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A COMPARISON OF MEASURES OF
PSYCHOLOGICAL DIFFERENTIATION AND BOUNDARY
INCLUDING THEIR RELATIONSHIPS TO
SUBJECTIVE EXPERIENCES OF SELF AND RELATIONSHIPS
IN NORMAL YOUNG ADULTS

A Thesis Presented

By

MADLINE ANNE WAGNER

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE

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Psychology

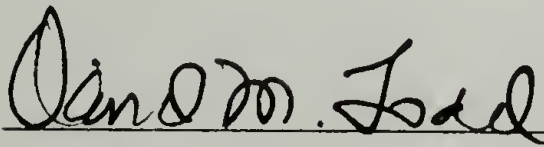
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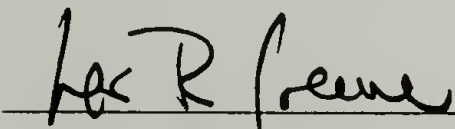
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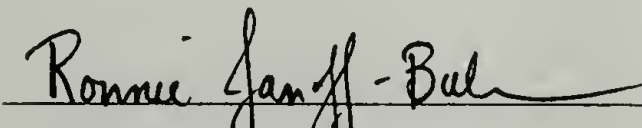
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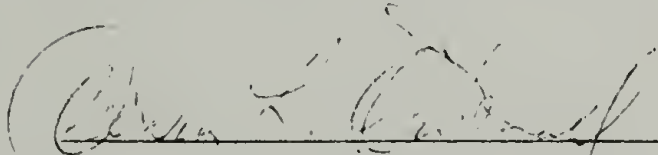
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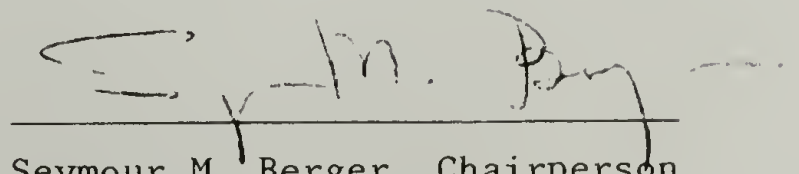
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C H A P T E R I

INTRODUCTION

The idea of psychological differentiation and a related construct, boundary, have been of considerable theoretical and empirical interest in the study of personality and psychopathology. Theoretical and research traditions in psychoanalytic, cognitive developmental, and social psychological study have investigated the processes of establishing a sense of self and of other objects--human, animate, and inanimate--within the physical, interpersonal, social, and cultural milieu.

Broadly defined, psychological differentiation refers to the distinctions between self and nonself. Development is considered to involve a progression from more vague diffuse sensorimotor experiences through mental schemata to perceptual, cognitive, affective experiences that are more differentiated organized representations of self, other and the world. The construct, psychological differentiation, is used also to refer to interpersonal development from a position of fusion or symbiosis to a more articulated individuated relational position.

The concept of boundary addresses the demarcation involved in psychological differentiation. This concept has often been loosely defined and at a variety of levels of abstraction. Boundary can refer to the capacity to maintain a separation between independent objects, the capacity to maintain a separation between representations of independent objects, and the capacity to maintain a separation

between the object and its representation. It can refer to the maintenance of a separation between self and nonself, and between internal experience and external events and objects. Interpersonally it can be used to refer to the capacity to maintain a representation of the self as separate from the representations of others, so that interpersonal relationships are not as likely to be disrupted by wishes for or fears of merging, or both.

Boundaries refer to the development of the capacity to experience and represent distinctions between self and nonself, between inside and outside, between objects and their representations, and between independent events. These cognitive, perceptual processes are necessary for the development of thinking, concept formation, reality testing, and, through the use of symbolic representations and verbal signifiers, language. The development of a sense of self and capacity for interpersonal relationships also includes the capacity to experience, perceive, and represent boundaries. This is not distinct from cognitive development but interrelated with it. A relatively stable sense of self and of others is related to the development of object constancy. The self is initially defined in relation to important human objects, and those others are defined in relation to the self. Interpersonal experiences are the human context of the sensorimotor experiences that evolve into organized mental representations. The attainment of cognitive capacities, such as object constancy, and the attainment of a sense of self and of the ability to form interpersonal ties can be seen as mutually interdependent developmental processes that influence each other in complex

ways.

Several research traditions have given rise to a number of measures of boundary and psychological differentiation. The present study is an empirical examination of these measures in relation to one another, and will also explore the relationships of these measures to one measure of experiences of self and relationships.

This examination of the relationship of the measures can help to clarify and raise conceptual issues in psychology that address the experiences of the distinction between self and nonself, and some of the experiences of self and relationships. It is an empirical exploration.

The measurement comparison aspect of this study was prompted because there was little to be found in the psychology literature that compared existing measures. The measures selected were chosen because each represents a responsible research tradition; and combined, they embody the major empirical work in psychological differentiation and boundary. The measures involve different methodologies: self-report inventories, projective tests, "objective" tasks. They have each been used to investigate psychological differentiation and boundary. Whether these measures are tapping closely related aspects of psychological functioning was investigated in this study by means of analyses based on statistical correlation. This part of the investigation did not draw on particular theory. Instead, it rested on the premise that measures of similar or related constructs ought to correlate with one another in predictable ways if they are indeed tapping the same psychological dimension.

The second aspect of this study, the investigation of the relationships of measures of psychological differentiation and boundary to a measure of experiences of self and relationships was a theory-based investigation. It tested a prediction about qualities of boundary and differentiation in relation to two postulated configurations in personality and psychopathology. This was investigated, statistically, by regression analyses.

The predictions and major points of the theory will be presented more completely in the context of presenting the measures. Table 1 presents a summary of the measures that were used in the study. Each will be introduced separately below. Copies of all measures except the Rorschach and the Embedded Figures Test can be found in Appendix A.

The Embedded Figures Test

The research of Witkin and his colleagues began with investigations of individual differences in the perception of the upright in space. They found individuals were consistent in the manner in which they established the upright across a number of orientation tasks. Some individuals tended to use the external field as a means of establishing the upright; others used the apprehension of gravity through bodily sensation. These two means of establishing the upright were referred to as field dependence and field independence. Further studies of cognitive factors extended the definition of field independence to the ability to disembed an item from its embedding context on a more general basis than tasks involving the body or a

Table 1

Summary Chart of Measures

Measure	Concept(s)	Method	Context(s)	Authors
(EFT) Embedded Figures Test	field dependence field independence	18 disembedding problems	perception of upright cognitive styles	Witkin et al. (1961)
Adjective Rating Procedure	differentiation, degrees of merging of self and object representations	rate self, "mother", picture, 20 adjectives, 6-point scale	Laboratory investigations of psychoanalytic theory - especially aggressive and merging wishes in schizo- phrenia	Silverman (1975)
(FCO) Personal Characteristic Questionnaire	boundary, fusion; preferences for blurring or sharpening psycho- logical or psychosocial boundaries	41 items, self-report, 7-point scale	sociopsychological studies of individuation-fusion dilemma individuation in groups children's coping styles	Miller, Greene & Harrison (in preparation)
Barrier Penetration	boundary characteristics	Rorschach scoring system	study of body image and personality	Fisher & Cleveland (1968)
Permeable Boundaries Impermeable Boundaries	boundary characteristics	Rorschach scoring system	study of ego boundaries	Landis (1970)
Vocabulary	vocabulary, verbal intelligence	36 words, multiple choice	Kit of Factor-Referenced Cognitive Tests	French et al. (1963)
(DE) Depressive Experience Questionnaire	dependency self-criticism	66 items, self-report 7-point scale	theory of anaclitic and introjective configura- tions in personality	Blatt et al. (1979)

rod in space. The Group Embedded Figures Test (Oltman, Raskin, & Witkin, 1971), used in this study, is a task of this sort.

Additional conceptual postulates were generated by Witkin and his colleagues to keep pace with the broadening universe of the differences being explored. Further research gave rise to a notion of an "articulated" field approach (kin to field independence) and a "global" field approach (kin to field dependence) as studies examined structuring ability in perceptual and intellectual functioning as well as the ability to overcome embedding contexts in problem-solving tasks.

These individual differences were then linked with differences in other areas of psychological investigation including controls and defenses, body concept, and the self. The concept of "psychological differentiation" was employed to address this body of research into these areas of psychological functioning. In this broader framework, differentiation is viewed as a "structural property of an organismic system" (Witkin & Goodenough, 1981, p. 19). Boundaries are seen as segregating self from nonself, and are seen to be not as definite in a less differentiated system. Differentiation, in this tradition, also involves the segregation of psychological activities such as thinking, feeling, perceiving, as interrelated constituents of an articulated system. Later speculation also included the segregation of neurophysiological functions, as in hemisphere lateralization.

This construct of psychological differentiation includes then the segregation of self and nonself, the segregation of psychological functions and the segregation of neurophysiological functions. Field independence-field dependence remained the construct associated with

the segregation of self and nonself and involving both restructuring skills and interpersonal competencies (Witkin, et al., 1979, Fig. 2, p. 1138). Later theory revisions (Witkin & Goodenough, 1981) employ the construct "autonomy of external referents in perceptual and social behavior" (p. 47) as a means of embracing data from studies of cognitive functioning along with data from studies of interpersonal behavior. Field dependence-independence is a variable concerned with differences in interactional processes and refers to a cognitive style that is seen by Witkin and Goodenough as "value-neutral", by which they mean that the adaptive value of a given style will depend upon the particular context. Field-dependent people give more evidence of interpersonal competencies, field independent people give evidence of greater skill in cognitive restructuring. Cognitive restructuring, itself an ability rather than a style, is viewed as a facet of functioning related to, and affected by, the more comprehensive process variable field independence-dependence. "Cognitive styles are thus conceived to express themselves in these abilities, and, accordingly, these may serve as means for the assessment of cognitive styles" (Witkin & Goodenough, 1981, p. 61). In this study, the Group Embedded Figures Test is utilized as an indicator of the cognitive styles of field dependence-independence process variables that refer to an individual's characteristic extent of autonomy with regard to external referents. This construct is associated with self-nonsel self segregation as an aspect of psychological differentiation.

Adjective Rating Procedure

Silverman has long been involved in laboratory experiments that address the development of theory in psychoanalysis. Much of his work involves the study of schizophrenics and has investigated aggressive and merging wishes through the use of subliminal messages, tachistoscopically presented. As he investigated the relationship between the activation of merging wishes and the extent of manifest psychopathology (thought disorder) he developed an "adjective rating scale procedure" (Silverman, 1975, p. 55, footnote 15). Subjects are asked to rate themselves on a six-point scale for the degree to which each of a set of twenty adjectives applies to themselves and a photograph of a woman intended as a mother-figure. Since there is little reason to infer much from the picture alone it is assumed that the degree to which the rating of self and photograph are similar can be used to measure the "degree of merging of self and object representations" (ibid). As this procedure was used subsequently, subjects were asked to rate "mother" as well as themselves and the photographs.

"Self and object representations" refers to the idea that concepts of self and others are psychological structures that result from the internalization of early or formative interpersonal interactions and, in turn, shape and direct subsequent interpersonal relationships. Here then, boundary indicates the extent of demarcations and differentiation within the mental concepts that may be seen as schemata derived from perceptual, cognitive, affective experiences of interactions within interpersonal matrices. While the boundary idea is

indicated in the degree of merging of internalized concepts of self and other, these schemata are seen as derived from experiences in which objects (others) are encountered in reality. The schemata, through development, move from more diffuse, sensorimotor experience to more differentiated representations of the self and the object world. Earlier schemata are modified and revised by subsequent internalizations of object relationships and provide, then, a revised organization for subsequent relationships. In this study, the degree of merging of self and object relations is used as a measure of psychological differentiation.

Personal Characteristics Questionnaire

The Personal Characteristics Questionnaire (Miller, Greene, & Morrison, in preparation) is an empirically-derived instrument designed to measure an individual's habitual preferences for the maintenance of relatively fluid and/or relatively rigid psychological and psychosocial boundaries.

Miller, Greene, and Morrison's work came from a sociopsychological perspective. They developed this instrument as part of a project that considered individuals as coping with an "individuation-fusion dilemma," as evidenced in both the clinical observation of idiosyncratic coping strategies of children in the developmental stages of separation-individuation, and in the observation of the behavior of individuals in groups who may emerge as voices for one side or the other of the ambivalence over individuation within the group process

context. They utilize a boundary construct as applied to both personality and the social system. The sociopsychological perspective considers the process of becoming a social participant as one that involves transformation in the location and permeability of personal boundaries.

The questionnaire was designed to look at the behavioral and attitudinal manifestations of early experiences and needs concerning fusion and individuation that are condensed and retained in character style. The attitudes and behaviors are seen as derived from a preference for the degree of blurring of psychological and psychosocial boundaries and/or for reinforcing and sharpening psychological and psychosocial boundaries. For example, the item "I allow plenty of time between tasks so I don't have to rush" indicates a preference for maintaining clear demarcations while the item "I would feel like I'd be losing an important part of myself if I lost a very close friend" indicates a quality of involvement that could not take place if interpersonal boundaries were rigidly maintained. The progression, developmentally and experientially, from a more symbiotic experience to a more individuated experience, is considered to be both yearned for and dreaded, as is remaining in a state of more merged self-object relationships. The Personal Characteristics Questionnaire was empirically derived using factor analysis to assess individual differences in the experienced threat of, and preferred coping strategies for, the ambivalence over individuation-fusion.

Rorschach Scoring--Barrier and Penetration

In the course of a wide-ranging study of "body image" and personality Fisher and Cleveland (1958, rev. 1968) derived empirically a scoring system for Rorschach responses that scores for "Barrier" and "Penetration". By "body image" they mean the body as experienced psychologically.

Body image may in certain respects overlap the various usages of concepts like ego, self, and self concept. Although the term body image is anchored in phenomena relating to attitudes toward the body, it has wider implications which cross into other personality areas.

(1968, p. xi)

Initially their studies were developed following observations that individuals with rheumatoid arthritis gave Rorschach responses that frequently emphasized the surface characteristics of the percepts. They chose the Rorschach from a series of measures as they found it "elicited more information that was pertinent and subject to quantification" (p. 57).

