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OBJECT RELATIONS THEORY AND PERSONAL CONSTRUCT

THEORY: RAPPROCHEMENT OPPORTUNITY

THESIS

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By

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Empirical investigation of the tenets of Object Relations Theory is recent. This study of the theoretical convergence between Object Relations Theory and Personal Construct Theory brought a new direction to the empirical investigation. It was hypothesized that individuals who displayed a well-developed level of object relations, as measured by Object Relations Theory, would also display a highly adaptive blend of cognitive complexity and ordination, as described by Personal Construct Theory, and vice versa. A correlational analysis of personality measures on 136 college students approached but did not attain statistical significance. Results indicated no significant theoretical convergence between Object Relations Theory and Personal Construct Theory. Further research is warranted only if greater variability in sample age, life experience, and psychopathology is assured.

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CHAPTER 1

OBJECT RELATIONS THEORY AND PERSONAL CONSTRUCT THEORY: RAPPROCHEMENT OPPORTUNITY

Overview of Object Relations Theory

History of object relations. Historically, Object Relations have evolved from the psychoanalytic theory of Sigmund Freud. The psychoanalytic meaning of "object" was first used by Freud (1905) when he referred to the agent either upon which the instinctual drives were discharged and/or the agent which facilitated the discharge. In Freud's first usage of "object," it was defined as the real person who either facilitated or blocked the infant's discharge of impulse. Later, Freud considered "objects" to also include internal structures that are created by identification (Grotstein, 1982).

Freud's creation of the concept of the object was, however, incidental to his theoretical interest in the flow of psychic energy. Tuttmann (1981) wrote that Freud's "general theory focuses upon intrapsychic tension management" (p. 4). Freud's (1905) earliest effort to develop an explanatory model of tension management employed a theory of instincts, which required that he create a specialized definition of "object." "Let us call the person from whom sexual attraction proceeds

the sexual object and the act towards which the instinct tends the sexual aim" (pp. 135-136).

Ten years later (1915), he elaborated this definition: The object of an instinct is the thing in regard to which or through which the instinct is able to achieve its aim [The object] is not originally connected with [the instinct] but becomes assigned to it only in consequence of being peculiarly fitted to make satisfaction possible (p. 122).

Restated in a simple manner, Freud considered an instinct to be aimed toward an object (Rychlak, 1981).

Freud's first use of this specialized meaning of "object" was to refer to the importance of a "caretaking person in providing gratification for the helpless infant. This special parental object plays a role in the unfolding and developing of an interest in the world, first in terms of pleasure and later from the viewpoint of reality" (Tuttman, 1981, p. 3-4). Further definition of the object occurred in the structural and developmental theories, which supplanted the instinct theory as an explanation for tension management. It was in these later writings that Freud contributed most heavily to contemporary Object Relations Theory.

In the structural model, Freud theorized that mental functioning occurred due to the existence and functioning of three distinct entities: the id, ego, and superego (Achenbach, 1982). Freud stated that the id is

"psychologically and biologically 'older' than the ego" (Monte, 1974, p. 185), in that the ego arose from the id. Freud considered the ego to be chiefly formed by the substitution of object relations by identifications (Tuttman, 1981). In Mourning and Melancholia, Freud (1917) wrote that he regarded the "ego as the repository of abandoned objects." One implication of this conceptualization was that Freud considered the id to be more powerful than the ego (Monte, 1980). As a result of this assignment of relative strength to the mental structures, Freud considered the individual to be victimized by his or her own id impulses. "The focus of the classical Freudian account of human behavior is on the vulnerability and weakness of the ego when confronted with powerful id demands or overwhelming external reality" (Monte, 1980, p. 145).

Freud's structural theory provides a foundation for his developmental theory. Freud was the first theorist to formally outline the orderly developmental changes that occur in mental organization. The implications of the developmental model pervade Freudian metapsychology. In the psychoanalytic view, disruptions of the normal developmental process will have important and possibly irreversible effects on character development. One effect of this belief was Freud's assumption that no radical change of the character was possible after childhood (Maddi, 1980). A further result is that Freud's psychic investigations almost exclusively dealt with the

individual's early experiences, to the near disregard of his or her current life experiences (Maddi, 1980). For example, Freud considered the interpersonal relations in adulthood to be only transference phenomenon, or a reenactment of early childhood relationships (Maddi, 1980). Certain theorists considered these aspects of Freudian metapsychology to be an incomplete explanation of human psychology.

Ego analytic psychologists responded to these dissatisfactions. Ego analytic writers had specific objections to classical psychoanalytic theory. The primary objections were that Sigmund Freud's drive theory did not adequately explain the mental life of the individual or relationships with others (Tuttman, 1981). Ego analysts sought "a more direct investigation of the conscious ego and its relations to the world, to the unconscious, and to the superego" (Monte, 1980, p. 12). Sigmund Freud's emphasis on the id and its impulses was supplanted by the ego analysts' investigation of the ego and its defensive and adaptive functions (Achenbach, 1982).

Ego analysts focused new attention on interpersonal relations. Sigmund Freud's theory had "rendered other persons as surprisingly incapable of having an influence except as stereotypic objects of someone's instincts" (Maddi, 1980, p. 51). In contrast, ego analysts considered personality to be strongly influenced by the differing effects of others (Maddi, 1980).

Anna Freud (1963) is considered to be the first ego analytic writer. Her work, which enlarged the boundaries of her father's psychoanalytic studies, gave legitimacy to ego analytic psychology (Monte, 1980).

Her attention to ego defenses, her adaptation of analytic method for therapy with children, and her metapsychological classification scheme are all based on classic theoretical formulations; but at the same time each of these achievements transcends classical theory in subtle yet significant ways. The key modification has been her emphasis on viewing personality development as more affected by the environment, as more easily shaped by interpersonal relations, and as more fluid than classical theory would have it. (Monte, 1980, p. 181)

Heinz Hartmann, considered to be the father of contemporary ego psychology, extended Sigmund Freud's conflict-based metapsychology (Monte, 1980). Hartmann (1958) wrote of the autonomous, adaptive ego that reciprocally interacts with the environment. Hartmann's conceptualization of the ego resulted in a less-mechanized analytic theory, and extended Freud's work beyond the neuroses into a general model of human behavior (Monte, 1980).

Hartmann questioned Sigmund Freud's structural model, which emphasized that the ego originated solely from conflict between id demands and the need to respond to reality

(Achenbach, 1982). In place of Freud's structural model, Hartmann (19858) introduced the concept of the "undifferentiated matrix": both the id and the ego are conceptualized as differentiating from a single psychic matrix. One implication of Hartmann's model is that the ego and id, considered to be the same "biological age," are equally important. A related implication is that human behavior is not conceptualized as being determined exclusively by intrapsychic id-related conflicts. Instead, both id-conflicts and autonomous ego interactions with the external environment are conceived as determining human behavior (Achenbach, 1984). Hartmann (19858) defined the ego's function as "primarily a reciprocal relationship between the organism and its environment" (p. 24). Contemporary ego psychology builds on Hartmann's view of the ego when it emphasizes the individual's life-long interactions with the environment as an important determinant of his or her behavior and psychological style (Maddi, 1980).

Freud's work stimulated the theoretical work of both Hartmann and Melanie Klein, but with different results. Klein's structural theory was based on an internal, fantasized, psychic world of ego-object relations (Guntrip, 1973). Klein gave a temporal compression to Freud's developmental theory. Specifically, she speculated that the infant who had received good care would have established stable object by one year of age (Blanck & Blanck, 1974).

Melanie Klein's emphasis of the ego's relationship with the object, among other theoretical contributions, led her theoretical work to be considered the "decisive breakthrough in the development of psychodynamic object-relations thinking" (Guntrip, 1973, p. 53). Klein's work polarized the British Psycho-Analytical Society, an established ego analytic group. Schisms developed, the Society reorganized, and the British School of Object Relations was created. Klein inadvertently provided leadership to the British School of Object Relations, whose members were influenced by her work (Tuttman, 1981). Although Klein's work heavily influenced the members of the British School of Object Relations, it was not a theoretically homogenous group.

Fairbairn thought of developmental processes in terms of the vicissitudes of objects, not the vicissitudes of instincts. This viewpoint polarized the British object relations school. At one end, there is the Kleinian branch, influenced by Freud's instinct theory and stressing primitive fantasy. At the other end, stand Fairbairn's followers, minimizing instinctual forces and pleasure-seeking and stressing the centrality of an "I" or ego as the core phenomenon of the psyche (Tuttman, 1981, p. 23).

Donald Winnicott's object relations orientation represents a middle position in the British School of Object

Relations (Tuttman, 1981). Winnicott (1953) created the designation of the "good enough mother" who provides optimal, phase-specific symbiotic gratification. Such a mother is able to give up her own symbiotic tie to the infant for the sake of furthering the infant's development.

In contrast to the British Psycho-Analytical Society, the American ego analytic school was slower to develop its own theory of object relations. Hartmann (1985), Erickson (1959), and Jacobson (1974) did eventually develop an object relations theory that was similar to the middle theorists in the British group.

The American school of object relations is most identified with the work of Hartman (1985) and Margaret Mahler (1968). Hartmann (1958) wrote that in an "average expectable environment," which includes the "stabilizing power of good object relations," the developing child will gradually make full use of his or her capabilities. The dyad of the developing child and his or her caretaker makes a special impact on psychological development. Hartmann used clinical data, gathered from observations of children, to substantiate and extend his object relations theorizing. Such observations led to a clarification of normal ego development; he also described developmental failure and its psychological consequences (Tuttman, 1981). Hartmann's theoretical ideas and his encouragement of the natural observation method of data collection were further developed by Margaret Mahler.

Margaret Mahler's contributions to object relations (1968) are built on Hartmann's (1958) view that the ego and id originated from the undifferentiated matrix. The infant, conceptualized as born with inborn apparatuses of primary autonomy, developed its personality in successive stages as a result of the caretaker/infant interaction. Mahler's unique contribution was to chronicle the developing child's progress toward self-mastery and independence.

Beginning in "forerunner" phases of normal autism and normal symbiosis, the infantile ego matures from its initial absolute narcissistic shell of isolation to dim recognition of an external, satisfying object world. Then, progressing in graduated steps, the child passes through symbiotic fusion with mother to a stage of primitive differentiation of self, then toward the practicing and rapproachment stages, marked by increasing awareness and acceptance of separateness from the love object. In the final subphase, children consolidate matured verbal, locomotor, and cognitive skills into a coherent unity, self-reliantly able to function apart from mother and unafraidly capable of the recognition that each is a "me" (Monte, 1980, p. 221).

With this work, Mahler described the developmental sequence that leads, in the fourth year of life, to the child's acquisition of identity. One requirement of this process of identification is that the child have a mental representation

of the mother that is supportive of his or her efforts toward independence (Monte, 1980).

Margaret Mahler's contributions to object relations theory have several implications. Through her naturalistic observations of normal and disturbed children and their mothers, she validated the work of earlier theorists. For example, Mahler's observational studies of splitting appear to validate the work of Melanie Klein (Tuttman, 1981). In contrast to Freud's work, Mahler has shown that the "roots of identity, conflict resolution, and ego strength lie much earlier in development than the Oedipus complex; and these ego functions are more influenced by the mother than Freud's paternalistic viewpoint would allow" (Monte, 1980, p. 24). Mahler's work has also served as a foundation for that of other theorists, as in the study of the etiology of the borderline states (Blanck & Blanck, 1974).

Jacobson (1964), also identified with the American school of object relations, wrote extensively about the "self." She considered the "self" to be the individual's total sense of his or her psychic and bodily person, and "self representations" to be "the unconscious, preconscious and conscious endopsychic representations of the bodily and mental self" (Jacobson, 1964, p. 19). The sense of self is an essential aspect of the core beliefs attributed to object relations theory (Maddi, 1980).

Understanding of object relations theory is deepened by comparing its core beliefs with those of Freud. For example, a comparison can be made of the differing views on interpersonal relations and the age at which personality growth is complete. Freud emphasized the triadic object relations of the Oedipal conflict; object relations theorists give particular emphasis to the mother-infant dyadic relations of the pre-Oedipal period, but consider important interpersonal relations to continue throughout the life span. Freud considered personality development to be nearly complete in childhood; object relations theorists consider major personality development to be completed in childhood, but consider that change can occur throughout the life span.

To summarize this limited historical overview: the proponents of three major psychoanalytic schools consider their theory to have derived directly or indirectly from the work of Sigmund Freud. Classical analytic thought directly employs Freud's dynamic, structural, and developmental models of the psyche, and emphasizes the ongoing psychic conflicts, especially the Oedipal conflict. Sigmund Freud created object relational terms in order to describe these psychic conflicts. Ego analytic thought builds on these constructs by adding a study of the ego's defenses against the id impulses. In addition, ego analytic theory studies self mastery capabilities (Monte, 1980) and developed object relational thought (Achenbaum, 1981).

Object relations theory integrates previous theory but with a new emphasis on the essential importance of human relationships that occur from birth through adulthood. Object relations theory was not established to reveal but to extend classical psychoanalytic theory. "Object-relational thinking is the emancipation of the core of psychodynamic insight" (Guntrip, 1973, p. 33).

