Empirical investigation of projective identification styles in college students.

Aryeh L. Shestopal
University of Massachusetts Amherst

Follow this and additional works at: https://scholarworks.umass.edu/theses

Retrieved from https://scholarworks.umass.edu/theses/2290

This thesis is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Masters Theses 1911 - February 2014 by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.
EMPIRICAL INVESTIGATION OF PROJECTIVE IDENTIFICATION
STYLES IN COLLEGE STUDENTS

A Thesis Presented
by
ARYEH L. SHESTOPAL

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

MASTER OF SCIENCE

May 1995

Psychology Department
EMPIRICAL INVESTIGATION OF PROJECTIVE IDENTIFICATION
STYLES IN COLLEGE STUDENTS

A Thesis Presented
by
ARYEH L. SHESTOPAL

Approved as to style and content by:

Sheldon Cashdan, Chair

David Todd, Member

Arnold Well, Member

Charles Clifton, Chair
Department of Psychology
Foremost, I want to thank Shelly Cashdan for his
tireless and personal efforts in all the different roles
that he has assumed during the last three years my mentor,
research advisor and clinical supervisor. His sincere
involvement allowed my time in graduate school to become a
period of professional and personal growth. I also want to
thank Arnold Well for his guidance, patience and support
and David Todd for his impartial and thorough critique. As
I was sifting through the numerous readings on object
relations, I continued remembering the voice of Paul
Lysaker, whose witty and caustic formulations represent for
me the essence of psychoanalytic approach. Finally, I want
to thank Melissa Higgins for her encouragement and assistance
in conducting the experiment.
ABSTRACT

EMPIRICAL INVESTIGATION OF PROJECTIVE IDENTIFICATION STYLES IN COLLEGE STUDENTS

MAY 1995

ARYEH L. SHESTOPAL, B.A., UNIVERSITY OF CONNECTICUT
M.S., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Sheldon Cashdan

Projective identification, defined as a developmental phenomenon by Klein (1946), is commonly viewed as a pathological defense mechanism (Perry & Cooper, 1992). In therapy, projective identification is significant because it allows a therapist to interpret counter-transference using the material of the interactions with a client (Cashdan, 1988; Ogden, 1982). However, viewed as an interpersonal process, projective identification refers to a common method of non-verbal communication, encountered in intimate relationships, individual therapy or small groups (Ogden, 1982).

As with most psychoanalytic concepts, projective identification has been employed in clinical practice in the absence of psychometric instruments. The current study explores the use of projective identification in the population of college students and attempts to measure it empirically.
To accomplish this, the study employed an experimental design. 900 undergraduate volunteers were administered selected items from the Millon's Clinical Multiaxial Inventory-II (MCMI-II). 95 subjects were selected and separated into two groups on the basis of the pre-test results. An interactive computer program presented the subjects with situational vignettes, the Adjective Check List (ACL) by Gough and Heilbrun (1983) and a series of direct questions. The vignettes described an interaction between two people who maladaptively employed projective identification. The responses to the program were compared with the subjects' scores on the Symptom Check List-90, Revised (SCL-90R).

The results showed that the ACL responses served as the best measure of the degree of the subjects' identification with the vignettes. The ACL scores differentiated between the pre-test groups and were significantly linked with the SCL-90R scales of anxiety, depression and hostility.

The study suggests that interactive computer technology provides an effective methodology for assessing interpersonal psychodynamic constructs such as projective identification. Additional research may apply this technology to a clinical population and also attempt to assess constructs such as denial, projection and ego strength.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>viii</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>A. Ogden’s View on Projective Identification</td>
<td>2</td>
</tr>
<tr>
<td>B. Clinical Application of Projective</td>
<td>4</td>
</tr>
<tr>
<td>Identification</td>
<td></td>
</tr>
<tr>
<td>C. Existing Assessment Techniques</td>
<td>6</td>
</tr>
<tr>
<td>D. Hypothesis</td>
<td>8</td>
</tr>
<tr>
<td>II. METHOD</td>
<td>9</td>
</tr>
<tr>
<td>A. Subjects</td>
<td>9</td>
</tr>
<tr>
<td>B. Measures</td>
<td>9</td>
</tr>
<tr>
<td>C. Design</td>
<td>13</td>
</tr>
<tr>
<td>D. Setting and Procedure</td>
<td>14</td>
</tr>
<tr>
<td>III. RESULTS</td>
<td>16</td>
</tr>
<tr>
<td>IV. DISCUSSION</td>
<td>26</td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
</tr>
<tr>
<td>A. STYLES OF PROJECTIVE IDENTIFICATION</td>
<td>30</td>
</tr>
<tr>
<td>B. SITUATIONAL VIGNETTES</td>
<td>31</td>
</tr>
<tr>
<td>C. DIRECT QUESTIONS</td>
<td>33</td>
</tr>
<tr>
<td>D. ADJECTIVE CHECK LIST</td>
<td>34</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>36</td>
</tr>
</tbody>
</table>


### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship between the ACL sub-scales and depression, anxiety and hostility</td>
<td>22</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Computer Object Relationships / Projective Identification (CORPI) program</td>
<td>15</td>
</tr>
<tr>
<td>3.1</td>
<td>Free-form questionnaire and the SCL-90R responses</td>
<td>23</td>
</tr>
<tr>
<td>3.2</td>
<td>The ACL sub-Scales: distance from others</td>
<td>24</td>
</tr>
<tr>
<td>3.3</td>
<td>The ACL sub-scales: closeness to others</td>
<td>25</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

Projective identification was originally introduced by Melanie Klein (1946) as a developmental phenomenon. Since then, this concept created much discussion in clinical literature. However, attempting to define projective identification, one easily feels overwhelmed by the challenge of reconciling multiple contradictory positions. For instance, in the introduction to her recent book, Savege-Scharff describes the feeling of being "drawn into a quagmire of debates and differing opinions" (1992, p. xiii).

In the past, projective identification was examined by a number of key authors, such as Winnicott, Fairbairn and Kernberg, who advocated innovative interventions based on the use of therapist's self. In recent writings, this idea has been applied to personal interactions (Ogden, 1982; Cashdan, 1988; Goldstein, 1991; Savege-Scharff, 1992). According to Ogden (1982), projective identification is a process through which individuals communicate their fantasies and manipulate intimate relationships. This process serves as a fundamental mode of communication in a number of situations, such as romantic relationships, family interactions, individual therapy and small groups. Reviewing the debate, Savege-Scharff (1992) concludes that Ogden's approach "brought some order to the chaos" (p. 28).
A. Ogden’s View on Projective Identification

According to Ogden (1982), projective identification is an important adaptive process for resolving past trauma. Projective identification becomes dominant in a relationship if a trauma has created a lasting memory that is associated with unmanageable painful affect. The process may then develop through the following stages: (a) creation of a fantasy to be rid of that memory, (b) interaction with a recipient who may potentially resolve the trauma, (c) coercion to re-enact some aspects of the past event and, finally, (d) acceptance and acting out of the assigned roles both by the initiator and the recipient.

In a simplistic example, a person brought up by a dominant mother would incorporate her personality traits into his/her own personality but, at the same time, may feel traumatized by them. Later, in an intimate relationship, that person may behave in a way which would induce his/her intimate partner to act domineering. The person may, for example, allow himself to be subjugated at work, behave weakly in various family situations, or otherwise act in a subtly insecure manner. As a result, the partner, who may not be otherwise dominating in relationships, might assume an overpowering role.

Ogden (1982) points out that enactment of projective identification serves an adaptive function by allowing
eventual resolution of the original trauma. Commonly, the initiator of such a process remains aware of own thoughts and behavior but feels powerless to stop the manipulative interaction. In the previous scenario, the initiator may accuse the partner of acting just like his/her mother and even recall the feelings from the childhood. Ultimately, the relationship becomes unbearable for both partners. Resolving this conflict serves as an impetus for seeking alternative modes of behavior and, potentially, leads to a resolution of the original conflict.

Ogden’s clinical examples illustrate a pathological application of projective identification. Other authors also view this phenomenon as a pathological defense mechanism. For example, Perry and Cooper (1992) believe that projective identification takes place when a person is uncomfortable with a part of oneself, "an impulse or affect," and projects that part onto another person. Because a person remains consciously aware of his/her behavior patterns, projective identification is distinguished from the classical projection.

In contrast, Klein’s original work defines projective identification as a normal phenomenon that accompanies the paranoid-schizoid stage of infant development (Klein, 1946). Also, Savege-Scharff (1992) specifies a number of non-pathological situations where projective identification plays a key role, such as family interactions. Therefore,
one may argue that projective identification is a defense mechanism which may be viewed as non-pathological, as well as pathological. One may also expect to find this process adopted to some degree by a non-clinical population.

B. Clinical Application of Projective Identification

The concept of projective identification approaches a client-therapist relationship from a novel perspective. In traditional psychoanalytic theory, it was assumed that all feelings arising in a therapist during interactions with a client derive from the therapist’s unresolved conflicts. Such feelings were named counter-transference and were considered negative, even pathological. In the object-relational framework, it is believed that as a client becomes involved in a therapeutic relationship, the therapist becomes an active player in the client’s fantasy to be rid of the trauma (Ogden, 1982). The client accomplishes this by manipulating the relationship to deposit own feelings in the therapist. Such interactions result in counter-transferential feelings on the therapist’s part. Ogden uses the writings of Winnicott, Balint and Searles to argue that counter-transference experienced by the therapist results from projective identification, and that these feelings can be used to provide verbal and non-verbal communication with the client.
Cashdan (1988) uses Ogden's work to suggest a structured approach to object relations therapy. From his clinical experience, Cashdan observes that the clients frequently enact one of the following manipulations: (a) dependency, in which the client acts in a helpless fashion, and the therapist feels drawn to act as a caretaker; (b) power, where the client attempts to control the interaction, and the therapist is made to feel incompetent; (c) sex, in which the client acts seductively, and the therapist becomes aroused; and (d) ingratiation, in which a client makes gestures of self-sacrifice, and the therapist is induced to feel appreciated.

