores, however, are more directly related to interpersonal behavior and may be more effected by the social situation. If this is true, the MMPI and IACL ratings should be reversed and the IACL should be used at Level I and the MMPI at Level II.

It is to be noted that there are no specific instructions that suggest from what perspective the subject should rate the MMPI and IACL. Wylie (1960) has stated that under such ambiguous instructions the subject may report how he privately sees himself or may report his "social self" concept. Studies in which subjects made self-ratings under the two conditions (Brownfain, 1952; Flyer, Barron and Bigbee, 1953; Goldings, 1954; and Miyamoto and Dornbusch, 1956) did not show identical self-ratings for the two conditions. Wylie (1960, p. 277) states that "it is important to specify clearly the instructions under which subjects make their self reports, if we are to evaluate results appropriately." Wylie (1960, p. 280) further comments that:

When instructions to subjects are loose, we certainly cannot know to what extent the subject is trying to give private self or social-self reports. Therefore, we cannot determine the degree to which idiosyncratic interpretations of the instructions influence subjects' insight scores, and the consequent findings.

This statement also applies to discrepancies in scores between levels one and two.

In summary, methodological difficulties seem present in Leary's use of the MMPI as a measure of public interpersonal behavior. Ratings by others and the subject's rating of how he thinks he is seen by others were felt to be more consistent with Leary's conceptualization of Level I. The potential usefulness of the Interpersonal System of Personality may be enhanced by empirical attempts such as this study to resolve these issues.

## CHAPTER 4

### METHOD OF THE RESEARCH

#### Subjects:

The subjects for the present study were members of three volunteer organizations involved in social action work in poverty areas. The three groups were Extension, Papal Volunteers of Latin America, and Federation of Communities in Service. Extension and PAVIA are respectively similar to VISTA and Peace Corps in operation but differ in that they are religiously sponsored. The FOCIS group is similar to a secular institute, although it has no formal religious sponsorship. Both male (N=33) and female (N=110) subjects were used. Subjects ranged in age from 20 to 45; the majority were high school graduates. No subject had a previous psychiatric hospitalization. At the time of testing, all subjects were involved in training programs related to their work. For two groups, Extension and PAVIA, members had just recently joined the organization and had worked and lived with other members for a six week period. Members of these groups (N=74) were considered as short term in their interpersonal interaction. Members of the third organization (N=69) had worked together for at least two years and were consequently considered long term in their relationship with other members.

#### Tests administered:

The following tests were administered: Leary Interpersonal Adjective Check List, Minnesota Multiphasic Personality Inventory, and the Allport-Vernon-Lindzey Study of Values. The subjects were asked to rate the Adjective Check List for self and for each member of their discussion



group. All tests were administered in group settings of 12 to 20 persons and standardized testing instructions were given.

The subjects took the tests on a voluntary and optional basis with the expectation that feedback would be given concerning the results on request by the subject. Participants were assured of the confidentiality of the findings and that the test results would not affect their status within the organization. The testing was offered for their personal use, as a means of increasing their interpersonal effectiveness in social action work. Testing conditions were such as to allow maximal openness in responding.

Data:

Scores derived from the Adjective Check List and the MMPI were converted into three types of data which can be derived from the Interpersonal System of Personality Diagnosis. First, personality profiles at Level I (MMPI), I (sociometric ratings), and II (IACL) on the basis of octant scores. The profiles are represented on the interpersonal grid, which is the circular continuum used to plot the intensity of behavior for each interpersonal variable. Second, Dom and Lov scores were arithmetically derived from the octant scores. Dom represents the dominance-submission dimension and Lov the hostility-affection dimension of the system. On the interpersonal grid, Dom is defined as the vertical axis and Lov is the horizontal axis. These scores are used as reference directions and as the two components of the vector sum or octant summary point, which is the third score derived from this system. The octant summary point locates the subject's interpersonal behavior in one octant

of the grid and at a certain intensity of behavior. This point represents the interpersonal behavior that characterizes the individual at a specified level of interpersonal behavior.