Responses scored as "Barrier" are percepts in which "either the hardness or protective insulation value of the periphery is prominent" (p. 55); a set of responses for which the structure, substance, or surface qualities of the boundary are important. The "Penetration" responses are also viewed as a boundary score. These responses refer to the boundaries in the sense of emphasizing their weakness, lack of substance, or penetrability. These responses would include references to surfaces being broken, destroyed or absent. "Barrier" scores were related to the assertion of boundary definiteness;

"Penetration of Boundary" scores were related to a sense of boundary breakdown and fragility.

Fisher and Cleveland believed that the predictive power of their measure (their studies and subsequent studies showed this measure to correlate significantly with aspects of psychophysiological patterns, response to stress, social interaction, and psychopathology) derived from their focus on the boundary implications as central. The body image boundary is conceived of as related to boundary between self and nonself as "the body is experienced as an approximate replica of some of the basic internalized systems which constitute the 'I' or 'self'." (p. 351) Their theoretical formulations are based on the ideas of Freud, Mead (1934), and Parsons and Bales (1955). These formulations address the development of personality as the internalization of systems of social interactions. Body image is a vehicle for the study of the results of developmental processes as "the individual's body is in a position of being "psychologically 'closer' to the collectivity of internalized systems that constitute the 'I' or 'self' than are objects exterior to the body" (pp. 350-351), and because bodily sensations are thought to be of particular prominence in an individual's earliest transactions with the environment and other persons in it. In this formulation, then, the boundary aspect of the body is related to the boundaries aspects of the internalized systems that are seen as constituting the framework of personality.

Rorschach Scoring--Permeable and Impermeable
Ego Boundaries

Landis (1970), in his study of ego boundaries, developed a system for scoring Rorschach responses as "permeable" and "impermeable" that is similar to the penetration and barrier scores of Fisher and Cleveland (1968). Landis views "ego boundary" as a construct that describes "one aspect of the involvement of one human being with others, as well as his differentiation from them" (p. 1). He also applies the term "ego boundaries" to the boundaries that differentiate the

phenomenal self in varying degrees (1) from those aspects of the personality not represented in consciousness, and (2) from the world of reality external to the person, as psychologically experienced. This includes not only the social sphere but the realms of nature to which human beings are variously related.

(Landis, 1970, p. 1)

His theoretical framework draws on psychoanalytic theory and Gestalt field theory.

Permeability and impermeability refer to the "openness" and "closedness" of the ego-nonego demarcation, and can refer to the boundaries of the ego with the inner and outer worlds. Landis states his focus as the quality of separation between the ego and the external world in normal and clinical populations. He seems to adopt this focus as he sees the outer boundary as easier to conceptualize, as it is closer to conscious experience. But he maintains that "it could be argued that both the inner and outer of a person have similar properties of permeability or impermeability" (pp. 44-45).

Ego boundaries, as viewed by Landis, relate to a person's mode of self-world involvement. Persons are viewed as having conflicting needs for relatedness and separation and respond to these conflicting needs in the developmental task of establishing a self that is distinct from, yet related to, the environment. The quality of demarcation between ego and external world, and "between ego and nonego within" (p. 29) are seen as involved in an individual's receptivity to external events, organization of experiences, and modes of relating to others.

Landis states that his scoring system was influenced by the work of Fisher and Cleveland and by the work of Zucker. He believes, however, that in his view "body image" and "ego" are rarely, if ever, the same. Yet he also puts forth that body-image may symbolize ego experience, as in figure drawings, and that "there appears to be a consistency between one's body-image boundaries and one's ego boundaries, even though the two are not the same." The present study will, in part, investigate this proposition.

Depressive Experiences Questionnaire

Another endeavor of this study is to consider the measurements of psychological differentiation with regard to the experiences of self and relationships as measured by the Depressive Experiences Questionnaire (DEQ) developed by Blatt, D'Afflitti, and Quinlan (1976). This examination involves consideration of Blatt's theory of two fundamental lines of development that he refers to as an anaclitic line and an introjective line.

Drawing upon his interest in self and object representations, Blatt developed a theory about two types of depression--anaclitic and introjective (Blatt, 1974). He elaborated his ideas in an examination of antisocial behavior and personality (Blatt & Schichman, 1981) and has most recently broadened his notion of the anaclitic and the introjective as two primary configurations of psychopathology, i.e., as two fundamental developmental lines (Blatt & Schichman, 1983).

Blatt and Schichman (1983) view personality development

as part of a complex transaction of two fundamental developmental lines--an anaclitic line leading to the establishment of satisfying, intimate interpersonal relationships, and an introjective developmental line leading to a stable, realistic, and essentially positive identity. These two developmental lines normally develop as a complex dialectical process. Development in either line is contingent upon this dialectical interaction. (p.187)

A synopsis of the anaclitic and introjective configurations, prepared from Blatt and Schichman (1983), is presented in Table 2.

The Depressive Experiences Questionnaire is comprised of 66 statements about experiences of self and of relationships that, while not symptoms of depression, have been thought of as relevant to depression. Subjects respond by indicating the extent of their agreement with the items on a 7-point scale. The DEQ assesses three factors related to depression: (1) dependency, (2) self-criticism, and (3) efficacy, and has been used with both clinical (Blatt et al., 1982) and non-clinical (Blatt et al., 1976) subjects. The first two factors, which account for the largest proportion of the variance, are of interest in this study. Experiences of self and of relationships

TABLE 2

A Synopsis of the Anaclitic vs. the Introjective
Diagnostic ConfigurationsANACLITIC CONFIGURATION

The anaclitic configuration is object-oriented and involves themes of relatedness and intimacy. These issues of interpersonal relationships are expressed in concerns about trust, closeness, affection, and dependability of another as well as the capacity to give and to receive love in a context of security, cooperation and mutuality.

Psychopathology within the anaclitic configuration involves concerns and conflicts about themes of interrelatedness, and the symptoms are expressions of exaggerated attempts to compensate for disruptions in interpersonal relations. These disturbances are manifested in conflicts concerning establishing satisfactory intimate relationships, and feeling loved and being able to love. The basic wish is wanting to be loved.

The development of the self may be neglected in the struggle to establish satisfying interpersonal relationships.

Psychopathology within the anaclitic configuration involves conflicts with libidinal issues such as deprivation of care, affection, love, and sexuality. The basic issues appear to be the reliability and dependability of care and affection.

CHARACTERISTIC ANTECEDENT RELATIONSHIPS

Depriving, rejecting, inconsistent, or unpredictable care, or overindulgent relationships.

ANACLITIC DEFENSES

Primarily avoidant maneuvers--denial and repression. The defenses may be bolstered by acting out, externalization, and displacement. At times of disruption one may also see a hypomanic search for substitute objects and for comfort.

Defenses are utilized to manage fears of abandonment, to defend against intense rage over deprivation and frustration, or to avoid intense erotic longings and competitive strivings that are seen as potentially compromising or threatening one's relationships.

TABLE 2 (continued)

ANACLITIC COGNITIVE PROCESSES

Primarily synthetic, figurative, focusing on images and affects; characterized by simultaneous rather than sequential thought, and the avoidance of contradiction and critical analysis.

The predominant perceptual mode is field dependent.

Representative anaclitic traumas include the threat of the loss of the mother or the threat of the loss of her love. When depression occurs, feelings of helplessness and hopelessness about care are likely.

ANACLITIC PSYCHOPATHOLOGICAL ORGANIZATIONS

Non-paranoid schizophrenia
 Infantile syndromes
 Anaclitic depressives
 Various hysteroid organizations
 Hysterical disorders

INTROJECTIVE CONFIGURATION

The primary concerns associated with the introjective configuration center on issues of self-definition, self-control, self-worth, and identity. The focus in the introjective configuration is not on sharing affection--of loving and being loved--but rather on defining the self as an entity separate from and different than another, with a sense of autonomy and control of one's mind and body, and with feelings of self-worth and integrity.

Psychopathology within the introjective configuration involves exaggerated attempts to compensate for concerns about self-definition, self-control, and self-worth. The development of satisfying interpersonal relationships is neglected in the exaggerated struggle to establish an acceptable self-definition and identity, as preoccupation with issues of self-definition dominate and determine the nature and quality of interpersonal interactions. The basic wish is to be acknowledged, respected, and admired.

Psychopathology focuses on conflicts about the management and containment of affect, especially aggression, toward others and the self. The basic issue is the struggle to achieve a sense of separation, definition, and independence.

TABLE 2 (continued)

CHARACTERISTIC ANTECEDENT RELATIONSHIPS

Struggles to achieve separation, definition, and independence from controlling, intrusive, punitive, excessively critical, and judgmental figures.

INTROJECTIVE DEFENSES

Primarily counteractive maneuvers--projecting (splitting, externalization, disavowal, and reversal), doing and undoing, obstinence, negativism, reaction formation, isolation, intellectualization, introjection and internalization, identification with the aggressor, rationalization, overcompensation.

Introjective hypomanic defenses involve efforts at overcompensation for feelings of inadequacy rather than a denial of object loss. Themes of grandeur and power may be similar to paranoid delusions.

INTROJECTIVE COGNITIVE PROCESSES

Cognitive processes are literal, focused primarily on things, thoughts, and deeds (actions) rather than on people, feelings, and interpersonal ties. Thinking is analytic, critical, precise, linear, and sequential. Concerns about cause and effect, responsibility and blame. Attention is focused on details and contradictions; differences are exaggerated. There is little spontaneity and feelings; the emphasis is upon power and control. The predominant perceptual mode is field independent.

Representative introjective traumas include the threat of the loss of superego approval and the threat of castration. When depression occurs, feelings of inferiority, worthlessness and guilt are likely.

INTROJECTIVE PSYCHOPATHOLOGICAL ORGANIZATIONS

Paranoid schizophrenia
Paranoia
Obsessive-compulsive disorders
Introjective (guilt-laden) depression
Phallic narcissism

that contribute to the dependency factor are viewed as related to the anaclitic configuration; those experiences of self and relationships that contribute to the self-criticism factor are viewed as related to the introjective configuration.

Studies Comparing the Measures

Only a few studies have been reported that compare any of the measures with one another.

Landis (1970) found no consistent relationship between permeability-impermeability and field dependence when he studied unidentified Rorschach protocols lent to him by Witkin. The most extreme I-dominant subject was field-independent and the most extreme P-dominant subject was field-dependent but no overall clear relationship was found. He suggests that the sparseness of the inquiry data in the Witkin protocols may have affected the results of his study. Landis also notes that studies of field independence-field dependence have addressed different personality attributes than the studies of permeability-impermeability and stresses that Witkin's measure deals primarily with a perceptual mode whereas his own measure addresses a structural concept. He posits that "[f]rom a metapsychological point of view, then, a perceptual process and a structural concept may be linked to different characterological features" (p. 124).

Fisher and Cleveland also failed to find a dependable relationship between body-image boundary indices and perceptual mode indices. They considered that this may be attributable to the fact that the perceptual mode tasks lack interpersonal implications [reported in

Landis (1970), footnote, p. 123].

Little relationship, if any, has been found between these measures and measures of language facility and intelligence. This confirms the selection of a verbal intelligence task for discriminant validity (Campbell & Fiske, 1959) in this study. Witkin and Goodenough (1981) report a significant but small mean correlation between Vocabulary and Embedded Figures Test scores: $r = .14$ (p. 61). Fisher and Cleveland (1968) report finding only a chance relationship between intelligence and body image scores in their examination of data from three separate studies (p. 69).

Dimensionality of Constructs

It is not resolved in the literature whether these scoring systems are tapping one dimension or two. Nor can this study hope to resolve this question.

Fisher and Cleveland (1968), when formulating their scoring system, expected that the Barrier score and Penetration of Boundary score would tend to be negatively correlated.

The actual data we later collected turned out rather different than we expected. But in any case, we set up two separate body-image boundary scores because we felt that although both scores were in their own ways tapping aspects of a boundary-definiteness dimension, we were still uncertain whether these aspects were sufficiently overlapping to permit them to be combined meaningfully into one score.
(pp. 58-59)

They retained both scores and found each to relate in its own way to various groups they studied such that to combine the scores would have been to lose useful information.

Landis (1970), however, preferred to view Permeability-Impermeability as a single dimension, despite the fact that an inverse correlation using the Spearman rank-order correlation was confirmed in only one of two studies. He found that a combined P-I difference score provided slightly better correlations with task performances he studied, yet does point out that this in itself is not evidence for a single continuum. His stated position is that the issue is not resolved; but he seems to prefer one dimension as this view enhanced his correlations, and because

it still seems reasonable to conceptualize permeability and impermeability as qualities along a single dimension; at least there does not appear to be any a priori reason to regard these attributes as discrete, as two different dimensions or continua. (p. 57)

The Personal Characteristics Questionnaire of Miller, Greene, and Morrison is empirically derived through factor analyses. The implication in their view of the two factors is that it is likely that two dimensions are being tapped.

Silverman (1975) does not address this question directly but undertook to study whether merging itself is a motivated wish. His research supported the notion that it is. This approach may bypass the question of the number of dimensions, but it may usefully redirect this question to consideration of those processes that affect position and movement on the continuum or continua. Movement, in development, is not simply a way from one construct (fusion) toward another (individuation) but involves a complex interplay of conflicting aims and challenges. Boundaries serve as both containers of individual

experience, and borders for interactional transactions.

Predictions

It was expected that the measures would be related in complex ways, yet, that a statistical relationship would obtain. Scores on the various measures were expected to be related to one another so as to make distinguishable two basic groups:

a "fusion" group

Predominantly field-dependent (Embedded Figures Test)
 High Penetration (Rorschach)
 Permeable-dominant (Rorschach)
 High Fusion (Personal Characteristics Questionnaire)
 Less Differentiated (Adjective Rating Procedure)

and a "boundary" group

Predominantly field-independent (Embedded Figures Test)
 High Barrier (Rorschach)
 Impermeable-dominant (Rorschach)
 High Boundary (Personal Characteristics Questionnaire)
 More Differentiated (Adjective Rating Procedure)

Further, it was expected that "fusion" variables would correlate more highly with the Dependency factor of the Depressive Experiences Questionnaire and that "boundary" variables would correlate more highly with the Self-Criticism factor of the DEQ.

C H A P T E R I I

METHOD

Subjects

All subjects were University undergraduates who volunteered to participate in the study for experimental credits. Subjects were recruited through sign-up sheets and bids in psychology classes.