The view of client-therapist interaction as a re-enactment of events from the past allows therapists to interpret their counter-transference as a product of projective identification (Ogden, 1982; Cashdan, 1988). When a therapist feels that projective identification is firmly established in an interaction with a client, he/she can initiate an intervention which presents the client with alternatives to the accustomed behavior. Such an intervention initiates the process of conscious re-internalization. As a client integrates the interactions with the therapist into his object relational world, and adopts new ways of behavior, the object representing the original trauma becomes modified. The client's inner world begins to include alternatives to previous thoughts,
feelings and behavior and the affect associated with the original conflict is gradually reduced to manageable proportions.

C. Existing Assessment Techniques

Despite its practical implications, there has been little empirical investigation of projective identification. As with most object relations constructs, projective identification operates on a subconscious level. In the past, such constructs have been mainly assessed with projective instruments, mainly Rorschach and TAT. Westen (1991), for example, developed a manual for rating TAT responses which provided scores on four scales: complexity of representations of people, affect-tone of relationship paradigms, capacity for emotional investment and understanding of social causality. These scales successfully distinguished between TAT responses of normal and borderline subjects (Westen, 1991) and between borderline personality disorder patients, major depressives and normals (Westen, Lohr, Silk, Gold & Kerber, 1990).

In a similar study, McKay (1991) used six TAT-like pictures and developed a coding system to rate the level of "affiliative trust-mistrust." The trust-mistrust concept was theoretically related to enjoyment of being with people,
expectations of safety in a relationship and other manifestations of affiliation and nurturance.

Like the TAT, the Rorschach is considered a useful instrument for studying object relations because its ambiguity allows an expression of the inner "representational world" (Blatt & Lerner, 1983). Blatt has constructed a reliable scale for rating the Rorschach responses, which he advocates for making diagnoses of severe psychopathology.

Finally, object relations have been assessed by rating the transcripts of dreams and early memories, but these instruments are difficult to use (Stricker and Healey, 1990). For example, the Ryan Object Relations Scale requires not only trained raters but also a transcript of early dreams (Ryan & Bell, 1984).

Reviewing the existing measures, one author concludes that "there have been very few attempts to assess object relations objectively" (Fishler, Sperling and Carr 1990); one notable exception, however, is the Bell Object Relations Inventory (BORI). An objective test, the BORI is a paper-and-pencil instrument consisting of 45 questions which can be marked "true" or "false" (Bell, Billington & Becker, 1986). Possessing a fair degree of validity and reliability, the instrument provides such scales as "alienation," "egocentricity" and "social incompetence."
Unfortunately, these BORI scales are not directly related to object relations constructs.

Nevertheless, the general usefulness of self-reports has been supported by a recent review of existing assessment techniques of the borderline personality disorder (Skodol & Oldham, 1991). This review "suggests the use of a self-report questionnaire as a cost-effective screening test" (p. 1021).

D. Hypothesis

The current study attempts to assess a theoretical object-relations construct through the use of interactive computer technology. It proposes the following hypotheses:
(a) among the normal population of college students, there exists a subgroup which scores significantly higher on the use of projective identification; (b) the use of projective identification correlates with self-reported symptoms of depression, anger and anxiety; (c) in conjunction with vignettes, the ACL provides a meaningful psychometric measure of projective identification; and (d) specific ACL scales will correlate with the responses to specific vignettes. This study uses custom-designed software which combines situational vignettes, the Adjective Check List (ACL) and specific questions into a computer-assisted object relations/projective identification test (CORPI).
CHAPTER II

METHOD

A. Subjects

Approximately 900 volunteers from undergraduate psychology classes were administered personality inventories during the "pre-screening" procedure at the University of Massachusetts in Amherst. Ninety five subjects were later selected on the basis of their responses to 10 items from the Millon's Clinical Multiaxial Inventory-II (MCMI-II) that loaded heavily on the "borderline" scale. 48 subjects (33 female and 15 male) were assigned to the "high" group because they responded "yes" to at least 6 MCMI-II items, and 49 subjects (37 female and 12 male) were assigned to the "low" group because they responded "no" to all items.

The experimenters repeatedly assured the subjects' anonymity and stressed the importance of self-disclosure. Throughout the experiment, they were asked to identify themselves only by the initials of their first and last names.

B. Measures

The Millon's Clinical Multiaxial Inventory-II (MCMI-II) is a 175-item personality inventory designed for clinical
use; it provides ratings closely corresponding to the categories of DSM-IIIR (Millon, 1987). Among its questions are 62 true-false items weighted from 1 to 3 which contribute to a score on the "borderline" scale (for example, "My feelings toward important people in my life often swing from loving them to hating them"). It has been widely reported that borderline populations use a broad range of pathological defense mechanisms (Vaillant, 1992; Bond, 1992; and many others), especially projective identification (Perry and Cooper, 1992). The current study selects 10 items with a weight of 3 from the "borderline" scale to create a pre-test score. By administering the MCMI-II items, this study hopes to identify a group of subjects who are likely to use projective identification.