The Interpersonal Adjective Check List was scored according to the Leary (1956) Manual for the Use of the Interpersonal System of Personality. Although in the original development of the IACL, adjectives were scored by intensity, final scoring methods are based on the number of adjectives checked in each octant. The raw scores for each octant were then converted into standard scores for graphic representation of the interpersonal profile for Level I, sociometric ratings by others and Level II, self. The raw scores were also used in the following arithmetical formulae to derive Dom and Lov scores:

$$\text{Dom} = .7 (\text{BC} + \text{NO} - \text{FG} - \text{JK}) + \text{AP} - \text{HI}$$

$$\text{Lov} = .7 (\text{JK} + \text{NO} - \text{BC} - \text{FG}) + \text{LM} - \text{DE}$$

The resulting Dom and Lov scores were then converted into standard scores which give an octant summary point at Level II.

The MMPI protocols were scored for the standard clinical scales. In addition, two other scales required for the conversion of the MMPI scores to the Interpersonal System were scored. These were: 1) Barron's Ego Strength Scale (Barron, 1953) and 2) Little and Fisher's (1958) Denial of Hysteria Scale. According to the Leary methodology, the following clinical scales were used to convert MMPI scores to the Interpersonal System:

- For Octant 1: PgB, Barron's Ego Strength Scale
- For Octant 2: Ma Scale
- For Octant 3: F Scale
- For Octant 4: Sc Scale
- For Octant 5: Pt Scale
- For Octant 6: D Scale

For Octant 7: HyD, Denial of Hysteria Scale

For Octant 8: K Scale

The K-corrected T scores for the six MMPI clinical scales and the PgB and HyD raw scores are converted into standard scores for each octant of the Interpersonal System. T-scores on the MMPI and raw scores on PgB and HyD were also used in the following arithmetical formulae to derive Dom (dominance-submission) and Lov (love-hostility) scores:

$$\text{Dom} = (\text{Ma-D}) + (\text{Hs-Pt})$$

$$\text{Lov} = (\text{K-F}) + (\text{Hy-Sc})$$

The resulting Dom and Lov raw scores were then converted into standard scores which can be plotted as an octant summary point on the standardized diagnostic grid for locating Level 1-M diagnosis.

The Allport-Vernon-Lindzey Study of Values was scored according to test instructions.

#### Rating Method:

Interpersonal profiles at Level I (MMPI), Level I (Sociometric), and Level II (Self), Value profiles on the Study of Values, and MMPI clinical profiles for each subject were examined by two raters. Both raters have had three years of experience in analyzing Leary interpersonal profiles. A decision of "deviant" or "nondeviant" was made for each profile. Deviance for interpersonal profiles was defined as having primary octant scores that fell outside of the positive social quadrant (octants 1, 8, and 7). The majority of profiles for normals is found to fall in this quadrant (Leary, 1957; Gynther, 1962). In this study, the majority of profiles also fell in this octant. Deviance for interpersonal profiles has two facets for subjects in this study: 1) deviance from expected normal profiles

and 2) divergence from the group norm interpersonal profile. "Deviance" on the MMPI clinical test was defined also in terms of suggested pathology indicated by T scores of 70 or above or below 40 on clinical scales. Such profiles also were deviant from the group norm since mean T scores for the group fall in the normal range. Deviance of the Study of Values was defined in terms of divergent from the group primary values. Social and religious were found to be the characteristically high values for the majority of value profiles.

Each rater worked independently on one category of test profiles at a time. Access to decisions for the same subject on other tests or by the other raters was not allowed. The judgment to include or not include a profile as "deviant" was made in terms of the pattern of each profile. Bronfenbrenner (1958) has pointed out the necessity of recognizing the Gestalt nature of test scores in interpersonal prediction. He stated that "empirical work must focus on correspondence not merely between isolated characteristics but between patterns of such characteristics." This orientation served as the overall guiding principle for both raters in making decisions.

Agreement in choices between the two raters for all categories of analysis averaged 79%. The two raters jointly examined profiles on which independent agreement had not been reached. The profile was then discussed in terms of the previously established criteria of deviance and a joint decision was made on this basis to include or not include the profile as deviant.