Contemporary Object Relations Theory

Current psychoanalytic usage of "object" differentiates Freud's single definition of object into two separate terms. In current usage, the term object refers to "the person, thing, or whatever to which the subject's overt behaviors, thought, and feeling are directed" (Dorpat, 1982, p. 154). The term object representation refers to the internal, affectively charged mental image of the external object.

Broadly defined, object representation refers to the conscious and unconscious mental schematic-including cognitive, affective, and experiential components of objects encountered in reality (Blatt & Lerner, 1983a, p. 195).

Purposeful action requires an object. Human relationships are both active and intentional endeavors, and thereby require an object.

From the infant's point of view, the object is nothing but the prolongation of the infant's activity. Only gradually . . . does the young child learn to make a

distinction between his activity and the object toward which this activity is directed Both actual and imagined object relations involve some kind of action or interaction between the subject and an object," (Dorpat, 1981, p. 153).

The relationship with the object is an active experience. The developmental psychologist Piaget (1967) termed this early, "action-bound" level of cognitive functioning as the sensori-motor stage. Object relations theorists build on Piaget's work with the observation that the developing child responds to the action experience with certain overt behavior, thoughts and emotions. Further, object relations theory speculates that this totality of behavior-thought-feelings begins early in the infant's life, even before he or she can differentiate self from the other person or object (Dorpat, 1981). The affect state is an essential element of the relationship with the object. Kernberg (1976) considered painful and pleasurable affects as the major organizers of good and bad internalized object relations. Thus, all affects have objects.

Object relations theory describes the infant as having a relationship with an "object:" another person or a tangible item such as a nursing bottle of milk. A major emphasis of object relations theory concerns the individual's awareness of himself or herself (Maddi, 1980).

Psychic development is thought to begin with the primary differentiation of self from not-self. Werner's (1956)

orthogenic principle noted that psychic development involves a change or differentiation in psychic structure.

Whenever development occurs, it proceeds from a state of relative lack of differentiation to a state of increasing differentiation and hierarchic integration.

(Werner & Kaplan, 1956. p. 866)

As behavior or psychic structures become more differentiated, they also become more hierarchically integrated. Such integration gives coherence and internal consistency to the subtle differentiations in behavior and psychic organization. For example, it is conceptualized that the developing child gradually learns to differentiate its family members from non-family members. Concurrently, the child hierarchically ranks the family member group as to the reliability of their providing a pleasurable experience. The process of differentiation results in increasingly subtle distinctions which are given an internal, ranked organization by the process of hierarchical integration.

As a result of interaction with the object, the individual creates an inner mental representation of the external object that is increasingly differentiated and hierarchically integrated. This mental codification of the object is thought to include the factual perception of the object and also its affective concomitants. One result of encoding the perception of the object with its accompanying affect is to create internal representations that do not necessarily accurately

parallel external reality (Blanck & Blanck, 1974). Object representations are based initially on pleasurable and unpleasurable experiencing. " . . . the child begins to build stable representation of the self and of others and to establish enduring investments and affective commitments" (Blatt & Lerner, 1983a, p. 193). As object representations become more developmentally advanced, they become more accurate depictions of external reality (Blatt & Lerner, 1983a).

Object relations theory considers personality development to result from the interaction of the individual's maturational level and their various experiences, especially their interpersonal experience (Dorpat, 1981). The interpersonal matrix is primarily based on the child's relations with its caretakers, but the impact of interpersonal relations extends even to the child's relations with its culture (Blatt & Lerner, 1983a). Both psychoanalysis and object relations theory hold an epigenetic concept of development in which psychic structures are the products of successive experiences between the individual and his or her environment (Dorpat, 1981). In other words, an individual's level of mental representation is thought to parallel his or her development of psychic structure such as the ego.

The individual's level of development and physical maturity mediates the creation of mental representations. For example, the child who is developmentally functioning at

the close of the sensorimotor level (Piaget, 1967) has achieved object permanency, which is the ability to internally represent an external object that is out of his or her line of sight (Flavell, 1985).

Piaget (1967, 1954) investigated the changing nature of the child's cognitive ability. The young child performs the action in the sensorimotor stage, but is increasingly able to merely contemplate action in the preoperational stage. The preoperational stage is characterized by egocentrism in both thought and language. In the concrete operational stage, the child is gradually able to contemplate nonaction concepts, although in a concrete manner. In the formal operations stage, at approximately age 12-13, the child is capable of performing symbolic and propositional thought.

Blatt and Lerner (1983a) developed the psychoanalytic parallel to Piaget's work when they outlined the stages for the child's development of the concept of the self and the object world.

Earlier forms of representations are based more on action sequences associated with need gratification; intermediate forms are based on specific perceptual and functional features; and the higher forms are more symbolic and conceptual. (quoted in Blatt & Lerner, 1983a, p. 195)

Although psychic development is thought to follow a typical sequence, development does not automatically occur.

Psychic development requires what Winnicott (1965) called the "facilitating environment." Object relations theory considers such an environment to consist primarily of empathic parenting (Dorpat, 1981). Investigators have sought ways to assess a child's present stage of object relations. This assessment is based on the assumption that object relations proceed in an ordered sequence that is parallel to other developmental changes in the child. Thus, observation of the child's physical maturity and skill level is thought to inductively indicate his or her intrapsychic level of object relations. Developmental psychologists have mapped childrens' predictable, age-specific sequence of relating to others (Erikson, 1963) and sequence of cognitive development (Piaget, 1967). Theoretically, knowledge of the developmental level also "provides us with a method for formulating the development of psychic defenses . . ." (Dorpat, 1981, p. 166).

By logical extension, the quality of the adult's object relations reveals the nature of his or her contact and involvement with significant persons during infancy and childhood. Thus, a measurement of the level and sophistications of one's object relations will indicate past object relationships and one's progress through developmental phases.

In summary, object relations theory brings a new emphasis to the primacy of early relations with others, a knowledge and experience of the self, and limitations on psychic

organization that are imposed by the developmental level. Although the object relations movement does not hold to a unitary theory, it can be generally stated to

. . . emphasize the tendency to develop a self. The Self is considered to be a composite of units, each an image deriving from significant interpersonal relations. Some units concern self-image (what you think of and expect from yourself), others involve object-images (What you think of and expect from other persons), and still others are affect dispositions (tendencies toward emotional states reflecting how you felt during interpersonal relations). (Maddi, 1980, p. 51)

Empirical Support for the Theoretical Construct of Object Representation

The more recent psychoanalytic literature has confirmed and elaborated early theoretical work. Blatt, Brenneis, Schimek, and Glick (1976) analyzed the development of the concept of the object in a normal population and in a sample of adolescent and young adult inpatients. Rorschach tests were administered to the normal subjects at four separate times as they aged from early adolescence to young adulthood. The human figure responses on the Rorschach were evaluated by the experimental instrument designated as the Developmental Analysis of the Concept of the Object Scale (DACOS). The results of this 20 year longitudinal study of normal subjects demonstrate a developmental progression in the structure of

the object representations. Specifically, as the normal sample aged, there was a marked increase in the frequency of accurately perceived, well-articulated full human figures that were engaged in appropriate and meaningful actions. These results were in the expected direction (Mahler, 1968) of younger subjects exhibiting less differentiated and articulated human figure responses and older subjects exhibiting more differentiated and articulated human figure responses. The Blatt et al. (1976) study demonstrated temporal changes in the construct that were theoretically predictable, and thereby contributed significantly to establishing validity of the construct.

Construct validity is further supported by demonstrating the discriminative ability of the level of object representation. Blatt, Brenneis, Schimek, Glick (1976), partially summarized above, conducted a comparison study of human figure responses on the Rorschach that were given by a normal sample and by adolescent and young adult inpatient samples. Statistically significant differences were found between the normal and inpatient groups. In the inpatient groups, significant relationships were found between the severity of psychopathology and aspects of inaccurately perceived human figures. Blatt et al. (1976) successfully used the construct of object representation to discriminate between the object representations offered by the normal sample and by the inpatient samples.

The discriminative function of level of object representation was supported by Spear and Lapidus (1981). Object representation, as measured by DACOS scoring on Rorschach responses and by the Krohn and Mayman (1974) scoring of manifest dream recall, differed stylistically in different character structure. As predicted by theory (Shapiro, 1965), the obsessive/paranoid borderline had structurally more advanced percepts than the undifferentiated schizophrenic. The obsessive/paranoid borderline had percepts that were more advanced structurally and the hysteric/impulsive borderline had percepts that were more advanced affectively.

Blatt and Lerner (1983b) also studied the discriminative value of the construct. They studied the differential structural aspects of object representations supplied by five persons diagnosed, respectively, as having nonparanoid schizophrenia, anaclitic depression, borderline narcissistic character disorder, introjective depression, and hysterical character disorder. Differences in their human responses on the Rorschach were generally in the direction predicted by Shapiro (1965). For example, in the patient diagnosed as hysteric, the object representations as measured by DACOS were accurately perceived full human figures with articulations that were primarily in terms of external, physical details rather than as having internal attributions.

Lerner and St. Peter (1984) also used the construct of object representation, as measured by DACOS, to discriminate

between the Rorschach protocols of different types of subject groups. Responses from outpatients who were diagnosed as having borderline or neurotic psychopathology were reliably separated from inpatients diagnosed as having borderline or schizophrenic psychopathology. A partial summary of their results include the finding that inpatients diagnosed as having borderline psychopathology perceived significantly more inaccurate human and quasi-human figures than did neurotics. In addition, these results permit the borderline diagnosis to be considered on a developmental continuum in that inpatient borderline object representations differed from those of outpatient borderline patients. In comparison to the outpatient borderline group, the inpatient borderline group had a relatively high frequency of accurately perceived malevolent responses. The Lerner and St. Peter (1984) study demonstrated the discriminative power of the construct of object representation with four patient samples.

Blatt et al. (1976), Spear and Lapidus (1981), Blatt and Lerner (1983b), and Lerner and St. Peter (1984) appear to have demonstrated that object representations differ, in a manner predictable by Object Relations theory as to structure and thematic content across different types of sample populations.

In contrast, Lerner (1983) studied the changing structure and thematic content that occurred within one psychotherapy case. Using a test-retest application of the DACOS, the

nature of the subject's object representations was paralleled by her progression in psychotherapy. Specifically, object representations given early in therapy revealed her developmental arrest at the sensorimotor level. Object representations sampled later in therapy were more abstract and gave evidence of increased differentiation between self and object.

Blatt, Wein, Chevron and Quinlan (1979) conducted a study of the relationship between parental representations and depression in a sample of normal young adults. The experimental instrument analyzed the content and structure of the object representation, and was based on spontaneous descriptions of significant others (parents and self). One finding was that the type of depressive experience and its intensity was significantly related to the cognitive level of the parent representation. These findings are consistent with theoretical formulations (Blatt, 1974) that distinguish an anaclitic or dependent depression from a developmentally more advanced introjective depression. The study reported a correlational relationship between level of object representation and types of depression.

Blatt and Berman (1984) examined Rorschach responses by means of three new conceptual approaches: thought organization, quality of object representation, and thought disorders. Sophisticated statistical manipulations resulted in identification of seven independent factors that enrich the information gathered from the Rorschach.

Converging lines of research such as these and clinical observation of both children (Mahler, 1968) and disturbed adults (Blatt & Ritzler, 1974) give further support to the theoretical concept of the development of the object.

Inspection of projective test data is the usual method to indirectly measure the developmental level of the individual's object representations. The rationale for the use of projective material has been clearly stated by Mayman (1967).

. . . (A) person's most readily accessible object-representation called up under such unstructured conditions tell much about his inner world of objects and about the quality of relationships with these inner objects . . . (Mayman, 1967, p. 17)

Such theoretical investigation has been based on projective test data, dream content, and spontaneously written descriptions of the parents. Mayman (1967) investigated thematic elements when he performed content analysis on Rorschach responses in order to derive level of object relatedness. As an extension of this use of test material calling for apperceptions, Mayman and Ryan (1972) studied early memories and Krohn and Mayman (1974) studied dreams. Blatt et al. (1976) has used human response on the Rorschach scales and an open-ended format to solicit descriptions of the subject's mother and father (Batt et al., 1979). Spear and Lapidus (1981) analyzed human responses on both the

Rorschach and in dream content. A variety of projective data has been used in these investigations, but Rorschach data have been the most frequently used.

The studies reported above differed in their design. Mayman's work (1967) required the clinician to empathically apply a scale to the patient's projective material. Blatt, Brenneis, Schimek, and Glick (1976) studied Rorschach responses of a normal population in a repeated measures design. Blatt, Wein, Chevron and Quinlan (1979) used a criterion-oriented study of concurrent validity in which the criterion, the Osgood (Suici & Tannenbaum, 1957, cited in Blatt et al., 1979) version of the semantic differential, was significantly correlated with an experimental scale based on an open-ended description of the parents. The Spear and Lapidus (1981) study was a correlational study of Blatt's (1976) DACOS and Krohn and Mayman's (1974) object representation scale for dreams. The Lerner and St. Peter work (1984) was a descriptive study of different levels of object representation among different pathological groups. Blatt and Berman (1984) used computer-assisted factor analysis of independent factors of Rorschach responses.

Overview of Personal Construct Theory

History of personal construct theory (PCT). As described above, Freudian metapsychology was altered by the ego psychologists and the object relations theorists. These later theorists added the dyadic element and elaborated the

concept of object relations as it applies to psychic development.