In addition to the MCMI-II, a number of other scales were administered to 900 undergraduate volunteers during a pre-screening process. These scales included the Beck's Depression Inventory (BDI; Beck, 1967) and the State and Trait Anxiety Inventory (STAI; Spielberg, Grosuch & Lushene, 1970). These measures were used to verify the responses to the MCMI-II items.

The Symptom Check List-90, Revised, (SCL-90R) is a 90-item questionnaire widely used for preliminary assessment and screening. The SCL-90R is designed to assess psychological symptoms of an individual at the time of filling out the form (Derogatis, 1992). It can be used in a
broad population, including "normal" non-patients, medical patients and individuals with psychiatric disorders. The SCL-90R contains 9 sub-scales, including ones which are specifically effected by projective identification, depression, anxiety and hostility (Vaillant, 1992). It has been validated against the MMPI and in clinical, medical and psychopharmacological research. The scale is internally consistent (alpha coefficients vary from .77 to .90) and reliable (test-retest coefficients vary from .78 to .90).

Two situational vignettes were used as projective assessment tools. The story in each vignette followed Ogden's interpretation of projective identification (Ogden, 1982). Each story portrayed (a) a main actor who has suffered a prior trauma, (b) manipulative behavior to act out this event in an intimate relationship and (c) resulting maladaptive relationship (see Appendix B). Each vignette was designed to represent one dominant theme, either power or dependence.

The vignettes were followed by direct questions, designed to assess the subjects' insight into the psychological process underlying the relationship described in the vignettes. These responses were rated on a 10-point Likert scale (see Appendix C).

Finally, selected adjectives from The Adjective Check List (ACL; Gough & Heilbrun, 1983) were used to measure the subjects' responses to the vignettes, as well as the
subjects' self-concept (see Appendix D). The Adjective Check List (ACL) was originally developed in 1949 at the Institute of Personality Assessment and Research (IPAR) in Berkeley (Gough & Heilbrun, 1983) and is based on trait theory. It contains 300 adjectives, most of which are favorable (for example, "affectionate" or "attractive"), but some are unfavorable (for example, "aggressive" or "anxious"). The subject is instructed to read them quickly and mark the ones which describe him/her best. The ACL currently contains 37 scales, which include 15 need-press traits, such as achievement, dominance and endurance. The ACL has been used in the past for the assessment of object relations, particularly among a borderline population (Baker, Silk, Westen, Nigg & Lohr, 1992). In this study, the subjects were presented with 197 adjectives from the 10 ACL sub-scales relevant to relationships, such as "dominance," "nurturance" and "affiliation."

An interactive computer program integrated two situational vignettes with the adjective check lists (ACL) and direct questions. It presented information in the following sequence: (a) the ACL to assess self; (b) a choice of gender and a list of common first names, to select a name of an actor; (c) the first vignette; (d) direct questions; (e) the ACL to assess a protagonist; (f) another list of common names; (g) the second vignette; (h) direct questions;
(1) the ACL to assess the second protagonist (see Figure 2.1).

At the end of the procedure, the subjects received an open-ended questionnaire with two choices: "I especially identified with a particular character in the story" and "I had a strong reaction to the stories and questionnaires." If a subject responded "yes" to a question, they were offered blank space to elaborate on the response. Finally, the questionnaire asked to "describe any other thoughts or reactions to this experiment which seem significant."

D. Design

The approach adheres to the methodology of "story completion," in which "the subject or client is assumed to 'identify with' the hero... [and] because of this identification the individual then unwittingly reveals areas of his or her personality" (Lansky, 1968). By presenting a subject with vignettes describing an ambiguous social situation, the experiment stimulates imagination and exposes underlying psychological processes (Rabin, 1968). Similar vignettes have been used in numerous experiments in the past, most notably by Piaget (cited in Lansky, 1968, p. 293) and Kohlberg (1978).

Additionally, by integrating the ACL and vignettes, the study intends to introduce a further element of projection
and to circumvent resistance associated with the exploration of unconscious processes. To enhance identification with the main character in the vignettes, the subject is offered a choice of gender and a list of first names. The computer automatically uses the name selected from that menu to identify the main character in the story. The story also assigns the same gender as the subject to the character.

E. Setting and Procedure

The experiment was administered at a computer lab of the Methods at Psychology course at the University of Massachusetts in Amherst. The subjects were told that they were participating in a design of a psychological test. They were assured of anonymity and encouraged to be honest.

The experimenters alternated the order of presentation of the SCL-90R and the software. Also, the software automatically alternated the order of presentation of the two vignettes. To start the software, the subjects were asked to type "CORPI" and follow computer instructions. The software appeared self-explanatory and error-free.

At the end, the subjects were given free-form questionnaires to record their thoughts and reactions.
Figure 2.1. Computer Object Relationships / Projective Identification (CORPI) program
CHAPTER III
RESULTS

The results confirmed that the 10 selected items from the MCMI-II personality inventory divided the subjects into two valid groups. The items were isolated from the "borderline" scale and, according to clinical literature, were expected to reflect the predisposition toward the use of projective identification. The borderline personality disorder is associated with high levels of depression, anxiety and hostility (Vaillant, 1992). Beck's Depression Inventory (BDI; Beck, 1967) and State and Trait Anxiety Inventory (STAI; Spielberg, Grosuch & Lushene, 1970) were administered at the time of pre-screening. These inventories showed that, as expected, the scores of anxiety and depression significantly differentiated the two groups (repeated measures ANOVA, F(1,93)=110.07, p<.001).