**Analysis:**

A chi-square method of analysis was used to test the relationship between the categories of analysis. Rater reliability was tested by means of phi coefficients of correlation and percentages of agreement for each category of analysis.

## CHAPTER 5

### RESULTS

The means and standard deviations on the Allport-Vernon-Lindzey Study of Values for the total group are presented in Table 2. The primary values for the subjects are religious and social. The value least characteristic of the members is an economic orientation.

The mean T-scores and standard deviations for MMPI clinical scales are presented in Table 3.

Inter-rater agreement for judgments made by the two raters in the selection of Ss with deviant scores in each category of analysis are presented in Table 4. Phi coefficients of correlation between choices made by each rater of scores as deviant or nondeviant were highly significant. Percentages of agreement between the raters were also high. The lowest rate of agreement was found for selection of Ss whose profiles were rated by others as deviant. Decision in this category was also most difficult since Ss were not necessarily rated consistently by all raters. Inter-rater agreement for all categories is sufficiently high for all categories of analyses to justify the making of joint decisions in resolving inter-rater differences.

The relationship between the three measures of interpersonal behavior was investigated by means of a chi-square analyses. These findings are presented in Table 5. The two sources of data at Level I, Ss rated by others and scores derived from the MMPI, are considered by Leary as alternate means of getting Level I data and consequently should have a

TABLE 2

Means and Standard Deviations  
for Allport Study of Values

Values	Mean	S.D.
Theoretical	34.5	3.4
Economic	29.5	4.2
Aesthetic	41.9	7.7
Social	46.9	15.9
Political	37.9	6.7
Religious	49.4	17.6

TABLE 3

Mean T-Scores and Standard Deviations  
for MMPI Clinical Scales

Scale	Mean	S.D.
L	49.5	7.8
F	51.2	5.3
K	60.8	7.2
Hs	51.7	3.4
D	48.3	12.4
Hy	57.1	1.4
Pd	57.5	10.2
Mf	56.4	13.2
Pa	56.2	10.4
Pt	55.8	8.2
Sc	56.8	12.4
Ma	58.0	10.2
Si	49.2	13.9



TABLE 4

Phi Coefficients of Correlation and Percentage of Agreement  
Between Two Raters for Selection of Subjects as Deviant  
or Nondeviant for Categories of Analyses

Category of analysis	Phi coefficient	Percentage of agreement
Self ratings (ACL)	.51	75%
Ratings of others by S	.44	66%
Ratings by others of S	.46	71%
MMPI clinical pathology	1.00	100%
MMPI Leary profiles	.60	84%
Value profiles	.49	78%

Note.-Phi coefficient greater than .04 is significant at  $< .01$  level.

TABLE 5

Chi-Square Analyses of Level I-MMPI Profiles with Level I Ratings  
 Made of Ss by Others and Level II Self Ratings

Ratings	Deviant Level I MMPI profiles	Nondeviant Level I MMPI profiles	x <sup>2</sup>
Level I			
Ss rated deviant by others	24	45	1.41*
Ss rated nondeviant by others	18	56	
Level II			
Deviant self ratings	21	51	.057*
Nondeviant self ratings	21	50	

\* p is not significant.

high degree of agreement. A chi-square analysis of these two measures showed no significant degree of agreement. MMPI ratings and self ratings at Level II were also compared on the basis of whether Ss profiles fell in negative interpersonal octants. Chi-square analysis showed that agreement was not significantly different from chance. In both analyses data derived from the MMPI was not found to be related to interpersonal ratings made by others or self on the Leary Interpersonal Adjective Check List.

Interpersonal profiles of Ss rated by others were compared with Ss self ratings on the same criteria of negative versus positive primary octants. The results of this analysis is presented in Table 6. Agreement between Ss self profile and the way he is seen by others was highly significant ( $X^2 = 27.8$ ,  $df = 1$   $p < .001$ ). This relationship was found for both long term and short term groups (LT,  $X^2 = 17.7$ ,  $p < .01$ ; ST,  $X^2 = 8.9$ ,  $p < .01$ ). Interpersonal ratings done by others for the Ss are consistent with self ratings. The interpersonal orientation of the Ss is very similar to how they are rated by members of the group if either a positive social orientation or a more independent, dominant orientation occurs.