Harry Stack Sullivan, trained as a classical Freudian analyst, was foremost in this revision and extension of Freudian metapsychology. Sullivan (1953) acknowledged the "biological substrate of personality," but he considered personality development to be more influenced by early dyadic impact. He founded the interpersonal school of psychology.

Sullivan's recognition of the subjectivity of experiencing as the true concern of psychodynamic studies and his definition of this as interpersonal relations, marks the emergence in the clearest possible way of object-relational thinking disentangled from biology. (Guntrip, 1973, p. 43)

Sullivan eventually came to believe that the family-based dyad was a limited view of the social unit that acts upon the personality. He considered all behavior to be essentially interpersonal. Guntrip (1973), commenting on Sullivan's sociological emphasis, wrote that he explored the "growth of the individual ego in its ever-widening social milieu . . ." (p. 3).

Sullivan (1953) described the self-system as based on "reflected appraisals from others and the learning of roles which one undertook to live or 'which live one' The unique individual person was a complex derivative of many

others" (p. 17). He saw personality as a social phenomenon. Sullivan (1953) defined personality as ". . . the relatively enduring pattern of recurrent interpersonal situations which characterize a human life" (p. 111).

Sullivan expanded on the neo-Freudian metapsychology, yet he retained certain of the original Freudian viewpoints. As an example, he considered humans to be merely reactive to environmental events. Sullivan emphasized the individual's reactive response to the interpersonal environment when he described the sense of self as

. . . built up of all the factors of experience that we have in which significant other people "respond" to us. In other words, our self is made up of the reflections of our personality that we have encountered mirrored in those with whom we deal." (Sullivan, 1976, p. 249)

Sullivan introduced the cognitive variable in personality development when he wrote of the individual attaching personalized meanings to his or her experience.

What we have in our mind begins in experience, and experience for the purpose of this theory is held to occur in three modes These modes are: the prototaxic, the parataxic, and the syntaxic. I shall offer the thesis that these modes are primarily matters of inner elaboration of events. (Sullivan, 1953, pp. 28-29)

This theoretical sequence for the development of modes of thought appears similar to Werner and Kaplan's (1956) thesis of cognitive development by the processes of differentiation and hierarchial integration.

Sullivan's work integrated that of previous theorists and also added certain new emphases. As a neo-Freudian, he stressed the importance of experience, especially the experience of interpersonal events, on personality development. Sullivan also wrote of the individual's unique cognitive interpretation of interpersonal events.

Although George A. Kelly (1955), the originator of Personal Construct Theory (PCT), did not publicly acknowledge a theoretical debt to Sullivan, Kelly's theoretical stance was similar to that of Sullivan and did temporarily follow publication of Sullivan's work (Neimeyer, 1985). Both theorists considered personality development to result from the personalized meanings attached to interpersonal events.

Early in his career as a clinical psychologist, George Kelly successfully used Freudian metapsychology. Although his informal Freudian therapy was generally effective with the Depression era Kansas farmers he treated, Kelly found the Freudian explanations of life too pat and boring (Monte, 1980). Kelly began the experiment of offering "preposterous interpretations" to the clients.

. . . I began fabricating "insights." . . . some of them were about as un-Freudian as I could make them

. . . My only criteria were that the explanation account for the crucial facts as the client saw them, and that it carry implications for approaching the future in a different way. (Kelly, 1963, p. 521).

In this manner, Kelly discovered the cognitive element he termed Constructive Alternativism. He found that people were able to deliberately decide to have alternative constructions about themselves and their problems. His early clinical work led him to consider that individuals were free to apply a creative construal to both early life events and current circumstances. Unlike Sullivan, Kelly considered humans to be both reactive and proactive in the interpersonal environment. In other words, Kelly held that the individuals' cognitive structure both responded to events and controlled events.

To summarize the core belief of Personal Construct Theory, it is that personality development results from the individual's construal of events, and not from the events themselves.

Kelly's (1955) work, The Psychology of Personal Constructs, remains an essential text for Personal Construct theorists. The text formalized the theoretical discussions Kelly had had for years with student clinicians in his role as an educator. Kelly demonstrated a remarkable ability to attract numerous students to his Personal Construct Theory (PCT). A network of colleagues developed in the United States

with a subgroup in the mid-1950's collaboratively developing a test that would be based on PCT and would also systematically assess individual differences in cognitive structure. This method of gathering idiographic data, the Role Construct Repertory Test (REP), required the subject to code his or her interpersonal comparisons on a grid matrix that was hand-scored (Neimeyer, 1985).

A decade after Kelly formalized his theory in the United States, an international network of PCT theorists began actively collaborating and extending his work. The British group grew more rapidly than the group in the United States, primarily due to the enthusiastic leadership of Donald Bannister. Another factor in the rapid growth of the British PCT group was Slater's (1965, cited in Neimeyer, 1985) development of a computer program for the analysis of repertory grid patterns. British theorists applied PCT to a variety of psychological problems. Bannister (Bannister & Salmon, 1966) applied PCT to the study of schizophrenia and other clinical topics. Jack Adams-Webber of Canada, one of the theory's present leaders, worked with colleagues (Bannister, Adams-Webber, Penn, & Radley, 1975) to apply PCT to, among other topics, the study of thought disorder.

A. W. Landfield was among the early group of students in the United States who were attracted to PCT. Under his leadership, the University of Missouri became a major training and research center in PCT theory. This group conducted

extensive research into the psychotherapy relationship. Landfield's move to Nebraska stimulated the establishment of a major social and training center there. Landfield and Barr (1976) created and developed the construct of Ordination, an additional measure of cognitive organization, that was measured by the REP (Neimeyer, 1985).

Contemporary Personal Construct Theory

Kelly developed a rational, cognitive-based theory of personality. Kelly wrote that this specialized view of humans might be termed Man-the-Scientist. By this, Kelly meant that all humans are motivated by a need to control and predict events "as if" they are scientists. Kelly considered human biological requirements such as appetite, tissue needs, and sexual impulses to be secondary to a need to know and control events (Monte, 1980). It is the accurately functional construct system that makes control of events possible.

Constructs are the channels in which one's mental processes run . . . They make it possible to anticipate the changing tides of events . . . Forming constructs may be considered as binding sets of events into convenient bundles which are handy for the person . . . Events, when so bound, tend to become predictable, manageable, and controlled. (Kelly, 1955, p. 126)

These "bound events" or cognitive structures are termed constructs. Kelly (1955) defined a construct as follows

In its minimum context, a construct is a way in which at least two elements are similar and contrast with third. There must therefore be at least three elements in the context. There may, of course, be many more. (Kelly, 1955, p. 61).

Construct formation is considered to be a process that is ongoing across the individual's lifespan. However, Kelly did not emphasize the importance of early life experiences in the original formulation of the construct system (Maddi, 1980).

Developmental research within PCT supports the work of Piaget (1971) and Werner (1957) concerning the orderly sequence of cognitive change in the developing child. PCT researchers report that the developing child shows a gradual decrease in the relative number of their interpersonal constructs that refer to physical appearance, behavior and social roles (Barratt, 1977; Brierly, 1967; Dittle, 1968, cited in Epting, Landfield, & Duck, 1975). By midadolescence, a majority of their interpersonal constructs are based on personality constructs. Beyond age 15, there appears to be little further increase in the number of personality-based constructs (Hayden, 1982, cited in Epting & Landfield, 1985). PCT research and developmental research indicate that conceptual development is by progressive cognitive differentiation and by hierarchic integration. These cognitive substructures are integrated at progressively higher levels

of abstraction. Integration provides a linkage among a number of independent construct systems. Integration may be an essential aspect for the development of intelligence (Pope & Gilbert, 1985).

The functional differentiation of structures enhances the range of convenience of an individual's construct system. However, hierarchic integration of these differing substructures is necessary for the integrity of a person's construct system. (Pope & Gilbert, 1985, p. 116).

A construct system is the hierarchical order the individual assigns to his or her constructs. The individual does not construe all constructs at the same level of abstraction. Some constructs have broad utility in the individual's life, and others organize limited and specific events (Rychlak, 1981). The individual's construct system is not static. The construct system remains valid due to successive interpretations of previous events and new events, and by re-examination of contradictions between constructs (Monte, 1980). Construct modification is rational trial and error (Maddi, 1980).

Interpersonal constructs include both the factual perception of the other person and the individualized meanings attributed to the other person's appearance and character. The construct includes an expectation as to the other person's future behavior. The individual's emotional response to the other person is also encoded in the interpersonal construct.

A maxim of Personal Construct Theory is that interpersonal constructs can be recalled by simply naming the other person, and the entire cognitive structure will become available to the individual. The ease of this approach was defended by Kelly.

Are proper names expressions of constructs? Yes. A name is a way of seeing a likeness in one group of events which distinguishes it from another group of events. Over here, we have a group of events which may be seen as being alike by way of being "Mary events." Over there are the events, still within the range of convenience of the construct, which are "un-Mary-like events." "Mary" is a construct of events. (This is a) . . . functional definition of a construct. (Kelly, 1985, p. 114).

Individuals have a distinct idea of their own identity only to the extent "they can discern a specific pattern of similarities and differences between self and others" (Adams-Webber, 1985, p. 59). Interpersonal constructs enable us to codify our self in contrast to others.

In Personal Construct Theory, a role "is an ongoing pattern of behavior that follows from a person's understanding of how the others who are associated with him in his task think" (Kelly, 1985, p. 97-98). An individual's role constructs explain the social expectations they have of others. Knowledge of an individual's role constructs gives knowledge of the interdependence of their social experience.

Empirical Support for the Theoretical Construct of Integrated Cognitive Complexity

The Role Construct Repertory Test (REP) was designed by Kelly (1955), modified twice by Landfield (in 1971 and 1980, as cited by Nicholson, 1985) and was further modified in this study. The REP directly depicts the interrelationships the individual assigns among his or her constructs (Crockett, 1985). The REP is more accurately considered a method of gathering idiographic data, as structured by the individual, than as a test instrument.

Traditionally, the REP has been used to study cognitive complexity. A score represents the individual's number of functionally independent constructs (FIC). Bieri (1955) defined the term "cognitive complexity" as the degree of differentiation of the belief system. For example, individuals having a high FIC were considered to have cognitive complexity. Bieri suggested that cognitive complexity might be an adaptive asset.

Landfield and Barr (1976) were the first researchers to actually investigate the theoretical construct of cognitive complexity and its adaptive function. Their work confirmed Kelly's (1955) original statement that the complex, propositional thinker would have difficulty thinking in a systematic way. Such an individual would have a relative absence of linking relationships between his independent constructs. In other words, extreme cognitive complexity may be maladaptive.

Their second research result was that there is, apparently, an optimal level of hierarchial integration within a single construct. Ordination (ORD) was the name they gave to this second measure of cognitive organization.

Phillips (1981) criticized those earlier studies (Chance, 1958; Tripoldi & Biere, 1966) that considered cognitive complexity to be a simple continuum measure. He faulted previous work that did not consider that optimal functioning existed between extreme levels of "too many" constructs, as in a loose but complex cognitive organization, and "too few" constructs, as in a very simple cognitive system. Phillips highlighted the minimax or curvilinear nature of cognitive complexity. He speculated that hierarchial organization might interact with cognitive complexity. For example, two cognitively complex individuals (High FIC) might have very different adaptive potential. Specifically, the individual with more between-construct differentiation (High FIC) would be expected to be well adapted if he or she concurrently experienced an adequate level of within-construct differentiation (High ORD). The individual with High FIC and Low ORD scores would have less adaptive capability. Phillips' minimax principle is that a High FIC score could result in either an adaptive or maladaptive position, depending on the interaction effect of Ordination.

The Landfield and Barr (1976) study is important for the additional reason that, for the first time, subjects'

construct systems were evaluated by two interlocking measures. The cognitive complexity was measured by the number of their Functionally Independent Constructs (FIC score), and hierarchial integration within constructs was measured by their Ordination (ORD score). The high and low patterns of the FIC and ORD scores were combined to produce four quadrants. Quadrant scores appeared to discriminate among subjects having four levels of interpersonal success. Specifically, subjects in quadrant 1 (Low FIC/Low ORD) were characterized as "lacking in richness of perspective" as they had a simple, non-integrated cognitive system. They often had difficulty understanding other subjects in the group. Subjects in quadrant 2 (Low FIC/High ORD) had a relatively simple but well integrated construct system. They all had stable lifestyles. Subjects in quadrant 3 (High FIC/Low ORD) had dysfunctional construct systems in that their thoughts were scattered and they were difficult for others to know. Subjects in quadrant 4 (high FIC/High ORD) were similar to subjects in quadrant 2 in that they were least maladjusted. They may be most able to predict and to interpersonally understand others.

Angelillo (1982) used the Landfield and Barr (1976) measures of FIC and ORD in a study of three subject groups. The REP was administered to a group of subjects diagnosed as being depressed, a control group composed of psychiatric patients diagnosed as having a non-affective disorder, and

a control group composed of normal subjects. Although no significant differences in cognitive complexity were found between the groups, the normal group had significantly higher ordination scores than either the depressed or psychiatric control groups. The author suggested that Ordination may be a general adaptation measure. Angelillo's results partially converge with those of Landfield and Barr (1976).