Analysis of responses to direct questions about the stories showed mixed results. Although some responses significantly differentiated between the two groups, overall they appeared to have little predictive validity. The subjects were asked three questions about the state of the world (e.g. "in close relationships, people tend to feel as they did growing up"), and three questions about the actors (e.g. "John seems to be motivated by his experiences in the past"). Three scores were analyzed: the responses to the
questions about the world, the responses to the questions about the actors, and the total of all questions. Only the questions about the state of the world that followed the "power" vignette differentiated between the two groups of subjects (t=2.05, df=93, p<.05). These scores were related to the SCL-90R measures of anxiety (r=.36, p<.001) and hostility (r=.33, p<.001).

When the results were combined for the two vignettes, the total responses to all questions also differentiated between the two subject groups (repeated-measures ANOVA, F(1,94)=14.75, p<.001). The scores for the "power" vignette were related to the SCL-90R measures of anxiety (r=.26, p<.05) and hostility (r=.27, p<.01). The scores for the "dependence" vignette remained unrelated to the SCL-90R responses. Overall, it appears that only selected questions to the "power" story have any predictive validity. However, even these questions seemed to reflect the subjects' anxiety more than any other personality trait.

Responses to the free-form questionnaires provided a number of interesting results. The subjects' narratives evidenced the emotional intensity of the experiment. They wrote, for example, "It's intriguing that our past experiences and behaviors influence our personalities... I have an intense desire to be in control of male/female relationships."
In addition, when these responses were assigned a score, they differentiated between the two subject groups and related to the SCL-90R scales of depression, anxiety and hostility. The questionnaires were rated 0 if the subjects circled "No" in response to the questions "I identified with a character in a story" and "I had a strong reaction to the stories." The questionnaires were rated 1 if the subject circled "Yes" in response to one of these questions but failed to elaborate. The questionnaires were rated 2 if the subject circled "Yes" and the written response contained emotional content (e.g. the words "feelings," "intense" or "dislike"). The questionnaires were rated 3 if the subject circled "Yes" and the written narrative referred to themselves. The questionnaires were rated 4 if the subject circled "Yes," and the written response contained emotional content and referred to themselves. Of the 95 subjects, 57 were rated 0; 22 of these subjects were in the "high" group predisposed toward using projective identification, and 35 were in the "low" group. However, only 11 subjects were rated 4; of these, 9 were in the "high" group, and 2 were in the "low" group. Overall, the difference between the groups was significant (Chi-square=10.14, df=4, p<.05).

The responses to the questionnaires were related to the SCL-90R scores of depression and anxiety (ANOVA, F(4,90)=4.46, p<.01 and F(4,90)=10.22, p<.001). Also, the graph of the results indicated that the questionnaires rated
3 and 4 had higher SCL-90R scores (see Figure 3.1). This trend was statistically significant for the scores of depression, anxiety and hostility (Contrast Analysis, \( F(1,90)=5.21, p<.05 \); \( F(1,90)=27.28, p<.001 \); \( F(1,90)=4.96, p<.05 \)). Since the ratings 3 and 4 were assigned for a written identification with a story character, these results confirmed that the degree of identification with the character indicates an inner psychological process.

Responses to the ACL supplied the most meaningful information. The experiment included 197 adjectives from the sub-scales relevant to relationships, such as "dominance," "nurturance" and "affiliation." The subjects used the sub-scales to rate themselves and the actors in the stories. The ACL manual described the method for deriving standard scores for each sub-scale, which took into account such details as the gender of the subject and the total number of adjectives checked (Gough & Heilbrun, 1983). To serve as a valid indicator of a subject's interpersonal style, the sub-scales had to provide significantly different scores for the "high" and "low" groups. In addition, these scores had to interact differently with the "self" ratings in the two groups. In statistical terms, to be accepted as a valid indicator, the sub-scale had to show a significant main effect and an interaction. Of the 10 original sub-scales, the following four satisfied this requirement:
(a) nurturance, which describes the tendency "to engage in behavior that provides material and emotional benefits to others" (Gough & Heilbrun, 1983, p. 10);
(b) deference, which describes the tendency "to seek and maintain subordinate roles in relationships with others" (p. 14) (for this scale, only the scores for the "power" story appeared valid);
(c) autonomy, which describes the tendency "to act independently of others or of social values and expectations" (p. 12) (for this scale, only the scores for the "dependence" story appeared valid);
(d) aggression, which describes the tendency "to engage in behaviors that attack or hurt others" (p. 12).

Since the experiment focused on the degree of identification with the character in the story, all further analyses were conducted on the difference between the scores for these sub-scales and the scores for the self.