A further analysis was made to see whether perception of self tended to affect Ss' perception of others. Such a relationship might especially be expected for those Ss whose interpersonal profiles are deviant from the groups. The chi-square analysis for deviant self rating and subjects' deviant view of others is presented in Table 7. Some agreement was found ( $X^2 = 3.64$ ,  $df = 1$ ,  $p < .05$ ) but not in the expected direction. Ss with a perception of self different from the group perception tended to see others

TABLE 6

Chi-Square Analysis of Relationship Between Self Ratings and Ratings of  
Ss Made by Others

Rating	Deviant self ratings	Nondeviant self ratings
Ss rated deviant by others	51	18
Ss rated nondeviant by others	21	53

Note. - $\chi^2=27.8$ ,  $df=1$ ,  $p < .001$ .

TABLE 7

Chi-Square Analyses for Self Ratings and Ss' Ratings of Others for Short and Long Term Groups

Group	Ss rating others as deviant	Ss rating others as nondeviant	$\chi^2$
Long term			
Deviant self ratings	21	14	.08
Nondeviant self ratings	16	14	
Short term			
Deviant self ratings	12	22	10.45**
Nondeviant self ratings	23	9	
Total group			
Deviant self ratings	33	36	3.64*
Nondeviant self ratings	39	23	

Note.-N=132 for ratings of others.

\*p < .05.

\*\*p < .01.

as different from themselves and more like the group while subjects who perceived themselves in a nondeviant way tended to rate others as different from the group norm. An examination of the results for long term and short term groups indicated a difference in the way members were rating others. In the long term group, self perception did not affect perceptions of others. Ss did not significantly rate others as like or different from themselves ( $\chi^2 = .08$ ,  $df = 1$ ,  $p$  is N.S.). Members of the short term group, however, tended to rate others as not like themselves at an significant level ( $\chi^2 = 10.45$ ,  $df = 1$ ,  $p < .01$ ). Ss whose profiles fell in negative interpersonal octants perceived others as more like the groups and as having a more positive interpersonal orientation. This finding suggests that these Ss may accept the group norm of a positive social orientation as characteristic of group members although they do not see themselves as acting in this manner. On the other hand, members of the group who see themselves as having a positive social orientation and as a result a more secure position in the group are less accepting of others as sharing this norm. Since this tendency is not found in the long term group it may be a function of the length of interpersonal interaction.

A related question was investigated. Does agreement exist between Ss who are rated by others as different from the group norm and those subjects' tendency to rate others as deviant from the group? The findings for this data are presented in Table 8. A chi-square analysis suggested some degree of relationship for the overall group ( $\chi^2 = 3.77$ ,  $df = 1$ ,  $p < .05$ ). The results for long term group differed from the short term group. For members who had known each other longer, agreement between how Ss' ratings of others and how they were rated by others was highly

TABLE 8

Chi-Square Analyses for Ss' Ratings of Others and Ratings Made by Others of Ss for Short and Long Term Groups

Group	Ss rated deviant by others	Ss rated nondeviant by others	$\chi^2$
Long term			
Ss ratings of others as deviant	25	12	6.64**
Ss ratings of others as nondeviant	9	19	
Short Term			
Ss ratings of others as deviant	13	12	.009
Ss ratings of others as nondeviant	21	21	
Total group			
Ss ratings of others as deviant	38	24	3.77*
Ss ratings of others as nondeviant	30	40	

Note.-N=132 for ratings of others.

\*p < .05.

\*\*p < .01.

significant ( $\chi^2 = 6.6, df = 1, p < .01$ ), while for the short term group no significant agreement ( $\chi^2 = .009, df = 1$ ) was found. In the long term group, members rated others similarly to how they were rated. This finding suggests that these Ss are more aware of their position in the group than are the members of the short term group. This suggests that more expression of interpersonal hostility exists in the long term group and more interpersonal superficiality or compensatory behavior in the short term group.