Nicholson (1985) studied acute, hospitalized subjects diagnosed as being psychotic and hospitalized subjects diagnosed as being substance abusers. He reported an interaction effect between cognitive complexity and hierarchical integration that was predicted by the Landfield and Barr (1976) study. Specifically, those subjects whose pattern of FIC and ORD scores placed them in quadrant 3 (High FIC/Low ORD) also scored highest on measures of current maladjustment. This replication of a portion on the Landfield and Barr (1976) work gives support to the theoretical construct of integrated cognitive complexity.

The Psychological Construct of Maladjustment

A model of developmental psychology offers an explanation for psychological outcomes such as the construct of maladjustment. Both theories under study here offer an explanation for maladjustment, which may be defined as a failure to adapt to the conditions of one's life. Extreme maladjustment is defined as psychopathology.

Maddi (1980) considers maladjustment and its treatment to be a core concern of Object Relations theorists. The extent of maladjustment is identified by the degree of disintegration of the self, the punitive nature of the superego, and the degree of work and social impairment. The immature individual carries "the seeds of, or vulnerabilities to, psychopathology" (Maddi, 1980, p. 303).

The Personal Construct theorist is "adamant on the uniqueness of people, and the attendant uselessness of attempting to specify what they may be like in advance of actually encountering them" (Maddi, 1980, p. 387). Development of maladjustment thereby depends on the individual's construal of his or her life events, and not on a particular sequence of events. The Personal Construct theorists explores the individual's construals by examining his or her conceptual structure (Angellilo, 1982).

Integration of Object Relations Theory with Personal Construct Theory

There is general agreement that the child's developing psychic structures change in an orderly sequence. Both theories reflect Piaget's (1967) model of differentiation and Werner's (1956) model of hierarchical integration. Object Relations Theory holds that these successive changes in cognitive theme and structure are most fully explained by a dynamic understanding of early childhood experiences. In contrast, Personal Construct Theory outlines these evolving

changes in cognition as successive, willful, alternative constructions of reality that extend throughout the life span. Both theories offer an explanation for the process by which interpersonal events are perceived, interpreted in the individual's unique style, and encoded in a mental structure.

Both theories consider these mental structures to be an internal reference point against which the individual subsequently contrasts events. The mental structures are an internal anchor point that provide the criterion for evaluating later interpersonal events. Those mental structures that are hierarchially organized allow the individual to experience his or her life events as having an internal consistency.

Both theories make provision for the encoding of affects that are concurrently experienced with the interpersonal event, including such judgments as "bad" and "good." The Personal Construct Theorist would consider a bipolar construct to be an adequate explanation of such primitive splitting and encoding of an affect. Adherents of either theory expect that cognitive structures play an active role in interpersonal relationships and are especially important in relations with significant others.

This sizable listing of theoretical similarity strongly suggests that both Personal Construct Theory and Object Relations Theory are developmentally based. The historical

emphasis of Object Relations Theory suggests it to be the theory that is more influenced by developmental issues.

By virtue of being developmentally based, a core concept of both theories is their explanation for the origin of personality. A minor concept is their explanation for maladjustment. Object Relations Theory emphasizes the historical aspect of maladjustment and Personal Construct Theory emphasizes the contemporary aspect of maladjustment. A full understanding of these theories will take into account their different views of maladjustment.

Purpose and Significance of the Study

Object Relations theorists have recently begun to empirically investigate its tenets. This process may be analyzing the possible relationship between Object Relations Theory and Personal Construct Theory. The purpose of the present study is to determine the degree of conceptual convergence between Object Relations Theory and Personal Construct Theory.

If, as predicted, it can be shown that the models actually describe the same psychological construct, the field of psychology would benefit from this conceptual rapprochement.

Hypothesis of Study

It was hypothesized that individuals who display a well developed level of object relations, as described by Object Relations Theory, would also display a highly adaptive blend of cognitive complexity and ordination, as described by

Personal Construct Theory. Along these same lines, it was hypothesized that individuals who display an inadequately developed level of object relations, as described by Object Relations Theory, would also display a maladaptive blend of cognitive organization, as described by Personal Construct Theory.

Specifically, it was hypothesized that the score on the REP measure will be correlated with the score on the DACOS measure. This analysis would indicate the direction and strength of any correlational relationships between REP and DACOS, and by inference, the degree of convergence between the theories of interest.

A full understanding of the possible convergence between the theories required a study of their explanation of maladjustment. Statistically examining the effects of current maladjustment may permit a better measurement of the effects of historically based maladaptation on their common variance. Maladjustment is defined in this study as a global measure of current psychopathology.

CHAPTER II

METHOD

Subjects

One hundred thirty-six students in various undergraduate psychology classes at a large Southwestern state university served as subjects. Research credit was offered in exchange for their voluntary participation.

Demographic data are reported in Table 1 (Appendix G) for the sample of 136 college students. The age of the sample ranged from 18-48 years ($M = 22$, $SD = 4.89$). Over 20 percent of the subjects were 19 years old (22.8%). Males comprised 41.2 percent of the sample ($n = 56$). Eighty percent of the sample were Caucasian ($n = 109$) and 13 percent of the sample were Black ($n = 18$). The class standing for 30 percent of the sample was Freshman ($n = 40$), 24 percent were Sophomore ($n = 32$), 23 percent were Juniors ($n = 30$), 20 percent were Seniors ($n = 26$), and two percent were Graduate Students ($n = 3$).

Instruments

Developmental Analysis of the Concept of the Object Scale (DACOS). This scoring system was devised by Blatt, Brenneis, and Schimek (1976) to assess the developmental level of subjects of a study of the formal properties of their human responses on the Rorschach. Three developmentally derived

aspects (Werner, 1948; Werner & Kaplan, 1963) of the responses were scored: differentiation, articulation, and integration. Differentiation was defined as the nature of response. Possible responses were partial quasi-human, partial human, full quasi-human, or full human responses. Articulation was defined as the elaborated perceptual (e.g., size, posture, clothing), and functional (e.g., age sex, role, or specific identification) attributes. Integration was defined as the quality of interaction between the object and the action (e.g., motivation of action, four levels of integration of the object with its action, interaction with another object, content of the interaction). In each of the three categories the human responses were scored along a developmental continuum. The developmental analysis also scored the accuracy of the human response. The scoring manual used in the application of this scale appears in Appendix A.

Inter-rater reliability for the DACOS was reported (Blatt et al., 1976) for a sample of normal subjects. The two undergraduate judges disagreed only once on what constituted a scorable human response. In scoring all but two dimensions, the judges agreed on over 90 percent of the ratings; in these two dimensions the degree of agreement was 84 percent and 82 percent. Reliability in scoring the entire patient sample, in both selection of adorable responses and the scoring of subcategories, was reported as having greater than 90 percent agreement.

The inter-rater reliability level was replicated in Lerner and St. Peter's work (1984). The authors achieved a percent of agreement that ranged from 70 percent to 93 percent. Reliability estimates fell below 80 percent for only two categories.

Role Construct Repertory Test (REP). The original REP was designed by Kelly (1955), and modified by Landfield (1971). The present instrument (Appendix B) was based on Landfield's recent modification (1980) that adds a meaningfulness scale to the REP format. The present study used a slightly modified version of Landfield's (1980, cited in Nicholson, 1985) format. This instrument required subjects to supply the names of persons known to them who fulfill specified role titles. Examples of role titles were the subject's mother, the most successful person they know, and a person who dislikes them. The subject wrote the names of persons having these specified role titles on column one through thirteen.

The subject was asked how two persons assigned to certain columns are like in an important way, and how they are different from another listed person. The subject wrote down his or her decision as to how the named persons are alike and how they are different: the "alike" and "different" designations are the opposite poles of the subject's bipolar construct. Rows in the interpersonal matrix of the REP represented the subject's constructs. Instructions for administering the modified REP are in Appendix B.

The meaningfulness scale was part of the response sheet of the REP. The subject assigned a meaningfulness score by rating each person named in a column on each construct named on a row. The meaningfulness scale ranged from -6 to +6, including a midpoint of zero.

Two scores were derived from the Repertory Test: the Functionally Independent Construction score (FIC) and the Ordination score (ORD). The meaningfulness scale provided the data base for the computer comparisons (Landfield, 1980, cited in Nicholson, 1985) that derive these two scores. Landfield (1976) identified the FIC as a measure of cognitive complexity and the ORD as a measure of within-construct integration. Procedures for obtaining the REP scores appear in Appendix C.

Reliability of this instrument was assessed by Field and Landfield (1961). They used 80 subjects and varied the conditions of the test administration. Conclusions were that, given the same elements or list of significant others, the subjects, after a two week interval, produced similar constructs (Pearson $r = .79$). A second finding was that subjects who were re-administered the complete REP test reproduced their earlier constructs although new elements could be considered (Pearson $r = .80$). Pederson (1958, cited in Zervopoulos, 1981) reported a correlation of .77 for role titles when subjects were tested one week apart. These test-retest coefficients indicated that the REP demonstrates adequate stability.

Landfield and Barr (1976) reported that .78 is the test-retest reliability for ordination when a five week interval is used. Landfield and Barr (1976) reported that .82 is the FIC test-retest reliability when a five week interval is used.

Minnesota Multiphasic Personality Inventory (MMPI).

The instrument has been widely used as a broad-based test of current psychopathology. It has a format consisting of 566 true-false items which are scored on four validity scales and 10 clinical scales.

The test-retest correlations for the validity and clinical scales ranged from .68 (Lie Scale) to .89 (Depression Scale). These figures pertained to male psychiatric cases tested with a one-to-two week interval between assessments. Female psychiatric cases who were tested with a similar time interval obtained test-retest correlations that ranged from .59 (Psychopathic Deviate Scale) to .86 (F Scale).

Procedure

One hundred thirty-six adult students were recruited to serve as voluntary subjects in this study. Subjects read and signed a statement of informed consent (Appendix D) which stated the extent of the confidentiality of their test data and assured their anonymity. This study was part of a series of programmatic studies, therefore, subjects were given additional tests not relevant to the present study (see Appendix

F for a description of the other tests administered). After completing a Personal Data Sheet (Appendix E) which includes such questions as their marital status, birth order, history of family moves or relocations, parents' marital status, etc., the subjects were administered a battery of personality tests. The tests were administered in the following order: REP test, Blatt's Self and Object Scale (SOS), the Rorschach, the Self scale, and the Minnesota Multiphasic Personality Test (MMPI).

The personality tests employed in the present study were the Rorschach, the REP test, and the MMPI. The Rorschach was administered in the Rapaport method as suggested by Blatt (Blatt et al., 1976), in which inquiry is conducted immediately following free association to each card. A TOTAL DACOS score was formed by summing the response categories to give a total item score and then summing all of these total item scores to create a Total Score. This Total Score was then divided by R (total number of responses on the record) minus H (total number of human responses on the record). The result of these computations was considered to be the subject's TOTAL DACOS score. The DACOS scale was applied by three raters. Inter-rater reliability estimates of the three DACOS scorers ranged from an Alpha coefficient of .79 to .95 across subtotal categories, with a total Alpha coefficient of .96.

The REP was administered with a modification of Landfield's (1980) 15 x 16 grid. Landfield's instructions were not modified. However, Landfield's role titles were

modified for columns 14, 15, and 16 which were labeled as "Perfect Mother," "Perfect Father," and "Self," respectively. The test was scored by computer.

Combined REP scores were formed by the method first suggested by Angellilo (1982) and used subsequently by Nicholson (1985). Angellilo's study, which used a college sample, reports specific FIC scores that were used to assign the subjects to a high FIC (FIC = 16 or more), moderate FIC (FIC = 6-15), or low FIC (FIC = 5 or less) group. Angellilo's (1982) work was further utilized in the categorization of ORD scores. Subjects were assigned to a low ORD (ORD = 42 or less) or high ORD (ORD = 43 or more) group. Six combined REP categories resulted from these three levels of FIC and two levels of ORD.

These six levels of ordinal data were given the linear ranking that was reported in Nicholson's (1985) work. The six categories of combined REP scores were ordered from most dysfunctional (Category 1) to least dysfunctional (Category 6). The categories were as follows: Category 1 = High FIC/Low ORD, Category 2 = Low FIC/High ORD, Category 3 = Low FIC/Low ORD, Category 4 = High FIC/Low ORD, Category 5 = Mod FIC/Low ORD, and Category 6 = Mod FIC/High ORD.

The 399-item version of the MMPI was administered and scored in the standard way. The Dahlstrom, Welsh, and Dahlstrom (1972) college norms (cited in Greene, 1980) were used to convert scores of the present college population

into K-corrected T-scores. In this study, the variable of Maladjustment was defined as the number of clinical scales that are measured to be at or above a T-scale rating of 70 (Heilbrun, 1962, cited in Nicholson, 1985). The number of MMPI clinical scales over 70 can range from zero to 10, with the most highly maladjusted person obtaining 10 scales over a T-scale of 70.

CHAPTER III

RESULTS

Descriptive Statistics on Measures

Combination REP scores were created from the Functionally Independent Constructs (FIC) and Ordination (ORD) scores. Subjects achieved total FIC scores that ranged from 2-30 ($\underline{M} = 9.180$, median = 8.000, $\underline{SD} = 4.835$, skewness = 1.544, kurtosis = 3.039). Total ORD scores ranged from 15.28-52.98 ($\underline{M} = 41.903$, median = 43.060, $\underline{SD} = 7.369$, skewness = -.924, kurtosis = .855). The highest frequencies were in REP Category Five ($f = 38$) and Category Six ($f = 55$). The lowest frequency was in Category Four ($f = 5$). Category One ($f = 9$) and Category Two ($f = 8$) are considered to be the least adaptive.

