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OBJECT RELATIONS CORRELATES ON THE MMPI

DISSERTATION

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This study was undertaken to help determine the usefulness of the Minnesota Multiphasic Personality Inventory (MMPI) for providing information regarding a person's object relations. Subjects were 136 college students (56 males, 80 females) ranging in age from 18 to 48. Subjects were administered the Rorschach, the Self Object Scale (SOS), and the MMPI. The Rorschach was scored using Blatt, Brenneis, Schimek, and Glick's (1976a) manual for scoring the level of object relations (Developmental Analysis of the Concept of the Object Scale-DACOS), the SOS scored as Blatt, Chevron, Quinlan, and Wein's manual (1981) directs, and the MMPI scored in the standardized manner using college-age norms. MANOVA's on the SOS and the DACOS resulted in significant effects for sex on MMPI scales 6, 7, and 8. Sex differences on MMPI scales 6 and 4 were obtained for high/low level of object relations on the DACOS. Pearson correlations showed positive correlations for males between level of object relations on the SOS and MMPI scale 5, and negative correlations on MMPI scale 5 for females.

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For males positive correlations between the DACOS and MMPI scale 4 and negative correlations on MMPI scale 10 were noted. These results were discussed as pertaining to the socialization of males and females. The most puzzling finding was the lack of correlation between the DACOS and the SOS. This was discussed as possibly being a result of the effect of the Rorschach, which measures psychopathology, whereas the SOS may be a purer measure of object relations. The paucity and weakness of the results was attributed to the restricted variance of the population. Implications for future research included obtaining a larger sample from a normal population, establishing clear norms for object relations measures, obtaining correlations between a measure of current functioning and the object relations measures as a step toward establishing cut-off scores for groups on the measures, and further exploration of the weights in the scoring categories of Blatt's DACOS scale.

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CHAPTER I

INTRODUCTION

Theoretical Background

Sigmund Freud laid the foundations for the subsequent elaboration of object relations theory in various writings (Freud, 1917, 1921, 1923). One of the central beliefs of object relations theory is that persons we depend upon as infants and children become sources of identification for us. This identification gradually structures our internal world which in turn controls and regulates our behavior (Tuttman, 1981). In 1981, Tuttman published a review article that traces Freud's developing ideas regarding the importance of object relations and states that "... from 1923 on, objects were understood as providing sources for identifications which come to constitute ego and superego qualities" (p. 7). This process of identification was believed to be "the earliest form of emotional bond with another person..." (p. 6). Tuttman points out that near the end of Freud's life he came to believe that the early mother-child relationship is the first and strongest object relation and that it becomes the foundation for all later love relationships. Freud (1926) also acknowledged the

pivotal role that fear of object loss plays in basic anxieties. Thus, the claims of many later object relations theorists that Freud was in the process of developing a more object related point of view seems justified.

Object relations theorists have formulated various levels of development in object relations from primitive (autistic) to mature (separated/individuated) which is analogous to Freud's loving and working genital stage (Jacobson, 1964; Mahler, 1968; Mahler, Pine, & Bergman, 1975). They believe that "the developmental level of the organization of concepts of self and other are psychological structures that are the consequence of the internalization of formative interpersonal interactions with significant figures" (Blatt & Lerner, 1983a, p. 192). Thus, if this is true, these levels can be quantified and studied as psychological structures.

Blatt (1974, 1978) has begun developing a theory of object relations which attempts to integrate cognitive developmental theory and psychoanalytic developmental theory. Specifically he refers to Piaget's (1954) and Werner's (1948, 1963) theories of cognitive development. According to their thinking a child develops through four basic stages, each characterized by specific cognitive schemata and processes. Cognitive theory holds that the development of mental representation results from the

internalization of action sequences. In earliest childhood, the level is termed "sensorimotor" since infants have no actual cognitive structures as yet. This stage is a time of transition from cognitive contents which are only external to basic cognitive contents which are internalized or "mental." The crucial ability to represent events mentally is acquired during this stage. Piaget believes that newborns do not understand that objects exist apart from their actions upon them. In other words, objects do not exist when the infant does not see them. At the end of this first stage the child has acquired the knowledge that objects are permanent regardless of whether they are actually seen or not. Slowly, the child passes into the preoperational stage in which thinking only in relation to action evolves into an ability to think about the action, an ability to take the perspective of others, and an ability to represent mental contents in language. This is the end of the preoperational stage. This ability to think about actions in relation to self and others is at first very concrete and thus the next stage is termed the concrete operations stage. During this stage the child acquires the ability to understand spatial and numerical relationships. For example, the child now realizes that the same amount of water is in two very differently shaped containers if he observes the identical amounts of water being poured into

them. In the preoperational stage the child is not capable of understanding this. Around 12 or 13 years old, the child enters the formal operations level. He or she is beginning to deal with the world on an abstract, symbolic, and propositional level. For example, concrete operational children can only solve problems in which the underlying principle can be empirically demonstrated, while formal operations children can solve problems in which the underlying principle must be deduced. Development, for Piaget and Werner, consists of an invariate progression through stages in which "new" cognitive schemas evolve out of older ones. "... The child comes to know the world as a product of his actions upon objects and through the relationship of his actions to his symbolic representation of actual and potential actions and interactions" (Blatt & Lerner, 1983a).

According to various psychoanalytic developmental theorists (Fraiberg, 1969; A. Freud, 1965; Jacobson, 1964; Mahler, 1965 & others), representations of self and others are initially diffuse and formless. Self and object are one; they are undifferentiated sensorimotor experiences. As a result of the experiences with the environment the child very gradually begins to differentiate self from other. The infant begins to understand that need satisfaction is coming from the mother and thus becomes aware of her as a

need-satisfying object different from his/her internal experience of pleasure or displeasure. Based on initial experiences of frustration and gratification, the child begins to build representations of self and object. Gradually the representation of the object and representation of the self are experienced as stable and consistent and eventually become that individual's sense of identity. Mature object representations are the complex mental schemata of significant objects encountered in reality (Blatt & Lerner, 1983a). Schemas are "examples of the abstract cognitive structures by which the organism assimilates information; they are the basic units of cognitive structure" (Brainerd, 1978, p.26).

The relationship with the mother is thus the basis for reality. "It is the basic caring relationship that provided the primary experiences in reality that are internalized as the earliest and most fundamental principles of cognitive organization" (Blatt & Lerner, 1983a, p.194). The mother's consistent and reliable care provides the child with the basis for the establishment of ego structures (Blatt, 1978). When the child internalizes the mother's reliability and organization, he or she begins to achieve a capacity for delay of gratification which is an important step in adaptation to reality--another important ego function. These basic ego processes are then elaborated and expanded as the child grows and encounters different environs.

In this study, object representation will refer to all the conscious and unconscious mental schemata of objects which have been encountered in reality (Blatt & Lerner, 1983a). This includes both cognitive and affective components. These representations begin as diffuse, undifferentiated affective and primitive cognitive experiences and evolve into consistent, stable schemata through which the world is experienced and understood. Earlier forms of representation are based on action sequences associated with need gratification; intermediate forms are based on concrete perceptual and experiential data; and advanced forms are more symbolic and propositional (Blatt, 1974). This is not a static system. Rather, it is a fluid, reciprocal system in which each level evolves out of the last, revising and reorganizing the schemata, but not destroying them. There is a constant interaction between past and present object relations and the development of representation. New levels of object and self representation provide a revised organization for subsequent object relations (Blatt, 1974).

The Assessment of Object Relations

Theory. Projective test material has been used most often to assess the developmental level of object representation. The theory behind the diagnostic or clinical use of any projective test is that when presented

with ambiguous stimuli, people will project onto it their personal inner schemata including cognitive and affective components (Blatt & Lerner, 1983a). Based upon this principle, a great deal of empirical work has been done on the structure and content of early memories (Mayman, 1968), manifest dreams (Brenneis, 1971, Krohn, 1972), the human response on the Rorschach (Blatt & Ritzler, 1974; Blatt, Brenneis, Schimek, & Glick, 1976; Blatt, Schimek, & Brenneis, 1980; Krohn & Mayman, 1974; Mayman, 1967; & Urist, 1973), open-ended descriptions of significant figures (Blatt, Wein, Chevron, & Quinlan, 1979), sentence completion (Loevinger, 1976), and samples of verbal productions (Gottschalk, Mayerson, & Gottlieb, 1967). The results of these studies, which used content and structural analyses, have supported the construct validity of object representations as a theoretical dimension appropriate for inferring levels of object relations development. "Object representations express the structure or template that determines the nature of the experience of the self and the object world" (Blatt & Lerner, 1983a, p. 195).

Research Groups. Two principle research groups are currently investigating this field and each is studying object representations from a different angle. Martin Mayman and his colleagues at the University of Michigan have been more content oriented and Sidney Blatt and his

colleagues at Yale University have been more concerned with the structural aspects of object relations. Mayman and his colleagues have focused on the content of object representations using early memories (Mayman, 1968), manifest dreams (Krohn, 1972), and Rorschach percepts (Krohn & Mayman, 1974; Mayman, 1967; Urist, 1973). The theoretical basis for the Mayman group stems from ego psychology and the test methods of David Rapaport, along with later contributions of Margaret Mahler and Otto Kernberg. The Blatt group's roots are also in Rapaport's work and in attempts to integrate object relations theory, ego psychology, and the developmental cognitive theories of Jean Piaget and Heinz Werner. Blatt's group has focused primarily on the Rorschach (Blatt, Brenneis, Schimek, & Click, 1976b; Blatt & Ritzler, 1974; Blatt, Schimek, & Brenneis, 1980), but in addition has studied the Thematic Apperception Test (TAT) (Blatt, Sugarman, & Bloom-Feshback, 1981), manifest content of dreams (Brenneis, 1971), and open-ended descriptions of significant figures (Blatt, Wein, Chevron, & Quinlan, 1979). They have developed scales and measures to extract the data needed to analyze the object representations presented by the subjects and to arrive at an assigned level of object relations (Blatt, Brenneis, Schimek, & Glick, 1976a; Blatt, Chevron, Quinlan, & Wein, 1981). Their empirical investigations have supported their

conceptualizations and they have discovered that object relations continue to develop throughout life.. They have shown that the quality of object relations can differentiate sub-groups within large diagnostic categories.

The Human Response on the Rorschach. Early studies on the human response on the Rorschach led to the belief that it was related to the individual's ability to establish meaningful and satisfying interpersonal relationships (Rorschach, 1921/1942), a capacity to invest in social relationships (Phillips & Smith, 1953; Piotrowski, 1957; Rapaport, Gill, & Schafer, 1945), advanced cognitive development and a maturity in social relations (Ames, Learned, Metraux, & Walker, 1950; Ames, 1966; Draguns, Haley & Phillips, 1967; McFate & Orr, 1949; Thetford, Molish, & Beck, 1951), and the capacity for empathy (Klopfer, Ainsworth, Klopfer, & Holt, 1967; Mayman, 1977). The human response (H) has also been linked to positive outcomes in therapy (Graver, 1953; Roberts, 1954; Rogers & Hammond, 1953; Exner, 1974) and good prognosis (Goldman, 1960).

The frequency and quality of H representations have implications for objects relations as well. Antisocial persons such as criminals, delinquents, and the preadolescent behavior disordered give very few or no H responses (Endara, 1957; Walters, 1953; Ray, 1963; Richardson, 1963; Roberts, 1955). An inverse relationship between

human response and severity and recidivism of antisocial and criminal behavior has also been found (Endara, 1957).

The human movement (M) response has been extensively studied. Studies have related it to intellectual capacity (Exner, 1974), psychological maturity and the capacity for empathy (Ansbacher, 1947; Mueller & Abeles, 1964; Phillips & Smith, 1953), the capacity for delay of gratification (Goldman & Herman, 1961; Meltzoff, Singer, & Korchin, 1953), time perspective and orientations (Buchwald & Blatt, 1974; Kurz, 1963), capacity for planning (King, 1958), cognitive complexity (Bieri & Blacker, 1956) and fantasy and dream production (Orlinsky, 1966; Schonbar 1965). The frequency of M responses in children is very low and steadily increases until about the 10th year (Exner, 1974). The formal quality of Ms is an important indicator, with a few good quality M's being a positive prognostic indicator and any M responses with poor form quality related to deficient social skills and poor interpersonal relations (Exner, 1974).

An important study by Hertzman & Pearce (1947) showed that the actual content of H responses was related to material brought up later in therapy. They found that 75% of the content of Human percepts had personal significance for the patients and that it clearly emerged during the therapeutic process. Other very interesting studies are

Orr's (1958), Pruitt & Spilka's (1964), and Endara's (1957) attempts at assessing the "humanness" of the responses. They discovered that psychotics had very low scores on this dimension as did convicted criminals. Higher scores were related to other assessments of improvement in group therapy.

These earlier studies point to the fundamental importance of the human response for the assessment of object relations. They reveal that assessment of the quality of the human figure on projective test data can provide information about the understanding of personality organization and object representation in individuals.

The Group at University of Michigan's Contributions.
As mentioned before, Mayman and his colleagues have concentrated on assessing the thematic content of the data from various projective instruments including manifest dreams, early memories, and the Rorschach human response. Mayman, like Erikson (1950) had believed earlier, assumes that manifest content expresses level of ego functioning, the capacity for object relations, and the nature of object relational strivings.