An analysis was also made to see whether subjects whose interpersonal profiles differed from the group in not sharing a positive social interpersonal orientation differed in other characteristics from the group norm. Such as investigation may indicate whether interpersonal perception is related to more than perceived interpersonal behavior. Two personality measures which were compared with interpersonal ratings are values as measured by the Allport-Vernon-Lindzey Study of Values and intrapersonal pathology as measured by the MMPI.

The findings for degree of relationship between values and interpersonal profiles are presented in Table 9. A chi-square analysis of the relationship between having values deviant from that of the group norm (high social, high religious) and being rated as deviant by the group in not sharing a positive social interpersonal orientation was significant ( $\chi^2 = 5.7, df = 1, p < .01$ ). There is a significant degree of agreement between subjects who are rated as deviant in interpersonal orientation and subjects whose values are deviant from the predominant value pattern. A less significant relationship ( $\chi^2 = 2.73, df = 1, p < .05$ ) was found between deviant self ratings and deviant values. Subjects who rate themselves as different from the group in not sharing a positive social relationship do



TABLE 9

Chi-Square Analyses of Relationship of Values to Self Ratings,  
Ratings Made by Others of Ss and Ss' Ratings of Others

Ratings	Deviant values	Nondeviant values	$\chi^2$
Deviant self ratings	33	39	2.73*
Nondeviant self ratings	22	49	
Ss rated deviant by others	34	35	5.73**
Ss rated nondeviant by others	21	53	
Ss ratings of others as deviant	24	38	.11
Ss ratings of others as nondeviant	28	42	

Note.-N=132 for ratings of others.

\* $p < .05$ .

\*\* $p < .01$ .

not strongly hold values different from the group values. A chi-square analysis between subjects with differing values and perception of others as deviant revealed no significant agreement. Thus values of deviant subjects tend to predict how they are rated by others but not how subjects rate others.

Chi-square analyses for the degree of agreement between interpersonal profiles and intrapersonal pathology as measured by the MMPI were also computed. A significant degree of agreement ( $\chi^2 = 5.97$ ,  $df = 1$ ,  $p < .01$ ) was found between subjects having MMPI profiles out of the normal range and subjects whose self ratings were in the negative interpersonal octants and different from the groups positive social interpersonal orientation. These findings are presented in Table 10. As examination of the results for the long term and short term groups showed a difference between the groups. In the long term groups, the degree of relationship was highly significant ( $\chi^2 = 6.2$ ,  $df = 1$ ,  $p < .01$ ), while the agreement was not significant for the short term group. This finding suggests that the members of the long term group were somewhat more open in their self ratings on the Adjective Check List than were members of the short term group. The chi-square analysis between intrapersonal pathology on the MMPI and perception by others as having a deviant interpersonal orientation is presented in Table 11. The degree of agreement was not significantly different from chance. This finding suggests that intrapersonal pathology is not necessarily related to negative interpersonal perceptions. A significant degree of agreement was not found between subjects having pathology on the MMPI and subjects' rating of others as having a negative interpersonal

TABLE 10

Chi-Square Analyses of Relationship of Intrapersonal Pathology to Interpersonal Self Ratings for Long and Short Term Groups

Ratings	Deviant MMPI	Nondeviant MMPI	$\chi^2$
Long term group Deviant self ratings Nondeviant self ratings	18 24	19 8	6.19*
Short term groups Deviant self ratings Nondeviant self ratings	23 29	12 10	1.11
Overall group Deviant self ratings Nondeviant self ratings	41 53	31 18	5.79*

\*p < .01.

TABLE 11

Chi-Square Analyses of Relationship of Intrapersonal Pathology  
to Ss' Interpersonal Ratings of Others and Ratings Made by Others of Ss

Ratings	Deviant MMPI	Nondeviant MMPI	$\chi^2$
Ss rated deviant by others	46	23	.002*
Ss rated nondeviant by others	48	26	
Ss ratings of others as deviant	43	51	.41*
Ss ratings of others as nondeviant	19	19	

Note.-N=132 for ratings of others.

\*N.S.

orientation. Subjects' interpersonal ratings of others are not negatively affected by intrapersonal pathology.

