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A Statistical Study of the Formal Aspects of The Diagnostic Drawing Series of Borderline Personality Disordered Patients, and its Context in Contemporary Art Therapy

Anne Mills

A Thesis

in

the Department

of

Art Therapy

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ABSTRACT

A Statistical Study of the Formal Aspects of
The Diagnostic Drawing Series of
Borderline Personality Disordered Patients,
and its Context in Contemporary Art Therapy.

Anne Mills

Using a standardized three drawing task, The Diagnostic Drawing Series, art therapists collected artwork from thirty-two adolescent and adult psychiatric inpatients diagnosed Borderline Personality Disorder under DSM-III criteria. The formal aspects of the art were blind rated on forty observable features, analyzed statistically and compared to the ratings of art made by other diagnostic groups and Controls under similar conditions. The structural qualities of the art of this sample are discussed. Literature reviews of borderline art and research design in art therapy, results of an interrater reliability study, and a survey of borderline deliberate self-harm are also examined.

ACKNOWLEDGEMENTS

This work represents the efforts of many people. It may be a cliche but it's true...it couldn't have happened without them.

The need for a standardized art therapy tool was seen by Barbara Lesowitz, ATR, and Barry M. Cohen, ATR, and they began the work. Research on the Diagnostic Drawing Series (DDS) in The Fairfax Hospital has been consistently supported by Tom Wise, M.D., Chairman, Department of Psychiatry, and Cookie Kerxton, Director, Creative Arts Therapies Department.

Barry Cohen, Shira Singer, ATR, and Anna Reyrer, ATR, worked long hours to get the DDS up and running, before I joined them along with Adrienne Kwapien, ATR, and Jacqueline Zitzke.

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My own collection of DDSs was immensely aided by the generous assistance of Kathleen O'Leary, MSW, Rex William Cowdry, M.D., and David L. Gardner, M.D., of the National Institute of Mental Health in Bethesda, Maryland.

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Introduction

In this Introduction, my intention is to show why this topic interested me; to recreate for the reader the intellectual context in which the central thesis' question co-existed with other, similar questions; and to suggest by so doing the many important related investigations that are beyond the scope of this work. This is especially necessary in this case because a path of inquiry has been chosen that differs from most within art therapy. As such, it must be examined in terms not only of itself and its conclusions, but also in terms of 'the roads not taken.' Perhaps with Goethe's words, "Every fact is already a theory" as caveat, we can begin.

During my training in art therapy, I worked with two very different young men at two different institutions. What they shared was a history of self-harm. One, profoundly retarded with a seizure disorder, who was unable to communicate verbally, had cut himself so many times that the skin on every part of his body he could reach was an intricate web of scar tissue. The compulsion to self-torture . . . self-stimulate . . . communicate must have been very strong because, as he had lived in a highly controlled institutional environment since birth, the only sharp instruments available were the

slotted steel air conditioning units that he would tear from the walls.

The other young man, of average intelligence, had severely scratched and mutilated his face during what seemed to be a one-time brief psychotic episode. At the time of our art therapy work together, he was contemplating further self-harm.

I was intrigued at how different these men were, but how similar they were in one respect. I wondered what would cause persons to deliberately harm themselves in highly specific ways that did not seem intended to end their lives. To try to understand better, I examined their artwork, comparing it to see if any similarity in <u>any</u> way would parallel their behavioral similarities.

The impulse to compare for similarities was the root of the work which is continued by this thesis.

What I noticed first about the artwork of these two men was something in the process, not the finished pieces. They would both bend over their papers, gazing and drawing with such fixed attentiveness that I sensed a relationship of some sort was being forged with the surface of the page. To myself, I called this quality "a peculiar intensity of application."

Their shared concerns for pressure, blending, and layering amounted to treatments of the surface, in a way that was different (to my mind) from other patients. I found I

could not easily describe this as it occurred in process or was evidenced in the product, but felt that, although indefinable, it could be observed in both. It remains, for me, unquantifiable in graphic or formal terms. Fast (1975) describes the process of the art making of borderlines, and discusses something very like what I term "peculiar intensity." She uses such terms as "enthusiastic commitment" "intense involvement" "exhilaration" and so on. She notes that when such functioning is successful it may result in novel or high quality products, and may absorb the patient's attention to the exclusion of all other activities for extended periods, often days or weeks.