(Mayman) regards character structure as organized around pivotal object relational themes and that early memories are not historical truths but reconstructions of "intrusive interpersonal themes which define that

person's enduring view of himself and his enduring expectations of others (p. 304)." (Blatt & Lerner, 1983a, p. 200)

Mayman's 1967 study demonstrated that Rorschach content evaluated by experienced clinicians for degree of psychopathology correlated significantly with independent ratings of psychopathology. His methods and techniques are based on the clinical-intuitive approach. He has also developed novel techniques for inquiring into Rorschach and TAT responses, as well as a psychological test--The Early Memories Test (Mayman, 1968). Mayman & Ryan (1972) developed a scale to evaluate the quality of object representation on this measure. Using this, Ryan (1973) studied neurotic outpatients and found a correlation between level of object relations and the ability to enter into a psychotherapeutic relationship. Mayman's students have gone on to explore other manifestations of object representations in dreams (Krohn, 1972), autobiographical data (Urist, 1973), and Rorschach protocols (Krohn & Mayman, 1974). Krohn (1972) has developed a new scale originally used to assess levels of object relations from dream content. Blatt and Lerner (1983a) report that Krohn and Mayman, using this new scale, concluded that,

the rating of the quality of object representation on the Rorschach is a blend of the level of

psychopathology and the quality of object relations, whereas the ratings of object representations on the manifest content of dreams and early memories seem to provide a pure measure of the quality of the patients object representations. (p. 208)

In summary, Mayman's group has provided increasing empirical support for the validity and reliability of the construct of levels of object relations as assessed through projective devices yielding object representational data.

The Research Group at Yale University's Contributions.

Blatt's group of studies are united by a principle assumption that two basic features are unique to human beings--our capacity for symbolic representation (i.e., our mental schemata) and our development in a complex and intense interpersonal fabric (i.e., we are "object related" from the very moment of birth). They believe that object representations--which are symbolic representations of interpersonal relationships--are a combination of both of these basic features. Thus, the study of the structure and content of the concepts of self and object lead us to the heart of a personality (Blatt & Lerner, 1983a).

Blatt feels that understanding the underlying structure of object representations will lead to principles of organization of behavior. He feels that psychology and psychiatry have for too long emphasized overt symptoms and

manifest behavior rather than emphasizing underlying structure. Putting together the recent contributions of developmental psychoanalysts (e.g., Fraiberg, 1969; A. Freud, 1965; Jacobson, 1964; Mahler, 1968, Wolff, 1967) and cognitive developmental psychologists (Piaget, 1954; Werner, 1948), Blatt feels he has "provided a basis for understanding aspects of the complex cognitive and interpersonal factors inherent in the structural organization that underlie much of manifest behavior." (Blatt, 1978).

Blatt and his colleagues (1976a) have developed an extensive manual for rating Rorschach human responses (H) in three major areas: differentiation, articulation, and integration (see Appendix A). Within these areas, the points are assigned along a developmental continuum. These areas spring from Werner's (1957) orthogenetic principle which states "whenever development occurs it proceeds from a state of relative globality and lack of differentiation to a state of increasing differentiation, articulation, and hierarchical integration" (p. 126). As an example, one might consider a young toddler's concept of animals. Often at first all four-legged furry creatures are referred to as "dog" or whatever name the child learned first. This is a very global, undifferentiated concept of animals. Gradually the child begins to differentiate dogs from horses, or cows,

or cats, and eventually can understand that there are different kinds of dogs, horses, cats and additionally that all can be subsumed under the concept of animal.

Using this manual, the research group has performed several investigations. A longitudinal study of the development of the H in a normal population showed that these responses change consistently with age (Blatt, Brenneis, Schimek, & Glick, 1976b). The three dimensions measured by the manual showed a developmental progression from less complexity to more complexity. One study investigated the concept of the object in psychosis (Blatt, 1976) and another investigated various types of psychopathology (Blatt & Lerner, 1983b). These studies have shown that empirical and measurable differences do exist for different psychopathologies in the quality of their object representations on the Rorschach. This implies that with further study and perhaps refinement the manual could be used as an additional aid to diagnosis as well as for treatment planning and evaluation of outcome.

The Blatt group (Blatt, Wein, Chevron, & Quinlan, 1974) has developed another method of assessing the content and structure of object representations. This method utilizes open-ended descriptions of significant figures in a person's life and the self. The scale developed for analysis of these descriptions consists of 12 content characteristics,

which are rated on a 7 point scale, a rating of ambivalence felt by the subject for the object, an estimate of verbal fluency, and a rating of the conceptual level of object representation (the structural aspect, see Appendix B). They implemented this research with a group of college students who were independently measured for types of depressive experiences. Their conclusions were that "there are significant relations among types of depression (i.e., anaclitic vs. introjective) and the content and structure of the descriptions of parents in a sample of normal young adults" (Blatt & Lerner, 1983a, p. 229). The impairments of object representation in patients vulnerable to depression are very different from those seen in schizophrenic patients in Blatt's research; this continues to support and validate the theory.

Summary of Object Representational Research

Object representational research is encouraging for those who espouse the object relations point of view. These theorists seem to have found several ways to measure this elusive construct and do it reliably. Each study seems to fit in the puzzle neatly confirming psychoanalytic developmental theories as well as cognitive developmental theories. Object representations become more advanced and complex with age, their levels correspond with psychopathologies which are theorized as due to arrests at

one level or another in development, and their levels have the expected predictive powers for adjustment, therapy outcome, and readiness for therapeutic relationships. As the evidence mounts, the implications for prediction, diagnosis, and treatment grow apace.

The MMPI and Object Relations Research

The stimulating effect of the increased research in the area of object relations leads to questions about the ability to detect object representations on other assessment devices, perhaps on a so-called "objective" assessment instrument. This is the question Trimboli and Kilgore posed in their 1983 article on using a psychodynamic approach to MMPI interpretation. They feel that the MMPI can be used in a limited way to provide information about internalized representations of self and others and characteristic modes of interaction with others.

Obviously if the configuration of MMPI scale elevations is consistently correlated with a level of object relations, it would provide better and more in-depth information to clinicians and researchers alike. Additionally, since it takes far less of the clinician's time both in administration and scoring, it would be particularly helpful.

Trimboli and Kilgore posited, based on psychodynamic theory, that certain scales would be presumed to reflect

these internal representations of self and/or others. Their reasoning goes as follows: self and object representation is on a continuum from non-reality based to fully reality based. Therefore, it follows that individuals whose sense of identity is very diffuse and/or shattered would especially elevate scales F and 8(Sc) which have to do with the image of the self. Naturally, with a diffuse self representation, object representation will be chaotic and diffuse. A very high or a very low score on scale 5(M/F) would also indicate identity confusion or lack of stability of the self including the sex role of the self. They further speculate that any elevation on scale 5 which accompanies an elevation on scale 8 would indicate a more severe deficit in self and object representation.

Severe forms of pathology correspond to arrests in object relations development. Thus, those arrested in the autistic phase of development cannot relate to others and those in the symbiotic phase relate to others in a fused or undifferentiated manner. That is, they are unable to see others as different from the self. One small step farther on the developmental continuum occurring in the separation/individuation phase of development is relating to others in a part-object manner, i.e., seeing them as all-good or all-bad.

Typically the most severe deficits in object representation are found in chronic and acute psychoses. These profiles are readily obvious and have been extensively researched. Persons who relate to others on a part-object basis however show their pathology in a variety of ways. An elevation on scales 1(Hy) or 2(D) might indicate a wish to establish a clinging or anaclitic relationship with a strong, powerful, all-good object. Elevations on both 1 and 2 may indicate a helpless mode of interacting with others and a very low score on 5 for females may show strong dependent wishes. High scores on 3(Hs) or 9(Ma) may be indications of a subtler attempt to elicit support of an all-good object. This person may idealize significant others and increase his/her self-esteem through identification with others. A very low O(Si) could be seen as a direct attempt to secure approval from significant others.

Elevations on scales 4(Pd) and 6(Pa) would seem to indicate predominantly all-bad object representations. An extreme spike on 4 would mean an egotistical disregard for others, a devaluation of others, and perhaps a ruthless use of others. A spike 6 might reveal overt hatred of others in that anger is focused on others.

Research on the MMPI and object representation is apparently non-existent. There is an enormous body of

research on the MMPI, but not specifically focusing on object relations. However, there is research being done on various disorders and MMPI correlates. One such disorder, borderline personality disorder, is relevant to our task since this disorder is assumed, in psychoanalytic theory, to result from deficits occurring in the separation/individuation phase of development and would result in the all-good, all-bad object representation speculated upon by Trimboli and Kilgore. The only other specific disorder being investigated with the MMPI which is related particularly to object relations theory or developmental theory is the psychotic range from a developmental viewpoint, i.e., the autistic, symbiotic, and differentiating types of psychoses (Smith, 1983).

The borderline personality disorder (BPD) investigations have had mixed results. Hurt, Clarkin, Frances, Abrams, and Hunt (1985) review five studies and the findings from their own study on BPD in and out-patients compared to non-BPD in and out-patient controls. The most consistent elevations seem to be 8, 4, 6, and F. The L and K scales are very often depressed. As a two point pair the most frequent were 8-4, 8-6, and 8-2 and the most frequent three point codes were 8-2-4, 8-6-4, and 2-7-8. The BPD profiles had very similar shapes to the comparison groups in all studies. Other studies (Abramowitz, Carroll, &

Schaffer, 1984; Patrick, 1984; Evans, Ruff, Braff, & Ainsworth, 1984) show similar, but not identical findings. Some found 8-2-7 plus an elevated F or 8-4-2-7 or a "floating" profile. Many times, however the findings were not significantly different from the controls. The BPD category seems too heterogeneous to obtain a consistent diagnostic prototype on the MMPI--at least for the moment. Only one study (Hurt et al., 1985) used, in addition to DSM III criteria for diagnosis, a psychoanalytically informed diagnostic tool--the Diagnostic Interview for Borderlines (Gunderson, Kolb, & Austin, 1981) to select the patients. Their best combination of scales correctly identified only 64 percent of the patients and only 48 percent of the borderline patients. This was certainly a failure of predictive power. They state "our mean BPD profile is not specific to BPD patients" (p. 60). Their conclusion was that the MMPI fails to correlate with personality diagnoses for what they term "unsurprising" reasons. They feel that persons who are given personality disorder diagnoses are surely homogeneous for certain defining features but heterogeneous for other symptoms (DSM III, Axis I) and/or other personality disorders, thus making a clear cut personality disorder diagnosis very difficult on the MMPI. The MMPI taps both symptomatology and characteristics of personality disorders and therefore would not be as

sensitive to personality disorders as other self-report instruments might be.

Thus, the little evidence we have so far indicates that BPD may be elevating 8 indicating severe deficits in self and object representations and elevating 4 and 6 indicating the all-bad nature of their object representation. We did not see elevations on 1 but frequently saw 2 elevated indicating a need for clinging or anaclitic relationships. There were no specific studies of females and no specific elevations on 5. High scores on 3 or 9 were noted, but not consistently, and no note of very low 0 scores was made for this particular diagnostic category.

From this research one might speculate that the MMPI would be identifying only the most striking BPD, i.e., persons arrested earlier in the separation/individuation phase of development. It is possible that when most object relations are all-bad, the psychopathological symptoms are more pronounced. Smith (1983) discusses the paranoid object relations view of the psychotic patient in the differentiating stage of object relations development (part of Mahler's first subphase level of the separation/individuation phase). She described the phenomenological state of the self as fragile and the world as unsafe. Presumably this person would elevate both 8 and 6 and would be considered, in psychoanalytic terms, a lower functioning

BPD. Smith also shows how a person in the symbiotic phase of development manifests dependent traits, attempts to engulf and/or merge which would be likely to elevate particularly 8, 2, and 3. Thus, at present, we have speculations, some unclear empirical findings, and little else to guide us in our search for correlates of levels of object relations on the MMPI.

Given this BPD research, which is the most germane to object relations theory, perhaps Trimboli and Kilgore (1983) are wide of the mark in supposing we could use the MMPI to assess object relations. The MMPI may not contain specific enough items to allow for differentiation between levels of object relations or even to determine gross object relations correlates. This adds to the significance of this study in providing empirical evidence in support or rejection of their hypotheses.

Purpose of Study

The purpose of the study is to determine the usefulness of the MMPI for providing information regarding a person's object relations. MMPI's are easy to administer, take very little time by the clinicians or investigators, and are easily and quickly scored by hand or computer. The information is important to treatment intervention, the therapeutic process, readiness for therapy, and therapeutic outcome decisions and research regarding object relations in general.

This study is designed to first, determine a level of object relations for each subject from both Rorschach human responses and from open-ended descriptions of significant others and self. Second, that level will be correlated with the person's MMPI scales: high points, pairs, trios, etc.. Third, other post hoc analyses will be run to determine any relationships between MMPI scales or profiles and any parts of the structural analyses of the object relations scales for Rorschach human responses or open-ended descriptions of significant others and self.

The hypotheses are as follows:

1. Levels of object relations correlates may be found in MMPI profiles.
2. Specific scales may be elevated according to levels of development. Specifically:
 1. a) Lower or more primitive levels elevate: 8, 4, 6, and 2 primarily,
 2. b) Intermediate levels elevate: 1, 3, 5, 7, 9, and 0 primarily,
 3. c) And higher levels do not show clinically significant elevations.

CHAPTER II

METHOD

Subjects

Subjects were 136 college students at a large southwestern university who volunteered for extra credit (see Table 1). They ranged in age from 18 to 48 with 75 percent in the 1 to 22 year old range. No attempt to obtain a half male and half female sample was made as sex was deemed an irrelevant variable in this study. There were 56 males and 80 females participating in the study. Eighty percent were caucasian and nearly 67 percent were persons from intact families.

Measures

The Developmental Assessment of the Concept of the Object Scale (DACOS). Blatt, Brenneis, Schimek, and Glick (1976a) created a manual for the Developmental Analysis of the Concept of the Object Scale (DACOS) (see Appendix A). It consists of ratings for the Rorschach human response in six areas: (a) differentiation (the type of human figure perceived: quasi-human part properties, human part properties, quasi-human full figures, and full human figures), (b) articulation (number and type of perceptual and functional

features attributed to figures), (c) the degree of internality in the motivation of action (unmotivated, reactive, and intentional action), (d) the degree of integration of the object and its action (fused, incongruent, nonspecific, and congruent action), (e) the content of the action (malevolent, benevolent), and (f) the nature of the interaction (active-passive, active-reactive, and active-active interactions). In addition an evaluation of the accuracy of the response (i.e., F+, F \pm , F \mp , F $_$) is made. Within these six areas, categories are arranged in an ascending developmental scale with higher scores representing higher developmental levels.