A chi-square analysis of the relationship between pathology on the MMPI and Leary interpersonal profiles derived from the MMPI is presented in Table 12. A significant degree of agreement ( $\chi^2 = 3.56$ ,  $df = 1$ ,  $p < .05$ ) was found between the Leary MMPI derived interpersonal scores and MMPI pathology. Since MMPI clinical scores are used to derive interpersonal profiles such a relationship would be expected. A higher level of significance would have been expected if the MMPI interpersonal orientation more closely reflected the MMPI as a clinical personality test.

The relationship of both forms of MMPI scores to values was also investigated. These findings are presented in Table 13. A significant degree of agreement was not found for S whose clinical MMPI scales suggested pathology and Ss whose values were deviant from the group. Similarly, no significant relationship was found between Leary interpersonal profiles derived from the MMPI and deviant values.

TABLE 12

Chi-Square Analysis of Relationship Between Clinical MMPI Scores  
and Derived MMPI Interpersonal Scores at Level I-M

MMPI Profiles	Deviant clinical MMPI	Nondeviant clinical MMPI
Deviant MMPI Level I-M	33	9
Nondeviant MMPI Level I-M	61	40

Note.  $\chi^2=3.56$ ,  $df=1$ ,  $p < .05$ .

TABLE 13

Chi-Square Analyses of Relationship of Values to Clinical and Interpersonal MMPI Profiles

MMPI Profiles	Deviant values	Nondeviant values	$\chi^2$
Deviant clinical MMPI	33	61	1.75*
Nondeviant clinical MMPI	22	27	
Deviant interpersonal MMPI	15	27	.39*
Nondeviant interpersonal MMPI	40	61	

\*N.S.

## CHAPTER 6

### DISCUSSION

The first major question of the study was the relationship of MMPI derived Level I interpersonal scores to Level I sociometric data and Level II self ratings based on the Interpersonal Adjective Check List.

According to Leary's theory, agreement between the two measures at Level I should be high. It was hypothesized, however, in this study that such a relationship would not be found since the two sources of data differ considerably. The MMPI is an intrapersonal, clinical self rating while sociometric ratings are interpersonal and made by others for the subjects. This expected lack of relationship was confirmed by the results; no agreement was found between the two sets of interpersonal ratings at Level I. This finding is similar to Gynther's study (1962). He reported a 26% agreement between octant summary points for the two sets of data using a four-fold classification which was not significantly different from chance. A 56% agreement was found in this study for profile similarity based on the two measures using a two-fold classification. The results of the two studies indicate that MMPI derived Level I scores cannot be substituted for or equated with the results of ratings made by others for a nonpatient population.

A similar lack of relationship was found between MMPI derived Level I profiles and Level II self ratings on the Interpersonal Adjective Check List. The 49% agreement between profiles based on the two measures was not significantly different from chance. On the basis of the theory of the Interpersonal System, some agreement between the measures would



have been expected although the sources of data tap different levels. It was hypothesized in this study that MMPI derived interpersonal scores and Level II scores would show some agreement since they are both self ratings. This hypothesis was not confirmed.

It is noted that Gynther (1962) found a low but significant rate of agreement between these two measures in his study. The discrepancy between the two sets of findings can be explained by the use of different sets of scores used for analyses in the two studies. Gynther based his findings on octant summary points while the present study was based on an eight octant profile analysis. Past research by Leary and his associates as well as by Gynther indicate that the use of octant summary points leads to spuriously high agreement because of constricted distributions of octant summary points. For the majority of psychiatric and nonpsychiatric subjects summary points fall in octants 1, 8 and 7. Distributions are more constricted for nonpsychiatric populations than for patient populations.