The interest in self-mutilation caused me to review medical charts of patients I worked with for accounts of such incidents. I was not always sure what I was looking for -- sometimes I hoped to establish precipitants, other times I was looking for evidence of mood change after an episode of dyscontrol (when a patient's action deviates from appropriate or intended behavior). What I usually found was seemingly insufficient detail in charting patient dyscontrol. Sometimes the episodes resulted in punitive staff behavior, and almost always in expressions of anger and revulsion by staff. I also noted a relative paucity of published material on self-mutilation in the professional literature. My impression grew that feelings which one might loosely term 'countertransferential' existed in the caretakers to those who deliberately

self-harm. These feelings were especially directed at direct, low, or medium lethality self-harm, such as delicate self-cutting or burning (Pattison and Kahan, 1983; Pao, 1969). Such material has been recorded in the literature (Stengel, 1965; Adler, 1977; Podvoll, 1969), noting that unconscious feelings of envy, aggression, satisfaction, and so on were aroused in therapists by their patients' self-harm. It is problematic that some therapists cannot tolerate this counter-transference. Unless resolved by the therapist, this material will seriously impede the work of therapy.

Thus, according to some thinkers, we all have a need to express psychic material akin to the self-mutilator's, but do not do so in the same manner (if at all). This then compels the self-mutilator to act, and in so doing, provides a service to the society. S/he is performing on our behalf. Carried a step further, the group is necessary to the action -- to literally witness, to feel and return the emotion the action generates, to be changed or manipulated by it. The society becomes as it were, an audience or an art patron. One recalls the 'body art' and 'performance art' of the 1970's. Deliberate self-harm was used then by artists like Vito Acconci ("I want to put the viewer on shaky ground") and Chris Burden ("I want them to receive it really strong"). In performance, they have bitten, burnt, cut, and electrically shocked themselves. With assistants, Burden has been shot and, on another occasion, crucified on a Volkswagon. Art

criticism has discussed the audience as the "other," the themes of emptiness, the ritual format with transcendence its outcome, and life/art concerns (Burden et al., 1975; Kozloff, 1975; Schwartz, 1981).

This was culturally-sanctioned self-harm and self-mutilation, but limited to and affecting only the art world and its patrons. In other parts of the world or other eras, traditional public self-mutilation rituals are an integral part of the culture and affect all members of it. The purpose is preservation or restoration of the stable society. Such practices are especially associated with rites of passage (Favazza, 1987; Bettelheim, 1962).

What distinguishes self-mutilation in our society from the above, even though it can be argued that it is "psychologically embedded" in all humans (Favazza, p. 191), is that we define it as alien, as societally purposeless or destabilizing. It is also private, impulsive, and present only in individuals considered 'abnormal' or 'pathological' (mentally retarded; convicts; multiple personality disorder; organic hallucinosis, etc.). In the acute care inpatient psychiatric service, self-mutilation is seen primarily in those patients diagnosed Borderline Personality Disorder (BPD). The association of self-harm and BPD has become a truism in that a patient who performs direct, low lethality, deliberate self-harm will almost certainly be assumed by nursing staff to be BPD.

Work with BPD's to learn more showed that they were usually very enthusiastic art therapy clients, a quality that can be misinterpreted as others have noted (Fast, 1975; Katan, 1958; Skolnikoff, 1976; Deutsch, 1942). This matter is discussed in Chapter 1, Section C, Investigations of Borderline Art. Nonetheless, in keeping with my temperament, I began looking for commonalities, as I had with my first self-harming patients. Along the way I encountered a sort of clinical 'oral tradition' of diagnostic clues to BPD art, all of which was unpublished (Gantt and Howie; Lesowitz, 1980; Gerber and Jacobson, 1982).

Since there were no normative studies of BPD art, I felt this would be the most necessary work to attempt. A normative study involves the preparation of norms from observation of a group, in order to compare observations of an individual or other norm groups to it. Such a study of BPD art was a sufficient challenge and I concluded I must leave investigation of countertransference, performance art, the relationship to the page, and cross-cultural comparisons to others.

I did not want to work with a single case study as I felt that the results would not be generalizable to other patients or therapists. I wanted to work on the contrary, with the largest sample (or group) of BPD s feasible. In order to do so, I sought and received Guest Researcher status to do art-therapy interviews at the U.S. National Institute of Mental Health with participants in a BPD self-mutilator study. I

also joined a collaborative network of art therapists collecting drawings (the Diagnostic Drawing Series) in a standardized way. I also wanted to identify and discuss elements that were observable and could be communicated clearly to fellow art therapists.

What follows is an account of my attempt to do so, my methods and their limitations, and my conclusions. My hope is that my excitement at this work will be apparent to the reader, and s/he will persevere despite charts and statistics. At the end, the reader should understand what borderline drawings tend to look like. Let us begin by critically examining what is meant by such diagnostic terms.