A sample size of 120 was sought. One hundred and fifty-five students were tested, although only 149 EFT were available for administration. More students were tested than the desired sample size in order to compensate for incomplete test records, to increase the likelihood of obtaining a more equal gender balance, and to honor the agreement to offer students an opportunity to participate in the experiment until test materials were exhausted. The data from 130 participants, 50 male and 80 female, were used in the study.

Investigators

In addition to the primary investigator, two undergraduate research assistants, trained by the primary investigator, took part in the administration and scoring of the scales.

Instrumentation

The instruments used in this study were introduced in the previous chapter and are summarized in Table 1. Each measure will be noted below with attention to format and scoring. Copies of all measures except the Embedded Figures Test and the Rorschach can be

found in Appendix A. All measures have been used with college students in previous research.

Vocabulary Test

This subtest from the Kit of Factor-Referenced Cognitive Tests is a 5-choice synonym test suitable for grades 11-16. It is a time-limited task, administered in two parts, each comprised of 18 items. A subject's score is the total number of items marked correctly. This scale is included in the study as a measure of verbal intelligence. It was selected to provide a means to consider discriminant validity.

Embedded Figures Test

The group-administered form of this test was used. Subjects are asked to solve problems that require them to locate and trace a simple form within a complex figure. The test is administered in three parts. The first part, comprised of 7 items, allows subjects to become familiar with the task and gives the experimenter a chance to verify that subjects have understood the task. There are two additional sections, each comprised of nine items, that are scored. A subject's score is the number of problems solved correctly. This measure is included as a test of cognitive restructuring ability. This ability is used to assess field dependence-field independence. The higher the subject's score, the greater the subject's cognitive restructuring ability, the more field independent the subject is assessed to be.

Adjective Rating Procedure

Subjects are asked to rate "self", "mother", and a photograph. Twenty adjectives are included in each rating. Ratings are on a 6-point scale. The differentiation scores obtained are the sums of the differences between self and mother ratings, and between self and photograph ratings. In his work with schizophrenic subjects, Silverman found that an average of the two differentiation scores could provide a more useful measure than either alone. This was not the case in this study. Silverman (1984) did not expect, as he had not found in his own research, that the measure would work in the same way with schizophrenic subjects and college students. In this study a measure of "Difference from Mother" and a measure of "Difference from Photograph" were each used. These scores are included to assess psychological differentiation in terms of the degree of overlap of self and object representations.

Personal Characteristics Questionnaire

This instrument is a 41-item self-report inventory. Each item is rated on a 7-point scale. Sixteen items load for "Boundary" and 16 items load for "Fusion". Most items are scored as the number indicated by the subject. A few items are scored by subtracting the indicated item score from 8. A summed score for "Boundary" and a summed score for "Fusion" is obtained for each subject in accordance with a scoring system supplied by the authors. "Boundary" scores are thought to indicate the subject's preference for sharpening psychological and psychosocial boundaries; "Fusion" scores are thought

to indicate the subject's preference for blurring psychological and psychosocial boundaries.

Rorschach Boundary Measures

Coding manuals were devised as part of the training of the Rorschach raters. The manuals were condensations of the information presented on scoring in Fisher and Cleveland (1968, includes scoring revisions since the original 1958 edition) and Landis (1970).

Initial training involved all three raters with both systems. It was then decided that one rater would score all Rorschach protocols for each system. The primary investigator served as criterion rater for reliability statistics. The scoring manuals used for this study can be found in Appendix B.

Barrier and Penetration of Boundary scores. Rorschach responses were scored in accordance with criteria put forth in the 1968 edition of Fisher and Cleveland. A training criterion of 85% agreement was exceeded; 90% agreement was obtained in the first training trial. Sixteen protocols were selected at random from the study data and scored by the experimenter as well as the rater. Inter-rater reliability was .90. Scores were controlled for response total, as advised by Fisher and Cleveland (1968), to make comparison possible. Scores for "Barrier Percent" and "Penetration Percent" were obtained by dividing the number of Barrier responses, and the number of Penetration of Boundary responses, by the total number of Rorschach responses for any given protocol.

Permeability and Impermeability of boundaries. Rorschach

responses were scored in accordance with the criteria put forth in Landis (1970). A training criterion of 85% agreement was not achieved on the first trial. After additional training, a second trial yielded 86% agreement. Sixteen protocols were selected at random from the data and scored by the experimenter as well as the rater. Inter-rater reliability was .95. Landis had used a difference score to classify individuals as I-dominant or P-dominant. In the present study, "Permeable Percent" and "Impermeable Percent" (each corrected for response total) were kept separate to have them be more readily comparable to the other scoring systems.

Depressive Experiences Questionnaire

This instrument is made up of 66 items. Each is rated on a 7-point scale. The DEQ is scored by computer using published factor coefficients, item means and standard deviations, and subject's indicated item scores. Each subject's data were used to yield a score on Factor I (Dependency) and Factor II (Self-Criticism). The DEQ is included in this study as a measure of experiences of self and of relationships. The factor scores for Dependency and Self-Criticism are considered to represent, respectively, measures of an anaclitic and an introjective configuration in personality.

Procedures

Group test sessions were arranged. Test sessions were administered by the experimenter and/or her two trained assistants. All test sessions were conducted in the Psychology Department. The

sessions took between 2 and 3 hours time. The number of subjects tested per session ranged between 1 and 16. Test materials were prepared so that test order was counterbalanced. Data was linked by subject number with no identifying information other than gender. All tests were accompanied by standard written instructions, except the Rorschach.

Group administration of the Rorschach was employed. Although group administration of the Rorschach is not favored for the purpose of clinical assessment, group administration procedures have been used for research purposes (Harrower, 1944; Hire, 1950; Munroe, 1948). Slides of the Rorschach blots were shown to the subjects. Each subject was provided with a set of 10 sheets corresponding to the 10 slides. Each sheet provided a space to list responses to the blot, a reproduction of the blot on which to indicate the location of the responses, and additional space for subjects to write additional information about how they were seeing the blot that would serve as Inquiry. All subjects completed their responses to each slide, including "Inquiry", before the next slide was shown. The decision to ask for the responses and the inquiry on each card at the same time, rather than a decision to run through all the cards twice, was made out of consideration of subject fatigue and the wish to obtain as complete a record as possible. It was assumed that asking subjects to write completely about each card would distribute both the work of the task and the novelty of the stimuli in ways that were advantageous to the purposes of this study.

Subjects were asked to provide a set number of responses, three

per card, to obtain uniformity in the data. Not all subjects complied with this request. When more than 3 responses per card were given, only the first three were scored. All scores were corrected for response total to facilitate comparison of scores.

Note on Presentation of Measures

This study was intended to examine measures of psychological differentiation and their relation to experiences of self and relationships. The instruments did not employ deception, but their relevancies to the constructs of interest were not explicitly addressed so as to avoid influencing subjects' responses. To this end, instruments were presented without titles or with neutral titles. For instance, the Blatt instrument is titled Depressive Experiences Questionnaire. Blatt devised the instrument while investigating qualitative differences in depression. The statements of experiences, while not symptoms of depression, have been thought relevant to depression. The factors that Blatt found he called "dependency" and "self-criticism"; these factors tie to theory that addresses qualities in personality more globally than did his earlier work. No mention of the factors of interest was made when the data was collected. The printed title of the form was "Experience Questionnaire" without reference to depression, dependency or self-criticism. Similarly, the Personal Characteristics Questionnaire was employed as an indicator of a subject's preferences for degrees of blurring psychological and psychosocial boundaries and reinforcing or sharpening psychological and psychosocial boundaries, but subjects were not

apprised of that. The Silverman procedure is scored as a measure of the merging of self and object representations. The Rorschach was scored according to a research tradition that examines "boundaries". Again, instruction and titles of instruments were put forth in the less explicit terms of "personal characteristics" and "experiences of self and relationships."

C H A P T E R I I I

RESULTS

Hypothesis #1: Relationships Among Measures of Differentiation and Boundary

The first hypothesis of this study was directed at investigating the relationship among a variety of measures of self-differentiation and boundary. It was expected that scores on the measures would cluster into two basic groups:

a fusion group

- Predominantly field dependent
- High Penetration
- Permeable-dominant
- High Fusion
- Less differentiated

and a boundary group

- Predominantly field independent
- High Barrier
- Impermeable-dominant
- High Boundary
- More differentiated

The nine scores obtained from the five measures of boundary and differentiation were correlated along with a measure of vocabulary, to provide some basis for considering discriminant validity. The correlation matrix can be found in Table 3. The resultant intercorrelation matrix was analyzed using the Principal Factor method of the Statistical Package for the Social Sciences (Nie et al., 1975). Orthogonal rotation (varimax) was used to aid in interpretation. A four factor solution was found to be the most important solution to consider in relation to the concerns of this study. This was the customary

TABLE 3
Pearson Correlation Coefficients

	Vocabulary	EFT	Difference from Mother	Difference from Photograph	Boundary	Fusion	Barrier Percent	Penetration Percent	Permeable Percent	Impermeable Percent
Vocabulary	1.0000	.1886*	.1941*	.0278	-.0546	-.0095	.1853*	.0880	.1086	.1074
EFT	.1886*	1.0000	.0280	.0395	-.1044	-.0003	.2420***	.0704	.0384	.2100***
Difference from Mother	.1941*	.0280	1.0000	.2030***	-.0764	-.0487	.0203	.0905	.1672*	.2192**
Difference from Photograph	.0278	.0395	.2030***	1.0000	-.0366	.0086	-.1003	-.1410	-.0668	-.0396
Boundary	-.0546	-.1044	-.0764	-.0366	1.0000	-.1092	-.1456*	-.1288	-.1058	-.0585
Fusion	-.0095	-.0003	-.0487	.0086	-.1092	1.0000	.0623	.0362	.0231	-.0841
Barrier Percent	.1853*	.2420***	.0203	-.1003	-.1456*	.0623	1.0000	.2968***	.3573***	.2947***
Penetration Percent	.0880	.0704	.0905	-.1288	-.1058	.0362	.2968***	1.0000	.4696***	.1545*
Permeable Percent	.1086	.0384	.1672*	-.0668	-.1058	.0231	.3573***	.4696***	1.0000	.3304***
Impermeable Percent	.1074	.2100***	.2192**	-.0396	-.0585	-.0841	.2947***	.1545*	.3304***	1.0000

*p ≤ .05
**p ≤ .01
***p ≤ .001

"default" solution that selects those factors with eigenvalues > 1 for rotation. Other solutions that attempted to force the data into fewer factors did not yield more interpretable results. The four factors accounted for 57.9% of the variance of the data. The rotated factor pattern and item loadings (rounded off to three digits) are presented in Table 4.

Factor 1 loaded most highly on the boundary measures of the Rorschach responses developed by Fisher and Cleveland (1968) and Landis (1970). The measures of penetration and permeability loaded more highly than the measures of barrier and impermeability.

Factor 2 loaded most highly on the Embedded Figures Test, the percentage of Barrier scores in the Rorschach, and the percentage of Impermeable scores on the Rorschach. Additionally, scores on Vocabulary loaded more highly on this factor.

The third factor reflected most strongly Silverman's self-differentiation adjective-rating measures. Rating oneself as different from the concept mother loaded more highly than rating oneself as different from a photograph.

The loadings that figure most importantly in the fourth factor are, overall, of less magnitude than those of the preceding factors. The highest loading is for Fusion, a measure derived from the Personal Characteristics Questionnaire. The next most important loadings for this factor are for Boundary, another measure of the Personal Characteristics Questionnaire, and Impermeable Percent, a Rorschach measure. Loadings for these two measures are opposite in sign to the loading for Fusion.

TABLE 4

Principal Factor Analysis:
Boundary, Differentiation, and Vocabulary Score Loadings on Four Factors

<u>Measured Score</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>
Vocabulary	.096	<u>.296</u>	.177	.046
Embedded Figures Test	-.013	<u>.572</u>	.004	.052
Difference from Mother	.187	.085	<u>.738</u>	-.086
Difference from Photograph	-.168	.020	<u>.324</u>	.054
Boundary	-.118	-.155	-.087	<u>-.285</u>
Fusion	.014	-.012	-.030	<u>.335</u>
Barrier Percent	<u>.420</u>	<u>.456</u>	-.112	.124
Penetration Percent	<u>.589</u>	.078	-.040	.160
Permeable Percent	<u>.765</u>	.094	.051	.019
Impermeable Percent	<u>.357</u>	<u>.383</u>	.115	<u>-.258</u>
Variance Accounted for by Factor	22.4%	13.2%	11.4%	10.9%

The prediction that scores would cluster in two groups was not supported. However, Factors 2 and 4 load in ways that are consonant with the prediction of this study. Factor 2 loads most highly on the two "boundary" measures of the Rorschach and scores on the Embedded Figures Test, an indication of the cognitive capacity to disembed figures that is related to the construct field independence. There is also a lesser loading for Vocabulary in this factor. Factor 4 has the score Boundary and a Rorschach "boundary" measure, Impermeable Percent, both loading opposite in sign to Fusion, a "fusion" measure.

Hypothesis #2: Relationships of Boundary and
Differentiation Variables to the Dependency
Factor and Self-Criticism Factor of the
Depressive Experiences Questionnaire

The second hypothesis of this study was directed at investigating the relationship of boundary measures to the qualities of experience of self and relationships as measured by the Dependency and Self-Criticism Factors of the Depressive Experiences Questionnaire. It was predicted that the "fusion" variables would correlate more highly with the Dependency Factor of the DEQ, and that "boundary" variables would correlate more highly with the Self-Criticism factor of the DEQ.

The intercorrelation matrix of the variables of concern was analyzed by means of the step-wise regression program of the Statistical Package for the Social Sciences (Nie et al., 1975). The correlations of the predictor variables with the DEQ Factor Scores are presented in Table 5. The results of the step-wise regression analysis for the Dependency Factor are presented in Table 6. The results of the

TABLE 5
 Correlation Coefficients of Predictor Variables
 with DEQ Factor Scores

<u>Predictor Variable</u>	<u>DEQ Dependency Factor</u>	<u>DEQ Self-Criticism Factor</u>
Vocabulary	-.125	.040
Embedded Figures Test	.058	.030
Response Total ^a	.172	-.031
Difference from Mother	-.089	.234
Difference from Photograph	-.045	.017
Boundary	.008	-.211
Fusion	.696	.509
Barrier Percent	-.060	.112
Penetration Percent	-.135	.091
Permeable Percent	-.090	.154
Impermeable Percent	-.059	.004

^aTotal number of responses to the Rorschach was included in some analyses to verify that it did not substantially influence results. All Rorschach boundary scores used in the analysis are corrected for response total as advised by Fisher and Cleveland (1968).