A TOTAL DACOS score was formed by summing the response categories to give a total item score and then summing all of these item scores to create a Total Score. This Total Score was then divided by R (total number of responses on the record) minus H (total number of human responses on the record) to control for response productivity (cf. Blatt et al., 1976). Subjects achieved TOTAL DACOS scores that ranged from 0-26 ($\underline{M} = 4.129$, $\underline{SD} = 3.742$, skewness = 2.491, kurtosis = 9.624).

The Maladjustment score was the number of clinical scales on the MMPI that were at or above T-score value of 70. Subjects achieved Maladjustment scores that ranged from zero through eight elevated scales ($M = 1.114$, median = .000, $SD = 1.901$, skewness = 2.008, kurtosis = 3.528).

Descriptive statistics for the measures of REP, DACOS, and Maladjustment are reported in Table 2 (Appendix G). Based on the skewness and kurtosis reported for the various measures, it was clear that the range of variability for these measures was quite limited. The skewed nature of the distribution of these personality results are reported in Table 3 (Appendix G).

Relationship between DACOS and REP

It was hypothesized that the score on the REP measure would be correlated with the score on the DACOS measure. A Pearson Product Moment correlation coefficient was obtained between DACOS and REP to test the hypothesis. The hypothesis was not supported by these data. However, the obtained correlation coefficient approached the level of significance ($r = .1671$, $p = .055$).

Further understanding of the relationship between DACOS and REP was attempted by evaluating the correlation of each with Maladjustment. A Pearson Product Moment correlation coefficient between DACOS and Maladjustment revealed the absence of relationship ($r = .1448$, $p = .098$). A Pearson Product Moment correlation coefficient between REP and

Maladjustment also revealed the absence of relationship ($\underline{r} = -.0073$, $\underline{p} = .935$). These results are reported in Table 4 (Appendix G).

The profound lack of variability in each measure precluded further analysis of the three measures by partial correlation. Any such results would have been indeterminate. Further analysis of Maladjustment was therefore unnecessary.

Additional Analyses

In that the correlational relationship between DACOS and REP approached the level of significance ($\underline{r} = .1671$, $\underline{p} = .055$), a further statistical investigation of this relationship was attempted. The 15 x 16 REP matrix was modified so as to excerpt columns 14, 15, and 16. These columns include the role designations of Perfect Mother, Perfect Father, and Self. The REP components, which are the FIC and ORD scores, were then correlated with DACOS. The Pearson Product Moment correlation coefficient that was obtained between DACOS and FIC was nonsignificant ($\underline{r} = .0097$, $\underline{p} = .456$). The Pearson Product Moment correlation coefficient that was obtained between DACOS and ORD was found to be statistically significant ($\underline{r} = .1544$, $\underline{p} = .038$). These data are reported in Table 5 (Appendix G).

Both theories posit that mental change, measurable by their respective scales, occurs as the individual ages. A Person Product Moment correlational analysis of DACOS and Age ($\underline{r} = -.0054$, $\underline{p} = .951$) and REP and Age ($\underline{r} = .0051$, $\underline{p} =$

.935) indicated that there was no such relationship in this sample. These data are reported in Table 6 (Appendix G).

CHAPTER IV

DISCUSSION

Impact of Sample Characteristics

This college sample shows an extremely limited variability. The majority are 22-years-old or younger, Freshman or Sophomores, and exhibit normal personality characteristics as measured by the REP and MMPI. The majority are functioning at a low maturity level as measured by the DACOS.

This sample achieves REP scores that replicate previous work. The median REP scores do not differ significantly from those reported for a college sample by Zervopoulos (1981). The combined REP category frequencies (Table 2, Appendix G) are distributed in a pattern that replicates the work of Nicholson (1985). Similar to Nicholson's study, the most adaptive categories (Category Five and Category Six) have the highest frequencies. Further, the least adaptive category (Category One) have one of the lowest frequency counts.

This replication of previous REP assessment includes the finding that a young college sample is generally well adapted. It follows that the less adaptive REP categories are represented by very few subjects. The design factor of a relatively large sample size is insufficient, with this

type of sample, to compensate for the predictably low variability in the REP scores.

The restricted range of variability is also seen in the DACOS results. Generally, the object representations reflect a lack of psychological maturity. It is unknown if low variability in DACOS is a usual finding in a college sample. Such normative data has not, to this investigator's knowledge, been published.

The restricted range of variability is also present in the distribution of Maladjustment scores. The sample endorsed very few maladjusted responses on the MMPI.

The factor of Age does not have the expected correlational relationship with either the REP or the DACOS measures. This is unexpected in that both measures are described in the present study as being developmentally based. However, the lack of variability is so restricted that the factor of Age cannot be adequately evaluated. The restricted variance confounds the correlational analysis to the extent that no Age-related correlational conclusions can be made.

Relationship between DACOS and REP

The hypothesis indicates an expectation that the score on the REP measure is associated with the score on the DACOS measure. The association between the scores approaches but does not meet the level of significance. Although the correlational analysis is nonsignificant, the REP does explain a very minor portion of the variance within DACOS (2.8%).

The convenience of recruiting a college sample is offset by the severely restricted range of variance in such a sample of young adults. The quite limited variance in this sample confounds these results. It can not be stated with certainty that there is no relationship between DACOS and REP, but only that in this homogeneous sample, no such relationship could be determined.

It is not surprising that no correlational relationship is found between the minor construct of maladjustment and the other measures employed. Once again, the severely restricted variance leads to indeterminate results. A sample that produces greater variability in these measures may demonstrate a significant correlational relationship between DACOS and Maladjustment and between REP and Maladjustment.

The variable of Age does not have the expected correlational relationship with either developmentally based measure. However, the lack of variability is so severe that the variable of Age cannot be adequately evaluated. The restricted variance confounds the correlational analysis to the extent that no Age-related correlational conclusions can be made.

The lack of support for the hypothesis of this study may be due, in part, to factors other than the restricted range of variability. For example, these results may be due to inaccuracy in the measuring scales. However, this seems

unlikely in that the DACOS, the REP and the MMPI have been used for years to measure object representation, cognitive complexity, and psychological maladjustment, respectively.

It may be that investigation of this hypothesis requires greater design precision. For example, the inclusiveness of the construct of adequate object relations, as described by Object Relations Theory, may have contributed to the severe lack of variability in the DACOS scores. A more detailed investigation of one aspect of adequate object relations, such as the Blatt et al. (1979) open-ended description of the parents, might have been usefully correlated with parental descriptions on the REP. A more exact measurement of these or related sub-constructs might be expected to result in greater variability, even given the restricted characteristics of this sample.

These indeterminate results may have been influenced by a novel application of the DACOS measure. In the present study, the TOTAL DACOS is derived in a different manner from that first suggested by Blatt et al. (1976). This change in computational form may have resulted in a DACOS score that is significantly different in meaning from that reported by Blatt. Another possible confound is in the present application of the scoring categories of differentiation, articulation, and integration. However, the high estimate of the inter-rater reliability indicates that the scoring categories were used in an internally consistent manner.

This study's novel application of the REP measure may have also influenced these results. A post-hoc analysis of this possibility was conducted by modifying the 15 x 16 REP matrix to a 15 x 13 matrix. This modification excerpts the role designations of Perfect Mother, Perfect Father, and Self. Removal of these three role designations results in a REP format that is more similar to Landfield's original format. Furthermore, it was speculated that removal of these role designations, which might be affectively enmeshed with other REP role designations, would increase the variability of the REP measure. Following these statistical manipulations, the relationship between REP and DACOS was re-examined. The REP component scores of FIC and ORD are found to have different relationships to DACOS. Only the ORD score, considered by Angelillo (1982) to be a measure of developmental adaptability, was found to have statistically significant relationship to DACOS. Although the significant relationship between DACOS and the reformulated REP is interesting, the results of such a post-hoc manipulation are of less importance than the original correlation. It must be emphasized that the data from this study do not support the hypothesized relationship between DACOS and REP.

Alternatively, the lack of strongly convergent results may simply be due to the lack of a relationship between Object Relations Theory and Personal Construct Theory. The weakly significant correlational results in this study may

be spurious. Unfortunately, these data do not permit a clear judgement as to the presence or absence of convergent validity.

Practical Versus Theoretical Significance

This study demonstrates a minimal degree of theoretical convergence. The maximum amount of variance accounted for is only 2.8 percent. There is a statistical relationship but only limited utility. This study did not identify the specific psychic structures that the models convergently explain. Furthermore, the extent that is explained is quite minimal.

Implications for Future Research

Although the data from this study do not support the hypothesized relationship between DACOS and REP, a trend toward theoretical convergence is suggested. The post-hoc statistical manipulation, which indicated a statistically significant correlational relationship between DACOS and REP, may indicate that further research is warranted. The highly restricted range of variability and the weakly positive correlational relationship may be either spurious or an underreport of a robust relationship. A more powerful test of this presumed convergence would be a subsequent study in which the sample is larger and has greater diversity in age, pathology, and psychological maturity.

It is curious that the subjects tested here produce such homogeneous results. In the absence of standards for

judging the demographic characteristics of a college sample, the youthfulness of the present sample cannot be adequately evaluated. However, an informal evaluation of these subjects is that they are relatively youthful and have had limited opportunities for relationships outside the nuclear family. Such a sample is expected to have lower scores on measures of interpersonal maturity such as the DACOS and, to a lesser extent, the REP. The inadvertent effect of working with an interpersonally inexperienced sample is that sensitive measures of psychological maturity are skewed. Such a sample is expected to have normally distributed scores for variables that are not developmentally based.

Conversely, if this sample is very similar to other college samples, there are implications for other studies. A severely reduced range of variability creates equivocal results, which pose a threat to the internal validity of the study. Without internal validity, the external validity or generalizability of results is also suspect. It is unlikely but possible that college-based studies that report significant results are actually reporting spurious findings.

Alternatively, it is remotely possible that this university's students share characteristics that are different from students at other universities. Extraneous factors such as the university being a large State school and a commuter campus cannot be ruled out as confounding factors that restrict the variability.

Summary and Conclusions

The purpose of the present study was to investigate the possibility of conceptual convergence between Object Relations Theory, as presented by DACOS, and Personal Construct Theory, as represented by REP. Statistical support for such convergence approaches but does not achieve the level of significance.

The lack of robust statistical support for conceptual convergence is due, in part, to the characteristics of the sample. The majority are 22-years-old or younger, Freshman or Sophomores, exhibit normal personality characteristics as measured by the REP and MMPI, and are functioning at a low maturity level as measured by the DACOS. An extremely restricted range of variance is known to interfere with the measurement of a correlational relationship.

It is of interest that even with this profound lack of variability a statistical trend toward convergence is demonstrated. These results indicate that further investigation is warranted. Conceptual convergence would be more powerfully tested with a larger sample that has greater diversity in age, pathology, and psychological maturity.

This study replicates certain aspects of previous work. This analysis of normal college students replicates Nicholson's (1985) work which indicates that a normal college sample would have a high representation in REP Category Five and Category Six, the most adaptive REP categories. In

addition, this study replicates Angellilo's (1982) work in establishing REP norms for a college sample.

Appendix A

DACOS Scoring Manual

The importance of the human response on the Rorschach has been noted often in a variety of contexts, but generally with a minimum of theoretical elaboration. Aspects of these responses may have particular relevance for the study of the development of the concept of the object and its impairment in psychopathology. This scoring system is an attempt to apply developmental principles of differentiation, articulation, and integration (Werner, 1984; Werner & Kaplan, 1963) to the study of human responses given to the Rorschach.

Differentiation is defined as the nature of the response with human content (that is, the type and completeness of the human figure); Articulation is defined as the degree to which the response was elaborated; and Integration is defined as the way the concept of the object is integrated into a context of action and interaction with other objects. Within each of these areas, categories were established along a continuum based on developmental levels. Within each category, ratings ranged from developmentally lower to developmentally higher levels.

CATEGORIES OF ANALYSIS AND SCORING PROCEDURES

SELECTION OF RESPONSES

Step 1 - Select Responses to be ScoredA. Human and quasi-human responses.

All human and quasi-human (H and {H}) responses are scored. Examples:

"a man with sunglasses on"

"two soldiers"

"a witch"

"two women stirring a pot"

"baby"

"people"

"dwarfs"

"angels flying around"

Human details and quasi-human details (Hd and {Hd}) are scored (1) if they involve human activity (e.g., talking, pointing, struggling, or (2) if no human activity, the response is scored if it contains some description of explicit human or humanoid characteristics and involves a substantial portion of the card and not just a small rare or edge detail. Thus, the following responses would be scored, provided they are not just a small rare or edge detail:

"the face of an old man with wisps of hair on the side"

"a girl's head"

"a vagina"

"a baby's face"

"baby's hands with mittens on"

"face with a large hooked nose"

"faces of 2 angels"

"devil's face and horns"

"a witch's pointed nose"

The following responses would be scored regardless of their location (due to human activity implied):

"2 angels' faces talking to each other"

"people's feet walking along"

"devil's mouth laughing"

"a tall person's head looking in a mirror"

"a penis rising"

"a woman's finger pointing"

B. Animal Responses

In some rare instances, animal responses are classified as quasi-human if the animal is explicitly given qualities that only a human could have. The exceptional quality of this classification must be emphasized. It is not meant to include all responses scored Animal Movement (FM). Though the following responses might be scored FM, they would not be included as a human or quasi-human response:

1. Human-like actions which could be achieved as the result of special training and which might, therefore, be expected in the context of a circus act., e.g., "2 bears riding bicycles."