Acceptable levels of inter-judge reliability were obtained by Blatt and Berman (1984) of .86 to .97. This same level of inter-rater reliability was replicated in the Lerner and St. Peter study (1984). No other type of reliability is reported by Blatt or others.

Blatt, Brenneis, Schimek, and Glick (1976b) found consistent changes in the human response to the Rorschach with age. In normal development, from ages 11-12 to adulthood (age 30), there was a marked increase in well-differentiated, highly articulated, and integrated human figures. Another analysis (Blatt, Brenneis, Schimek, & Glick, 1976b; Blatt, Schimek, & Brenneis, 1980) compared the protocols of normal young adults (ages 17-18) to those

of a hospitalized sample of adolescents and young adults. In comparison to the normals, the patients gave human figures which are significantly less accurately perceived, distorted, and partial, and seen as inert or engaged in unmotivated, incongruent, nonspecific and malevolent activity. Blatt's group has used the DACOS in other studies as well and has replicated these findings and found other consistent results (Blatt, Wild, & Ritzler, 1976; Ritzler, Zambianco, Harder, & Kaskey, 1980; Blatt & Lerner, 1982; Blatt & Berman, 1984; Lerner & St. Peter, 1984).

Self Object Scale (SOS). Blatt, Chevron, Quinlan, and Wein (1981) devised a scale which measures content and structural aspects of object relations. It is scored from open ended descriptions of self and parental figures. The Self Object Scale (SOS) results in ratings on a 7 point scale in 13 content areas. These characteristics or qualities of the person being described are as follows: affection, ambition, benevolence, degree of involvement in family, evaluative, intelligence, nurturance, punitive, personal strength, personal success, positive ideal, and warmth, along with an evaluation of degree of ambivalence in the description (on a 3 point scale). The structural ratings result in a conceptual level of object representation being assigned to the description going from Sensorimotor-Preoperational level, to Concrete Perceptual,

to Iconic, to Conceptual level on a 9 point scale based on Blatt's formulations (1974). As an example, in a description rated sensorimotor, the parent would be described mostly with reference to his or her ability to gratify or frustrate their child. There is little sense of the parent as a separate entity. In a description rated conceptual, the parent is seen as a whole, separate person who is experienced in complex, integrated ways and a number of different attributes and functions are integrated in a cohesive, complex synthesis (Blatt, Wein, Chevron, & Quinlan, 1979).

Blatt, Wein, Chevron, and Quinlan (1979) obtained adequate inter-rater reliability for the 13 qualities expressed in the parental descriptions (corrected Pearson r coefficient of .84). The corrected reliability correlation for inter-rater reliability of the conceptual level of the descriptions was .78.

In Blatt, Wein, Chevron, and Quinlan's 1979 study on the relationship between parental representation and types of depression, they used both the Self Other Scale and ratings of the parents on Osgood, Suci, and Tennenbaum's 1957 semantic differential for "my mother", "my father", "myself as I am", and "myself as I would like to be" on 17 bipolar adjective scales of Osgood, Suci, & Tennenbaum's three basic factors: evaluation, potency, and activity.

After a factor analysis of the 13 qualities, two primary factors emerged. Factor I (40% of the variance) was called nurturance and included nurturance, positive ideal, benevolent, warmth, family involvement, affectionate, strong, and successful. Factor II (29 percent of the variance) was called striving and included evaluative, ambitious, punitive, intelligent, ambivalence, successful, and strong.

In order to assess concurrent validity, the experimenters correlated the two factors and the conceptual level with the ratings from the semantic differential. The nurturance factor was positively correlated ($p < .001$) with evaluation, potency, and activity on the semantic differential. The striving factor and the conceptual level of the description of father also correlated significantly ($p < .05$) with potency and activity on the semantic differential. Descriptions of both parents as nurturant was significantly correlated with a positive self description on the semantic differential (and, in their study, with lower scores of depression).

Their hypothesis that there would be a progressive (developmental) increase in the conceptual level ranging from low to high in a theorized developmental order of types of depression (from anaclitic to introjective) was supported.

Minnesota Multiphasic Personality Inventory. The Minnesota Multiphasic Personality Inventory (MMPI) (Hathaway & McKinley, 1948) is a 566 question true/false inventory of which the minimum 399 responses were required for the subjects in the experiment. The 399 answer protocol is common usage. The inventory yields four validity scales (Cannot Say, L, F, & K) and ten clinical scales (hypochondriasis, depression, hysteria, psychopathic deviate, male/female, paranoid, schizophrenia, mania, and social introversion) (see Appendix C for an example of the MMPI profile configuration). The validity scales were designed to give information regarding test taking attitudes and response sets and the clinical scales were designed to measure type, degree, and severity of psychopathology. The MMPI represents the most commonly used and most widely researched objective personality inventory (Greene, 1980).

Test-retest reliability coefficients have been calculated for each of the scales except the Cannot Say scale with coefficients ranging from .59 to .97 (with the exception of paranoid which was .49 to .89) for short-term retests and .32 to .76 for long-term retests. These lower coefficients are not surprising since those scales which measure more trait-like behavior have higher retest coefficients than others which measure state-like behavior.

Extensive research on the scale elevations, the high point pairs, the trios, and configurations has been performed. Dahlstrom, Welsh, and Dahlstrom (1975) include almost 6000 references on the clinical and research applications of the MMPI and Buro's (1978) Eighth Mental Measurement Yearbook contains more than 5000 citations on the MMPI. Years of research and clinical experience has shown that the interpretations from patient's MMPI profiles in accordance with the widely accepted interpretive cookbook systems (Gilberstadt, 1970; Gilberstadt & Driker, 1965; Marks & Seeman, 1963; Marks, Seeman, & Haller, 1974) are statistically valid indicators of patients' varied pathologies.

The MMPI was normed partly on a reference group of 724 "normal" persons from age 16 to 55 in the late 1930's. They were all caucasians and were representative of the Minnesota population for sex and marital status. Another of the "normal" groups used in the development of the scales was 265 precollege high school graduates (Greene, 1980). Thus, the MMPI appears to be an appropriate instrument to use with college students.

Procedure

Subjects were recruited from undergraduate classes in Psychology on an ongoing basis. They were oriented to the study and the assessment procedure was explained. Complete

confidentiality of their results was assured. All data was handled as confidential and protocols/score sheets/descriptions showed only a subject number. Subjects were required to sign an informed consent form (Appendix D) which stated that they may withdraw from the experiment at anytime. They completed a demographic questionnaire which includes data pertaining to their parents and siblings (Appendix E). Qualified advanced graduate students administered all measures except the demographic questionnaire which was given to them by first year graduate students. Each subject spent approximately two to two and a half hours in the test situation.

Administration of the SOS. First, subjects wrote their descriptions of their mothers, fathers, and themselves. Subjects were asked by the advanced graduate student experimenters to "Tell us what your mother is like--describe your mother" on a blank sheet of paper. They were told that they had a maximum of 5 minutes. Subsequently, the same directions were given for descriptions of their father and themselves.

Scoring of the SOS. A group of advanced graduate students studied the SOS manual for scoring the descriptions on a content and structural level (see Appendix B). They practiced scoring and discussed their questions until they achieved adequate inter-rater reliability (.74, Pearson r)

for the category used in this research (conceptual level). Inter-rater reliability was obtained once before the scoring and was not obtained again. Raters were not blind to the purpose of the study.

Administration of the Rorschach. Next, the Rorschach was administered in the standard procedure established by Rapaport, Gill, and Schafer (1945). Hermann Rorschach's Psychodiagnostic Plates (1921/1942) were used to administer the test including all 10 cards and obtaining free association and inquiry responses. Rapaport, Gill, and Schafer's (1945) method of administration was followed which entails doing the inquiry for each card directly after all the free association responses for that card have been obtained. The subject is not shown the card again for location purposes until he/she has completed the inquiry on all responses.

Scoring on the Rorschach. The human and quasi-human responses were excerpted by two first year graduate students from the subjects records. The students trained on protocols with Blatt et. al.'s (1976a) manual in order to recognize the human and quasi-human responses. Their inter-rater reliability after training was calculated as .84 (Pearson r). This was the only time inter-rater reliability was calculated. These responses were then scored in accordance with the DACOS scale by a group of three advanced

graduate students trained to acceptable levels of reliability. The graduate students were not blind to the purpose of the study. An alpha coefficient was calculated to establish inter-rater reliability on pilot data not being used in this study and then on data chosen at random from this study. The alpha coefficients for each subcategory ranged from .79 to .95 with an overall alpha of .96 for the three raters of the DACOS.

Administration of the MMPI. Subsequently the MMPI was administered. Since the subject was a high school graduate and had taken the SAT exams for college entrance, it was assumed that he or she could read on at least a sixth grade level. The MMPI was administered by giving the subject a pencil and asking him or her to read the instructions. The examiner asked for questions or clarifications and then the subject took the test. Most subject's completed the entire test in 60 to 90 minutes, as most people do (Greene, 1980). The subject was checked on periodically to make sure there were no problems.

Scoring of the MMPI. Scoring of the anonymous computer sheets was done by hand with the proper MMPI templates for each validity and clinical scale. Undergraduate students scored the computer sheets.

However, Greene (1980) points out that the K-corrections normally applied to all profiles have proved

unreliable with college samples. In the three studies which were performed to determine if the K-corrections were valid in differentiating normal from maladjusted college students, the K-corrections were found to be either the wrong weights or entirely invalid for this population. Since this is the case, only K-corrections from college norms were used in determining the T-scores in addition to non-K corrected T-scores (Greene, 1980).

CHAPTER III

RESULTS

Descriptive Statistics

Table 2 presents basic descriptive statistics for the DACOS, the SOS, and all 10 of the K and non-K corrected MMPI scales. Total scores on the DACOS were formed by summing the raw scores in each of the separate categories (articulation, differentiation, and integration) and dividing by the total number of responses minus the number of human form responses in order to control for response productivity. This is analogous to the method used by Blatt and his associates (1976b) to control for response productivity. The distribution obtained was positively skewed (skewness = 2.518; kurtosis = 9.200) and there were two extreme outlying scores. Outliers were defined as any scores falling 4 standard deviations or more above or below the mean. The range minus the outliers is 0 to 14 with a mean of 5.53. The outlying scores were 19.0 and 26.0. The distribution is shown in Figure 1. Analyses were performed on these data after dividing it into two equal groups.

Table 2

Descriptive Statistics for the DACOS, SOS, and MMPI

| | Range | Mean | Median | Mode | S.D. | Kurtosis | Skewness |
|------------------------------|--------|------|--------|------|-------|----------|----------|
| DACOS with outliers | 0-26 | 4.13 | 3.2 | .3 | 3.74 | 9.62 | 2.49 |
| DACOS without outliers | 1-15 | 5.53 | 5.0 | 5.0 | 3.04 | .70 | 1.05 |
| SOS | 1-8 | 5.25 | 5.5 | 5.0 | 1.66 | -3.70 | -4.96 |
| K-Corrected MMPI | | | | | | | |
| 1 | 13-122 | 57.8 | 56 | 48 | 14.09 | 2.45 | 1.11 |
| 2 | 30-97 | 55.2 | 52 | 50 | 12.20 | .66 | .88 |
| 3 | 21-93 | 53.5 | 54 | 49 | 12.33 | .53 | .31 |
| 4 | 32-79 | 55.1 | 56 | 47 | 9.99 | -.32 | -.07 |
| 5 | 30-81 | 50.4 | 47 | 41 | 11.17 | -.08 | .67 |
| 6 | 28-80 | 51.8 | 52 | 57 | 10.93 | -.14 | .09 |
| 7 | 32-85 | 55.6 | 54 | 49 | 12.64 | -.45 | .52 |
| 8 | 33-121 | 57.2 | 53 | 53 | 15.17 | 2.58 | 1.34 |
| 9 | 37-82 | 57.1 | 57 | 64 | 10.81 | -.46 | .03 |
| 10 | 26-79 | 50.3 | 49 | 44 | 10.63 | -.18 | .52 |
| Non K-Corrected MMPI | | | | | | | |
| 1 | 37-110 | 53.3 | 50 | 46 | 11.70 | 3.55 | 1.51 |
| 2 | 32-99 | 55.7 | 53 | 51 | 11.80 | 1.25 | 1.06 |
| 3 | 26-87 | 56.7 | 56 | 56 | 9.31 | .96 | .18 |
| 4 | 37-84 | 60.6 | 61 | 63 | 11.18 | -.71 | .19 |
| 5 | 26-88 | 55.5 | 53 | 39 | 13.83 | -.52 | .30 |
| 6 | 38-79 | 57.5 | 59 | 59 | 9.34 | -.48 | -.14 |
| 7 | 36-88 | 55.4 | 54 | 43 | 11.86 | -.41 | .58 |
| 8 | 37-97 | 57.0 | 53 | 53 | 12.84 | .17 | .86 |
| 9 | 43-86 | 62.3 | 61 | 59 | 9.94 | -.36 | .00 |
| 10 | 28-77 | 51.4 | 50 | 44 | 10.36 | -.16 | .59 |