The lack of agreement between MMPI derived Level I scores with sociometric Level I ratings and self ratings at Level II may be explained by this constriction of the distribution of both octant summary points and profile scores based on all eight octants. An examination of the frequency distribution of both sets of scores showed that 88% of octant summary scores fell in octants 1 and 8 and that 80% of octant profiles had octants 1, 7 and 8 as primary. These results can be best explained as due to a methodological weakness in the conversion of MMPI clinical scores into scores of the interpersonal system. The method of derivation does not allow for a variability in interpersonal octant scores that

adequately reflects the variability in MMPI clinical profiles. The constriction of the distribution cannot be explained in terms of social desirability since Level I - M scores are derived from the MMPI. The lack of distribution cannot be explained by high similarity of MMPI clinical profiles for the subjects of the study. A frequency distribution of peak scales on the MMPI shows the highest percentage is 27% for any one scale. These findings seem to strongly indicate that the present method of conversion of MMPI scores to interpersonal scores within the Leary system is not adequate and would not be advised for nonpsychiatric subjects.

The highly significant rate of agreement between subjects' own self ratings and the way they are perceived by others indicates that Level I sociometric ratings and Level II self ratings are related. The high degree of agreement between these two measures and the lack of agreement of either measure to MMPI derived Leary scores suggests that MMPI scores at Level I - MMPI do not reflect interpersonal behavior at either level.

The results of this analysis also indicate that members of the groups see themselves as they are seen by others. Persons who describe themselves in the positive, social interpersonal octants have a public stimulus value for others that is positive. Individuals who perceive themselves as more independent and dominant and less social are rated by others in a similar manner. Thus a strong relationship between how individuals perceive their interpersonal behavior and how they affect others interpersonally was demonstrated. Social stimulus value of Ss is closely related to self perception of interpersonal behavior.

Further analysis of the data revealed that a close relationship did not exist between self ratings and Ss perception of others for the

long term group. Subjects did not tend to perceive others as they saw themselves. Members of the long term group did not significantly rate other members as like or different from themselves. This finding suggests that more interpersonal experience with other members of a group may lead to greater objectivity or less subjectivity of ratings. In contrast, members of the short term group perceived other members as significantly not like themselves. Subjects who saw their own interpersonal behavior as different from the norm attributed to others profiles that were within the norm of a positive, social orientation. These subjects seemed to be accepting of other members in a compensatory manner as if others would be more accepting of them for holding these positive perceptions. Subjects with deviant self profiles seemed to accept the group norm of positive, social interpersonal orientation even though they saw their own interpersonal behavior as not living up to this norm. Members of the short term group whose profiles were characteristic of the group norm tended to rate others as more deviant and less social than themselves. They were less accepting of others as sharing this norm and tended to rate other members more negatively than they rated themselves.

Similarity in self perception and perception of others has been found to be related to acceptance of self and acceptance of others and to liking of others (Fiedler, 1958). In this study neither long term nor short term group members tended to see others like self. In the long term group there was an indication that acceptance of other members or liking for other members was not high. Members of this group tended to keep interpersonal distance from other members and probably received little emotional satisfaction from other members or mutuality in relationships. On the

other hand, members of the short term group seemed more concerned with their position in the group. Those persons who shared the positive social orientation which was the group norm could be more rejecting of others since their position in the group was secure. Members whose profiles were less positive saw others as more positive than themselves. In both cases these subjects seemed to perceive others as "not - me." Persons whose interpersonal orientation was positive social seemed accepting of self and rejecting of others while persons with deviant interpersonal orientation were more rejecting of self and accepting of others.

The results of the study further indicated that interpersonal ratings for self and others was related to personality characteristics revealed on the MMPI and the Allport Vernon Study of Values. These findings suggest that perception of interpersonal behavior is not based solely on interpersonal interaction. Interpersonal perception may, in fact, be partly determined by perception of shared values or similar personality characteristics. Greater agreement was found between ratings made by others of Ss with values different from the group and Ss perceived by others as having a negative interpersonal orientation than was found for the relationship of values and self ratings. Thus persons may be rated interpersonally by others more on the basis of their values being like or dislike the group's than on the basis of the way the subject perceives his own interpersonal behavior. The perception of shared values seems to play a greater part in the determination of interpersonal ratings than has been previously recognized. Subjects whose values were deviant from the group norm did not tend to rate other subjects as deviant to a greater degree than Ss with nondeviant values. Thus similarity or

differences in values in relation to the primary group values tend to predict how subjects are rated by others but not how subjects rate others.