2. Activities which humans perform, but which can also be performed by animals (e.g., rubbing noses). The human content must be explicit. If, for example, "Bugs Bunny" is given as a response, it is scored only if Bugs Bunny is engaged in a clearly human action. Thus, Bugs Bunny crying or talking would be scored as a quasi-human ({H}) response. Applying these criteria, the following animal responses would be scored as quasi-human:

"a hookah smoking caterpillar . . . from Alice in Wonderland"

"two drunken penguins leaning on a lamp-post . . . they're definitely sloshed."

"two lobsters coming out of a saloon . . . and they kind of have their arms around one another."

"sea gull . . . laughing, making fun of anybody."

"two frogs . . . tete-a-tete . . . two angry frogs, their mouths are downcast."

"spiders (at at insect ball) eating spareribs."

SCORING PROCEDURES

Step 2 - Accuracy of the response. Responses are classified as perceptually accurate or inaccurate (F+, F₊, F₊, F-). F+ or F₊ responses are classified as accurate and F- responses and F₊ responses are classified as inaccurate (Rapaport, Gill & Schafer, 1945;

Allison, Blatt & Zimet, 1968). The F_+ score refers to an essentially good form level response with some traces of weakness of perceptual organization in it; the F_+ score refers to an essentially poor response, but with some traces of good perceptual organization. The criteria for perceptual accuracy are as follows:

F+: The unusually well developed and articulated use of form in a manner that enriches the quality of the percept without sacrificing the appropriateness of form involved. The F_+ answer need not involve an "original" percept, but rather should be unique by the manner in which the form is used and specified.

E.g., Card IX (whole) - Free association: "Hey, that's pretty, like a floral arrangement."

Inquiry: "It's very symmetrical and the top parts, the orange c b s.t. lik gladiolas, + the green s b leaves or ferns, + the lower part, the pink c b a k. o. vase or flower holder."

E.g., Card CI (half of blot) - Free association:

"It's lik a ship at nite in battle, its being fired on, c the shell splashed in the water in front of it." Inquiry: "C the outline of the ship, the bow and superstructure + here in front is a splash, a big one, lik a shell exploded." (at nite?) "It's all black lik at nite."

F+: The obvious, easily developed use of form, wherein the content and blot areas are congruent. The answer is generally commonplace, and easy to see, with no enrichment to the quality of the answer by the manner in which the form is used and specified.

E.g., Card III (D2) - Free association: "Thes r ppl diving in unison." Inquiry: "Ther heads r down lik they were just beginning a sommersault + the legs r extended."

E.G. Card VI (whole) - Free association: "Ther's a totem pole up on a hill." Inquiry: "It would b a big one, cause its pretty small in proportion to the hill, c all of this bottm is the hill & the totem is here lik an Indian one w/ the wings carved and e.t."

F+: The unconvincing, ill-conceived use of form manifesting a shift away from a congruence between the blot area and the response content. Form fit is not grossly distorted, yet fails to meet the criterion of being easily perceived.

E.g., Card I (Dd 34) - Free association: "This prt is a golf umbrella, its closed up." Inquiry: "Thyr shaped like that when thyr closed up, c rite here it comes up to a point."

E.g., Card X v(whole) - Free association: "Fire-works, lik a starburst, all if dif directins."

Inquiry: "It ll its shootg out + all the dif-ferent colors makes me think of fireworks."

F-: The distorted, arbitrary, unrealistic use of form as related to the content offered, where an answer is imposed on the blot area with total, or near total, disregard for the structure of the area.

E.g., Card VIII (D 2) - Free association: "An indian womb." Inquiry: "Yeah, its all red so it must be an Indian." (Not sur I c it as u do.)

"Well all ths, wombs r big lik this + here is the openg, the crack wher the baby comes thru."

E.g., Card I (Whole). Free association: "Two animals sitg on a bettle." Inquiry: "Well the bettle is in the middle, u can c the hard shell, + there r 2 animals, lik bears w/ big ears sittg on ea side of the bettle." (Hard shell?)

"Its all shiny lookg so it must hard + bettles have hard shells."

- Step 3 - Differentiation. Here responses are classified according to types and ecompleteness of figures perceived; where the figure or subject of the action are quasi-human details (Hd), human details Hd; full quasi-human figures (H); and full human figures, H.
1. Quasi-human details. (1 point) Here only part of a quasi-human figure is specified. Examples:

"angel's face"

"witch's head"

"devil's face"

2. Human details. (2 points). Here only part of a human figure is specified: Examples:

"hands strangling"

"faces staring at each other"

"man's face with a beard"

"a woman's breast"

3. Quasi-human responses. (3 points). Here the figures are whole but less than human or not definitely specified as human. Examples:

"A butterfly singing opera"

"Two drunken penguins"

"A beddah with a jewel in the belly"

"Witches"

"Dwarfs"

"Two opposing forces, sticking out arms and hands. Opposing forces, pitted against each other . . . looking at each other. With complicated . . . of talons, appendages, arms raised in combat . . . Person maybe . . . standing there, being very offensive and attacking."

4. Human responses. (4 points). To be classified as a human response, the figure must be whole and clearly human. Examples:

"People"

"Men"

"Baby"

"African natives"

"Soldiers fighting"

"2 women stirring a pot"

"A person on a motorcycle"

Step 4 - Articulation. Here responses are scored on the basis of types of attributes ascribed to the figures. A total of seven types of attributes are considered. These types of attributes were selected because they seem to provide information about human or quasi-human figures. The analyses are not concerned with the sheer detailing of features or with inappropriate articulation. The analyses are only concerned with articulations that enrich a human or quasi-human response, that enlarge a listener's knowledge about qualities which are appropriate to the figures represented. For example, a response which states that a man has a head, hands, and feet does not enlarge the listener's knowledge about the man. Possession of these features is presupposed by the initial response, "man." An articulation such as "a man with wings" is not scored as an articulation because it is an elaboration which does not add to the specifications of the human or quasi human features of the figure.

There are two general types of articulation: The articulation of (1) perceptual, and (2) functional attributes. There are three specific types of perceptual characteristics: (1) size or physical

structure, (2) clothing or hairstyle, and (3) posture. There are four specific types of functional characteristics: (1) sex, (2) age, (3) role, and (4) specific identity. Articulation is scored by assigning one point each for each specific type of perceptual characteristic in the response, and two points for each specific type of functional characteristic.

1. Perceptual characteristics. (1 point for each specific type.

a. Size or physical structure. For this aspect to be scored as articulated, descriptions of the figure must have adjective status. Thus, no credit is given in a response where an examinee only says that a man has feet or that a hand has fingers. Size or structure is only scored as articulated if there is a qualitative description of aspects of body parts of the whole body. Descriptions of bodies or body parts as "funny" or "strange" are not scored as indicating articulation of body structure.

Certain aspects of facial expression can be scored as articulations of size or structure. Included in this category are responses like "eyes closed" or "mouth open" in which the description of facial expression amounts to something more than just a description of physical appearance.

Applying these criteria, the following responses would be scored as articulations of size or physical structure:

"slim men"

"big feet"

"the top of the body is sort of heavy and her legs are real, real teeny"

"slanted eyes"

"chins protruding down from the face"

"eyes closed"

"mouths open"

"tongue was sticking out"

By contrast, the following responses are not scored as articulations of size or structure:

"women with breasts"

"they're shaped like people"

"eyes, nose, mouth"

"woman doesn't have a head"

"a pervert with bunny ears"

"person with wings instead of arms"

- b. Clothing or hairstyle. For this aspect to be scored as articulated, there has to be a qualitative description of some aspect of either clothing or hairstyle. It must enrich the description of the figure. Simple mention of items of clothing implied by the response does not enrich one's understanding of the figure and is, therefore, not

scored as an articulation. Using these criteria, the following responses are scorable as articulations of clothing or hairstyle.

"some kind of moustache . . . right above its mouth"

"girls with ponytails"

"hair and the things sticking out of them, feathers"

"their pants would have to be skintight and when they lean down, their jackets go pointing out, makes it look like a very tight jacket."

"a couple of witches with red hats"

"wearing a black coat and a homburg hat. Black coat is sort of billowing behind him . . ."

". . . a full-tailed coat"

"two little girls, all dressed up in their mother's things"

"Gay 90's type women . . . Both wearing a long bustle and feathers in hair."

"An American Indian in some ceremonial costume with wings and paraphenalia."

"A man . . . with sunglasses on."

By contrast, the following responses would not be scored as articulations of clothing or hairstyle:

"Two women with skirts on."

"shoes on"

c. Posture. Posture is scored if the response contains:

- a) a description of body posture which is separate from the verb describing the activity of the figure,
- or b) a description of facial expression that goes beyond mere articulation of the physical appearance

of features in that in contains a sense of movement or feeling. Posture is not scored if body posture is implied in the verb rather than being separately articulated or if it is simply a description of a figure's position in space (e.g., facing outward). Thus, the following responses are scored as articulations of posture:

"arms flung wide"

"head tilted"

"standing with legs spread apart"

"leaning on a lamp post"

"shoulders hunched"

"somebody hanging . . . dangling down, drooped, formless, shapeless"

"eyes look piercing"

"gritting teeth"

"smiling"

The following responses are not considered articulations of posture:

"sitting"

"standing"

"doing a high dive"

"back to back"

"facing outward"

"mouth closed"

2. Functional characteristics. (2 points for each specific type).

- a. Sex. For sex to be scored there either has to be

a specific mention of sex of the figure or an assignment to an occupational category which clearly implies a particular sexual identity. If the final sexual identity is not decided but alternatives are precisely considered, sex is scored as articulated. If, however, the indecision is based upon a vague characterization of the figures with an emphasis upon the sexual nature of the figure as a whole, sex is not considered articulated. In the following responses, sex is scored as articulated:

"Man"

"Girl"

"Mother"

"Priest"

"either an old man or an ugly woman"

"2 boys putting on a disguise kit or a girl with her makeup kit"

By contrast sex is not scored as articulated in these responses:

"Well, these look like two human figures. I think when you look at the breasts there, they're girls. Then down here could look like phalluses. I don't know. It's rather ambiguous, confusing . . . protrusions from the thorax, you know."

"Looks like two people. Could be a woman or a man. I debated this for a minute. (mean?) Well, this form could be women or the costuming of man. (?) Well, I guess it would be tights and sort of loose shirt. I don't know exactly."

"Two people beating drums in a way like both might be women. In another way, like men. Doesn't seem to be any real indication whether they are male or female. The rather extended chests seem to represent breast of women and protuberance on bottom seems to be leg. In these respects, it has a bisexual appearance. There is something barbaric about the figures. Seems to be something of a representation of gods or something like that. They seem to be wearing high heel shoes. Both of the figures seem to be very awkward and look as though they're doing some clumsy movements in beating the drums. The heads also don't look human-- look as though they're some kind of bird's heads."

- b. Age. For this aspect to be scored, specific reference must be made to some age category to which the figure belongs. Thus, age is assumed to be delineated in the following responses:

"child"

"baby"

"old woman"

"young girl"

"little boys"

"teenagers"

By contrast, although some indication of age is implied in the following responses, the references are not specific. Thus, age is not scored in these responses:

"man"

"girls"

"boys"

"priest"

- c. Role. When figures are human, a clear reference

to the work a figure does (occupation) is scored as an articulation of role. With regard to quasi-human figures, role is scored if the manner in which the figure is represented implies that it would engage in certain activities rather than others. Thus, role is assumed to be articulated in the following responses:

"soldier"

"priest"¹

"Spanish dancer"

"ballet dancer"

"Princess"

"mother"

"witch"

"devil"

"elves"

Role is not scored in the following responses because there is no clear indication that they refer to occupation rather than a momentary activity.

"dancer"

"singers"

- d. Specific identity. Here a figure must be named

¹When sexual identity is clearly indicated in a role designation, both sex and role are scored as articulated. Such a situation exists in the following responses; "mother," "witch," and "priest."

as a specific character in history, literature, etc.² Examples:

"Charles DeGaulle"

"Theodore Roosevelt"

- d. Integration. Integration of the response is scored in four ways: (a) the degree of internality of the motivation of the action (unmotivated, reactive, or intentional), (b) the degree of integration of the object and its action (fused, incongruent, nonspecific, or congruent), (c) the integration of the interaction with another object (active-passive, active-reactive, or active-active), and (d) the content of the interaction with another object (malevolent or benevolent). These analyses can only be applied to figures engaged in human activity.

Step 5 - Integration: Motivation of action.

The articulation of action in terms of motive implies a developmentally advanced perception of action as differentiated from but related to the subject. Moreover, motive can be ascribed in two ways: as reactive or as intention. Reactive explanations involve a focus on past events and behavior is explained in terms of causal factors; one assumes that, for certain prior reasons, an individual had to do a certain thing. By

²To the degree that age, sex, and occupation are clearly indicated in the specific identity, these features are also scored as articulated. Thus, in the response, "Charles DeGaulle," sex and occupation are specified. Such is not the case in the response, "piglet."

contrast, intentionality is proactive and implies an orientation toward the present or future. The individual chooses to do something to attain a certain end or goal. The ability to choose between motives and to purposively undertake an activity implies a greater differentiation between subject and action than is the case when an individual is impelled to take an action because of past occurrences. For this reason, the analysis of action will consider whether or not a motive was provided and whether the motivation was reactive (causal) or intentional.

a. Unmotivated activity (1 point)

Here action is described with no explanation of why it occurs. Examples:

"Two people kissing each other."