Count Midpoint One Symbol = Approximately .80 Occurrences

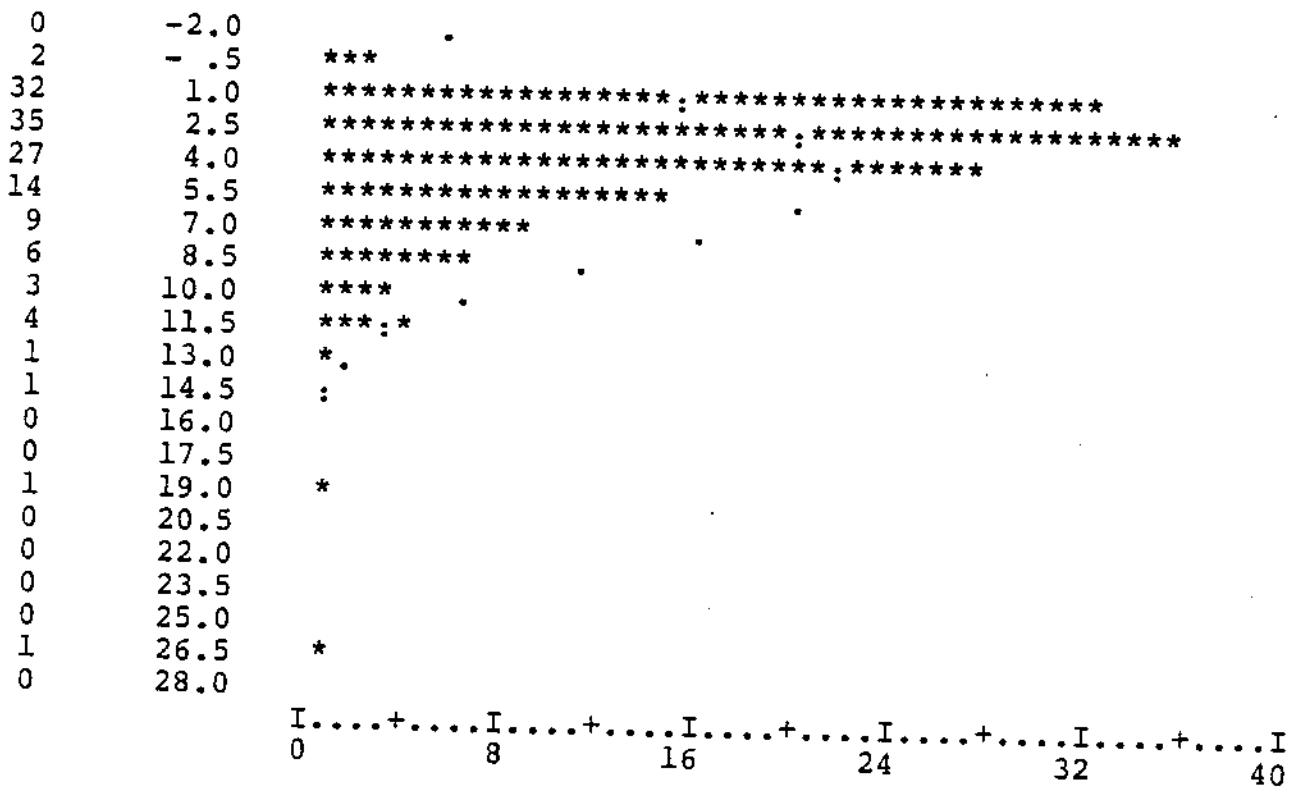


Fig. 1--DACOS Distribution

The SOS total score was created by taking the average of the conceptual level ratings for mother and father descriptions. The distribution thus obtained on the SOS was essentially a normal one (skewness = -.496, kurtosis = -.370).

The MMPI was scored and transformed into standard scores using K-corrected and non-K corrected norms for

college freshmen from Dahlstrom, Welsh, and Dahlstrom (1972, in Greene, 1980). Most distributions of the scales were essentially normal; however, scale 1 (hypochondriasis) and scale 8 (schizophrenia) for the K-corrected MMPI scales were observed to be positively skewed (skewness = 1.11 and 1.34 respectively). For the non K-corrected MMPI scales, scale 1 (hypochondriasis) and scale 2 (depression) were positively skewed (skewness = 1.51 and 1.06 respectively) as shown in Table 2.

Grouping

The next task was to divide the 132 subjects with usable data on all three measures into 3 groups: low, medium, and high on the SOS and low and high on the DACOS. For the SOS, this was done on a theoretical basis, following Blatt's conception of level of object relations, assigning those to the low group based on an SOS score of less than 4 (which includes the sensorimotor-preoperational level). Those in the middle group included those scores from 4 to 6 inclusive (high end of concrete-perceptual and external iconic levels) and those in the high group had scores equal to or above 7 (internal iconic and conceptual levels). Since the data were normally distributed, this resulted in group 1 with 27 subjects (20 percent), group 2 with 81 subjects (60 percent), and group 3 with 27 subjects (20 percent).

This type of a division had not been attempted in the literature to date to this researchers' knowledge and Sidney Blatt (personal communication, April 15th, 1986) stated that he had not established norms or cut-off points for either of these scales. A Pearson Product Moment correlation was performed on the DACOS and the SOS which resulted in no significant correlation. Thus it was not possible to separate the DACOS data into three groups based on the same percentages as the SOS (i.e., 20 percent, 60 percent, and 20 percent). Therefore, a split using the mean and one standard deviation above and below the mean to form the middle group was attempted. This left only one person in the "low" group or the below 1 standard deviation below the mean group. Obviously this was not acceptable. Since the data was so homogeneous on this measure it was decided that a median split into two groups--low and high--was the only division which would be defensible both theoretically and statistically. Therefore, the subjects were divided into two equal groups using a median split.

Statistical Analyses

Following these categorizations, MANOVAS were performed on the DACOS groups and the SOS groups with the MMPI scales as dependent variables. Results from the MANOVAS on the SOS and the DACOS groups are presented in Tables 3 through 5. For the SOS groups there were no significant group by

Table 3
MANOVA By Group With SOS

| | Males | | Females | | Combined | |
|--------------|------------|------|------------|------|-------------|------|
| | df (2, 52) | F | df (2, 74) | F | df (2, 129) | F |
| KMMPI | | | | | | |
| 1 | .57 | .571 | 1.51 | .227 | .14 | .872 |
| 2 | .73 | .485 | 1.47 | .237 | .03 | .970 |
| 3 | .82 | .447 | .58 | .565 | .19 | .827 |
| 4 | .46 | .632 | .58 | .564 | .03 | .966 |
| 5 | 1.11 | .337 | 1.70 | .190 | .30 | .740 |
| 6 | .38 | .685 | .48 | .623 | .02 | .984 |
| 7 | 1.53 | .226 | .71 | .496 | .21 | .810 |
| 8 | .42 | .657 | 1.32 | .273 | .15 | .857 |
| 9 | .22 | .803 | 1.24 | .295 | 1.20 | .305 |
| 10 | .53 | .594 | 2.18 | .120 | .86 | .426 |
| MMPI | | | | | | |
| 1 | .38 | .684 | 1.40 | .253 | .11 | .893 |
| 2 | .72 | .493 | 1.55 | .219 | .03 | .966 |
| 3 | .75 | .478 | .56 | .575 | .20 | .822 |
| 4 | .21 | .810 | 1.00 | .371 | .25 | .782 |
| 5 | 1.13 | .332 | 1.57 | .215 | .18 | .839 |
| 6 | .37 | .690 | .33 | .721 | .11 | .896 |
| 7 | .42 | .661 | .77 | .468 | .08 | .926 |
| 8 | .30 | .741 | .96 | .388 | .31 | .731 |
| 9 | .26 | .770 | 1.31 | .277 | 1.37 | .258 |
| 10 | .48 | .624 | 1.89 | .158 | .73 | .485 |

Note. KMMPI = K-corrected MMPI scales; MMPI = non-K-corrected MMPI scales.

Table 4
MANOVA By Group With DACOS

| | Males | | Females | | Combined | |
|--------------|-------|------------|---------|------------|----------|-------------|
| | F | df (1, 53) | F | df (1, 75) | F | df (1, 130) |
| KMMPI | | | | | | |
| 1 | .16 | .693 | .23 | .632 | .45 | .50 |
| 2 | .47 | .495 | .04 | .846 | .45 | .50 |
| 3 | 1.22 | .274 | .00 | .954 | .60 | .44 |
| 4 | 4.58 | .037 | .16 | .691 | 2.75 | .10 |
| 5 | 3.01 | .089 | .78 | .381 | .96 | .33 |
| 6 | 5.28 | .026 | 1.11 | .296 | 5.64 | .02 |
| 7 | 2.76 | .103 | .87 | .355 | 3.52 | .06 |
| 8 | 1.37 | .246 | .38 | .542 | 2.03 | .16 |
| 9 | 2.16 | .148 | 1.12 | .293 | 3.33 | .07 |
| 10 | 1.00 | .322 | .54 | .463 | 1.28 | .26 |
| MMPI | | | | | | |
| 1 | 1.64 | .206 | .17 | .686 | 1.63 | .21 |
| 2 | .47 | .497 | .09 | .770 | .61 | .44 |
| 3 | 1.36 | .249 | .00 | .991 | .50 | .48 |
| 4 | 4.12 | .047 | .08 | .781 | 2.50 | .11 |
| 5 | 3.14 | .082 | .61 | .438 | .59 | .45 |
| 6 | 5.37 | .024 | 1.57 | .214 | 6.15 | .01 |
| 7 | 1.78 | .188 | .32 | .575 | 1.81 | .18 |
| 8 | 1.73 | .194 | .07 | .789 | 1.44 | .23 |
| 9 | 2.04 | .159 | .82 | .369 | 2.78 | .10 |
| 10 | 1.10 | .298 | .28 | .599 | 1.16 | .28 |

KMMPI = K-corrected MMPI scales; MMPI = non-K-corrected scales.

Table 5
MANOVA By Sex With SOS and DACOS

| | SOS df (1, 126) | | DACOS df (1, 126) | |
|--------------|--------------------|----------|----------------------|----------|
| | <u>F</u> | <u>P</u> | <u>F</u> | <u>P</u> |
| KMMPI | | | | |
| 1 | .01 | .927 | 1.29 | .258 |
| 2 | .00 | .965 | .71 | .400 |
| 3 | .02 | .900 | .49 | .486 |
| 4 | .77 | .381 | 3.05 | .083 |
| 6 | 6.80 | .010 | 14.79 | .000 |
| 7 | 3.82 | .053 | 10.62 | .001 |
| 8 | 12.43 | .001 | 21.61 | .000 |
| 9 | .94 | .334 | 1.61 | .206 |
| 10 | .12 | .745 | 2.84 | .094 |
| MMPI | | | | |
| 1 | .30 | .586 | 2.58 | .111 |
| 2 | .29 | .593 | 2.40 | .124 |
| 3 | .39 | .533 | .00 | .944 |
| 4 | 1.86 | .175 | 5.69 | .019 |
| 6 | .05 | .820 | .06 | .813 |
| 7 | .87 | .352 | 3.34 | .070 |
| 8 | 2.67 | .105 | 4.72 | .032 |
| 9 | 1.62 | .205 | 2.87 | .093 |
| 10 | .58 | .447 | .09 | .759 |

Note. KMMPI = K-corrected MMPI scales; MMPI = non-K-corrected MMPI scales.

sex interactions on any K corrected or non-K corrected MMPI scales. No significant effect for group was found and this was true for males and females. There was a significant effect for sex on K corrected MMPI scales 6 (paranoia), 7 (psychasthenia), and 8 (schizophrenia). Females scored significantly lower than males on all of these scales.

Similarly, for the DACOS groups there were no significant group by sex interactions on any K or non-K corrected MMPI scale. Again, there was a significant effect for sex (males scoring higher than females) on K corrected MMPI scales 6, 7, and 8 as there was for the groups on the SOS (see Table 5).

On the DACOS scale, a significant effect for group was found on K corrected and non-K corrected MMPI scale 6 ($F = 6.16$, $df = 1,128$, $p = .01$). Group 1 and Group 2 were found to be significantly different from each other in that Group 1's (the high group) mean score was significantly higher than Group 2's (the low group) mean score. When the MANOVA was performed individually by sex, the p value for males on scale 6 (K corrected and non-K corrected) was .024 but for females it was non-significant.

For males, a significant effect for group (Group 1 higher than Group 2) on MMPI scale 4 (K and non-K corrected) was obtained. The same effect for females was not found. No other significant MANOVA results were found.

Pearson Product Moment correlations were performed to evaluate the data more fully and to look at overall relations between the experimental scales and the MMPI scales. Pearson correlations were performed on the accurate and inaccurate responses on the DACOS with the MMPI scales. The only significant correlations were those of accurate responses and scales 9 and 10 on the MMPI, K-corrected, and scale 10, non-K corrected (see Table 6). Scale 10's correlations were in the negative direction. Thus, as accuracy increased, scores on MMPI scale 9 increased and on MMPI scale 10 scores decreased.

A Pearson correlation was also performed on the DACOS with the SOS with no significant results ($SOSTOTMF = -.0850$, $p = .164$).

Other Pearson correlations performed include SOS total scores with MMPI scales divided by sex and combined, DACOS total scores with MMPI scales divided by sex and combined. Results are shown in Tables 7 and 8. Significant results include:

1. A significant positive correlation between SOS and MMPI scale 5 (K corrected and non-K corrected) for males and a significant negative correlation between SOS and scale 5 (K corrected and non-K corrected) for females.
2. A significant positive correlation between DACOS and MMPI scale 4 (K corrected) and a negative correlation on scale 10 (K corrected and non-K corrected) for males.

Table 6

Pearson Product Moment Correlations of Accurate and Inaccurate Perceptions on the DACOS with the MMPI

| | Accurate | | Inaccurate | |
|--------------|--------------|----------|--------------|----------|
| | <u>Corr.</u> | <u>p</u> | <u>Corr.</u> | <u>p</u> |
| KMMPI | | | | |
| 1 | .05 | .29 | .06 | .25 |
| 2 | -.02 | .40 | .10 | .14 |
| 3 | .03 | .37 | .07 | .22 |
| 4 | -.02 | .40 | .08 | .20 |
| 5 | -.05 | .29 | .11 | .10 |
| 6 | -.05 | .27 | .10 | .13 |
| 7 | .00 | .49 | .10 | .13 |
| 8 | -.01 | .47 | .12 | .08 |
| 9 | .15 | .04 | .07 | .21 |
| 10 | -.17 | .02 | -.08 | .18 |
| MMPI | | | | |
| 1 | .03 | .38 | -.00 | .48 |
| 2 | -.02 | .42 | .10 | .13 |
| 3 | .03 | .37 | .04 | .33 |
| 4 | -.04 | .32 | .02 | .42 |
| 5 | -.05 | .30 | .08 | .17 |
| 6 | -.04 | .32 | .10 | .14 |
| 7 | -.03 | .36 | .00 | .48 |
| 8 | -.04 | .33 | .04 | .32 |
| 9 | .13 | .06 | .03 | .37 |
| 10 | -.16 | .03 | -.08 | .17 |

Note. KMMPI = K-corrected MMPI scales; MMPI = non-K-corrected MMPI scales.