Interestingly, the nurturance and deference sub-scales describe behavior which is commonly interpreted as adaptive in relationships. In contrary, the autonomy and aggression sub-scales describe behavior which may lead to problematic relationships. As the graph below illustrates, the difference scores for the first two sub-scales were significantly higher for the "low" group than the "high" group (repeated measures ANOVA, F(1,93)=12.63, p<.001) (see
Figure 3.2). In contrast, the difference scores for the second two sub-scales were significantly lower for the "low" group than the "high" group (repeated measures ANOVA, $F(1,93)=10.44$, $p<.01$). It seems likely that the nurturance and deference scores indicate the tendency to avoid maladaptive use of projective identification, and that the autonomy and aggression scores show the tendency to engage in such maladaptive behavior.

The validity of these scores was confirmed by their relationship to the SCL-90R scores. According to literature, the borderline personality disorder is associated with high levels of depression, anxiety and hostility (Vaillant, 1992). The table below shows that, as expected, the SCL-90R scales of anxiety, depression and aggression were significantly related to the difference scores for the selected sub-scales (see Table 1). It seems that these difference scores not only differentiated between the "high" and "low" groups in a logically consistent fashion, but also strongly related to the subjects' psychological state.

All of the analyses were repeated, taking the subjects' gender into account. Surprisingly, all results appeared to be independent of gender.
TABLE 1

Relationship between the ACL sub-scales and depression, anxiety and hostility.

<table>
<thead>
<tr>
<th>Sub-scale</th>
<th>Story Theme</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Hostility</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURTURANCE</td>
<td>Power</td>
<td>r=.32*</td>
<td></td>
<td>r=.22</td>
</tr>
<tr>
<td></td>
<td>Dependence</td>
<td>r=.40**</td>
<td>r=.25</td>
<td>r=.33**</td>
</tr>
<tr>
<td>DEFERENCE</td>
<td>Power</td>
<td></td>
<td>r=.25</td>
<td>r=.34**</td>
</tr>
<tr>
<td>AUTONOMY</td>
<td>Dependence</td>
<td>r=.25</td>
<td>r=.28*</td>
<td>r=.25</td>
</tr>
<tr>
<td>AGGRESSION</td>
<td>Power</td>
<td>r=.23</td>
<td>r=.31*</td>
<td>r=.33**</td>
</tr>
<tr>
<td></td>
<td>Dependence</td>
<td>r=.33**</td>
<td>r=.29*</td>
<td>r=.32**</td>
</tr>
</tbody>
</table>

Note: All correlations are significant at p<.05.

* = p<.01
** = p<.001
FIGURE 3.1

Figure 3.1. Free-form questionnaire and the SCL-90R responses.
Figure 3.2. The ACL sub-Scales: distance from others.
Figure 3.3. The ACL sub-scales: closeness to others.
CHAPTER IV
DISCUSSION

It appears that the results supported most of the hypotheses in the study. Of the 900 undergraduate volunteers, 47 were selected for the "high" group, indicating a predisposition toward using projective identification, and 48 were selected for the "low" group. The students in the first group appeared to identify significantly stronger with the characters in the two vignettes which described the pathological use of projective identification. This identification showed in their narratives on free-form questionnaires. The subjects in the "high" group more frequently reported feeling kinship with the characters in the story. They also appeared more emotionally affected by the experiment. The computer program provided an empirical assessment of this identification by integrating the vignettes with the adjective check list (ACL). The standard scores on the ACL sub-scales showed that the subjects in the "high" group identified more strongly with the traits of autonomy and aggression. They identified less with the traits of nurturance and deference. These results concur with previous clinical studies which found high prevalence of object relational pathology among the borderline population, especially the maladaptive use of projective identification.
(Vaillant, 1992; Perry & Cooper, 1992). Since the subjects in the current study identified with the stories describing the enactment of projective identification, it seems that the software scores indeed assessed the their tendency to use this defense mechanism.

Self-reported symptoms of depression, anxiety and hostility appeared significantly linked with the high borderline scores on the MCMI-II and also with the measures of projective identification. The SCL-90R scales on depression, anxiety and hostility were significantly different in the "high" and "low" groups. They also were strongly associated with the scores for the ACL sub-scales which measured nurturance, deference, autonomy and aggression. These results support previous findings which associate the pathological use of projective identification with depression, anxiety and hostility (Vaillant, 1992).

Because of the resistance associated with the exploration of unconscious processes, projective measures provide a better estimate of the subjects' interpersonal styles. The software integrated the ACL with direct questions about the characters and about people in general. Although responses to selected questions appeared promising, this methodology proved to have little predictive validity overall. Responses to free-form questionnaires showed interesting results, especially as an independent measure of the subjects' emotional involvement in the experiment.
However, the strongest results were obtained by comparing the subjects' rating of themselves and of the characters in the stories using the ACL adjectives. The difference in standard scores for the ACL sub-scales rated for the "self" and for the story characters appeared strongly related with the subjects' inner psychological state.

As expected, specific ACL sub-scales were related with the responses to specific vignettes, although not in the manner suggested originally. The nurturance and aggression sub-scales were linked with both the "power" and "dependence" vignettes. The deference sub-scale was linked with the "power" story only, and the autonomy sub-scale was linked with the "dependence" story.