TABLE 6

Summary Table for Step-wise Regression with
DEQ Dependency Factor as Dependent Variable

<u>Step</u>	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>	<u>R Square Change</u>
1	Fusion	120.241	.000	.484	.484
2	Penetration Percent	6.665	.011	.510	.026
3	Vocabulary	2.866	.093	.521	.011
4	Response Total ^a	2.397	.124	.530	.009
5	Embedded Figures Test	1.886	.172	.537	.007
6	Difference from Photograph	1.783	.184	.544	.007
7	Barrier Percent	1.121	.292	.548	.004
8	Boundary	.674	.413	.550	.003
9	Impermeable Percent	.441	.508	.552	.002
10	Permeable Percent	.058	.811	.552	.000
11	Difference from Mother	.044	.834	.552	.000

^aTotal number of responses to the Rorschach was included in some analyses to verify that it did not substantially influence results.

step-wise regression analysis of the Self-Criticism Factor are presented in Table 7.

Only Fusion and Penetration Percent were found to be significant predictor variables for the DEQ Dependency Factor. It should be noted that Penetration Percent correlates with the DEQ Dependency Factor in the direction opposite to prediction and thus does not support the hypothesis. Fusion, however, is a very strong predictor for the DEQ Dependency Factor and accounted for 48.4% of the variance in the sample.

Fusion, contrary to prediction, accounted for 25.9% of the variance of the sample and was the most significant predictor of the DEQ Self-Criticism Factor. The self-differentiation measure, Difference from Mother, was a significant predictor for the DEQ Self-Criticism Factor. This was consonant with prediction from theory. The variable accounted for an additional 6.7% of the variance of the sample and was significant at the .001 level.

Subsequent Secondary Analyses

As the outcome of the study presented an unexpected and complicated picture, additional analyses were undertaken to attempt to inform interpretation of results.

These analyses focused on examination of the Fusion variable from the Personal Characteristics Questionnaire as it was a strong predictor of both DEQ factor scores and accounted for a considerable amount of the variance of each as a predictor (48% for DEQ Dependency Factor, 26% for DEQ Self-Criticism Factor).

TABLE 7

Summary Table for Step-wise Regression with
DEQ Self-Criticism Factor as Dependent Variable

<u>Step</u>	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>	<u>R Square Change</u>
1	Fusion	44.766	.000	.259	.259
2	Difference from Mother	12.656	.001	.326	.067
3	Boundary	3.548	.062	.345	.018
4	Permeable Percent	1.510	.221	.353	.008
5	Impermeable Percent	.396	.530	.355	.002
6	Barrier Percent	.266	.607	.356	.001
7	Difference from Photograph	.223	.637	.357	.001
8	Response Total ^a	.169	.682	.358	.001
9	Vocabulary	.080	.778	.358	.000
10	Embedded Figures Test	.057	.811	.359	.000
11	Penetration Percent	.044	.835	.359	.000

^aTotal number of responses to the Rorschach was included in some analyses to verify that it did not substantially influence results.

Concerned with construct validity, I decided to examine the items of the Personal Characteristics Questionnaire that contribute to the Fusion score and to sort them on the basis of whether I expected each to correlate with the Dependency Factor and/or the Self-Criticism Factor, using Blatt and Schichman's (1983) theory of the anaclitic and introjective configurations as the basis of my predictions. The PCQ Fusion items and specific predictions are included in Table 8. Correlations were computed for the Fusion items with the DEQ Factor scores. There was 81% agreement between my theory-based predictions and the results of the computed correlations, indicating reasonable construct validity. The correlations of the Fusion items with the DEQ Factor scores are presented in Table 9.

A principal components analysis of the Fusion items was undertaken to produce factor scores that could be used in a subsequent regression analysis. Orthogonal rotation (varimax) was used to aid in interpretation. The customary "default" solution that selects those factors with eigenvalues > 1 for rotation was selected. Other solutions that attempted to force the data into fewer factors did not yield more interpretable results. The six factors accounted for 63.1% of the variance of the data. The rotated factor pattern and item loadings for items that loaded higher than .300 are presented in Table 10. Factors loadings are rounded off to three digits.

Fusion Factor 1 accounted for 22% of the variance and loaded most highly on items that suggest powerlessness and a negative, unstable, or unintegrated self-representation. These included such

TABLE 8

PCQ Fusion Items and Investigator's Predictions
of Likely Significant Correlations with
DEQ Dependency and DEQ Self-Criticism

DEQ Dependency			DEQ Self- Criticism
<u>Anaclitic</u>			<u>Introjective</u>
Expected	07	I like to belong to an intimate group.	
Expected	11	Often it is difficult for me to make decisions.	Expected
Expected	12	I feel comfortable when a strong person is in the room.	
Expected	19	I very often feel that I have no choice.	Expected
Expected	20	Whenever I am near someone with a cold I always catch it.	
	23	The thought has occurred to me that the various parts of my body don't fit together well.	Expected
Expected	25	Sometimes I feel very big and other times I feel very small.	Expected
Expected	26	I feel frightened when I'm in a large empty building.	
Expected	30	I often think I can read people's minds.	Expected
Expected	31	I sometimes feel as though my world is falling apart.	Expected
Expected	32	I am very upset when I have to say goodbye to a good friend.	
Expected	36	Frequently I can't get bad thoughts out of my head.	Expected
	37	I sometimes feel that I have been in exactly the same situation twice, i.e., I have <u>deja vu</u> experiences.	
Expected	38	I would feel like I'd be losing an important part of myself if I lost a very close friend.	
Expected	39	I have difficulty breaking off a relationship that is making me unhappy.	
Expected	40	My happiest moments have occurred when I've felt so close to someone that we could communicate without a word.	

TABLE 9

Correlations of Fusion Items from Personal Characteristics Questionnaire
with DEQ Factor Scores for Dependency and Self-Criticism

<u>PCQ Item</u>	<u>Correlation with DEQ Dependency</u>	<u>p</u>	<u>Correlation with DEQ Self-Criticism</u>	<u>P</u>
07	.2823	.001	.2332	.004
11	.3242	.001	.3906	.001
12	.2857	.001	.2682	.001
19	.2589	.001	.3818	.001
20	.2176	.006	-.0139	.437
23	.3156	.001	.3106	.001
25	.4261	.001	.4376	.001
26	.4195	.001	.0877	.160
30	.2256	.005	.0865	.164
31	.3765	.001	.4950	.001
32	.5409	.001	-.0108	.451
36	.2723	.001	.4938	.001
37	.1567	.037	.0421	.317
38	.4868	.001	.0409	.322
39	.3348	.001	.2818	.001
40	.1584	.036	.0289	.372

TABLE 10

Principal Components Analysis of
Personal Characteristics Questionnaire Fusion Items

Factor Loadings $\geq .300$ on Six Factors

PCQ Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
07			.777			
11	.483		.599			
12			.660	-.345		
19	.677					
20						.872
23	.529	.328				
25	.560					
26	.358	.545				
30					.490	.411
31	.802					
32		.808				
36	.525				.517	
37					.826	
38		.785				
39	.324			.754		
40				.697		
Variance Accounted for by the Factor	22.0%	10.5%	8.6%	7.8%	7.3%	6.9%

items as "I sometimes feel as though my world is falling apart", "I very often feel I have no choice", and "The thought has occurred to me that the various parts of my body don't fit together well".

Fusion Factor 2, accounting for 10.5% of the variance, loads most importantly on items concerning the loss of a good object such as "I am very upset when I have to say goodbye to a good friend" and "I would feel like I'd be losing an important part of myself if I lost a very close friend".

Fusion Factor 3 loads most highly on items concerning liking belonging to an intimate group, feeling comfortable with a strong person in the room, and having difficulty making decisions. It is interpreted as deference, or as indicating an interest in looking to others for supplies.

Fusion Factor 4 loaded most highly on the items "I have difficulty breaking off a relationship that is making me unhappy" and "My happiest moments have occurred when I've felt so close to someone that we could communicate without a word". There is a lesser negative loading for feeling comfortable with a strong person in the room. This factor is interpreted as a wish/fear for closeness and a fear of being alone.

The fifth Fusion Factor reflects cognitive aspects of fusion. It loads on items concerning deja vu experiences, thinking one can read people's minds, and having difficulty getting bad thoughts out of one's mind.

Fusion Factor 6 loads most highly on the items "I often think I can read people's minds" and "Whenever I am near someone with a cold,

I always catch it". This factor is interpreted as an indicator of interpersonal permeability.

A step-wise regression analysis was done similar to the one that addressed Hypothesis #2. In this analysis factor scores, derived from the matrix of the principal components analysis of the Fusion items, were substituted for the Fusion score used in the earlier regression analyses. The correlations of the predictor variables with the DEQ Factor scores are presented in Table 11. The results of the step-wise regression analysis for the DEQ Dependency Factor are presented in Table 12. The results of the step-wise regression analysis for the DEQ Self-Criticism Factor are presented in Table 13.

All the significant predictor variables for the DEQ Dependency Factor were Fusion Factor scores. Together, these variables accounted for 53.5% of the variance. The most significant variable, accounting for 25.4% of the variance, was Fusion Factor 2, the factor that is concerned with loss of a good object. Fusion Factor 1, reflecting a sense of powerlessness and negative self-representation, accounted for an additional 14.4% of the variance as a second step in the regression. The next most important factor was Fusion Factor 3, deference or an interest in looking to others for supplies, followed by Fusion Factor 4, a wish/fear of closeness and fear of being alone. These factors accounted for an additional 6.2% and 4.8% of the variance given their place in the step-wise regression. The final significant Fusion Factor in the regression was Fusion Factor 6, interpreted as interpersonal penetrability. It accounted for an R^2 change of .027.

TABLE 11

Correlation Coefficients of Predictor Variables
with DEQ Factor Scores
Fusion Factor* Scores Substituted for Fusion Scores

<u>Predictor Variable</u>	<u>DEQ Dependency Factor</u>	<u>DEQ Self-Criticism Factor</u>
Vocabulary	-.125	.040
Embedded Figures Test	.058	.030
Difference from Mother	-.089	.234
Difference from Photograph	-.045	.017
Boundary	.008	-.211
Barrier Percent	-.060	.112
Penetration Percent	-.135	.091
Permeable Percent	-.090	.154
Impermeable Percent	-.059	.004
Fusion Factor 1	.379	.575
Fusion Factor 2	.504	-.091
Fusion Factor 3	.249	.291
Fusion Factor 4	.220	.151
Fusion Factor 5	.089	.062
Fusion Factor 6	.163	-.016

*Fusion Factor Interpretations:

- Fusion Factor 1 - powerlessness/negative, unstable, unintegrated self-image
 Fusion Factor 2 - concerns about loss of a good object
 Fusion Factor 3 - deference/looking to others for supplies
 Fusion Factor 4 - wish for/fear of closeness and fear of being alone
 Fusion Factor 5 - cognitive aspects of fusion concerns
 Fusion Factor 6 - interpersonal permeability

TABLE 12

Summary Table for Step-wise Regression with
DEQ Dependency Factor as Dependent Variable
Substituting Fusion Factor* Scores for Fusion

Step	Variable	F to Enter or Remove	Significance	Cumulative R Square	R Square Change
1	Fusion Factor 2	43.668	.000	.254	.254
2	Fusion Factor 1	30.328	.000	.398	.144
3	Fusion Factor 3	14.448	.000	.460	.062
4	Fusion Factor 4	12.306	.001	.508	.048
5	Fusion Factor 6	7.095	.009	.535	.027
6	Penetration Percent	3.624	.059	.548	.013
7	Embedded Figures Test	2.347	.128	.557	.009
8	Vocabulary	2.401	.124	.565	.009
9	Fusion Factor 5	2.233	.138	.573	.008
10	Difference from Photograph	.807	.371	.576	.003
11	Barrier Percent	.905	.343	.580	.003
12	Impermeable Percent	.427	.514	.581	.002
13	Permeable Percent	.038	.844	.581	.000

*Fusion Factor Interpretations

- Fusion Factor 1 - powerlessness/negative, unstable, unintegrated self-image
- Fusion Factor 2 - concerns about loss of a good object
- Fusion Factor 3 - deference/looking to others for supplies
- Fusion Factor 4 - wish for/fear of closeness and fear of being alone
- Fusion Factor 5 - cognitive aspects of fusion concerns
- Fusion Factor 6 - interpersonal permeability

TABLE 13

Summary Table for Step-wise Regression with DEQ Self-Criticism Factor
as Dependent Variable Substituting Fusion Factor* Scores for Fusion

Step	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>	<u>R Square Change</u>
1	Fusion Factor 1	63.139	.000	.330	.330
2	Fusion Factor 3	18.374	.000	.415	.085
3	Difference from Mother	9.373	.003	.455	.040
4	Fusion Factor 4	4.811	.030	.476	.020
5	Permeable Percent	.989	.322	.480	.004
6	Penetration Percent	.765	.384	.483	.003
7	Boundary	.769	.382	.486	.003
8	Barrier Percent	.515	.474	.488	.002
9	Impermeable Percent	.780	.379	.492	.003
10	Fusion Factor 2	.502	.480	.494	.002
11	Embedded Figures Test	.205	.652	.495	.001
12	Fusion Factor 5	.177	.674	.496	.001
13	Vocabulary	.074	.787	.496	.000
14	Difference from Photograph	.060	.808	.496	.000

*Fusion Factor Interpretations

Fusion Factor 1 - powerlessness/negative, unstable, unintegrated self-image
 Fusion Factor 2 - concerns about loss of a good object
 Fusion Factor 3 - deference/looking to others for supplies
 Fusion Factor 4 - wish for/fear of closeness and fear of being alone
 Fusion Factor 5 - cognitive aspects of fusion concerns
 Fusion Factor 6 - interpersonal permeability

The significant predictor variables for the DEQ Self-Criticism Factor were Fusion Factor 1, powerlessness and negative self-representation; Fusion Factor 3, deference or an interest in looking to others for supplies; differentiating oneself from the concept of mother; and Fusion Factor 4, a wish/fear of closeness and fear of being alone. Fusion Factor 1 accounted for 33% of the variance. The R^2 change for subsequent predictors were .085, .041, and .020, respectively. Overall, the predictors could account for 47.6% of the variance in the DEQ Self-Criticism factor.