Table 7

Pearson Correlations of SOS by Sex and Combined with MMPI

| | | Male | | Female | | Combined | |
|--------------|--------------|----------|--|--------------|----------|--------------|----------|
| | <u>Corr.</u> | <u>p</u> | | <u>Corr.</u> | <u>p</u> | <u>Corr.</u> | <u>p</u> |
| KMMPI | | | | | | | |
| 1 | .00 | .49 | | -.06 | .29 | -.03 | .37 |
| 2 | -.02 | .43 | | .02 | .42 | .01 | .47 |
| 3 | .07 | .30 | | -.09 | .22 | -.03 | .38 |
| 4 | .07 | .31 | | -.01 | .48 | .03 | .37 |
| 5 | .26 | .03 | | -.22 | .03 | .04 | .34 |
| 6 | .07 | .32 | | -.01 | .47 | .03 | .35 |
| 7 | -.06 | .32 | | -.05 | .35 | -.04 | .33 |
| 8 | .02 | .45 | | -.13 | .14 | -.03 | .38 |
| 9 | .09 | .26 | | -.07 | .28 | -.00 | .49 |
| 10 | .18 | .10 | | .03 | .41 | .09 | .16 |
| MMPI | | | | | | | |
| 1 | -.02 | .44 | | .01 | .46 | .00 | .48 |
| 2 | -.02 | .45 | | .04 | .37 | .02 | .42 |
| 3 | .07 | .30 | | -.08 | .24 | -.02 | .38 |
| 4 | .10 | .23 | | .06 | .30 | .08 | .17 |
| 5 | .26 | .03 | | -.21 | .03 | .01 | .48 |
| 6 | .06 | .32 | | -.03 | .41 | .01 | .46 |
| 7 | .00 | .50 | | .04 | .38 | .03 | .37 |
| 8 | .01 | .48 | | -.06 | .32 | -.02 | .41 |
| 9 | .10 | .24 | | -.02 | .42 | .03 | .38 |
| 10 | .18 | .09 | | .01 | .45 | .08 | .19 |

Note. KMMPI = K-corrected MMPI scales; MMPI = non-K-corrected MMPI scales.

Table 8
Pearson Correlations of DACOS by Sex
and Combined with MMPI

| | Male | | Female | | Combined | |
|--------------|--------------|----------|--------------|----------|--------------|----------|
| | <u>Corr.</u> | <u>p</u> | <u>Corr.</u> | <u>p</u> | <u>Corr.</u> | <u>p</u> |
| KMMPI | | | | | | |
| 1 | .00 | .49 | -.01 | .48 | -.03 | .37 |
| 2 | -.01 | .48 | -.02 | .44 | .01 | .47 |
| 3 | .04 | .40 | -.01 | .45 | -.03 | .38 |
| 4 | .22 | .05 | -.08 | .26 | .03 | .37 |
| 5 | .07 | .30 | -.09 | .23 | .04 | .34 |
| 6 | .08 | .30 | .10 | .19 | .03 | .35 |
| 7 | .00 | .49 | .06 | .31 | -.04 | .33 |
| 8 | .01 | .46 | .02 | .43 | -.03 | .38 |
| 9 | .14 | .16 | .11 | .17 | -.00 | .49 |
| 10 | -.25 | .04 | -.08 | .24 | -.09 | .16 |
| MMPI | | | | | | |
| 1 | .04 | .40 | -.03 | .41 | .00 | .48 |
| 2 | .01 | .48 | -.01 | .48 | .02 | .42 |
| 3 | .04 | .40 | -.03 | .42 | -.03 | .38 |
| 4 | .17 | .11 | -.08 | .24 | .08 | .17 |
| 5 | .08 | .29 | -.08 | .24 | .01 | .48 |
| 6 | .08 | .29 | .12 | .14 | .01 | .46 |
| 7 | -.01 | .46 | .02 | .44 | .03 | .37 |
| 8 | .01 | .46 | -.02 | .43 | -.02 | .41 |
| 9 | .11 | .22 | .08 | .24 | .03 | .38 |
| 10 | -.25 | .04 | -.06 | .30 | .08 | .19 |

Note. KMMPI = K-corrected MMPI scales; MMPI = non-K-corrected MMPI scales.

CHAPTER IV

DISCUSSION

Description of Sample

The sample consisted of mostly freshmen men and women at a large Southwestern state university (see Table 1). They had mean scores on the measure of psychopathology (MMPI) in the normal range. The majority are functioning at a low or more primitive level of object relations as measured by the DACOS (it was positively skewed) or a medium level of object relations as measured by the SOS. It is not known if this restricted range of variability on the DACOS is typical of a college population as there are no normative data available to this researcher's knowledge.

When measured on the MMPI, the sample closely approximated normal college samples reported by other investigators (Kelly & King, 1978, and Sopchack, 1952) and did not significantly vary from the norms provided by Dahlstrom, Welsh, & Dahlstrom (1972, in Greene, 1980). Forty-seven percent had no clinical scales elevated. Fifty-three percent had at least one scale clinically elevated (> or = 70T) and 33 percent had two or more scales clinically elevated. The scores were approximately normally distributed for all scales (see Table 2).

Distribution of Scales

The sample was shown to be quite homogeneous for all measures. A restricted range and homogeneous sample is known to reduce the chances for statistical significance. A decrease in variability (i.e., in the spread between scores) means that the scores are mostly clustered around the mean. When this distribution is found, statistical tests to discover differences between certain groups of scores are less likely to be significant (i.e., find differences) (Weinberg & Goldberg, 1979). According to Hildebrand (1986) when the SS (between), which "measures the variability attributable to the levels of a factor" (p. 567), in an analysis of variance procedure is large, it will make the F statistic large and statistically significant, and when it is small, it will contribute to the nonsignificant results found.

Choice of Statistical Procedures

Since MMPI scale distributions were approximately normal with only three exceptions (1 and 8 K corrected, and 1 and 2 non-K corrected), the SOS data were normally distributed, and the DACOS had even numbers of subjects in each group, it was felt that assumptions of normality for a MANOVA procedure had been met. The large sample size was felt to be another positive aspect of the statistical picture which enabled the researcher to feel confident in using the most powerful statistics available.

Pearson Product Moment Correlations were performed in order to more fully understand the relationships between the object relations scales and the MMPI. The data was continuous and, with the exception of the DACOS, fairly normal. Thus, the Pearson is the correlational procedure indicated when these assumptions are met. It is important to note that a large number of correlations were performed (122) and thus one should expect at least 6 of them to be significant simply by chance. In actuality, fourteen correlations were found to be significant.

Relationship between MMPI Scales and Object Relations

MANOVA Results for SOS. Since object relations were measured on two scales, the SOS will be discussed first and then the DACOS. No significant group (low, medium, or high) by sex interactions were found on any MMPI scale K or non-K corrected and there was no main effect for SOS group contrary to what was hypothesized. A significant effect for sex was found on K corrected MMPI scales 6 (paranoia), 7 (psychasthenia), and 8 (schizophrenia). Females consistently scored lower than males on these scales. These three scales (6, 7, and 8) are generally considered to measure the most severe pathology and are collectively referred to as the "psychotic triad" (Greene, 1980). It is interesting to speculate as to why men would endorse more pathological items than women on these particular scales.

Perhaps socialization can account for some of the difference. Females are socialized through childhood and adolescence differently than males (Lerner & Shea, 1982). Their socialization, which has emphasized "developing and maintaining close interpersonal relationships" and permission to talk about feelings and problems, is one which would seem to prepare a person for first time away from home college experiences (p. 514). Contrast this with boys socialization which emphasizes "achievement, competition, control of feelings, and control of aggression" (p. 514) and it seems that a new environment would provoke more psychological disorganization for males than for females whose background would tend to allow them to seek out support groups. Thus, females may not feel as disturbed by their experience in college as males.

MANOVA Results with DACOS. As with the SOS, there was no DACOS group by sex interaction on any of the MMPI scales, K or non-K corrected. The main effect for sex obtained on the SOS also obtained on the DACOS K corrected MMPI scales. For the non-K corrected MMPI scales the main effect for sex was evident on scale 8 as on the K-corrected but not on scale 6 or 7. There was an effect on scale 4 however. The main effect for sex on scale 8 has been discussed above. Scale 4 differences may have to do with the above discussed stereotypical sex roles. Males would likely be less

uncomfortable with such descriptions as "rebellious, unconventional, and nonconforming" (p. 88, Greene, 1981) than females due to their socialization process. Scale 4 descriptions are more consistent with stereotypically male characteristics than with stereotypical female characteristics. To the extent that males are disorganized or off balance in the new environment the characteristics of rebellious, unconventional behavior could become more prominent.

There was a main effect for DACOS group on the MMPI scale 6 (paranoia) on both K and non-K corrected scales. Group 1 (high) and group 2 (low) were found to be significantly different at the .01 level. Group 1 scored higher on scale 6 than group 2. When the MANOVA was performed for males and females separately, only males showed significant effects. The p value for males on scale 6 was .03 for K corrected and .02 for non-K corrected but for females the p value was .30 and .21 respectively. According to Greene (1980), high scoring normals on Scale 6 (not clinically elevated) are described in terms compatible with good object relations such as "interpersonally sensitive, emotional, rational, clear thinking, and empathic" (p. 97). Low scoring normals are described often as "underachievers, unaware of or insensitive to the motives of others, having narrow interests, conventional, and trusting"; however they

are also described as "socially competent" (p. 97). One researcher (Anderson, 1956) found that low scoring college students reported conflicts with their parents and were academic underacheivers. These descriptions seem to be generally consistent with high or low object relations. Thus, it appears that these significant differences between Group 1 and Group 2 on scale 6 and on scale 4 are applicable only for males.

Correlational Results on the DACOS. Pearson Product Moment Correlations were more numerous. The DACOS was split into accurate and inaccurate responses and each MMPI scale was evaluated for degree of correlation. An accurate response is defined as an accurately perceived human response, i.e., a response given a "plus" or a "plus/minus" rating as opposed to a "minus/plus" or a "minus" rating as defined in Allison, Blatt, & Zimet (1968) and Rappaport, Gill, and Schafer (1945). This means that the percept is easily and frequently seen, conforms to the general outlines of the blot, and is perhaps more elaborated (i.e., the response is given in more detail) than is usually heard (receiving a "plus"). Often it is correlated with the quality of reality testing (Exner, 1974; Lerner & St.Peter, 1984). An inaccurate response is one which receives a "minus/plus" or "minus" score; i.e., it has no particular form or is a severely distorted perception of the blot.

Blatt, Brenneis, Schimek, and Glick (1976b) and Lerner and St. Peter (1984) have found that persons diagnosed either with psychotic or severely borderline psychopathology tend to have high DACOS scores on developmental level of human differentiation, articulation, and integration on inaccurately perceived responses and tend to have lower DACOS scores when they give accurately perceived responses. Both speculate that since accurately perceived responses represent reality, this population cannot cope with reality and therefore would distort and/or give nonsensical responses to accurately perceived human percepts. Thus, it has been important to separate accurate from inaccurate responses when dealing with pathological samples. Since this has not been done with a "normal" sample the correlation was performed to discover whatever significant relationships with accurately and inaccurately perceived responses were present.

There were no correlations on the inaccurate responses probably indicating the normalcy of the population. However, for the accurately perceived human responses, scales 9 and 10 on the K corrected and scale 10 on the non-K corrected MMPI were significantly correlated with the DACOS (scale 10's correlations were in the negative direction). Scale 9 measures, among other things, social confidence, denial of sensitivity, independence from others opinions,

denial of guilt, frankness, a feeling of great self-importance, physical activeness, and a pressure for action (Greene, 1980). Scale 10's score in the low range measure social extroversion, gregariousness, and social poise (Greene, 1980). Nakamura (1960) presents evidence to support the theory that scale 9 is usually high in college students because it measures desirable qualities in the stereotype of the popular student (i.e., "sociable, active, enthusiastic, frank, likes drinking and idealistic" p. 111). He further states that scale 9 scores regularly increase from Freshman to Sophomore years. This is one explanation of the correlation between accurate responses on the Rorschach and scale 9; i.e., those students with the more "normal," healthy object relations would tend to conform with ease to the college stereotype. Thus the higher the developmental level of accurately perceived responses, the more students may conform to this picture. This stereotype also applies to scale 10 low scorers who would be described in similar terms, i.e., as socially extroverted, gregarious, and poised. College students are expected to score in this range (Greene, 1980). Thus, these students with good reality testing (i.e., accurate human responses) and high levels of object relations (higher developmental levels) are seen as outgoing, extroverted, sociable, and active. Certainly if any MMPI scales should correlate with object

relations it would be scales 9 and 10 as is evident from the personality descriptions. Thus, it seems that higher levels of accurate human responses on the Rorschach are positively associated with active, outgoing, and socially confident qualities and negatively associated with signs of social isolation, social insecurity, and withdrawal.