"Women looking at each other."

"Men leaning against a hillside."

b. Reactive motivation (2 point)

Here perceived activity is described as having been caused by a prior situation (internal or external) and the subject is seen as having little choice in his reaction. Examples:

"A German soldier on guard duty. I think he sees something and points his gun at."

"Arabs recoiling from an Israeli bomb."

"A person afraid of a snake, standing on rocky cliff with arms upraised as if he's going to hit it with something."

"Two women struggling over ownership of a garment."

C. Intentional motivation (3 points).

For motivation to be scored as intentional, the action must be directed toward some future moment and the subject must be seen as, in some sense, choosing his action rather than having to react. Examples:

"Halloween witches, making incantations over the fire, in preparation for all hallows' eve."

"An orchestra conductor, his arms raised, about ready to begin."

Step 6 - Object-action integration

In this analysis, four levels of integration of the object with its action are distinguished (fused, incongruent, nonspecific, and congruent).

a. Fusion of object and action. (1 point)

For a response to be included within this category, the object must be amorphous and only the activity articulated. In such situations, object and action are fused. The object possesses no separate qualities of its own. It is defined only in terms of its activity. This type of response is exemplified below. In both instances, nothing is known about the object except what it is doing. Examples:

"Two opposing forces, sticking out arms and hands. Opposing forces, pitted against each other . . . looking at each other. With complicated . . . of talons, appendages, arms raised in combat . . . Person maybe . . . standing there, being very offensive and attacking."

"Figure there with hands, standing with legs spread apart, reaching out with hands as if trying to grab something."

b. Incongruent integration of object and action (2 points)

For a response to be included within this category, there should be some separate articulation of object and action. Something must be known about the object apart from its activity. Nevertheless, the activity is incongruous, unrelated to the defined nature of the object. The articulation of action detracts from, rather than enriches, the articulation of the object.

Examples:

"A great big moth, dancing ballet."

"Two figures, one half human and one half animal, holding two sponges."

"A little baby throwing a bucket of water."

"A satyr-thing bowling."

"Two sphinxes pulling a decapitated woman apart."

"Two beetles playing a flute."

c. Nonspecific integration of object and action (3 points)

Inclusion within this category also requires some separate articulation of object and action. However, the relationship between the two elements is nonspecific. The figures, as defined, can engage in the activity described. Thus, while the

articulation of action does not detract from the articulation of the object, neither does it enrich it. Examples:

"One big person standing with arms raised."

"A knight, standing ready to do his job."

"Cavemen leaning against a hillside."

"Two figures dancing."

"Two older women trying to pull something away from each other."

"Two men fighting."

"A man running away."

"A person, sort of a girl, standing on her toes."

d. Congruent integration of object and action (4 points)

For a response to be assigned to this category, the nature of the object and the nature of the action must be articulated separately. In addition the action must be particularly suited to the defined nature of the object. By way of contrast with the preceding category, the action must be particularly suited to the defined nature of the object. By way of contrast with the preceding category, the action must not only be something the object might do; it must be something that the object would be especially likely to do. There is an integrated and particularly well-suited relationship between the object and

the specified action. Moreover, the articulation of this action enriches the image of the object.³

Step 7 - Integration of interaction with another object

This analysis applies to all responses involving at last two human or quasi-human figures. In addition this analysis can also pertain to situations where a second figure is not directly perceived, but its presence is necessarily implied by the nature of the action.

a. Active passive interaction (1 point)

Two figures can involve a representation of one figure acting upon another figure in an active-passive interaction. One figure is active and the other entirely passive so while acted upon, it does not respond in any way.

b. Active-reactive interaction (2 points)

In another type of interaction the figures may be unequal. One figure is definitely the agent

³ In situations where the role definition of the object amounts to nothing more than literal restatement of the action, object and action are not considered integrated. Responses like "dancer's dancing," or "singer's singing" are scored as non-specific (level 3) relationships. However, responses such as "ballerina dancing" or "character from a Rudolph Falls opera, singing" are classified as a congruent (level 4) relationship.

⁴ Attached are examples for scoring both the nature and content of interactions. Notations in the left hand margin indicate scoring for the nature of the interaction. (Active-Passive A-P), Active-Reactive (A-R), and Active-Active (A-A). Notations in the right hand margin indicate the scoring for the content of the interaction (Malevolent M and Benevolent B).

of the activity, acting upon another figure.

The second figure is reactive or responsive only to the action of the other. This is defined as an active-reactive interaction.

c. Active-active interaction (3 points)

In a third type of interaction, both figures contribute equally to the activity, and the interaction is mutual.

Step 8 - Integration: Content of interaction⁴

a. Malevolent (1 point)

The interaction is aggressive or destructive or the result of the activity implies destruction or harm or fear of harm.

b. Benevolent (2 points)

The activity is not destructive, harmful, or aggressive. It may be neutral or it may reflect a warm positive relationship between objects.

Integration of Interaction

<u>Nature of Interaction</u>	<u>Content of Interaction</u>
A-P	A couple of undertakers lowering babies into the pit. M
A-P	A prostitute rolling a drunk M
A-P	Crucified man M
A-P	A mother holding out her arm and telling her kid never to come back. M
A-P	Two sphinxes pulling a decapitated woman apart. M
A-P	Two people kneeling down with hands extended toward and touching other people. B
A-R	African natives beating a drum, Martians applaud. B
A-R	Eve being tempted by a snake (snake seen on card) M
A-R	Two people with hands up as if trying to ward off the two people coming to get them. Two guys with black capes . . . coming in to get the other people. . . M
A-R	German soldier - think he sees something and points gun at it M
A-R	An orchestra conductor, arms raised, just about to begin B
A-R	A man running away M
A-R	A woman crying out for something . . . two forces pulling her apart, one is depression, one is suicide M
A-R	A man trying to kill a little girl, who's running away M
A-A	A woman with a child looking up at her B
A-A	Someone having intercourse, a man child and a woman child, trying to make love but not knowing how B

<u>Nature of Interaction</u>	<u>Content of Interaction</u>
A-A One person there is pointing out the other is listening	B
A-A Two people and two martians fighting	M
A-A Two women havng a fight, calling each other names	M
A-A People pledging hands together - like victors, walking long like that.	B

Scoring OutlineCategories of Analysis

- I. Accuracy of response - Accurate (F+, F₊) or Inaccurate (F₋, F-)
- II. Differentiation (Types of figures perceived)
 - (a) Human (4 points)
 - (b) Quasi-human (3 points)
 - (c) Human detail (2 points)
 - (d) Quasi-human detail (1 point)
- III. Articulation
 - (a) Perceptual attributes (1 point for each specific type)
 - (1) Size or physical structure
 - (2) Clothing or hairstyle
 - (3) Posture
 - (b) Functional attributes (2 points for each specific type)
 - (1) Sex
 - (2) Age
 - (3) Role
 - (4) Specific identity
- IV. Integration: Motivation of Action
 - (a) Unmotivated (1 point)
 - (b) Reactive (2 points)
 - (c) Intentional (3 points)
- V. Integration: Object and Action
 - (a) Fusion of object and action (1 point)

- (b) Incongruent action (2 points)
- (c) Non-Specific action (3 points)
- (d) Congruent action (4 points)

VI. Integration: Interaction with Another Object

- (a) Active-passive (1 point)
- (b) Active-reactive (2 points)
- (c) Active-active (3 points)

V. Integration: Content of Interaction

- (a) Malevolent (1 point)
- (b) Benevolent (2 points)

Appendix B

Administering the REP

Administration of the REP requires (1) the Response Sheet, (2) the Role Specification Sheet, and (3) the Instruction Sheet.

ROLE CONSTRUCT REPERTORY TEST

Name _____
 Marital Status _____ Educ _____
 Occupation _____ Age _____

RESPONSE SHEET

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Column 0	Column 2
A																6-5-4-3-2-1	+1+2+3+4+5+6
B																6-5-4-3-2-1	+1+2+3+4+5+6
C																6-5-4-3-2-1	+1+2+3+4+5+6
D																6-5-4-3-2-1	+1+2+3+4+5+6
E																6-5-4-3-2-1	+1+2+3+4+5+6
F																6-5-4-3-2-1	+1+2+3+4+5+6
G																6-5-4-3-2-1	+1+2+3+4+5+6
H																6-5-4-3-2-1	+1+2+3+4+5+6
I																6-5-4-3-2-1	+1+2+3+4+5+6
J																6-5-4-3-2-1	+1+2+3+4+5+6
K																6-5-4-3-2-1	+1+2+3+4+5+6
L																6-5-4-3-2-1	+1+2+3+4+5+6
M																6-5-4-3-2-1	+1+2+3+4+5+6
N																6-5-4-3-2-1	+1+2+3+4+5+6
O																6-5-4-3-2-1	+1+2+3+4+5+6

Role Specification Sheet

Do the best you can to find people who fit the descriptions below:

1. Write the first name of your mother or the person who played the part of your mother on the first diagonal line of the response sheet.
2. Write the first name of your father or the person who has played the part of your father on the second diagonal line of the response sheet.
3. Write the name of your brother nearest your own age, or the person who has played the part of such a brother.
4. Write the name of your sister nearest your own age, or the person who has played the part of such a sister.
5. Write the name of your wife (or husband) or the closest present girl- (or boy-) friend. Do not repeat the name of anyone listed above.
6. Write the name of your closest present friend of the same sex as yourself. Do not repeat names.
7. Write the name of a person with whom you have worked or associated with, who for some unexplainable reason, appeared to dislike you. Do not repeat names.
8. Write the person with whom you usually feel most uncomfortable. Do not repeat names.
9. Write the name of the person you have met whom you would most like to know better.
10. Write the name of the teacher whose point of view you have found most acceptable. Do not repeat names.
11. Write the name of the teach whose point of view you have found most objectionable. Do not repeat names.
12. Write the name of the most unsuccessful person you know personally. Do not repeat names.
13. Write the name of the most successful person you know personally. Do not repeat names.
14. Write "Ideal Mother."
15. Write "Ideal Father."
16. Write "Self."

Instruction Sheet

This questionnaire is comprised of three sheets (1) the Response Sheet, (2) the Role Specification Sheet, and (3) the Instruction Sheet. Read all directions before beginning. If the directions are not completely clear, ask for more information.

Start with the Role Specification Sheet. Beginning with your mother's name, write the first names of the people described. Write their names on the Response Sheet in the numbered blanks in the upper left-hand corner. If you have two people with the same name, use a last initial as well. If you cannot remember a person's first name write his/her last name, or something about him/her which will clearly bring to your mind the person's identity.

Take your Response Sheet. Note that two cells in Row 1 have circles in them. This means that you are first to consider the two people whose names appear on diagonals 1 and 7. Think about these two people. Are the two people alike in some one way? Or are the two people different in some one way? If the two people are like, is one of your listed acquaintances different from the two who are alike?

If you first see that the two people are alike in some one way, write under Column 1, Row 1, the one way in which these two people are alike. Then, if you can think of a person on your list who can be contrasted with the two people who are alike, write under Column 2 the way in which this person is different from the two who are alike. Place the number of the different acquaintance after the contrasting description.

RESPONSE SHEET

Example:					Column 1	Column 2
Sal	Pete	Bill	Phil	Jill	Honest	Non-Religious
1	2	3	7	8	-6-5-4-3-2-1 0	+1+2+3+4+5+6
Row 1	<input type="radio"/>		<input type="radio"/>			

If you first see that the two people are alike in some one way, but can not find a person on your list who can be contrasted with these two similar people, fill in Column 1 but leave Column 2 blank.

RESPONSE SHEET

Example:					Column 1	Column 2
Sal	Pete	Bill	Phil	Jill	Formal	
1	2	3	7	8	-6-5-4-3-2-1 0	+1+2+3+4+5+6
Row 1	<input type="radio"/>		<input type="radio"/>			

If you first see that the two people are different in some way, write under Column 1 the description of the person in the left circle and under Column 2 the different description of the person in the right circle.

RESPONSE SHEET

	Sal 1	Pete 2	Bill 3	Phil 7	Jill 8	Column 1 Formal -6-5-4-3-2-1 0	Column 2 Doesn't Care +1+2+3+4+5+6
Row 1:	○			○			

If you cannot see a similarity or a difference between the two people designated in Row 1, leave blanks. After you have finished with Row 1 consider the two people to be compared in Row 2. Follow the instructions given above.

After you have completed each of the fifteen people with regard to the descriptions you have written in Column 1 and Column 2 for Row 1. Now rate your perception of each of these fifteen people using the 13-point rating scale between Column 1 and Column 2. For instance, using the above example, consider Person 1 (Sal): If Sal is extremely formal, you might rate him with -6 or -5; if he's moderatley formal, you might rate him with -4 or -3; if he's a little formal, you might use -2 or -1. Considering Person 7 (Phil), you might rate him +6 or +5 if you perceive him as "not caring" to the extreme; if he moderately "doesn't care," you might choose a rating of +4 or +3; and if he "doesn't care" just a little, you might choose to rate him +2 or +1. If a person in the row cannot be accurately described by a rating on either description, put a 0 in the appropriate bos. Now go through each person in Row 1 and rate him/her according to your rating scale, putting your rating in the bos below each person's name. If there is n characteristic under Column 2 for row, no +1 to +6 rating can be done in this row.