The results of these regression analyses indicate that different concerns predominate in their associations with Dependency and Self-Criticism as measured by the DEQ.

C H A P T E R I V

DISCUSSION

Discussion of the Relationships of Measures of Differentiation and Boundary

The first hypothesis of this study--that measures of psychological differentiation and boundary would cluster in two groups--was not confirmed. Factor analyses of the boundary and differentiation measures and a measure of vocabulary gave rise to a four-factor solution. It can be seen, however, that the structure of some of the factors is consistent with the prediction. This would indicate that these measures may indeed be tapping similar, related psychological phenomena, though not cleanly.

It can be seen that the methodology or format of measurement may likely play a role in this. Factor 1 loads highly on only the Rorschach measures, Factor 3 loads highly on Silverman's adjective rating measures, while Factor 4 loads predominantly on the self-report Personal Characteristics Questionnaire.

It seems clear, however, that something other than measurement methodology is also involved. Although Factor 4 loads predominantly on the Boundary and Fusion measures of the Personal Characteristics Questionnaire, there is also a noteworthy contribution from one of the Rorschach variables, Impermeable Percent. This variable loads in the same direction as the Boundary variable and opposite in direction to Fusion. This factor, then, shows some cross-methodology loadings with directionality in those loadings that is consonant with

the prediction. A Rorschach measure that indicates "closedness" in a boundary distinction is linked with a self-report measure of attitudes and behaviors selected as indicators of a preference for sharpening interpersonal boundaries. And both these measures load opposite to a self-report measure of preference for blurring interpersonal boundaries.

Factor 2 is also of interest in this regard as it loads on variables that cross methodologies and are correlated in the expected direction. Barrier Percent and Impermeable Percent, both Rorschach measures of closed or firm demarcation, load on this factor. The highest loading came from the Embedded Figures Test, a cognitive task that is used to assess field independence-dependence. Field independence, indicated by a high score on the EFT, is related by Witkin and his colleagues to the segregation of self from nonself. These three variables--Barrier Percent, Impermeable Percent, and EFT--are concerned with some capacity to make a distinction. The EFT is more a measure of ability to define an object within a field, while the Rorschach scores indicate an inclination to focus on contour. This factor, then, draws on an overlap between a more strictly conscious cognitive measure and ones that are ordinarily seen as more unconsciously motivated.

In Factor 2 there is also a minor loading for the Vocabulary Test. This measure was included out of concern for discriminant validity. Verbal intelligence was considered to be a psychological variable that might be relatively unlikely to correlate highly with differentiation or boundary measures. The vocabulary test was

selected because of its ease of administration and previous use with college populations, and was not expected to play much of a role in factor structures. Its appearance, as a minor but not negligible contribution to Factor 2, might reasonably be considered to stem from the nature of the task, in light of understanding this factor as an indication of a capacity to make distinctions. The vocabulary test was a word recognition test, presenting the test item and a choice of alternatives from which to select the best synonym. As such, it can readily be seen as a task that would engage cognitive processes involved in making distinctions.

Factor 1 loaded on the four Rorschach measures; more strongly on what had been anticipated as the "fusion" measures, Penetration Percent and Permeable Percent, and secondarily on the "boundary" measures, Barrier Percent and Impermeable Percent. Measurement methodology may play some role here, but it is likely that there are other influences as well. This factor indicates that those individuals who note the closedness of boundaries and emphasize the structure, substance, or surface characteristics of boundaries are also those who give Rorschach responses that reflect concern with boundary permeability, breakdown, or fragility. It would seem, then, that this factor does not reflect as much about tendencies to view boundaries in particular ways as an indication, important in itself, to focus on boundary phenomena in the first place. Perhaps this could have been anticipated given Fisher and Cleveland's (1968) comment about what they found in relation to their expectation that Barrier and Penetration would be negatively correlated (that

was quoted in the first chapter of this thesis and will be repeated here).

The actual data we later collected turned out rather different than we expected. But in any case, we set up two different body-image boundary scores because we felt that although both scores were in their own ways tapping aspects of a body-definiteness dimension, we were still uncertain whether these aspects were sufficiently overlapping to permit them to be combined meaningfully into one score. (pp. 58-59)

The results of this study with regard to these Rorschach measures would not seem to differ from previous research.

This finding of a factor loading positively on all four Rorschach measures is based on these measures being positively correlated with one another. This does not support Landis's (1970) supposition of a single bipolar continuum. Factor 1 of this study indicates that attention to boundary phenomena, whether definite or indefinite, accounts for more than one fifth of the variance of the data, more than any other factor. But differences in how the boundaries are noted are also important. In this study, on the basis of the loading of Barrier Percent and Impermeable Percent on Factors 2 and 4, it would seem that maintaining the measures for boundary definiteness and boundary permeability separately, rather than combining them, provided a relevant source of information that might have been lost in a single score. In this study, Landis's difference score did not add particularly meaningful information. It merely correlated, at the .001 significance level, with the measures from which it was derived and with Penetration Percent.

The mixed results of this factor analysis, while differing from

the initial prediction of this study, do provide support for there being constructs that are tapped by more than one type of measure. There is evidence of some correspondence between objective and projective measures in Factors 2 and 4. This suggests that a boundary and differentiation construct can hold psychological salience across levels of consciousness. What seems to be most readily detected across these measures is a capacity or preference for making distinctions.

Perhaps thinking about levels of consciousness can suggest another reason why the Rorschach measures cluster in Factor 1. The Rorschach is used to inquire into unconscious meanings that contribute to the organization of perceptions. In tapping deeper, more primitive levels of meaning one may tap meanings in which a fusion-individuation dilemma or conflict holds greater sway than in more conscious attitudes and abilities that are influenced by, and reflect, adaptive experience and coping style.

Discussion of the Relationships of Boundary Measures to Qualities of Experience of Self and Relationships

The second hypothesis of this study predicted that "fusion" measures would be better predictors of the DEQ Dependency Factor and "boundary" measures would be more associated with the DEQ Self-Criticism Factor. This prediction is in keeping with Blatt and Shichman's theory of an anaclitic configuration and an introjective configuration as representing distinguishable developmental lines that interact in a dialectical process in personality development.

The Dependency Factor of the DEQ is taken here as an indication of anaclitic concerns; the Self-Criticism Factor as a reflection of introjective concerns.

The second prediction of this study was not borne out by the results of the regression analysis. Mixed and unexpected results were obtained.

The Fusion variable, a measure derived from the Personal Characteristics Questionnaire, was the best predictor of the Dependency Factor. This is in keeping with the theory-based prediction of this part of the study. The Fusion variable demonstrated a strong correspondence with the DEQ Dependency Factor, accounting for 48% of the variance of the data. Penetration Percent was the only other variable that predicted the Dependency Factor at or below the .05 level of significance ($p = .011$). However, the correlation of Penetration Percent with the Dependency Factor is in the direction opposite to prediction and does not support the hypothesis.

Contrary to prediction, the Fusion variable was also the best predictor of the Self-Criticism Factor of the DEQ, accounting for nearly 26% of the variance in the data. The Silverman differentiation measure of rating oneself as different from mother was the only other significant ($p = .001$) predictor of the Self-Criticism Factor. This result was in line with prediction.

Overall, then, aside from Fusion and Difference from Mother, the differentiation and boundary variables did not show much congruence with the DEQ Factors. This might best be understood by considering the nature of the tasks from which these measures are

derived. Both the Personal Characteristics Questionnaire and the Depressive Experiences Questionnaire ask subjects to reflect upon statements of attitudes, behaviors, or experiences; to assess and indicate the extent to which they agree or disagree with such statements. What is being considered here is more than methodological similarity. The suggestion is that these tasks engage psychological processes that are "experience-near" (i.e., processes that are accessible and identifiable to individuals as aspects of their psychological experience), and that these tasks tap internalized representations of self and relationships. The Silverman adjective rating procedure also draws an experienced-based evaluation of an internalized referent--"Mother". It is this difference from mother, assessed through one's ratings of one's internalized representation of her, and not the difference from a photograph of a "mother-figure", an external stimulus, that was found to be a significant predictor. It seems likely that the "experience-nearness" of the psychological processes involved in these tasks accounts for their greater correspondence, i.e., ability to tap related psychological dimensions.

The only other "experience-near" variable, also derived from the Personal Characteristics Questionnaire, is Boundary. Why it is not among the significant predictors? Perhaps the answer lies in an examination of the items that make up the measures, with "experience-nearness" as a criterion. The DEQ items and items that comprise the Fusion score are all self-referential statements. The items that comprise the Boundary measure are mostly self-referential; however, included in the score are items that seem to be at a different level

of thought or concern. Consider, for instance, the following PCQ Boundary items: "When you can't get justice by legal means, you should resort to non-legal means", "Operations to change the sex of an individual when he or she wishes should be legalized", "There is a clear distinction between rational and irrational thinking", and "Generally, I do not think men should do women's tasks at home (like sewing, cooking, housekeeping)". These items do not seem as personal, interpersonal, or experience-near as items such as "I am very upset when I have to say goodbye to a good friend" (PCQ-fusion item), "After an argument, I feel very lonely" (DEQ item), "Often I feel threatened by change" (DEQ item), and "There is a considerable difference between how I am now and how I would like to be" (DEQ item). It seems plausible that the inclusion of more abstract, less interpersonal, less expressly affective statements in the Boundary score could account for its lack of correspondence with the other experience-near evaluative measures that concern themselves with dimensions of evaluation of internal representations of self and relationships.

Discussion of Secondary Analyses

As Fusion had been the best predictor of both DEQ Dependency and DEQ Self-Criticism and accounted for such a striking amount of the variance (48%) for the DEQ Dependency Factor, further examination of this variable, for heuristic purposes, seemed warranted.

My predictions, based on Blatt and Schichman's (1983) theory, of which PCQ Fusion items I expected to correlate highly with DEQ

Dependency and which with DEQ Self-Criticism, were found to have 81% agreement with those items that did show significant correlations ($p = .05$ or less) with the DEQ factors. This provided empirical support for the idea that anaclitic concerns, related to dependency, and introjective concerns, related to self-criticism, are conceptually separable. This indicator of construct validity further supported the idea of examining the Fusion variable.

The principal components analysis of the Fusions item generated six factors that were interpreted as:

Fusion Factor 1 - powerlessness/negative, unstable, unintegrated self image

Fusion Factor 2 - concerns about loss of a good object

Fusion Factor 3 - deference/looking to others for supplies

Fusion Factor 4 - wish/fear for closeness and fear of being alone

Fusion Factor 5 - cognitive aspects of fusion concerns

Fusion Factor 6 - interpersonal permeability

The results indicated that different concerns predominate in association with DEQ Dependency and DEQ Self-Criticism. The best predictor of DEQ Dependency was Fusion Factor 2 which was interpreted to be an expression of concern about the loss of a good object. In this fusion factor, relationship is salient. This is what is expected as theory would predict that Dependency as an indicator of the anaclitic configuration of personality would center on relational experiences.

DEQ Self-Criticism was best predicted by Fusion Factor 1, an indication of a powerless, negative, unstable or unintegrated self-

image. This, too, is consonant with theory. Concerns about the self are central to the introjective configuration for which Self-Criticism serves as indicator.

Yet it is clear in the results that the constructs are not altogether simply and neatly separable. Fusion Factor 1, related to self-image, is the second most important predictor of the Dependency Factor. Fusion Factor 3, interpreted as deference or loading to others for supplies, also figures significantly as a predictor for both Dependency and Self-Criticism.

Perhaps the lesson in this is the importance of context for meaning. I note that even in the naming of Fusion Factor 2 I have included a more anaclitic concept-name, deference, with a more introjective one, looking to others for supplies, in which self-concern might predominate without relatedness being as necessary or important, at least in some occurrences. A similar point occurs in considering Fusion Factor 1, a "self-image" factor. It indicates a sense of powerlessness but cannot tell us with respect to what. And that context question is a most important one for sorting anaclitic and introjective concerns. One can imagine the essential importance of qualitative distinctions. For example, helplessness or powerlessness, so frequently recognizable in normal and pathological depressive experience, may relate to very different realms of human experience. One can feel helpless or hopeless in relation to receiving care sought from others, a more anaclitic helplessness, or feel helpless or hopeless about attaining one's goals, a more introjective helplessness.

So here we are faced with a limitation of the data used for this study. We cannot know when a person agrees strongly with a statement like "Often, it is difficult for me to make decisions" or "I very often feel I have no choice" which decisions or choices are most likely to preoccupy the person, which are most salient.

The results of these secondary analyses can be seen as somewhat supportive of the usefulness and distinguishability of Blatt and Schichman's notions of the anaclitic and introjective configurations in personality. The results of the regression analyses indicate that the different components of Fusion that best predict DEQ Dependency and DEQ Self-Criticism are concordant with theoretical expectation. Also, the crucial importance of context in which to re-associate a disembedded component is highlighted along with the limitations of these data for that purpose.

A Note Concerning an Exploratory Analysis of the Significance of Gender

Gender differences were not expected to play a major role in the results of this study; previous research had not suggested that the relationships among the variables would differ with regard to gender.

However, thinking about the qualitative differences indicated in the principal components analysis of the Fusion variable suggested that an examination of the data by gender might be of heuristic value. The analysis will not be discussed in detail because this study was not designed to systematically explore gender differences. Given that, any conclusions drawn on the basis of a sample of this size

might well be misleading.