Surprisingly, all the results appeared independent of the subjects' gender. Indeed, the borderline personality disorder, which is commonly linked with the pathological use of projective identification, is much more prevalent among females. However, the anti-social personality disorder is at least thirty times more frequently diagnosed among males (American Psychiatric Association, 1987). One may hypothesize from the results of the current study that projective identification is employed equally among genders, at least among college students. However, the pathological use of this defense mechanism conforms to gender-stereotypic roles.
The design of this study contained a number of limitations. First, the subjects were selected from the undergraduate volunteers, which limits the conclusions to non-clinical populations. Second, only the subjects with the highest and the lowest scores on the MCMI-II borderline items were included in this study. Therefore, no conclusions can be drawn about the precision of the results.

However, the strength of the study lies in its applicability to the empirical research of broad psychoanalytic concepts. In the past, most studies drew correlations between responses on personality inventories or projective tests and the subjects's symptoms (Bell, Billington & Becker, 1986; Westen, 1991; Blatt & Lerner, 1983; and many others). The current study is distinguished by its employment of interactive computer technology to assess a purely theoretical concept. It appears that, on the basis of such pilot work, a practical empirical measurement of projective identification may be constructed and applied to measure the construct. A similar approach may assist in empirical investigation of other important psychodynamic concepts, such as denial, projection and ego strength.
APPENDIX A

STYLES OF PROJECTIVE IDENTIFICATION

<table>
<thead>
<tr>
<th>Proj. Ident.</th>
<th>Relat. Stance</th>
<th>Meta-communication</th>
<th>Induction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependency</td>
<td>Helplessness</td>
<td>I can't survive</td>
<td>Caretaking</td>
</tr>
<tr>
<td>Power</td>
<td>Control</td>
<td>You can't survive</td>
<td>Incompetence</td>
</tr>
<tr>
<td>Sex</td>
<td>Eroticism</td>
<td>I'll make you sexually whole</td>
<td>Arousal</td>
</tr>
<tr>
<td>Ingratiation</td>
<td>Self-sacrifice</td>
<td>You owe me</td>
<td>Appreciation</td>
</tr>
</tbody>
</table>

APPENDIX B
SITUATIONAL VIGNETTES

A. Power Vignette

John was the oldest of three children. As far back as he can remember, his parents fought loudly, and his father occasionally drank heavily. Despite his father’s continuous losses of jobs and financial hardship, John’s mother maintained a clean, organized household. The family difficulties were kept a secret from other relatives.

John met Anne in a management training program and was attracted to her because she was warm and nurturing. Their careers were progressing well. Soon, John’s income doubled and he received an attractive offer from a company in another state. When they moved, he insisted that Anne should freelance out of home or, possibly, write a book, because they needed only one full-time income. However, as Anne began to take on the responsibility for their new, much larger house, she noticed that John remained closely involved in all arrangements. He was upset if any decisions were made in his absence.

As Anne spent more time at home, she became restless and attempted to become involved in activities outside of the house. However, John insisted on her abstaining from paid or volunteer jobs. He demanded that she must attend exercise classes only at the time when he could also be at the gym. He developed a habit of raising his voice during arguments, so that at times Anne felt intimidated. As time passed, Anne felt less and less capable of making any decisions.

B. Dependence Vignette

John was the only child. His father was a successful tax attorney, who commonly worked 12-hour days. John remembers always being in a company of his mother, who was once a promising violinist but had to stop performing because of an illness. She has never developed another career or new interests and never recovered from her disappointment. Since his early years, John has been her friend, supporter and confidant.
John met Anne at a music conservatory and was attracted to her because of her poise and confidence. They married, and Anne found work as an assistant editor at an art magazine and was quickly promoted. John pursued career in music and, initially, won a number of prestigious engagements. However, he gradually started having difficulty practicing and became worried about developing the same medical symptoms as his mother. John turned down a performances and contemplated a career in teaching. During these difficult times, Anne remained aloof but confident and discouraged any changes.

As John was spending less time practicing and performing, his other activities began to suffer. He played less tennis and abandoned his ceramics hobby. He was having trouble making decisions and began calling Anne at work a number of times a day for a consultation on shopping and chores. In their interaction, Anne now acquired caring but condescending tone. It became assumed between them that John requires her guidance, and that he will never succeed at anything important.
APPENDIX C