Males had positively correlated total DACOS scores with MMPI scale 4 (K corrected). Males who demonstrated more mature object relations on the DACOS, scored higher on Scale 4, a measure of sociopathy. Scale 4 has been broken down into subscales which show that this scale can be indicating a denial of social anxiety, an assertion of social poise and confidence (similar to scale 9) although concommittently a lack of gratification in social interactions. Greene (1980) reports that first impressions of high scorers on Scale 4 often suggest a person who is socially outgoing, facile, and energetic (p. 86) which also coincides with scale 9. Factor analysis of scale 4 results in the following factors: shyness, hypersensitivity, delinquency, impulse control, and neuroticism (Greene, 1980). Thus the DACOS may be measuring people's overt abilities to get along with other people and their sensitivity to cues which are, obviously, prerequisites to the ability to establish and maintain an intimate relationship. However, this could also indicate a rather cold, calculating person and/or one who can only relate to others on a superficial level.

Correlational Results on the SOS. Significant correlations for males and females were correlations between their SOS data and scale 5 (the male/female scale)--for males the correlation was positive, for females, negative. Apparently, for males, higher levels of object relations are associated with higher scores on Scale 5 which measures more traditionally feminine qualities, i.e., passivity, social perceptivity and sensitivity, wide range of aesthetic interests, and a preference for working through problems in a covert or indirect manner (Greene, 1980). Western society has associated certain characteristics with women and this has been widely documented (Cook, 1985, Parsons & Bales, 1953, Spence & Helmrich, 1978). It encourages women to concentrate on relationships and in understanding and sensitivity to others far more than it has encouraged men to do so. Cook (1985) reports that males seem to be encouraged in "assertive activity, differentiation, self-protection, self-expansion, an urge toward mastery, and forming separations from others" (p. 5). The negative correlation on this scale 5 for females could mean that females with higher level object relations accept the stereotypical picture of a female (i.e., "passive, submissive, yielding and demure" Greene, 1980, p. 93). However, looking at the actual items on the MMPI scale show that low scoring females say they "have never been sorry I am a girl, like

poetry, have been disappointed in love, think I feel more intensely than most people do" (Hathaway & McKinley, 1948). Thus it would appear that this finding could also mean that these women are sensitive, tender, and relationship-oriented. Females with lower levels of object relations reject the "stereotypical view of femininity" (Greene, 1980). They are seen as "aggressive, unfriendly, dominating, and competitive, and maybe adventurous" (p. 93) which is more consistent with a position of disengagement from people.

Correlational Results between the SOS and the DACOS.

The most surprising results of the study came when a Pearson correlation revealed no significant correlation between the DACOS and the SOS. Obviously, in this study at least, they were not measuring the same underlying concept. It is possible that, as Mayman had speculated, the measures applied to the Rorschach obtain "a blend of the level of psychopathology and the quality of object relations" (p. 208 in Blatt & Lerner 1983a). A measure of object relations in the purer sense may be thought of as the SOS. Thus since the MMPI was created as a measure of psychopathology and the Rorschach may yield a blend including level of psychopathology, this may explain why the only significant main effect for group was obtained on the DACOS and four of the significant correlations were on the DACOS as well. It

may be the influence of psychopathology rather than the influence of object relations which have produced the significant correlations on the DACOS.

Interpretation of Scores on Object Relations Scales

In Blatt et al's 1976 article they gave group means and standard deviations for the various age groups in their longitudinal normal sample. One group was the 17 to 18 year old sample. At this time the Blatt group was simply reporting frequencies; i.e., a certain category was either present or not present. Scoring criteria included in the present manual were not used at that time so that no weighted means were reported. Thus the lack of norms on the weighted data compounds our difficulty in interpreting what these scales mean. The Blatt group's scoring manual (see Appendix A) assigns weights beginning at 1 for the theoretically lowest developmental level and increasing by increments of 1 for each subcategory of that major category, i.e., a score of 1 for quasihuman detail, 2 for human detail, 3 for full quasihuman, and 4 for full human under the major category of differentiation. What is interesting is that they appear not to have taken the data from their normal sample into consideration when assigning the order of the weights to the subcategories. It appears from the data that human detail should be assigned the weight of 3 instead of 2 and full quasihuman should be assigned a 2 instead of a

3 (see Table 9). In other words, according to the longitudinal data it would appear that the developmental progression should be quasihuman detail, full quasihuman, human detail, and full human weighted 1, 2, 3, and 4 respectively rather than 1, 3, 2, and 4 as the present system weights them. Similarly, other subcategories appear to be improperly weighted on a developmental continuum from the normal sample's data. Blatt et al's (1976b) conclusion that "there is a marked increase in the number of accurately perceived, well-articulated, full human figures involved in appropriate, integrated, positive, meaningful interactions" (p. 367) with age certainly appears correct. This particularly appears to apply to three of the higher developmental subcategories (i.e., full human, congruent, and benevolent). However, the order of the weightings appears at least questionable and this may, in turn, have contributed to the negatively skewed appearance of the data in this study. It certainly seems that this would warrant further research.

Another area to examine is the actual scoring procedure applied to the DACOS. It is possible that calculating the DACOS scores in the manner in which it was

Table 9

Longitudinal Normal Sample (Blatt et al., 1976b)

| | Age (in years) | | | |
|---|----------------|-------------|-------------|-------------|
| | 11-12 | 13-14 | 17-18 | 30 |
| Differentiation | | | | |
| Quasihuman detail | 1.35 (6.48) | .16 (.44) | .05 (.23) | .43 (1.52) |
| Human detail | 1.95 (8.09) | .46 (.72) | .97 (1.33) | 1.08 (1.71) |
| Full quasihuman | .54 (.79) | .86 (.88) | .54 (.64) | .84 (1.15) |
| Full human | 1.59 (2.02) | 1.65 (1.36) | 2.59 (1.67) | 2.78 (1.71) |
| Articulation | | | | |
| Perceptual | 3.27 (8.79) | 1.92 (1.73) | 4.00 (2.88) | 6.51 (4.04) |
| Functional | 2.76 (3.72) | 2.59 (2.25) | 4.59 (2.92) | 5.78 (3.93) |
| Integration: Nature of action | | | | |
| No action | 3.78 (14.46) | 1.30 (1.33) | 2.35 (2.02) | 2.11 (1.77) |
| Unmotivated action | 1.57 (2.15) | 1.81 (1.18) | 1.75 (1.65) | 2.35 (1.71) |
| Reactive action | .03 (.16) | 0 (.0) | 0 (0) | .14 (.34) |
| Intentional action | .05 (.23) | .03 (.16) | .03 (.16) | .05 (.23) |
| Integration: Object-action integration | | | | |
| Fused | .03 (.16) | 0 (0) | .03 (.16) | .05 (.23) |
| Incongruent | .16 (.44) | .14 (.34) | .19 (.51) | .16 (.44) |
| Nonspecific | 1.08 (1.26) | 1.51 (1.08) | 1.30 (1.43) | 1.81 (1.29) |
| Congruent | .14 (.41) | .19 (.39) | .30 (.56) | .54 (.79) |
| Integration: Nature of interaction | | | | |
| Active-passive | .05 (.23) | .03 (.16) | 0 (0) | 0 (0) |
| Active-reactive | 0 (0) | 0 (0) | .03 (.16) | .05 (.23) |
| Active-active | .03 (.16) | 0 (0) | 0 (0) | .03 (.16) |
| Integration: Content of interaction | | | | |
| Malevolent | .14 (.41) | .24 (.49) | .16 (.37) | .14 (.47) |
| Benefvolent | .41 (.97) | .35 (.63) | .51 (.79) | .78 (1.09) |
| Total no. of responses | 17.32 | 15.84 | 20.97 | 24.27 |

Note. The sample $n = 37$. Data are group means; standard deviations are in parentheses.

done, i.e., differently from the way Blatt et al (1978) and Spear & Lapidus (1981) did theirs somehow contributed to a different meaning to these scores. Specifically, in this study each person's total DACOS (TOTDACOS) score was calculated by summing all the categories (differentiation, articulation, and integration) and dividing by their total number of responses minus their total number of human responses (as a control for response productivity). Blatt et al (1976b) calculated the scores separately for each subcategory. They controlled for response productivity by using an analysis of covariance procedure in which the control variable was the individuals total number of responses minus the particular subset score. Thus, each subset score had its' own covariant value which was an estimate of response productivity independent of the specific subset variant. Statistically, the two procedures are equivalent but they produce noncomparable data.

Implications for Future Research

This rather large sample of college students was unexpectedly and remarkably homogeneous. A larger normal population drawn from the general public would be likely to yield more variance in the sample and thus more clear-cut results. Since levels of object relations is a developmentally-based concept it would seem that a larger diversity of ages and a more representative normal sample

would be helpful in determining the validity of Trimboli and Kilgore's speculations. Certainly a clinical population would be more likely to elevate MMPI scales in a manner which would probably produce some significant correlations. However it would be expected that they would have a positively skewed distribution on their DACOS scores as well, indicating mostly lower level object relations.

Norms for the DACOS and the SOS measures of object relations must be established before further research in this area could be done. According to the APA standards for test measures, it is important to report normative data if reliability and validity are to be assessed. Obviously Blatt and his group have been using these scales experimentally but it follows that their studies would be strengthened by the establishment of clear norms on these important measures.

In addition, researchers looking at object relations may wish to include a measure of current functioning such as the Midtown Manhattan scale found in Srole et al's study (1962). This would assess in a more detailed manner how the specific individuals were performing in daily life rather than in a diagnostic fashion as the MMPI does. Correlations between a measure of "mental health" and the object relations measures could help indicate cut-off scores for low, medium, and high levels of object relations on an empirical basis.

Further research on the weights in the scoring categories appears warranted. The empirical data would appear to contradict the theory as discussed above. A larger sample of the normal population at various ages should be studied and their data compared to this study's data, not Blatt's, since his is not weighted. Then the weights can be adjusted to the reality of object relations progression over time.

Summary and Conclusions

It was hypothesized from speculations in an article by Trimboli & Kilgore (1983) that the MMPI might be able to provide useful information regarding a person's object relations. Levels of object relations were to be obtained and these were hypothesized to be associated with certain scale elevations according to levels of development as speculated in the article. This proved not to be the case for this normal, yet restricted, college population.

The theory of object relations leads to the belief that object relations are a developmentally based concept. As such, one would think that the rate of development would be variable in the population and that this characteristic would be normally distributed in a large sample of young adults. Measured perhaps by a "purer" analysis of object relations, the data was normally distributed. Measured by Rorschach human responses, more young adults had lower or

more primitive levels of object relations than higher or more mature levels. Further research is needed to determine which of these results are actually true or if they can be combined. Since over half of this population had at least one MMPI scale clinically elevated, and 33 percent had two or more scales elevated, it would seem that this would have given the MMPI data enough variability to allow differences to come forward. However, statistically, mean scores for all scales for all groups were found to be within the normal range and thus, once again, the lack of variability restricted outcome.

Trimboli and Kilgore's speculations about object relations correlates on the MMPI make intuitive sense, given the descriptions of high scorers on each scale. However, it may be the case that these descriptions, even in general, apply strictly to maladjusted individuals. It would not be appropriate, then, to make object relational inferences from MMPI data for normal college populations, at least with the way in which object relations are measured at present.

The restricted range of this sample is most likely the main reason for the lack of meaningful results. Secondly, the way the groups of low, medium, and high were obtained may not be the most useful and informative way to divide this data. The divisions into groups on the SOS were made on theoretical grounds as no empirical grounds were

available and the low/high split on the DACOS was made for statistical reasons. Thirdly, the order of weights in the subcategories on the DACOS may have skewed the data. Fourthly, the calculation of the total DACOS score may contribute to the lack of findings since it was calculated differently than in Blatt's research. All of these may have collectively contributed to the lack of results but, by far, the most important would seem to be the restricted variance of the sample.

As discussed, the DACOS may not be a pure measure of object relations but may result in a combination of level of object relations and severity of psychopathology. As noted above, level of developmental responses to accurate and inaccurate perceptions on the Rorschach can be indicative of severity of psychopathology. Blatt has measured "normal" populations only for purposes of comparisons with clinical populations or for developmental longitudinal research. In addition, as discussed, the scoring weights on the DACOS may not be in the right order thus contributing an unknown and unmeasurable confound into the appearance of the distribution of scores on the DACOS. Nevertheless, the SOS data appeared normally distributed in this homogeneous population. It may be that object relations do become more mature as one grows older but at about what age "normal" persons may be said to have attained mature object relations

is still an open question. Perhaps, it is not possible to obtain a large variation in object relations when measuring a group of same age peers, even if they are considered "adult". Or, as suggested in Results, by weak but significant data, the DACOS may be measuring superficial personality characteristics such as freedom from interpersonal anxiety, ability to get along with others, social perspicacity, a high energy level, enthusiasm, and perhaps conformity to a typical college stereotype in males. Of course, one could argue that these "superficial" qualities are the outward manifestations of object relations.

The lack of correlation between the two measures of object relations is largely unexplained. Only the possible confound of the Rorschach DACOS data with psychopathology seems to be a plausible explanation and even so, this should only make the correlation weaker--not destroy it. These measures are supposedly both measures of "object relations"--one is a structural analysis (DACOS) and one is the structural category in a content analysis (SOS) as explained in the introduction. However, Blatt's group's and Mayman's group's measures have obtained fairly high correlations between their stuctural and content oriented scales in a previous study (Spear & Lapidus, 1981). Blatt's group has not made any comparisons in print of the DACOS and the SOS.

Also, perhaps, as stated in the introduction, the MMPI is not a measure which is suited to a description of object relations in a normal population. The MMPI's items were constructed to aid in differential diagnosis of pathological conditions. That they have been used often in research with normal populations and in settings where clients are supposedly not in severe distress such as counseling centers is not the point. Nor is the point that personality interpretations from moderately elevated scores (60-69 T scores) are used extensively in personality assessment for any purpose (i.e., vocational counseling). The point is, could the MMPI scales be used to aid in identifying a person's level of object relations? The answer, for so-called normal college persons seems to be "no". And the reason for this may lie in the original construction of the MMPI scales. However, since the MMPI is currently under revision, the generalizability of this statement to the new version of the inventory is obviously questionable.