I mention the analysis and note it here to substantiate two points. The first is that while significant gender differences were found for only three of the original variables (Dependency, Boundary, and Fusion), two of the three are variables of major importance in the regression analyses. I do not believe this totally undermines the results or thinking of the study. Instead I see this as further evidence that attention to qualitative distinctions is paramount in research in this area. That is the second point. While the results of the analysis presented in Appendix C must remain speculative and inconclusive, it appears differences emerge that suggest intriguing variation in qualitative dimensions. For instance, a negative, powerless, unstable or unintegrated self image is sometimes linked, for the female subsample, with feeling comfortable with a strong person in the room (deference?). This does not appear for the male subsample. Males in the subsample link a capacity for affiliation, as indicated by liking belonging to a group and feeling upset when saying goodbye to a good friend, with a negative loading for feeling one has no choice, suggesting an empowering aspect of affiliation that differs from, say, the female subsample component of a desire for communion, indicated by liking belonging to groups and feeling happiest in close wordless communication. In giving these examples I do not wish to indicate these results qua results in the same way as I spoke to earlier analyses. I intend only to restate the value that further qualitative investigation appears to have in the service of possibly illuminating differences, including gender differences, in the

experience of self and relationships.

Concluding Summary

This study was undertaken to investigate whether a variety of measures of psychological differentiation and boundary were measuring the same dimensions, and to investigate how these measures were related to experiences of dependency and self-criticism as measured by the Depressive Experiences Questionnaire.

With regard to the first investigation, it was expected that two groupings of the measures would be found: a "fusion" group that indicated a penetrability and blurring of boundaries and a "boundary" group that indicated a preference for well-defined or more rigid demarcations. This expectation was only partially confirmed. Both means of measurement and levels of consciousness seemed to affect the observed groupings. Nevertheless, two of the four factors obtained in a principal component analysis showed the correlation of different types of measures in the expected directions. These factors seemed to be tapping a capacity to make a distinction, an ability of obvious importance in the establishment of a sense of boundary.

Contrary to prediction (but in keeping with previous research findings) all Rorschach measures clustered together in one factor. This finding supports the idea that existing boundary measures are tapping related but distinguishable aspects of boundary phenomena rather than a single bipolar dimension.

With regard to the second investigation, it was expected that "fusion" variables would be the better predictors of DEQ Dependency

scores and "boundary" variables better predictors of DEQ Self-Criticism scores. Contrary to predictions, the Personal Characteristics Questionnaire variable Fusion was the best predictor for both DEQ factor scores. The similarities of the Depressive Experience Questionnaire and the Personal Characteristics Questionnaire, both in terms of their methodology, and their "experience-nearness" was thought to account for this result.

Secondary analyses of the Fusion variable items and another set of regression analyses provided additional, though limited, support for the theory that guided this study. A fusion factor that concerned itself with relatedness was the best predictor of the anaclitic variable, Dependency; while a self-evaluative factor was the best predictor of the introjective variable, Self-Criticism.

The limitations of this study underscored the importance of context for evaluating how experiences of self and relationship may be interpreted as representing any given balance of anaclitic (relationship) concerns and introjective (self-experience) concerns. Further qualitative research that allows for more description of personal meanings in relation to experiences of self and relationship would make it possible to better consider how a theory of two primary configurations in personality might further our understanding of development, psychopathology, and treatment.

In addition there are indications, inconclusive due to sample size, that possible gender difference bear further investigation [Blatt and his colleagues are now finding that the DEQ factors are somewhat different for males and females. Preliminary reports are

not yet published (Quinlan, 1984)]. Given the complexity of the psycho-social-sexual milieu in which the early development of psychological differentiation and boundary takes place, qualitative differences for males and females may well obtain (cf. Chodorow's discussion of male and female identifications in development and consequences in object-relatedness and Gilligan's work on the different "voices" in which males and females speak to morality).

We are left, then, with the idea that the constructs of psychological differentiation and boundary are complicated ones, and that the aspect most readily measured involves some capacity to make distinctions, an important but clearly limited representation of such a fundamental and meaningful psychological domain as the demarcation between self and nonself. In addition, there is some support to be found in this study for the utility and discernability of distinguishable aspects of experience that concern self (introjective) and relationships (anaclitic). Further investigation would profit from examination of gender differences in the organization of experience of self and relationships, and in special attention to the meaning context in which self-descriptions and self-evaluations are asserted.

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A P P E N D I X

APPENDICES

APPENDIX A
INSTRUMENTS

Advanced Vocabulary Test--V-4

This is a test of your knowledge of word meanings. Look at the sample below. One of the five numbered words has the same meaning or nearly the same meaning as the word above the numbered words. Mark your answer by putting an X through the number in front of the word that you select.

jovial
1-refreshing
2-scarce
3-thickset
4-wise
X-jolly

The answer to the sample item is number 5; therefore an X has been put through number 5.

Your score will be the number marked correctly minus a fraction of the number marked incorrectly. Therefore, it will not be to your advantage to guess unless you are able to eliminate one or more of the answer choices as wrong.

You will have 4 minutes for each of the two parts of this test. Each part has one page. When you have finished Part 1, STOP. Please do not go on to Part 2 until you are asked to do so.

DO NOT TURN THIS PAGE UNTIL ASKED TO DO SO.

Part 1 (4 minutes)

- | | |
|--|---|
| <p>1. mumble
 1-speak indistinctly
 2-complain
 3-handle awkwardly
 4-fall over something
 5-tear apart</p> | <p>8. orthodox
 1-conventional
 2-straight
 3-surgical
 4-right-angled
 5-religious</p> |
| <p>2. perspire
 1-struggle
 2-sweat
 3-happen
 4-penetrate
 5-submit</p> | <p>9. stripling
 1-stream
 2-narrow path
 3-engraving
 4-lad
 5-beginner</p> |
| <p>3. gush
 1-giggle
 2-spout
 3-sprinkle
 4-hurry
 5-cry</p> | <p>10. salubrious
 1-mirthful
 2-indecent
 3-salty
 4-mournful
 5-healthy</p> |
| <p>4. massive
 1-strong and muscular
 2-thickly populated
 3-ugly and awkward
 4-huge and solid
 5-everlasting</p> | <p>11. limpid
 1-lazy
 2-crippled
 3-clear
 4-hot
 5-slippery</p> |
| <p>5. feign
 1-pretend
 2-prefer
 3-wear
 4-be cautious
 5-surrender</p> | <p>12. procreate
 1-sketch
 2-inhabit
 3-imitate
 4-beget
 5-surrender</p> |
| <p>6. unwary
 1-unusual
 2-deserted
 3-incautious
 4-sudden
 5-tireless</p> | <p>13. replete
 1-full
 2-elderly
 3-resentful
 4-discredited
 5-restful</p> |
| <p>7. veer
 1-change direction
 2-hesitate
 3-catch sight of
 4-cover with a thin layer
 5-slide</p> | <p>14. frieze
 1-fringe of curls on the
 forehead
 2-statue
 3-ornamental band
 4-embroidery
 5-sherbet</p> |

15. treacle
 1-sewing machine
 2-framework
 3-leak
 4-apple butter
 5-molasses
16. ignominious
 1-inflammable
 2-elflike
 3-unintelligent
 4-disgraceful
 5-mysterious
17. abjure
 1-make certain
 2-arrest
 3-renounce
 4-abuse
 5-lose
18. duress
 1-period of time
 2-distaste
 3-courage
 4-hardness
 5-compulsion

Part 2 (4 minutes)

19. bayonet
 1-small tent
 2-basket
 3-helmet
 4-sharp weapon
 5-short gun
20. astound
 1-scold severely
 2-make angry
 3-surprise greatly
 4-drive out
 5-uncertain
21. contamination
 1-contradiction
 2-contempt
 3-warning
 4-pollution
 5-continuation
22. amplify
 1-electrify
 2-expand
 3-cut off
 4-signify
 5-supply
23. mural
pertaining to
 1-growth
 2-manners
 3-the eyes
 4-war
 5-a wall
24. hale
 1-glad
 2-fortunate
 3-tall
 4-robust
 5-ready
25. meander
 1-marvel
 2-predict
 3-slope
 4-forget
 5-wind
26. burnish
 1-polish
 2-wave
 3-dye
 4-heat
 5-consume
27. duplicity
 1-extent
 2-double-dealing
 3-agreement
 4-cleverness
 5-overlapping
28. mundane
 1-worldly
 2-obstinate
 3-deafening
 4-servile
 5-penniless

29. deleterious
1-injurious
2-hysterical
3-critical
4-slow
5-thinned out
30. nascent
1-colorful
2-broad
3-unpleasant
4-floating
5-beginning
31. prolific
1-freely reproductive
2-prehistoric
3-talented
4-highly temperamental
5-frivolous
32. paroxysm
1-bleach
2-disaster
3-storm
4-fit
5-revolution
33. antipodal
1-outmoded
2-slanted
3-melodious
4-opposite
5-four-footed
34. acrimony
1-promptness
2-boredom
3-divorce
4-stupidity
5-bitterness
35. lissome
1-lonely
2-young
3-dreamy
4-supple
5-dainty
36. succinct
1-sudden
2-concise
3-prosperous
4-literary
5-cunning

DO NOT GO BACK TO PART 1 AND DO NOT GO ON TO ANY OTHER TEST UNTIL
ASKED TO DO SO.

STOP.

Adjective Rating Scales

SELF

Please indicate the extent to which each of the following adjectives describes yourself. Use the scale below and write a number next to each adjective to indicate the degree to which it describes you. For example, if you feel you are slightly careless, write a "2" next to that adjective.

	1	2	3	4	5	6
	not at all	slightly	somewhat	moderately	very	extremely

- | | |
|---------------|-------|
| 1. careless | _____ |
| 2. hard | _____ |
| 3. worthless | _____ |
| 4. delicate | _____ |
| 5. darling | _____ |
| 6. sweet | _____ |
| 7. honest | _____ |
| 8. calm | _____ |
| 9. sad | _____ |
| 10. tender | _____ |
| 11. strong | _____ |
| 12. sharp | _____ |
| 13. irritated | _____ |
| 14. tense | _____ |
| 15. quiet | _____ |
| 16. hopeful | _____ |
| 17. careful | _____ |
| 18. agreeable | _____ |
| 19. sociable | _____ |
| 20. flashy | _____ |

Adjective Rating Scales

MOTHER

This time indicate the degree to which each adjective describes your mother. If your mother is not alive, indicate your ratings as you best remember her.

1	2	3	4	5	6
not at all	slightly	somewhat	moderately	very	extremely

- | | |
|---------------|-------|
| 1. careless | _____ |
| 2. hard | _____ |
| 3. worthless | _____ |
| 4. delicate | _____ |
| 5. darling | _____ |
| 6. sweet | _____ |
| 7. honest | _____ |
| 8. calm | _____ |
| 9. sad | _____ |
| 10. tender | _____ |
| 11. strong | _____ |
| 12. sharp | _____ |
| 13. irritated | _____ |
| 14. tense | _____ |
| 15. quiet | _____ |
| 16. hopeful | _____ |
| 17. careful | _____ |
| 18. agreeable | _____ |
| 19. sociable | _____ |
| 20. flashy | _____ |

Adjective Rating Scales

PHOTOGRAPH

Please look at the attached photograph and indicate the extent to which each of the following adjectives best describes this photo. Use the scale below and write a number next to each adjective to indicate the degree to which it describes the woman in the photograph.

	1	2	3	4	5	6
	not at all	slightly	somewhat	moderately	very	extremely

- | | |
|---------------|-------|
| 1. careless | _____ |
| 2. hard | _____ |
| 3. worthless | _____ |
| 4. delicate | _____ |
| 5. darling | _____ |
| 6. sweet | _____ |
| 7. honest | _____ |
| 8. calm | _____ |
| 9. sad | _____ |
| 10. tender | _____ |
| 11. strong | _____ |
| 12. sharp | _____ |
| 13. irritated | _____ |
| 14. tense | _____ |
| 15. quiet | _____ |
| 16. hopeful | _____ |
| 17. careful | _____ |
| 18. agreeable | _____ |
| 19. sociable | _____ |
| 20. flashy | _____ |

Personal Characteristics Questionnaire

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1; if you feel somewhere in between, circle any one of the numbers between 1 and 7. The midpoint, if you are neutral or undecided, is 4.

	Strongly Agree						Strongly Disagree
1. I allow plenty of time between tasks so I don't have to rush.	7	6	5	4	3	2	1
2. When I'm asked to do something by one of my superiors, I frequently want to do the exact opposite.	7	6	5	4	3	2	1
3. I am easily saddened by seeing one of my friends sad.	7	6	5	4	3	2	1
4. When I go on trips I always pack early.	7	6	5	4	3	2	1
5. I sometimes forget important promises I've made to people.	7	6	5	4	3	2	1
6. I plan my work so that I do an equal amount every day.	7	6	5	4	3	2	1
7. I like to belong to an intimate group.	7	6	5	4	3	2	1
8. I frequently find myself unconsciously acting like or mimicking my superiors.	7	6	5	4	3	2	1
9. When you can't get justice by legal means, you should resort to non-legal means.	7	6	5	4	3	2	1
10. I make it a point to arrive at appointments a few minutes early.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
11. Often, it is difficult for me to make decisions.	7	6	5	4	3	2	1
12. I feel comfortable when a strong person is in the room.	7	6	5	4	3	2	1
13. I like getting high with my friends.	7	6	5	4	3	2	1
14. I talk a lot at group meetings.	7	6	5	4	3	2	1
15. I am very neat in my personal appearance.	7	6	5	4	3	2	1
16. Operations to change the sex of an individual when he or she wishes should be legalized.	7	6	5	4	3	2	1
17. It irks me that there are people who have power over me.	7	6	5	4	3	2	1
18. There is a clear distinction between rational and irrational thinking.	7	6	5	4	3	2	1
19. I very often feel that I have no choice.	7	6	5	4	3	2	1
20. Whenever I am near someone with a cold, I always catch it.	7	6	5	4	3	2	1
21. I dislike it when people don't heed my advice.	7	6	5	4	3	2	1
22. On the whole I am successful at keeping my desk or work area tidy.	7	6	5	4	3	2	1
23. The thought has occurred to me that the various parts of my body don't fit together well.	7	6	5	4	3	2	1
24. I set rules that I always live by.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
25. Sometimes I feel very big and other times I feel very small.	7	6	5	4	3	2	1
26. I feel frightened when I'm in a large, empty building.	7	6	5	4	3	2	1
27. I refuse to compete in struggles for power.	7	6	5	4	3	2	1
28. It's unheard of for me to schedule two activities for the same time.	7	6	5	4	3	2	1
29. I feel unable to communicate to others the things I feel strongest about.	7	6	5	4	3	2	1
30. I often think I can read people's minds.	7	6	5	4	3	2	1
31. I sometimes feel as though my world is falling apart.	7	6	5	4	3	2	1
32. I am very upset when I have to say goodbye to a good friend.	7	6	5	4	3	2	1
33. I feel especially good when someone spontaneously gives me something I've secretly wanted.	7	6	5	4	3	2	1
34. I like to try to influence people.	7	6	5	4	3	2	1
35. Generally, I do <u>not</u> think men should do women's tasks at home (like sewing, cooking, housekeeping).	7	6	5	4	3	2	1
36. Frequently I can't get bad thoughts out of my mind.	7	6	5	4	3	2	1
37. I sometimes feel that I have been in exactly the same situation twice, i.e., I have <u>deja vu</u> experiences.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
38. I would feel like I'd be losing an important part of myself if I lost a very close friend.	7	6	5	4	3	2	1
39. I have difficulty breaking off a relationship that is making me unhappy.	7	6	5	4	3	2	1
40. My happiest moments have occurred when I've felt so close to someone that we could communicate without a word.	7	6	5	4	3	2	1
41. In groups I try to be the leader.	7	6	5	4	3	2	1

Experiences Questionnaire

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1; if you feel somewhere in between, circle any one of the numbers between 1 and 7. The midpoint, if you are neutral or undecided, is 4.