CHAPTER I, SECTION A. DIAGNOSTICALLY GROUPED SUBJECTS

Reliability of Psychiatric Diagnoses

Based as this study is on psychiatric diagnosis, it is necessary to briefly review reliability in that field.

Validity in the strict sense is not discussed here because it is not testable unless one has an absolute standard to compare it against. At best a "procedural validity" is testable, that is, multiple comparisons of a new diagnostic interview with known instruments.

It is generally agreed that reliability in psychiatric diagnosis has improved greatly since the institution of DSM-III. Increased reliability was a goal of the DSM-III, and this was achieved because the DMS-III addresses diagnosis from a descriptive rather than a etiological perspective. The reliability of DMS-III has been tested by a number of teams (Anthony et al., 1985; Helzer et al., 1985; Akiskal, 1980; Robins et al., 1981; Wittchen et al., 1985) and was shown to be a satisfactory instrument capable of producing correct (concurring) diagnoses in the hands of a trained psychiatrist or an untrained lay interviewer (for research purposes).

However, it is still true that interrater reliability of two psychiatrists doing independent examinations of the same individual is less than perfect (Goleman, 1985; Grove et al., 1981). There will not be perfect concordance at all times, indicting that psychiatric examination can give an imperfect reflection of the occurrence of psychiatric symptoms. This can be due to the capabilities of the psychiatrist, the respondent not revealing symptomatology consistently or accurately, as well as to faults of a given nosological system.

Because of this, completely reliable diagnosis remains "a dream" and "a bold aspiration" for psychiatry (APA, 1985, p. 655), and is pursued with much interest. It is an important limitation for art therapists to recognize if their work is to be tied to diagnostically-oriented psychiatry, either clinically or in research. For example, various tests for psychiatrist-psychiatrist diagnostic concordance, depending on sample, illness, and number of symptoms, yield results ranging from 65% to 90%. Inter-psychiatrist concordance on the diagnosis of BPD has been reported as low as 30% (Wise, 1989), and in two pilot field studies of the SAM-III as "quite low" (APA, 1985, p. 468). Further, the BPD criteria in DSM-III have yet to be confirmed in validation studies (e.g., response to treatment studies, psychological testing, etc.). Despite the observability of the DSM-III BPD traits (so designed to increase clinical utility and reli-

ability), a high order of inference is still demanded of diagnosticians. This is largely due to both overlap and co-incidence of criteria, to be presented below, with other disorders and dissociative disorders). In reviewing this situation, Widiger and Frances (1988) comment on work suggesting that the quantifying, descriptive, categorical model of DSM-III itself is problematic. The personality disorders, as opposed to more florid mental illness, chart an area qualitative close to normal personality traits. As such, "fuzzy set" theory might provide a more realistic and helpful model than categories. A fuzzy set is a group in which members are similar but heterogeneous. The set has a subset of multiple, defining features and overlapping boundaries with other fuzzy sets (Widiger and Frances, 1988; Cohen and Anon, 1987).

The term "DSM-III" is used throughout this paper, because all patients in this study were diagnosed by DSM-III standards. However, I believe that the results would generalize to patients diagnosed under the newer, revised edition of DSM-III (DSM-III-R, 1987) as the BPD criteria in the two manuals are essentially the same.

Is there historical support for the us of such a nosological system as part of art therapy inquiry?

On the Use of Diagnosis in Art Therapy Research

The history of the use of painting and drawing in personality assessment is long and complex. Beginning in the late 19th century, some investigators used specific psychiatric classification (Mohr); some examined formal elements composing the picture (Waehner); some used a drawing task (Abel). However, most of the pre-1940 work reviewed by Anastasi and Foley (1940, 1941 and 1945) were naturalistic studies. By this I mean non-experimental, uncontrolled studies involving, chiefly, observation of spontaneous artistic work. By middle of the 20th centry, much interest was evidenced in assessment by means of drawings, especially by psychologists.

For the purpose of this brief review, I will exclude work that is not from the field of art therapy; work which is oriented to personality assessment of interpretation, not specifically psychiatric diagnosis; and single case studies. To illustrate how delimiting this is, let us consider Amos' review of literature regarding schizophrenic art (1982). Of his 45 references, only one third are part of what may be broadly defined as 'art therapy literature;' that is, where the source would be somewhat familiar to art therapy practitioners even though it was published in the field of psychology, or psychiatry and art (e.g., Billig; Machover; Goodenough; Reitman; Arieti; Jakab; Volmat).

After such delimiting, there remain two ways in which art therapy research uses diagnosis. One, that art therapists will attempt to diagnose, presumably on a basis of understanding some qualities which differentiate one diagnosis, artistically, from another. The second, that subjects will be diagnostically grouped and characteristics of their artwork examined.