Thus, even though some of this study's original hypotheses were not confirmed for various reasons, it has made some contributions. It has pointed out the glaring need for normative data and cut-off points for these important object relations scales. It has contributed norms for 132 college students on these scales as well as on the MMPI. It has raised the possibility that Blatt et al's

(1976b) order of weights for their subcategories may not be correct. Finally, it has suggested reasons for the significant results obtained which may be replicated in further research. The few results obtained are consistent with an object relational interpretation of those MMPI scales which were significant.

APPENDIX A

DACOS Scoring Manual

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, 1948; 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 Scored

A. 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 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"
"a witch's pointed nose"
"devil's face and horns"

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 mouth are downcast"

"spiders (at an insect ball) eating spareribs"

Scoring Procedures

Step 2 - Accuracy of the Response

Responses are classified as perceptually accurate or inaccurate (F_+ , F_{\pm} , FF , F_-). F_+ or F_{\pm} responses are classified as accurate and F_{\mp} 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. For example, 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 c b leaves or ferns, + the lower part, the pink c b a k.o. vase or flower holder." Or, Card VI (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 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. For example, 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." Or, 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 is not grossly distorted, yet fails to meet the criterion of being easily perceived. For example, Card I (Dd 34) - free association: "This prt is a golf umbrella, its closed up." Inquiry: "Thyr shaped like that when thyx closed up, c rite here it comes up to a point." Or, Card X (whole) - free association: "Fireworks, lik a starburst, all in dif directions." Inquiry: "It ll its shootg out + all the dif 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 with total, or near total, disregard for the structure of the area. For example, Card I (whole) -

free association: "Two animals sitg on a beetle."

Inquiry: "Well the Beetle is in the middle, u can c the hard shell, + ther r 2 animals, lik bears w/ big ears sittg on ea side of the beetle." (Hard shell?) "Its all shiny lookg so it must be hard + beetles have hard shells.". Or, 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 ths + here is the openg, the crack wher the baby comes thru..".

Step 3 - Differentiation

Here responses are classified according to types and completeness of figures perceived; whether the figure or subject of the action are quasi-human details, human details, full quasi-human figures, or full human figures.

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 buddah 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 each 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 aspect of body parts or 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 and 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 articulation 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 moustach...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 paraphernalia"
"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 it 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"

"witch"

"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, ths ll 2 human figures. I thk when u look at the breasts thr, thy'r girls. Then down here cld ll phalluses Idk. It's rather ambiguous, confusing...protrusions from the thorax, u know."

"Ll 2 ppl. Cld b a woman or a man. I debated ths for a min. (mean?) Well, ths form cld b women or the costuming of a man. (?) Will, I guess it wld b tights & s.o. loose shirt. I d k exactly."

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" (both sex and role are scored)

"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 as a specific character in history, literature, etc. To the degree to which 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". Examples:

"Charles DeGaulle"

"Theodore Roosevelt"

Step 5 - Integration

Integration of the response is scored in four ways: 1) the degree of internality of the motivation of the action (unmotivated, reactive, or intentional), 2) the degree of integration of the object and its action (fused, incongruent, nonspecific, or congruent), 3) the integration of the interaction with another object (active-passive, active-reactive, or active-active), and 4) the content of the interaction with another object (malevolent or benevolent). These analyses can

only be applied to figures engaged in human activity.

1. 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 intentional. 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 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 points)

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 it."

"Arabs recoiling from an Israeli bomb."

"A person afraid of a snake, standing on a 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."

2. Object-Action integration

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. Non-specific 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 but there is no special fit between object and action. Many other kinds of objects could 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 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 the action enriches the image of the object. Examples:

"ballerina dancing"

"character from a Rudolph Fallas opera, singing"

The following are not scored as congruent because they are examples of role definitions amounting to a literal restatement of the action:

"dancer's dancing"

"singer's singing".

3. Integration of interaction with another object

This analysis applies to all responses involving at least 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. Examples:

"A couple of undertakers lowering babies into the pit."

"A prostitute rolling a drunk."

"A mother holding out her arm and telling her kid never to come back."

b. Active-Reactive interaction (2 points)

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

"African natives beating a drum, Martians applaud..."

"Eve being tempted by a snake (snake seen on card)."

"A man running away."

c. Active-Active interaction (3 points)

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

Examples:

"A woman with a child looking up at her."

"One person there is pointing and the other is listening."

"Two people and two martians fighting."

4. Integration: Content of interaction

a. Malevolent (1 point)

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

"A crucified man"

"A man trying to kill a little girl, who's running away."

"Two women having a fight, calling each other names."

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. Examples:

"A woman with a child looking up at her."

"People pledging hands together - like victors, walking along like that."

"Two people kneeling down with hands extended toward and touching each other."

APPENDIX B

Scoring of Qualitative Characteristics

Appendix B

Scoring of Qualitative Characteristics

Judges rate descriptions on a seven-point scale for the degree to which each of fourteen characteristics are attributed to each of the parents (see Rating Form, p. 17). Ratings are made on the basis of the rater's judgment of the subject's view of the parent on each dimension. If a particular category is irrelevant, or if it is not possible to make a decision, a mean score rating of 4 should be assigned.

1. Affectionate

Demonstrating overt affection or warm regard; actively showing and demonstrating affection (1 = little affection; 7 = much affection). (Different than warmth in that one could be warm without necessarily being overtly and demonstratively affectionate.)

2. Ambitious-Driving

This rating should reflect either (1) quality of the individual in relation to others and/or (2) quality of the individual in relation to him or herself. Ambitious--"having an ardent desire to achieve a particular goal--aspiring". . . Driving--"exerting pressure" (on self or others). . . This rating should generally reflect the individual's aspirations or pressure vis-a-vis achievement in instrumental or occupational domains (1 = relatively non-ambitious and driving; 7 = strongly ambitious and driving of self and/or others).

3. Malevolent-Benevolent

Malevolent is defined as having, showing or arising from intense ill will, spite or hatred. Benevolent is defined as marked by or disposed to doing good--good will. This rating should be thought of as a global or composite rating of the subject's view of the person's intent or effect on others. For example, though a person might be overly protective and affectionate, such a "smothering" style might not necessarily be benevolent. This dimension (malevolent/benevolent) should be viewed as a general rating of the individual's presence as a positive or negative influence on other's point of view (1 = malevolent; 7 = benevolent).

4. Cold-Warm

Warm in feelings in respect to others; ability to make others really feel loved by them regardless of how it is communicated. Cold refers to lack of warm feelings; unemotional; impersonal (1 = cold; 7 = warm).

5. Degree of Constructive Involvement

The negative end of this scale should indicate distant, reserved, remote, aloof or, alternately, over-involvement in an enveloping, enfolding, encumbering manner in which people are either ignored or inappropriately intruded upon. The positive end of the scale indicates constructive involvement and interest, but a respect for the individual's expression of individuality. (1 = disinterest or destructive, intrusive involvement; 7 = positive and constructive involvement with encouragement of autonomy and individuality).

6. Intellectual

Rational; given to study, reflection and speculation; having an interest in ideas; creative use of the intellect; a capacity for rational and intelligent thought (1 = not at all; 7 = highly intellectual).

7. Judgmental

Judgmental and critical as opposed to tolerant; having excessively high standards, inflexibility in relation to these standards so that others are made to feel that they don't measure up (1 = non-judgmental; 7 = highly judgmental).

8. Negative-Positive Ideal

Rating should be made on the basis of how much the rater believes that the subject identifies with and/or would want to be like the person; the degree of admiration for qualities the individual possesses (1 = negative ideal; 7 = positive ideal).

9. Nurturant

Giving affection, care and attention; as opposed to demanding or taking from others for their own needs. Nurturance can be defined as a positive, "no strings attached" sort of giving (1 = low nurturance; 7 = high nurturance).

10. Punitive

Ratings should indicate to what extent the person is either physically or emotionally abusive; not limited to

physical punishment. The extent to which the individual inflicts suffering pain or loss that serves as retribution (1 = non-punitive; 7 = highly punitive).

11. Successful

This rating should reflect the subject's view of the person's success in terms of the individual's own aspirations. Ratings should not be limited to assessments of the individual in the conventional sense of success; i.e., wealth, power, favor, or eminence. Thus, for example, a person who is described as the manager of a bank, but who drinks heavily, might be rated as less successful than an efficient housewife who is described as enjoying her life and receiving satisfaction in her role as homemaker. In other words, ratings should reflect more than mere occupational success or failure. The Success-Failure rating should be a rating of the subject's impression of the individual's satisfaction with their own accomplishments (1 = failure; 7 = success).

12. Weak-Strong

Not necessarily physical strength; this quality should be judged on the basis of the person's effectiveness or efficiency (as opposed to being mild or weak); solidity; power to resist or endure; possessing a sufficiently stable sense of self as to appear as a consistent figure (1 = extremely weak; 7 = extremely strong).

13. Degree of Ambivalence

The degree to which subject reflects ambivalent feelings about the person (3-point scale--1 = little ambivalence, 3 = marked ambivalence).

14. Verbal Fluency

An estimation of the number of words used in the description.

Scoring of Conceptual Level

Based on developmental psychological concepts derived from Piaget, Werner and developmental psychoanalytic theory, five levels of object representation are defined. Based on these theoretical formulations, the conceptual levels of parental representations are scored as follows.

1. Sensorimotor-Preoperational (Score 1)

The person is described primarily by his/her activity in reference to the gratification or frustration he/she provides. It is an emphasis on the person as an agent who causes the subject either pleasure or pain, making them feel good or bad. The description has a personal, subjective focus and the person is defined primarily in terms of his/her direct effect of pleasure and pain for the subject. There is little sense that the person exists, is experienced or defined as a separate and independent entity. The description centers on the direct value of the person for the subject.

2. Concrete-Perceptual (Score 3)

The person is defined as a separate entity, but the definition is primarily in concrete literal terms, often characterized in terms of physical attributes. There is a literalness, a globality, and a concreteness to the description. There is little emphasis on part properties, attributes, or

features, but rather the person is experienced as a literal, concrete totality. Emphasis is often on what the person looks like in its external characteristics or physical properties, in a literal, concrete sense.

3. Iconic (Score 5 - 7)

a. External Iconic. (Score 5) A focus on part properties of the person in terms of his/her activities, but the activities and functions (in contrast to Level 1, Sensorimotor-Preoperational) are uniquely the person's and have little or no direct and explicit reference to the gratification or frustration of the subject. The activities are not directly need gratifying for the subject, but rather the focus is on the person as a separate entity in terms of his/her functional activities and attributes.

b. Internal Iconic. (Score 7) The person is described in terms of his/her attributes and part properties, but not in terms of what the object does but rather what the person thinks, feels, values, etc. The description is directed toward internal dimensions.

In both the external and internal iconic levels (3a, 3b) the descriptions are by-and-large one-sided and unidimensional. They do not describe a complexity of actions, feelings or values, in which there are levels (e.g., manifest behavior versus more latent feelings). There is no recognition of subtlety, apparent contradiction, complexity, levels, or development over time. The descriptions focus on either

external or internal attributes, values, principles, feelings, etc., and are by-and-large one-sided, and not integrated.

4. Conceptual Representation (Score 9)

The person is described in a way that integrates all of the prior levels. The total description indicates that there are a wide range of levels on which the personal is understood and experienced. There is an appreciation of internal dimensions in their own right as well as in contrast to the external. Also, there may be a time line in which there is an appreciation of changes and variation. There are a variety of dimensions which are integrated and in which apparent contradictions are resolved. Thus, there is a sense of disjunctiveness in which the manifest, literal, and concrete may appear in contradiction to more internal dimensions. But the apparent contradiction is resolved in an integrated, complex synthesis. At this level there can be comments about the need gratifying attributes, or physical and functional characteristics of the parent, but the description indicates that the person is experienced in complex, integrated ways and that a number of different attributes and functions are integrated in a cohesive, complex synthesis.

APPENDIX C

MMPI Profile

APPENDIX D

Informed Consent

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) a 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: _____ Witness Signed: _____ Subject

or

Signed: _____ Witness Signed: _____ Person Responsible

Relationship _____

Instructions to persons authorized to sign:

If the subject is not competent, the person responsible shall be the legal appointed guardian or legally authorized representative. If the subject is a minor under 18 years of age, the person responsible is the mother or father or legally appointed guardian. If the subject is unable to write his/her name, the following is legally acceptable:

John H. (His X Mark) Doe and two (2) witnesses.

APPENDIX E

Data Sheet

APPENDIX E

DATA SHEET

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? _____

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) _____
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? _____

REFERENCES

- Abramowitz, S. I., Carroll, T., & Schaffer, C. B. (1984). Borderline personality disorder and the MMPI. Journal of Clinical Psychology, 40, 410-413.
- Allison, J., Blatt, S. J., & Zimet, C. (1968). The interpretation of psychological tests. New York: Harper and Row.
- Ames, L. B. (1966). Changes in Rorschach response throughout the human lifespan. Genetic Psychology Monograph, 74, 89-125.
- Ames, L. B., Learned, J., Metraux, R. W., & Walker, R. S. (1950). Child Rorschach responses: Developmental trends from 2 to 10 years. New York: Hoeber.
- Ansbacher, H. L. (1947). Adler's place today in the psychology of memory. Individual Psychology Bulletin, 6, 32-40.
- Bieri, J., & Blacker, E. (1956). The generality of cognitive complexity in the perception of people and inkblots. Journal of Abnormal and Social Psychology, 53, 112-117.
- Blatt, S. J. (1974). Levels of object representation in anacistic and introjective depression. Psychoanalytic Study of the Child, 29, 107-157.
- Blatt, S. J. (1978). Paradoxical representations and their implications for the treatment of psychosis and borderline states. Paper presented to the Institute for Psychoanalytic Research and Training, New York City, May 18. (Also presented at the Austen Riggs Center, Stockbridge Mass., October 6, 1976).