	Strongly Agree						Strongly Disagree
1. I set my personal goals and standards as high as possible.	7	6	5	4	3	2	1
2. Without support from others who are close to me, I would be helpless.	7	6	5	4	3	2	1
3. I tend to be satisfied with my current plans and goals, rather than striving for higher goals.	7	6	5	4	3	2	1
4. Sometimes I feel very big, and other times I feel very small.	7	6	5	4	3	2	1
5. When I am closely involved with someone, I never feel jealous.	7	6	5	4	3	2	1
6. I urgently need things that only other people can provide.	7	6	5	4	3	2	1
7. I often find that I don't live up to my own standards or ideals.	7	6	5	4	3	2	1
8. I feel I am always making full use of my potential abilities.	7	6	5	4	3	2	1
9. The lack of permanence in human relationships doesn't bother me.	7	6	5	4	3	2	1
10. If I fail to live up to expectations, I feel unworthy.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
11. Many times I feel helpless.	7	6	5	4	3	2	1
12. I seldom worry about being criticized for things I have said or done.	7	6	5	4	3	2	1
13. There is a considerable difference between how I am now and how I would like to be.	7	6	5	4	3	2	1
14. I enjoy sharp competition with others.	7	6	5	4	3	2	1
15. I feel I have many responsibilities that I must meet.	7	6	5	4	3	2	1
16. There are times when I feel "empty" inside.	7	6	5	4	3	2	1
17. I tend not to be satisfied with what I have.	7	6	5	4	3	2	1
18. I don't care whether or not I live up to what other people expect of me.	7	6	5	4	3	2	1
19. I become frightened when I feel alone.	7	6	5	4	3	2	1
20. I would feel like I'd be losing an important part of myself if I lost a very close friend.	7	6	5	4	3	2	1
21. People will accept me no matter how many mistakes I have made.	7	6	5	4	3	2	1
22. I have difficulty breaking off a relationship that is making me unhappy.	7	6	5	4	3	2	1
23. I often think about the danger of losing someone who is close to me.	7	6	5	4	3	2	1

	Strongly Agree				Strongly Disagree		
24. Other people have high expectations of me.	7	6	5	4	3	2	1
25. When I am with others, I tend to devalue or "undersell" myself.	7	6	5	4	3	2	1
26. I am not very concerned with how other people respond to me.	7	6	5	4	3	2	1
27. No matter how close a relationship between two people is, there is always a large amount of uncertainty and conflict.	7	6	5	4	3	2	1
28. I am very sensitive to others for signs of rejection.	7	6	5	4	3	2	1
29. It's important for my family that I succeed.	7	6	5	4	3	2	1
30. Often, I feel I have disappointed others.	7	6	5	4	3	2	1
31. If someone makes me angry, I let him (her) know how I feel.	7	6	5	4	3	2	1
32. I constantly try, and very often go out of my way, to please or help people I am close to.	7	6	5	4	3	2	1
33. I have many inner resources (abilities, strengths).	7	6	5	4	3	2	1
34. I find it very difficult to say "No" to the requests of friends.	7	6	5	4	3	2	1
35. I never really feel secure in a close relationship.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
36. The way I feel about myself frequently varies; there are times when I feel extremely good about myself and other times when I see only the bad in me and feel like a total failure.	7	6	5	4	3	2	1
37. Often, I feel threatened by change.	7	6	5	4	3	2	1
38. Even if the person who is closest to me were to leave, I could still "go it alone."	7	6	5	4	3	2	1
39. One must continually work to gain love from another person: that is, love has to be earned.	7	6	5	4	3	2	1
40. I am very sensitive to the effects my words or actions have on the feelings of other people.	7	6	5	4	3	2	1
41. I often blame myself for things I have done or said to someone.	7	6	5	4	3	2	1
42. I am a very independent person.	7	6	5	4	3	2	1
43. I often feel guilty.	7	6	5	4	3	2	1
44. I think of myself as a very complex person, one who has "many sides".	7	6	5	4	3	2	1
45. I worry a lot about offending or hurting someone who is close to me.	7	6	5	4	3	2	1
46. Anger frightens me.	7	6	5	4	3	2	1
47. It is not "who you are," but "what you have accomplished" that counts.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
48. I feel good about myself whether I succeed or fail.	7	6	5	4	3	2	1
49. I can easily put my own feelings and problems aside, and devote my complete attention to the feelings and problems of someone else.	7	6	5	4	3	2	1
50. If someone I cared about became angry with me, I would feel threatened that he (she) might leave me.	7	6	5	4	3	2	1
51. I feel uncomfortable when I am given important responsibilities.	7	6	5	4	3	2	1
52. After a fight with a friend, I must make amends as soon as possible.	7	6	5	4	3	2	1
53. I have a difficult time accepting weaknesses in myself.	7	6	5	4	3	2	1
54. It is more important that I enjoy my work than it is for me to have my work approved.	7	6	5	4	3	2	1
55. After an argument, I feel very lonely.	7	6	5	4	3	2	1
56. In my relationships with others, I am very concerned about what they can give to me.	7	6	5	4	3	2	1
57. I rarely think about my family.	7	6	5	4	3	2	1
58. Very frequently, my feelings toward someone close to me vary: there are times when I feel completely angry and other times when I feel all-loving towards that person.	7	6	5	4	3	2	1

	Strongly Agree						Strongly Disagree
59. What I do and say has a very strong impact on those around me.	7	6	5	4	3	2	1
60. I sometimes feel that I am "special".	7	6	5	4	3	2	1
61. I grew up in an extremely close family.	7	6	5	4	3	2	1
62. I am very satisfied with myself and my accomplishments.	7	6	5	4	3	2	1
63. I want many things from someone I am close to.	7	6	5	4	3	2	1
64. I tend to be very critical of myself.	7	6	5	4	3	2	1
65. Being alone doesn't bother me at all.	7	6	5	4	3	2	1
66. I very frequently compare myself to standards or goals.	7	6	5	4	3	2	1

APPENDIX B

Scoring Manual for Fisher and Cleveland (Revised)

General Rules

- 1) A response is given only one score (for B or P) even if it meets more than one criterion.
- 2) A response may be scored for both B and P if it meets criteria for both.
- 3) Only score responses to the blot.
- 4) Don't score a "tossed off" or dismissed comment unless it is elaborated.

BARRIER SCORES

- 1) Spatial regions with borders or any type of container. For example: aisle, river, bay, pool, inlet, frame, stomach, ice cream cone.

Objects having unusual container-like shapes or properties.
For example, chair, bagpipes, throne, ferris wheel.

Enclosed openings in the earth. For example: valley, ravine, mine, shaft, well, canal.

Unusual animal containers (e.g., bloated cat, udder, kangaroo, pregnant woman).

- 2) Objects that are covered or hidden, especially by a protective or decorative covering, or when design is mentioned. For example, any mention of clothing, designs on objects, costumes, ice or snow covering anything.

Do not score: beards or any human hair unless it's hiding or covering something; masks-unless special mention of decoration is given; the bow tie on card 3; the boots on card 4.

- 3) Animals with unusual skin or body coverings are scored but not if only part of the animal is mentioned. Include animals with hard and protective surfaces. Include animal skins if emphasis is placed on surface qualities (fuzzy, mottled, etc.). For example: cat with fuzzy fur, turtle, clam, snail, mussel, shrimp, horseshoe crab.

Do not score: lamb's head, butterfly, bat, seahorse, lobster.

Score: Animals or creatures whose skins are distinctive or unusual are scored only if more than the head of the animal is given. The following is a complete list of such animals: alligator, badger, beaver, bobcat, chameleon, coyote, crocodile, fox, goat, hippo, hyena, leopard, lion, lizard, lynx, mink, mole, mountain goat, peacock, penguin, porcupine, prairie dog, rhinoceros, scorpion, sea lion, seal, sheep or lamb, Siamese cat, skunk, tiger, walrus, weasel, wildcat, wolverine, zebra.

- 4) Any object which connotes protection. For example: battleship, castle, fortress, shell, tank, rocket ship, airplane, auto, umbrella, awning, dome, shield, all references to buildings and related structures, weapons.

Additional general examples of Barrier responses: basket, bay, bell, book, book ends, bottle, bubble, cage, candleholder, cave, cocoon, cove, curtain, dancer with veil, frosting on cake, fuzzy poodle, globe, harbor, headdress, hedge along a walk, helmet, inlet, lake surrounded by land, lake surrounded by water, mountain covered with snow, net, pot, river, screen, spoon, urn, wall, wallpaper, wig.

PENETRATION SCORES

- 1) Images that express a view, through an outer surface, of the interior of an animal or human body. For example: X-rays, fluoroscopes, cross-section of an organ.

Do not score: body parts not viewed through the body unless there is implication of damage or blood.

- 2) Responses indicating degeneration, damage, dissolution, disruption, wearing away, including bloody body parts. Anything decaying, melting, burning, or seriously deformed. Any object being pulled apart. Score all references to loss of a body member.

Do not score: bulging eyes, an explosion in which no mention of damage is made.

- 3) Openings or orifices, especially those which connote receptiveness or expulsiveness. All references to the mouth being open or being used for intake or expulsion. Something coming out of a body opening. Include all windows; score doors only if open. Score: geyser, fountain, oil gusher.

Do not score: mouths singing or talking.

- 4) Any mention of an overflowing or bypassing of boundaries.
- 5) Images that involve the surfaces of things as being easily permeable or fragile. Score all references to transparency. Score: soft ball of cotton candy, fleecy cloud, shadows, ghosts, mud you can step through.

Further general examples of Penetration of Boundary responses: animals chewing on a tree; broken-up butterfly; jigsaw not put together; doorway; fish with meat taken off; broken body; bat with holes; torn fur coat; frayed wings; deteriorated wings; grasshopper pecking at something; harbor entrance; man defecating.

Scoring Manual for Landis's Ego Boundaries

General Scoring Rules:

- 1) Only responses in the performance proper are scored. Do not score new responses in inquiry.
- 2) Two scores can be given if simultaneous indications of permeability and impermeability occur in the response.
- 3) A single response may be given 2 scores but no more than 2. The response must clearly meet the requirements for both categories.

P-scores:

P-1 Permeable scores

An object or surface which is intrinsically permeable, amorphous, soft, fluffy, insubstantial.

A reason for or elaboration of this permeability must be given.

A response usually qualifies if it refers to something a person could easily put his fingers through.

Animal fur and feathers generally not scored unless emphasis is placed on the fluffy, permeable quality.

Shadow responses not scored.

P-2 Penetration of boundaries

Images that express or imply a view, through an outer surface, of the interior of a human or animal body--without attribution of damage to body boundary (cf. P-3: Dis-integrated boundaries).

Include: X-rays, fluoroscope pictures
Skeletons or organs described as visible through the skin.

Do not score: Transparency responses involving views through inanimate objects.

Anatomy responses
Medical book illustration responses

P-3 Disintegrated boundaries

Include responses depicting the breakdown of the body boundaries of a person or animal. Images that specifically involve the degeneration, fragmentation or mutilation of a body surface.

Blood--by itself is likely to be scored P-5 (Fluid contours). But where blood is perceived in the context of body damage the response is scored P-3 (Disintegrated boundaries).

Do not score: Damage to the boundaries of an object.
Ordinary skeletal or other anatomy responses.

However do score: if the response has a vivid "raw flesh" or "exposed" quality.

P-4 Ego-Field Extention Tendency (EFET)

This assessment is based on responsiveness of the subject rather than content of response.

The subject must exhibit a substantial personal involvement with the stimulus.

Score only one EFET per card.

P-5 Fluid Contours

Responses must describe something fluid and varying in shape.

Do score: "present-tense" fluidity (e.g., splashing water, dripping blood).

Do not score: references to dried paint or dried blood, etc.
The five major categories are blood, water, fire, explosions, and radiating light.

P-6 Siamese boundaries

Includes responses in which two living entities--primarily persons or animals--share a boundary belonging intrinsically to both.

Plant life, such as fungus or mold, seen as living on the boundaries of an object are included. However, an object perceived as merely "sticking" to another object is not scored.

I-scores:I-1 Impermeable scores

Responses which are intrinsincally impermeable--hard, solid, impenetrable. Responses must refer to a specific area of the blot and contain some reason for why the area suggests the impermeable quality (1 or more adjectives).

Any specific metals or objects described as metallic qualify even if there is no reason given.

Responses of animals with hard or scaly skins are not scored unless specific note is made of an impermeable surface quality.

I-2 Clothing responses

Responses depicting clothing on a person or animal are scored. Clothing by itself is not scored.

In general, unless the response is unusual or particularly striking it is not scored.

Do not score: shoes on Card III, boots on Card IV, hats, head-dress, wigs, toupees, translucent clothing.

I-3 Silhouette responses

Must have (1) a uniform dark or light surface and (2) be seen against a uniform background.