RESPONSE SHEET

	Sal 1	Pete 2	Bill 3	Phil 7	Jill 8	Column 1	Column 2
Row 1	-5	+2	+4	-6	0	Formal -6-5-4-3-2-1 0	Informal +1+2+3+4+5+6
Row 2	-3	-6	0	-2	-3	Honest -6-5-4-3-2-1 0	+1+2+3+4+5+6
Row 3	-6	-2	-5	+2	+2	Humorous -6-5-4-3-2-1 0	Serious +1+2+3+4+5+6

Appendix G

Scoring the REP

Obtaining the Ordination Score

In contrast to the derivation of the Functionally Independent Construction score, the subject's ratings are not reduced to sidedness to obtain the Ordination score. Rather, the 13-point scale is reduced to 7 points, that is, 0 to 6, using absolute values. To obtain the Ordination score of a particular descriptive construct, one multiplies the number of different ratings across the 15 people on a particular construct by the difference between the highest and lowest ratings. A similar procedure is used to assess the Ordination score for a particular person across all 15 constructs. The final Ordination score is obtained by, first, averaging the 15 different descriptive construct Ordination scores and, then, finally, combining these two averages (Landfield, 1971; Landfield & Barr, 1976). A computer program for obtaining the Ordination scores can be obtained by contacting Alvin W. Landfield, Ph.D., Department of Psychology, University of Nebraska, Lincoln, Nebraska.

Obtaining the Functionally Independent Construction Score

The Functionally Independent Construction score is obtained from the Role Construct Repertory Test. Each construct is used to anchor a 13-point scale on which the subject rates his or her acquaintances. Although the subject may use any of the scale points, the investigator collapses each

construct scale to three points: first pole, contrast pole and midpoint. Following this, grid-row rating patterns are used as operational definitions of descriptive construct dimensions, and column rating patterns are used as operational definitions of people. Each row-pattern is related to each other row-pattern, and each column-pattern is related to each column-pattern. After all rows and columns have been inter-related, these two matrices of relationships are used in determining the Functionally Independent Construction score. The process of deriving this score from the construct relationships begins in determining the criterion for the functional equivalence of rows and the functional equivalence of columns. The criterion is at least 80 percent criterion for both rows and columns. For example, in a 15 rows x 15 columns Role Construct Repertory Test grid, two rows are considered related to each other, or functionally equivalent, if 12 out of the 15 column elements are rated on the same side of the rating scales for those two constructs. Two columns are considered related to each other, or functionally equivalent, if 12 out of the 15 row elements are rated on the same side of the rating scales for those two person elements. Each cluster of related constructs, which are unrelated to other clusters of related constructs, is assigned a score of 1. This score is totaled, and the same procedure as above is applied to the column, or people, elements. The two scores are summed to provide the Functionally Independent Construction score. The final Functionally Independent Construction score

has a possible scoring range of 2 to 30, if a 15 (people) by 15 (constructs) grid is employed (Landfield, 1971; Landfield & Barr, 1976). A computer program for obtaining the Functionally Independent Construction score can be obtained by contacting Alvin W. Landfield, Ph.D., Department of Psychology, University of Nebraska, Lincoln, Nebraska.

Appendix D

INFORMED CONSENT

NAME OF SUBJECT: _____

1. I hereby give consent to Polly E. Peterson to perform or supervise the following investigational procedure or treatment.

Administration of a battery of psychological tests, including the Role Repertory Test (REP), the Rorschach and the Minnesota Multiphasic Personality Test (MMPI). These tests will be administered individually and the entire procedure will take approximately 3½ hours.

2. I have (seen, heard) a clear explanation and understand the nature and purpose of the procedure or treatment; possible appropriate alternative procedures that would be advantageous to me (him, her); and the attendant discomforts or risks involved and the possibility of complications which might arise. I have (seen, heard) clear explanation and understand the benefits to be expected. I understand that the procedure or treatment to be performed is investigational and that I may withdraw my consent for my (his, her) status. With my understanding of this, having received this information and satisfactory answers to the questions I have asked, I voluntarily consent to the procedure or treatment designated in Paragraph 1 above.

DATE

SIGNED: _____ SIGNED: _____
WITNESS SUBJECT

or

SIGNED: _____ SIGNED: _____
PERSON RESPONSIBLE

Instructions to persons authorized to sign:

Relationship

If the subject is not competent, the person responsible shall be the legal appointed guardian or legally authorized rep. If the subject is a minor under 18 yrs of age, the person responsible is the mother or farther or legally appointed rep. If the subject is unable to write his name, the following is legally acceptable: John H. (His X Mark) Doe and two (2) witnesses.

15. What is the status of your parent's marriage? (e.g., married, divorced, separated, etc.)

16. If divorced, how old were you when they separated? _____

17. Who did you live with? _____

18. Did either parent remarry? _____ If so, how old were you?

19. If there was more than one remarriage, please give your age and who you were living with at the time:

mother

father

20. Please list current ages of all your siblings:

brothers

sisters

21. Of your immediate family (parents and siblings) who were you closest to as you were growing up?

22. Who are you closest to now?

23. Is there anyone else (grandparent, aunt, uncle, other extended family or close friend) that you were very close to or who played a significant role in your growing up?

Appendix E

Subject # _____

Date _____

Time _____

Please answer the following questions:

1. Date of birth: _____

2. Sex: _____

3. Marital Status: _____

4. Number of children: _____

a. give age and sex of each child:

5. What is your current class standing in school? _____

6. Where were you born? _____ (country, city, state)

7. Nationality: _____

8. Race/ethnicity: _____

9. Where did you grow up? _____

10. How many times did your family move? _____

11. What is your father's age? _____ If deceased, age at death? _____

12. What is your mother's age? _____ If deceased, age at death? _____

13. What is your father's occupation? (If retired, occupation before retirement)

14. What is your mother's occupation? (If retired, occupation before retirement)

Appendix F

Description of All Tests Used

Role Construction Repertory Test (REP) - Measure of cognitive structure.

Self and Object Scale (SOS) - Measure of qualitative and structural dimensions of the subject's written description of his or her parents and self.

Rorschach - Projective personality test.

Self - Measure of the extent of the defense of "splitting."

Minnesota Multiphasic Personality (MMPI) - Global measure of current psychopathology.

Appendix G

Statistical Analysis

Table 1
Sample Characteristics

Age	Range	18-48 years	Mean	22 years
Sex		f		%
Males		56		41.2
Females		80		58.8
Ethnicity				
Caucasian		109		80.1
Black		18		13.2
Asian, Oriental		3		2.2
Hispanic		2		1.5
Native American		1		.7
Middle-Eastern		1		.7
Other		2		1.5
Class Standing				
Freshman		40		29.4
Sophomore		32		23.5
Junior		30		22.1
Senior		26		19.1
Graduate		3		2.2
Not Designated		5		3.7

Note. n = 136.

Table 2
Descriptive Statistics On Measures

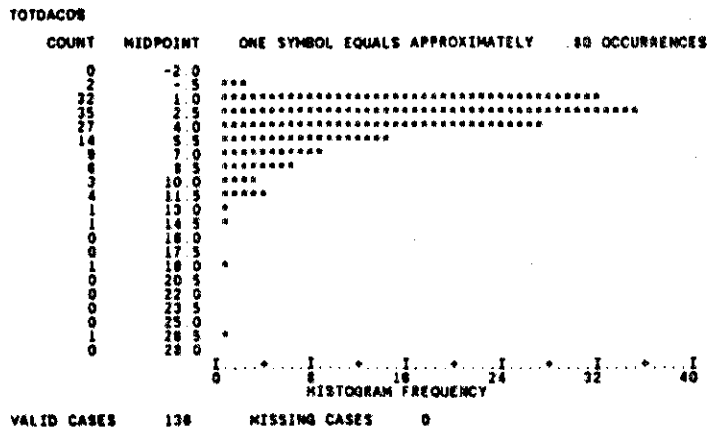
Measure	Range	Mean	Median	SD
<u>REP</u>				
Total FIC	2-30	9.180	8.00	4.835
Total ORD	15.28-52.98	41.903	43.060	7.369
.				
REP Categories		f	%	
1. Hi FIC/Low ORD		9	6.6	
2. Low FIC/Hi ORD		8	5.9	
3. Low FIC/Low Ord		18	13.2	
4. Hi FIC, Hi ORD		5	3.7	
5. Mod FIC/Low ORD		38	27.9	
6. Mod FIC/Hi ORD		55	40.4	
.				
REP Categories		4.654	5.000	1.586
<u>DACOS</u>	0 - 26	4.129	3.157	3.742
<u>Maladjustment</u>				
	Value	f	%	
	.00	81	58.6	
	1.00	16	11.8	
	2.00	13	9.6	
	3.00	8	5.9	
	4.00	4	2.9	
	5.00	2	1.5	
	6.00	3	2.2	

7.00	3	2.2
8.00	2	1.5
Not Designated	4	2.9

Note. For REP, \underline{n} = 133; Value = Number of MMPI scales < 70.

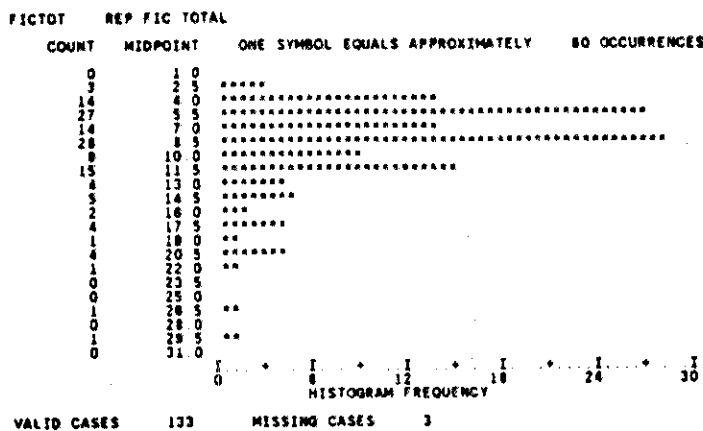
Table 3

Limited Variance on all Measures

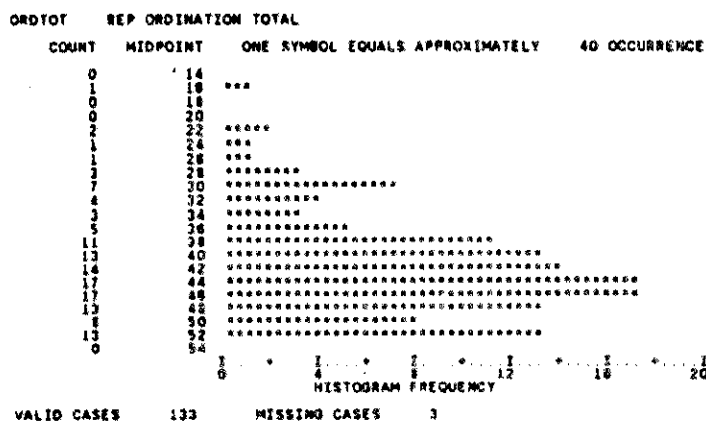


Total DACOS
 Skewness = 2.491
 kurtosis = 9.624

Maladjustment
 Skewness = 2.008
 kurtosis = 3.528



FIC
 Skewness = 1.544
 kurtosis = 3.039



ORD
 Skewness = -.924
 kurtosis = .855

Table 4

Pearson Product Moment Correlation between DACOS and Maladjustment and between REP and Maladjustment

DAOCS and Maladjustment	$\underline{r} = .1448$
	$\underline{p} = .098$
REP and Maladjustment	$\underline{r} = -.0073$
	$\underline{p} = .935$

Table 5

Correlation between DACOS and AGE and Correlation between REP and AGE

	AGE
REP	$\underline{r} = .0051$
$\underline{n} = 133$	$\underline{p} = .953$
DACOS	$\underline{r} = -.0054$
$\underline{n} = 136$	$\underline{p} = .951$

Table 6

Pearson Product Moment Correlation Ad Hoc Analysis

	FICTOT	ORDTOT	MALT	TOTDACOS
FICTOT	1.0000 (0)	.0518 (133)	.1373 (129)	.0079 (133)
	$\underline{p} = .$	$\underline{p} = .277$	$\underline{p} = .060$	$\underline{p} = .456$
ORDTOT	.058 (133)	1.0000 (0)	.0058 (129)	.1544 (133)
	$\underline{p} = .277$	$\underline{p} =$	$\underline{p} = .474$	$\underline{p} = .038$

Table 6--Continued

	FICTOT	ORDTOT	MALT	TOTDACOS
MALT	.1373 (133) $\underline{p} = .060$.0058 (129) $\underline{p} = .474$	1.0000 (0) $\underline{p} =$.1448 (132) $\underline{p} = .049$
TOTDACOS	.0097 (133) $\underline{p} = .456$.1544 (133) $\underline{p} = .038$.1448 (132) $\underline{p} = .049$	1.0000 (0) $\underline{p} =$

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