A strong relationship was also found for interpersonal perception and intrapersonal personality traits as measured on the MMPI. A highly significant relationship was found between intrapersonal pathology on the MMPI and self ratings in the negative interpersonal octants in the Leary system. Perception of one's interpersonal behavior as negative and individualistic and as more dominant and asocial was related to intrapersonal pathology. This finding was significant for the long term group but not the short term group. Members of the long term group seem to have been more open in self ratings on both tests than were members of the short term group. While intrapersonal pathology was related to self perception of interpersonal behavior as negative, this relationship did not hold for intrapersonal pathology and ratings made by others of Ss.

In this study then, self ratings of interpersonal behavior are related more to intrapersonal pathology than to values. In contrast, ratings made by others of Ss are more related to shared values than to Ss intrapersonal pathology. The individual subject bases his perception of his interpersonal behavior on his intrapersonal characteristics. Other persons tend to base perception of the subject on more easily accessible and public traits such as values. The degree of agreement between values and intrapersonal pathology was not found to be significant for members of the group. This suggests that the perspective a person uses to rate self and the perspective a person uses to rate others are not necessarily the same. The lack of relationship of MMPI derived scores and values

suggests another reason for the lack of agreement between Level I ratings made by others and Level I derived MMPI scores. Ratings of interpersonal behavior by others are made on the basis of shared values and not in terms of intrapersonal characteristics. Since intrapersonal value profiles show no significant degree of agreement, the two measures would not be expected to agree with interpersonal ratings made from these differing perspectives.

Another question for research, one which is relatively unexplored, is the relationship of interpersonal perception to similarity of values. The findings of this study indicate that persons attribute a positive social interpersonal orientation to persons with values similar to their own. An aspect which was not investigated was whether the Ss actually perceived this value similarity.

A related question is whether interpersonal conflict is less likely to occur between persons with similar value orientation. The present study suggested that this might be the case. Further research on interpersonal conflict and conflict within a group should investigate the value orientation of persons in conflict and those who are not in conflict.

The study suggests several areas for further research. A methodological issue raised by the findings is the conversion of MMPI scores to the Interpersonal System at Level I, Public Communication. MMPI derived scores were not found to be closely related to sociometric ratings at Level I, self ratings at Level II, or MMPI clinical scores. These findings indicate that the present method of conversion is not adequate. More theoretical and methodological consideration must be given to the question of how clinical MMPI scores relate to interpersonal traits. The findings of this study

suggested some relationship between interpersonal self ratings and MMPI scores. Since the MMPI is a self report, the variables tapped are probably more related to Level II, conscious description of self.

A more meaningful measure of Level I, social stimulus value, would be to ask Ss to rate their "social self" on the basis of how they see their interpersonal behavior in relation to others. This measure should be tested as an alternative means of data at Level I.

## SUMMARY

The relationship between self perception and perception of others to intrapersonal traits on the MMPI, to interpersonal ratings on the Leary Adjective Check List, and to major value orientation on the Allport Study of Values was investigated. Members of three volunteer social action organizations were used as subjects. Ss were divided into a short term (N=74) and long term (N=69) groups on the basis of their interpersonal interaction. Profiles on the three tests were divided into two categories, deviant and nondeviant from the average group profile, by two judges.

A highly significant relationship was found for Ss' self ratings of interpersonal behavior and how their interpersonal behavior is perceived by others. Ss did not tend to rate others as they rated themselves. In fact, members of the short term group saw others as different from themselves to a significant degree. Self perception of interpersonal behavior was significantly related to self reports on the MMPI. Ss' perception of others' interpersonal behavior was significantly related to perception of shared values. The results suggest that a person rates his own interpersonal behavior in terms of intrapersonal traits but rates others on the basis of shared values. MMPI derived Level I scores of interpersonal behavior were not significantly related to Level I sociometric scores, self ratings at Level II, or to MMPI clinical profiles. This lack of relationship suggests that the use of MMPI derived scores at Level I of the Leary system does not give a good measure of interpersonal behavior.



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## APPROVAL SHEET

The dissertation submitted by Marilyn Kolton has been read and approved by members of the Department of Psychology.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

11/1/67

Date

[Signature]

Signature of Adviser