Scored as silhouette if criteria are met even if subject does not use the word "silhouette" in the response.

Not scored as silhouette if the subject refers only to the contour and does not perceive it against a background.

I-4 Vista responses

The blot is perceived as having depth and perspective.

Three dimensionality, per se, or shallow depth are not scored; there must be reference to distance perceived between two objects or two parts of an extended view, such as a landscape. Far-off scenes or aerial views are also scored if the subject actually perceives distance in the card--even if there is no object in the foreground.

I-5 Statue responses

Responses which describe a piece of sculpture or a statue.

Do not score: "busts".

Often, but not always, an impermeable substance is attributed to the sculpted work, but this is not necessary for a statue score.

APPENDIX C

AN EXPLORATORY ANALYSIS OF THE SIGNIFICANCE OF GENDER

While this study was not expected nor designed to systematically explore gender differences, thinking about Fusion Factors suggested that another examination of the data might be of heuristic value. Given the limitations of the sample size these results must be seen as speculative.

Of the 130 subjects studied eighty were female and fifty were male. t-tests indicated that of all the original variables only Boundary, Fusion, and the DEQ Dependency Factor were significantly different for males and females. t-test results are presented in Table 14.

Separate Fusion Factors were developed for females and for males. The results of a Principal Components analysis of Fusion for the females is presented in Table 15, the factor analysis for males in Table 16. Each analysis utilized the customary "default" solution. Orthogonal (varimax) rotation was used to aid in interpretation. Only item loading of .300 or greater are included in the tables.

The Fusion Factors for females are interpreted as follows:

Factor 1 loaded on items for difficulties and powerlessness and feeling comfortable when a strong person is in the room. This factor is interpreted as helplessness with a wish or ability to look to others for help, or deference to strength.

Factor 2 reflected upset at loss of a good object.

Factor 3 loaded on negative or unstable self-image and difficulty breaking off an unhappy relationship. It is interpreted as a helplessness in relationships coupled with a poor self-representation.

TABLE 14

t-Test: Comparison of Factor Analysis and
Regression Analysis Variables for Males and Females

<u>Variable</u>	<u>t</u>	<u>Two-tail Probability</u>
Vocabulary	.96	.340
Embedded Figures Test	-1.30	.197
Difference from Mother	-.46	.649
Difference from Photograph	-.98	.328
Boundary	2.91	.004
Fusion	3.27	.001
Barrier Percent	.69	.491
Penetration Percent	-1.09	.279
Permeable Percent	.04	.971
Impermeable Percent	.92	.357
DEQ Dependency Factor	3.54	.001
DEQ Self-Criticism Factor	-.45	.656

TABLE 15

Principal Component Analysis of Fusion Items of the
 Personal Characteristics Questionnaire for
 Female Subsample ($N = 80$)

Factor Loadings $\geq .300$ on Six Factors

PCQ Item	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>	<u>Factor 5</u>	<u>Factor 6</u>
07				.765		
11	.684		.329			
12	.676					
19	.695					.305
20						.862
23			.554		.384	
25			.669			
26					.421	
30					.621	.531
31	.684		.326			
32		.898				
36	.715					
37		.863			.765	
38			.800			
39						
40				.766		
Variance Accounted for by the Factor	24.1%	11.1%	8.9%	7.8%	6.9%	6.6%

Total variance accounted for by six factors = 65.4%.

TABLE 16

Principal Factor Analysis of Fusion Items of the
Personal Characteristics Questionnaire for Male Subsample ($N = 50$)

Factor Loadings $\geq .300$ on Six Factors

PCQ Item	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>	<u>Factor 5</u>	<u>Factor 6</u>	<u>Factor 7</u>
07		.925					
11			.313		-.586		
12							
19	.536	-.423					
20							.854
23			.925				
25	.963						
26					.509		
30			.451				
31	.621			.321			
32		.380		.354			
36			.777				
37			.587				
38					.644		
39						.862	
40						.487	
Variance Accounted for by the Factor	16.3%	15.2%	10.8%	10.1%	8.8%	7.1%	6.3%

Total variance accounted for by seven factors = 74.6%.

- Factor 4 loaded on items reflecting liking belonging to intimate groups and feeling happiest in close wordless communication. It is interpreted to represent a desire for a kind of communion.
- Factor 5 loaded on items concerned with deja vu experiences, often thinking one can read people's minds, feeling frightened in a large empty building, and feeling that the various parts of one's body don't fit together well. This factor is interpreted as an indication of uneasiness and vulnerability.
- Factor 6, loading on items of catching colds and reading minds, is interpreted as a reflection of a sense of interpersonal permeability. This factor also included a sense of helplessness in association with it as it loaded on feeling one has no choices.

The Fusion Factors for males were interpreted as follows:

- Factor 1 loaded on items concerning powerlessness and an unstable self-image. ("Sometimes I feel very big and other times I feel very small.")
- Factor 2 loaded on liking to belong to an intimate group and feeling upset when saying goodbye to a good friend. It also loaded negatively on feeling one has no choice. This factor is interpreted as reflecting a capacity for affiliation that is empowering.
- Factor 3 loaded on difficulty with decisions, deja vu experiences, thinking one can read people's minds and frequently not being able to get bad thoughts out of one's mind. This factor is interpreted as associated with aspects of cognitive control.
- Factor 4 loaded on "The thought has occurred to me that the various parts of my body don't fit together well," "I sometimes feel as though my world is falling apart," and feeling upset when having to say goodbye to a good friend. It is interpreted as a poor or unintegrated self image in association with a vulnerability to interpersonal loss.
- Factor 5 loaded most highly on "I would feel like I'd be losing an important part of myself if I lost a very close friend," as well as feeling frightened in a large empty building. It also loads negatively on having difficulty making decisions. It

is interpreted as reflecting the importance of relationships in terms of not being alone and empowering one to evaluate.

Factor 6, loading on difficulty breaking off unhappy relationships and experiencing one's happiest moments when in close wordless communication, is interpreted as reflecting a wish for closeness and clinging quality.

Factor 7 loaded on thinking one readily catches other's colds and having difficulty getting bad thoughts out of one's mind. It is interpreted as an expression of an experience of vulnerability.

These new Fusion Factor scores by gender were used in another set of regression analyses. The correlation coefficients of the predictor variables with the DEQ Factor Scores for females are presented in Table 17. The summary table of the step-wise regression analysis with DEQ Dependency as criterion variables is presented in Table 18; with DEQ Self-Criticism as criterion variable in Table 19.

For the female subsample, scores on the DEQ Dependency Factor were best predicted by feeling upset at the loss of a good object, helplessness with a wish or ability to look to others for help, or deference, helplessness in relationships coupled with a poor self representation, interpersonal permeability, a desire for communion, the Embedded Figures Test, and a negative score on Vocabulary. Altogether, these predictors could account for 64.2% of the variance on DEQ Dependency Factor for the female subsample. Separately, each of these predictors accounted for an R^2 change of .236, .214, .060, .046, 0.34, .025, and .028, respectively.

Sixty-two and one-half percent of the variance in DEQ Self-Criticism scores for the female subsample could be accounted for by

TABLE 17
 Correlation Coefficients of Predictor Variables
 with DEQ Factor Scores
 Fusion Factor Scores Substituted for Fusion Scores
 Female Subsample

<u>Predictor Variable</u>	<u>DEQ Dependency Factor</u>	<u>DEQ Self-Criticism Factor</u>
Vocabulary	-.134	.158
Embedded Figures Test	.195	.103
Difference from Mother	-.099	.306
Difference from Photograph	.187	.128
Boundary	-.165	-.365
Barrier Percent	-.061	.114
Penetration Percent	-.097	.151
Permeable Percent	-.199	.169
Impermeable Percent	-.192	.184
Fusion Factor 1	.458	.651
Fusion Factor 2	.486	-.104
Fusion Factor 3	.334	.366
Fusion Factor 4	.209	.227
Fusion Factor 5	.153	.003
Fusion Factor 6	.195	-.091

TABLE 18

Summary Table for Step-wise Regression with
 DEQ Dependency Factor as Dependent Variable
 Fusion Factor Scores Substituted for Fusion Scores
 Data for Female Subsample

<u>Step</u>	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>
1	Fusion Factor 2	24.062	.000	.236
2	Fusion Factor 1	29.875	.000	.449
3	Fusion Factor 3	9.333	.003	.510
4	Fusion Factor 6	7.817	.007	.556
5	Fusion Factor 4	6.076	.016	.590
6	Embedded Figures Test	4.651	.034	.614
7	Vocabulary	5.533	.021	.642
8	Penetration Percent	3.930	.051	.660
9	Boundary	1.246	.268	.666
10	Permeable Percent	1.017	.317	.671
11	Fusion Factor 5	.464	.498	.674
12	Difference from Mother	.264	.609	.675
13	Impermeable Percent	.310	.579	.676
14	Difference from Photograph	.149	.701	.677

TABLE 19

Summary Table for Step-wise Regression with
 DEQ Self-Criticism Factor as Dependent Variable
 Fusion Factor Scores Substituted for Fusion Scores
 Data for Male Subsample

<u>Step</u>	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>
1	Fusion Factor 1	57.503	.000	.424
2	Fusion Factor 3	10.093	.002	.491
3	Difference from Mother	10.520	.002	.553
4	Fusion Factor 4	6.301	.014	.588
5	Impermeable Percent	7.373	.008	.625
6	Boundary	2.520	.117	.637
7	Penetration Percent	2.507	.118	.650
8	Vocabulary	2.224	.140	.660
9	Difference from Photograph	1.544	.218	.668
10	Fusion Factor 6	.854	.359	.672
11	Fusion Factor 2	.829	.366	.676
12	Fusion Factor 5	.324	.571	.677
13	Barrier Percent	.381	.539	.679
14	Embedded Figures Test	.209	.649	.680
15	Permeable Percent	.013	.908	.680

five of the predictor variables in a step-wise regression. A sense of helplessness, deference with a possible wish or ability to look to others for help, was the strongest predictor, accounting for 42.4% of the variance in DEQ Self-Criticism for the subsample. Helplessness in relationships coupled with poor self-representation accounted for an additional 6.7% and differentiating oneself from the concept mother for an additional 6.2%. The other two predictors each accounted for 3-4% of the variance of the Self-Criticism Factor scores. These predictors were a desire for communion, and Landis's (1970) Rorschach measure of impermeability.

The correlation coefficients for the male subsample regression analyses of the DEQ Dependency and DEQ Self-Criticism are presented in Table 20. The summary table for the step-wise regression with DEQ Dependency is presented in Table 21; for DEQ Self-Criticism, Table 22.

For the male subsample only two of the predictor variables were significantly able to predict DEQ Dependency Factor scores. They were a capacity for affiliation that is empowering and a powerless or unstable self-image. Together these predictors could account for 25.5% of the variance on DEQ Dependency Factor scores for the male subsample. The first accounted for 18.7% of the variance, the second for an additional 6.8%.

DEQ Self-Criticism was best predicted by three predictor variables that together could account for 43.8% of the variance in the Self-Criticism Factor scores for the males of the sample. These variables were powerlessness and an unstable self-image (27.4%), a cognitive control variable (an additional 10.1%), and Landis's (1970)

Rorschach measure of Impermeability (an additional 6.3%). Note that this Rorschach measure is negatively correlated with DEQ Self-Criticism for this male subsample.

TABLE 20
 Correlation Coefficients of Predictor Variables
 with DEQ Factor Scores
 Fusion Factor Scores Substituted for Fusion Scores
 Male Subsample

<u>Predictor Variable</u>	<u>DEQ Dependency Factor</u>	<u>DEQ Self-Criticism Factor</u>
Vocabulary	-.206	-.174
Embedded Figures Test	-.069	-.098
Difference from Mother	-.039	.077
Difference from Photograph	-.362	-.162
Boundary	.112	.081
Barrier Percent	-.130	.118
Penetration Percent	-.137	-.011
Permeable Percent	.069	.134
Impermeable Percent	.063	-.234
Fusion Factor 1	.252	.523
Fusion Factor 2	.433	-.017
Fusion Factor 3	.116	.211
Fusion Factor 4	.230	.059
Fusion Factor 5	.013	.185
Fusion Factor 6	.076	.111
Fusion Factor 7	.072	.169

TABLE 21

Summary Table for Step-wise Regression with
 DEQ Dependency Factor as Dependent Variable
 Fusion Factor Scores Substituted for Fusion Scores
 Data for Male Subsample

<u>Step</u>	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>
1	Fusion Factor 2	11.058	.002	.187
2	Fusion Factor 1	4.306	.043	.255
3	Fusion Factor 4	3.709	.060	.311
4	Fusion Factor 3	2.554	.117	.348
5	Barrier Percent	2.627	.112	.385
6	Difference from Photograph	1.746	.193	.409
7	Impermeable Percent	1.534	.222	.430
8	Vocabulary	1.018	.319	.443
9	Fusion Factor 7	.878	.354	.455
10	Penetration Percent	.692	.411	.465
11	Permeable Percent	1.393	.245	.484
12	Fusion Factor 5	.341	.563	.488
13	Difference from Mother	.142	.709	.490
14	Embedded Figures Test	.112	.739	.492
15	Fusion Factor 6	.059	.810	.493
16	Boundary	.048	.828	.494

TABLE 22

Summary Table for Step-wise Regression with
 DEQ Self-Criticism Factor as Dependent Variable
 Fusion Factor Scores Substituted for Fusion Scores
 Data for Male Subsample

<u>Step</u>	<u>Variable</u>	<u>F to Enter or Remove</u>	<u>Significance</u>	<u>Cumulative R Square</u>
1	Fusion Factor 1	18.100	.000	.274
2	Fusion Factor 3	7.627	.008	.375
3	Impermeable Percent	5.157	.028	.438
4	Fusion Factor 5	1.689	.200	.459
5	Boundary	1.948	.170	.481
6	Penetration Percent	1.517	.225	.499
7	Fusion Factor 7	1.148	.290	.512
8	Fusion Factor 6	.693	.410	.521
9	Difference from Mother	.895	.350	.531
10	Difference from Photograph	1.037	.315	.543
11	Fusion Factor 2	1.003	.323	.555
12	Barrier Percent	.590	.447	.562
13	Vocabulary	.120	.731	.563
14	Fusion Factor 4	.041	.840	.564