DIRECT QUESTIONS

John seems to be motivated by experiences in his past

1 2 3 4 5 6 7 8 9 10
Very much Not at All

In close relationships, people tend to feel as they did growing up

1 2 3 4 5 6 7 8 9 10
All the time Rarely

John's attitude towards Anne changed over time

1 2 3 4 5 6 7 8 9 10
Very much Not at All

In close relationships, people revert to their old ways

1 2 3 4 5 6 7 8 9 10
All the time Rarely

John seems to be acting out a fantasy of controlling Anne

1 2 3 4 5 6 7 8 9 10
Very much Not at All

In close relationships, people act out fantasies of control
and power

1 2 3 4 5 6 7 8 9 10
All the time Rarely
<table>
<thead>
<tr>
<th>Adjective</th>
<th>Adjective</th>
<th>Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>active</td>
<td>dominant</td>
<td>lazy</td>
</tr>
<tr>
<td>adaptable</td>
<td>dreamy</td>
<td>logical</td>
</tr>
<tr>
<td>adventurous</td>
<td>energetic</td>
<td>loud</td>
</tr>
<tr>
<td>affected</td>
<td>enterprising</td>
<td>loyal</td>
</tr>
<tr>
<td>affectionate</td>
<td>enthusiast</td>
<td>mannerly</td>
</tr>
<tr>
<td>aggressive</td>
<td>enterprise</td>
<td>masculine</td>
</tr>
<tr>
<td>alert</td>
<td>excited</td>
<td>mature</td>
</tr>
<tr>
<td>aloof</td>
<td>faulty</td>
<td>meek</td>
</tr>
<tr>
<td>ambitious</td>
<td>fearful</td>
<td>methodical</td>
</tr>
<tr>
<td>anxious</td>
<td>finding</td>
<td>mild</td>
</tr>
<tr>
<td>apathetic</td>
<td>ferocious</td>
<td>mischievous</td>
</tr>
<tr>
<td>appreciative</td>
<td>forceful</td>
<td>moderate</td>
</tr>
<tr>
<td>argumentative</td>
<td>foresighted</td>
<td>modest</td>
</tr>
<tr>
<td>arrogant</td>
<td>forgiving</td>
<td>natural</td>
</tr>
<tr>
<td>assertive</td>
<td>frank</td>
<td>nervous</td>
</tr>
<tr>
<td>attractive</td>
<td>friendly</td>
<td>noisy</td>
</tr>
<tr>
<td>autocratic</td>
<td>generous</td>
<td>obliging</td>
</tr>
<tr>
<td>bitter</td>
<td>gentle</td>
<td>obnoxious</td>
</tr>
<tr>
<td>boastful</td>
<td>good-looking</td>
<td>opinionated</td>
</tr>
<tr>
<td>bossy</td>
<td>good-natured</td>
<td>optimistic</td>
</tr>
<tr>
<td>calm</td>
<td>gentle</td>
<td>original</td>
</tr>
<tr>
<td>cautious</td>
<td>good-natured</td>
<td>optimistic</td>
</tr>
<tr>
<td>charming</td>
<td>Hindus</td>
<td>original</td>
</tr>
<tr>
<td>cheerful</td>
<td>handsome</td>
<td>original</td>
</tr>
<tr>
<td>clear-thinking</td>
<td>headstrong</td>
<td>patient</td>
</tr>
<tr>
<td>clever</td>
<td>healthy</td>
<td>pleasing</td>
</tr>
<tr>
<td>cold</td>
<td>helpful</td>
<td>pleasure-seeking</td>
</tr>
<tr>
<td>complaining</td>
<td>heroic</td>
<td>poised</td>
</tr>
<tr>
<td>conceived</td>
<td>helpful</td>
<td>praised</td>
</tr>
<tr>
<td>confident</td>
<td>hostile</td>
<td>prudish</td>
</tr>
<tr>
<td>conservative</td>
<td>humorus</td>
<td>quarrelsome</td>
</tr>
<tr>
<td>considerate</td>
<td>imaginative</td>
<td>queer</td>
</tr>
<tr>
<td>contented</td>
<td>immature</td>
<td>quiet</td>
</tr>
<tr>
<td>conventional</td>
<td>initiative</td>
<td>rational</td>
</tr>
<tr>
<td>cool</td>
<td>impatient</td>
<td>reasonable</td>
</tr>
<tr>
<td>cooperative</td>
<td>impulsive</td>
<td>rebellious</td>
</tr>
<tr>
<td>curious</td>
<td>independent</td>
<td>reckless</td>
</tr>
<tr>
<td>cynical</td>
<td>indifferent</td>
<td>reflect</td>
</tr>
<tr>
<td>daring</td>
<td>individualistic</td>
<td>relaxed</td>
</tr>
<tr>
<td>demanding</td>
<td>infantile</td>
<td>reserved</td>
</tr>
<tr>
<td>dependable</td>
<td>inhibited</td>
<td>resourceful</td>
</tr>
<tr>
<td>dependent</td>
<td>initiative</td>
<td>responsible</td>
</tr>
<tr>
<td>despondent</td>
<td>insightful</td>
<td>retiring</td>
</tr>
<tr>
<td>determined</td>
<td>intelligent</td>
<td>rude</td>
</tr>
<tr>
<td>discreet</td>
<td>intolerant</td>
<td>sarcastic</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>irresponsible</td>
<td>self-centered</td>
</tr>
<tr>
<td>distrustful</td>
<td>irritable</td>
<td>self-confident</td>
</tr>
</tbody>
</table>
self-controlled  strong  unconventional
self-denying    submissive  undependable
self-pitying    suggestible  understanding
self-seeking   suspicious    unemotional
selfish         sympathetic  uninhibited
sensitive       tactful      unkind
sentimental    tactless     unselfish
serious         talkative    vindictive
sexy            thoughtful   versatile
shallow         timid        warm
show-off        tolerant     weak
shy             touchy       whiny
silent          tough        wholesome
shy             trusting     withdrawn
snobbish        unambitious  witty
simple          unassuming  worrying
snobbish        strong
BIBLIOGRAPHY