- Blatt, S. J., & Berman, W. H., Jr. (1984). A methodology for the use of the Rorschach in clinical research. Journal of Personality Assessment, 48, 226-239.
- Blatt, S. J., Brenneis, C., Schimek, J. G., & Glick, M. (1976a). A developmental analysis of the concept of the object on the Rorschach. Unpublished manual.
- Blatt, S. J., Brenneis, C., Schimek, J. G. (1976b). Normal development and psychological impairment of the concept of the object on the Rorschach. Journal of Abnormal Psychology, 85, 364-373.
- Blatt, S. J., Chevron, E. S., Quinlan, D. M., & Wein, S. (1981). The assessment of qualitative and structural dimensions of object representations. Unpublished manual, Yale University, New Haven, Connecticut.
- Blatt, S. J., & Lerner, H. (1983a). Investigations in the psychoanalytic theory of object relations and object representations. In J. Masling (Ed.), Empirical studies of psychoanalytic theories (Vol. 1), (pp. 189-249). Hillsdale, NJ: Analytic Press.
- Blatt, S. J., & Lerner, H. (1983b). The psychological assessment of object representation. Journal of Personality Assessment, 47, 7-28.
- Blatt, S. J., & Ritzler, B. A. (1974). Thought disorder and boundary disturbances in psychosis. Journal of Consulting and Clinical Psychology, 42, 370-381.

- Blatt, S. J., Schimek, J. G., & Brenneis, C. B. (1980). The nature of the psychotic experience and its implications for the therapeutic process. In J. S. Strauss, M. Bowers, T. Downey, S. Fleck, S. Jackson, and I. Levine (Eds.), The psychotherapy of schizophrenia. New York: Plenum.
- Blatt, S. J., Sugarman, A., & Bloom-Fishbach, S. (1981). A developmental analysis of object representation on the TAT. Unpublished manual.
- Blatt, S. J., Wein, S. J., Chevron, E., & Quinlan, D. (1979). Parental representations and depression in normal young adults. Journal of Abnormal Psychology, 78, 388-397.
- Blatt, S. J., Wild, C. M., & Ritzler, B. A. (1975). Disturbances of object representations in schizophrenia. Psychoanalysis and Contemporary Science, 4, 235-288.
- Brainerd, C. J. (1978). Piaget's theory of intelligence. Englewood Cliffs, NJ: Prentice-Hall.
- Brenneis, C. B. (1971). Features of the manifest dream in schizophrenia. Journal of Nervous and Mental Disease, 153, 81-91.
- Buchwald, C., & Blatt, S. J. (1974). Personality and the experience of time. Journal of Consulting and Clinical Psychology, 42, 634-644.
- Buros, O. K. (Ed.). (1978). The eighth mental measurements yearbook. Highland Park, NJ: Gryphon Press.
- Dahlstrom, W. G., Welsh, G. S., & Dahlstrom, L. E. (1975). An MMPI handbook: Research applications (Vol. 2), (rev. ed.). Minneapolis: University of Minnesota Press.

- Draguns, J. G., Haley, E. M., & Phillips, L. (1967). Studies of Rorschach content: A review of the research literature Part I: Traditional content categories. Journal of Projective Techniques and Personality Assessment, 31, 3-32.
- Endara, J. (1957). Psicodiagnóstico de Rorschach y delincuentes la representación de la figura humana. Archives of Criminal Neuropsychiatry, 5, 547-574.
- Erikson, E. H. (1950). Childhood and society. New York: Norton.
- Evans, R. W., Ruff, R. M., Braff, D. L., & Ainsworth, T. L. (1984). MMPI characteristics of borderline personality inpatients. Journal of Nervous and Mental Disease, 172, 742-748.
- Exner, J. E. (1974). The Rorschach A comprehensive system (Vol. 1). New York: John Wiley and Sons.
- Fraiberg, S. (1969). Libidinal object constancy and mental representations. Psychoanalytic Study of the Child, 24, 9-47.
- Freud, A. (1965). Normality and pathology in childhood. New York: International Universities Press.
- Freud, S. (1917). Mourning and melancholia. Standard Edition, 14, 237-260. London: Hogarth Press.
- Freud, S. (1921). Group psychology and the analysis of the ego. Standard Edition, 18, 67-143. London: Hogarth Press.

- Freud, S. (1923). The ego and the id. Standard Edition, 19, 3-66. London: Hogarth Press.
- Freud, S. (1926). Inhibitions, symptoms and anxiety. Standard Edition, 20, 77-175. London: Hogarth Press.
- Gilberstadt, H. (1970). Comprehensive MMPI code book for males. Minneapolis: MMPI Research Laboratory, Veterans Administration Hospital.
- Gilberstadt, H., & Duker, J. A. (1965). A handbook for clinical and actuarial MMPI interpretation. Philadelphia: Saunders.
- Goldman, A. E., & Herman, J. L. (1961). Studies in vicariousness: The effect of immobilization on Rorschach movement responses. Journal of Projective Techniques, 25, 164-165.
- Goldman, R. (1960). Changes in Rorschach performance and clinical improvement in schizophrenia. Journal of Consulting Psychology, 24, 403-407.
- Gottschalk, L. A., Mayerson, P., & Gottlieb, A. A. (1967). Prediction and evaluation of outcome in an emergency brief psychotherapy clinic. Journal of Nervous and Mental Disorders, 144, 77-95.
- Greene, R. L. (1980). The MMPI: An interpretive manual. New York: Grune and Stratton.
- Graver, D. (1953). Prognosis in paranoid schizophrenia on the basis of the Rorschach. Journal of Consulting Psychology, 17, 199-205.
- Grey, A., & Davis, M. (1981). Mental health as level of interpersonal maturity. Journal of the American Academy of Psychoanalysis, 9, 601-614.

- Hathaway, S. R., & McKinley, J. C. (1948). The MMPI. New York: The Psychological Corporation.
- Gunderson, J. G., Kolb, J. E., & Austin, V. (1981). The diagnostic interview for berderline patients. American Journal of Psychiatry, 138, 896-903.
- Hertzman, M., & Pearce, J. (1947). The personal meaning of the human figure in the Rorschach. Psychiatry, 10, 413-422.
- Hurt, S. W., Clarkin, J. F., Frances, A., Abrams, R., & Hunt, H. (1985). Discriminant validity of the MMPI for border-line personality disorder. Journal of Personality Assessment, 49, 56-61.
- Jacobson, E. (1964). The self and the object world. New York: International Universities Press.
- King, G. (1958). A theoretical and experimental consideration of the Rorschach human movement response. Psychological Monograph, 72, No. 458.
- Klopfer, B., Ainsworth, M. D., Klopfer, G., & Hold, R. (1954). Developments in the Rorschach technique: Vol. 1. Techniques and theory. New York: World Book.
- Krohn, A. (1972). Levels of object representations in the manifest dreams and projective tests. Unpublished doctoral dissertation, University of Michigan.
- Krohn, A., & Mayman, M. (1974). Object representation in dreams and projective tests: A construct validational study. Bulletin of the Menninger Clinic, 38, 445-466.
- Kurz, R. B. (1965). Rorschach correlates of time estimation. Journal of Consulting Psychology, 29, 379-382.

- Lerner, H., & St. Peter, S. (1984). Patterns of object relations in neurotic, borderline and schizophrenic patients. Psychiatry, 47, 77-92.
- Loevinger, J. (1976). Ego development. San Francisco: Jossey-Bass.
- McFate, M., & Orr, F. (1949). Through adolescence with the Rorschach. Rorschach Research Exchange, 13, 302-319.
- Mahler, M. (1965). On the significance of the normal separation-individuation phase. In M. Shur (Ed.), Drives, affects, behavior (Vol. 2). New York: International Universities Press.
- Mahler, M. (1968). On human symbiosis and the vicissitudes of individuation (Vol. 1). New York: International Universities Press.
- Mahler, M., Pine, F., & Bergman, A. (1975). The psychological birth of the human infant: Symbiosis and individuation. New York: Basic Books.
- Marks, P. A., & Seeman, W. (1963). The actuarial description of personality: An atlas for use with the MMPI. Baltimore: Williams and Wilkins.
- Marks, P. A., Seeman, W., & Haller, D. L. (1974). The actuarial use of the MMPI with adolescents and adults. Baltimore: Williams and Wilkins.
- Mayman, M. (1967). Object representations and object relationships in Rorschach responses. Journal of Projective Techniques and Personality Assessment, 31, 17-24.

- Mayman, M. (1968). Early memories and character structure. Journal of Projective Techniques and Personality Assessment, 32, 303-316.
- Mayman, M. (1977). A multi-dimensional view of the Rorschach movement response. In M. Rickers-Ousiakina (Ed.), Rorschach psychology (pp. 229-250). New York: Robert E. Kreiger Publishing Co.
- Mayman, M., & Ryan, E. (1972). Level and quality of object relationships: A scale applicable to overt behavior and to projective test data. Unpublished manuscript, University of Michigan.
- Meltzoff, J., Singer, J. L., & Korchin, S. J. (1953). Motor inhibition and Rorschach movement responses: A test of the sensori-tonic theory. Journal of Personality, 21, 400-410.
- Mueller, W. J., & Abeles, N. (1964). The components of empathy and their relationship to the projection of human responses. Journal of Projective Techniques and Personality Assessment, 28, 322-330.
- Orlinsky, D. E. (1966). Rorschach test correlates of dreaming and dream recall. Journal of Projective Techniques and Personality Assessment, 30, 250-253.
- Orr, M. (1958). Le test de Rorschach et l'imago maternelli. Paris: Groupement Francais du Rorschach.
- Osgood, C., Suei, G., & Tennenbaum, P. (1957). The measurement of meaning. Urbana: University of Illinois Press.
- Patrick, J. (1984). Characteristics of DSM-III borderline MMPI profiles. Journal of Clinical Psychology, 40, 655-658.

- Phillips, L., & Smith, J. G. (1953). Rorschach interpretation: Advanced technique. New York: Grune and Stratton.
- Piaget, J. (1954). The construction of reality in the child. New York: Basic Books.
- Piotrowski, Z. A. (1950). A Rorschach compendium: Revised and enlarged. Psychiatric Quarterly, 24, 543-596.
- Pruitt, W. A., & Spilka, B. (1964). Rorschach empathy and object relations scale. Journal of Projective Techniques and Personality Assessment, 28, 331-336.
- Rapaport, D., Gill, M., & Schafer, R. (1945). Diagnostic psychological testing (Vols. 1 & 2). Chicago: Yearbook Publishing.
- Ray, A. B. (1963). Juvenile delinquency pattern on Rorschach inkblots. Psychologia, 6, 190-192.
- Richardson, H. (1963). Rorschachs of adolescent approved school girls, compared with Ames' normal adolescents. Rorschach Newsletter, 8, 3-8.
- Ritzler, B., Zambinco, D., Harder, D., & Kaskey, M. (1980). Psychotic patterns of the concept of the object on the Rorschach test. Journal of Abnormal Psychology, 89, 46-55.
- Roberts, L. K. (1954). The failure of some Rorschach indices to predict the outcome of psychotherapy. Journal of Consulting Psychology, 18, 96-98.
- Roberts, P. M. (1955). Personality structure of socially adjusted and socially maladjusted children according to the Rorschach test. Psychological Monograph, 69, (Whole No. 404).

- Rogers, L. S., & Hammond, K. R. (1953). Predictors of the results of therapy by means of the Rorschach test. Journal of Consulting Psychology, 17, 8-15.
- Rorschach, H. (1942). Psychodiagnostics. (H. Huber, translation). Bern: Bircher. (Original work published in 1921).
- Rorschach, H. (1942). Psychodiagnostics: A diagnostic test based on perception. (P. Lemkau and B. Kroneberg translation). New York: Grune and Stratton.
- Ryan, E. R. (1973). The capacity of the patient to enter an elementary therapeutic relationship in the initial psychotherapy interview. Unpublished doctoral dissertation, University of Michigan.
- Schonbar, R. (1965). Differential dream recall frequency as a component of "Life Style." Journal of Consulting Psychology, 29, 468-474.
- Smith, K. (1983). Object-relations concepts applied to the psychotic range of ego functioning. Bulletin of the Menninger Clinic, 47, 417-439.
- Srole, L., Langner, T. S., Michael, S. T., Opler, M. K., & Rennie, T. A. C. (1962). Mental health in the metropolis: The midtown Manhattan study, Vol. 1. New York: McGraw Hill.
- Thetford, W. N., Molish, H. B., & Bech, S. J. (1951). Developmental aspects of personality structures in normal children. Journal of Projective Techniques, 15, 58-78.

- Trimboli, F., & Kilgore, R. B. (1983). A psychodynamic approach to MMPI interpretation. Journal of Personality Assessment, 47, 614-626.
- Tuttman, S. (1981). A historical survey of the development of object relations concepts in psychoanalytic theory. In S. Tuttman, C. Kay, and M. Zimmerman (Eds.), Object and self: A developmental approach (pp. 3-51). New York: International Universities Press.
- Urist, J. (1973). The Rorschach test as a multidimensional measure of object relations. Unpublished doctoral dissertation, University of Michigan.
- Walters, R. H. (1953). A preliminary analysis of the Rorschach records of fifty prison inmates. Journal of Projective Techniques, 17, 436-446.
- Werner, H. (1957). The concept of development from a comparative and organismic point of view. In D. B. Harris (Ed.), The concept of development. Minneapolis: University of Minnesota Press.
- Werner, H. (1948). Comparative psychology of mental development. New York: International Universities Press.
- Werner, H., & Kaplan, B. (1963). Symbol formation: An organismic-developmental approach to language and the expression of thought. New York: Wiley.
- Wolff, P. H. (1967). Cognitive considerations for a psychoanalytic theory of language acquisition. In R. Holt (Ed.), Motives and thought (Psychological Issues 18/19: 299-343). New York: International Universities Press.