In the first category there are two papers that will be mentioned here as illustrative. "Art Therapists as Diagnosticians" (Ulman and Levy, 1973) functions as a review of these authors' many studies of the abilities of art therapists and others) to make diagnostic judgments. Details on the number or type of diagnostic categories are not given. In a recent paper by Witlin and Augusthy (1988), ability to retrospectively discriminate Axis I DSM-III diagnosis plus BPD was shown in an art therapist working with products of a structured art interview.

In the latter category falls this study. It is modelled on the structure of existing DDS work by Cohen, Hammer and Singer (1988). Earlier work of McIntyre and Wright (1979) grouped depressed and normal adult subjects and collected Kinetic Family Drawings from them. Their study asserts that a difference exists in the artwork which is attributable to psychopathology. Finally, there is an unpublished, little-distributed study of interest by Gantt and Howie (year unknown), which attempts to characterize the free artwork,

of psychiatric patients from twenty DSM-III diagnostic groups. It does so by analysis of: Color; 2-D form; 3-D form; organization; content; and developmental level.

Limitations of the Use of Diagnosis in Art Therapy Research

The cornerstone of the two sections above is a reliance on clustering people and seeking commonalities, with the goal of generalizing those findings. The maxim might well be, "nothing we can learn about an individual thing is of use unless we find generality in the particular" (Arnheim, 1969, p. 1) This outlook was an integral part of this research design, and the way it has employed sample size and diagnostic categories.

There are many arguments that can be made against the use of diagnosis, but the most global is the resulting focus on commonalities, rather than particulars. First, certain phenomena may not be perceived, noted, or reported because it would be impractical to do so with a large group. The data one thereby neglects may be of central importance. This could be because the researcher has predicted incorrectly what will be essential; or, may attribute value to one variable, forgetting it may operate in interrelationship with another unknown variable.

Secondly, unlike physical illness which is 'real' and can be measured and examined physically, investigation of mental illness can take place only within a less tangible

framework -- the world view of the investigator. Unintentional distortion of perceptions of art, behavior or personality of the subject can occur in order to conform percepts to the belief system of the investigator.

We can question the assumption that mental illness is observable in some way in drawings. This position is supported by some studies (Cohen et al., 1988; Witlin and Augusthy, 1988; Leavitt, 1988) but is not conclusively proven. We can also question the premise that different variants of mental illness exist and can be determined in some way from artwork even without being able to observe or talk with the artist.

Often in day-to-day work, or in the pressures one experiences in research, pragmatics may take precedence over theory. Pragmatism informs the use of diagnosis in psychiatry and art therapy. The actions taken are weighed in terms of efficacy and short term gain. There is little consideration of theoretical framework or moral responsibility. Pragmatically one can give strong argument for the necessity of diagnosis in psychiatry; but one should also question whose interests the nosology serves. Some charge that giving psychiatric diagnoses amounts to permanent stigmata for patients and their families. When we define aberrant behavior as 'sick' we save the designated patient from criminal punishment perhaps, but we have defined his or her behavior as only a symptom, and we have suggested s/he

is not responsible for it. The patient is then subjected to the dubious benefits of continuous help (instruction, remedies, discrimination) from family and professionals.

Every tool has its limitations. The imperfect concordance of psychiatric diagnosis is discussed above. It may be that this nosological system is not compatible with the diagnosis of character disorders, in that reliability is poor and BPD especially has overlaps with other categories.

It seems that the increasing tendency to define non-medical problems as within the realm of medicine's concerns, provoked the incursion of descriptive psychiatry into typology and the 'normal' end of the spectrum of human behavior. Under these circumstances, it may be the task of definition of psychiatry is illserved by the reifying and other tendencies now demonstrated, influenced by the medical model.

Let us turn our attention now to the somewhat controversial diagnosis which is the focus of interest of this study.

CHAPTER I, Section B. The Diagnosis of Borderline Personality Disorder

Diagnostic Criteria for Borderline Personality Disorder in DSM-III and ICD-9

To attempt to summarize briefly and in a general manner the breadth of BPD: It is a deviation of personality with lifelong abnormalities in cognition, behavior patterns, and sense of identity, with affective instability. Characterized by early onset, and certainly in evidence by early childhood, the patient's chronic patterns of poor judgement, ability to provoke negative reactions in others, and damaged relationships are exacerbated by stress. The patient's related distress is sufficient to interfere with the activities of daily living.

To diagnosis a person with BPD, at least five of the following criteria are required under the DSM-III:

1. Impulsivity or unpredictability in at least two areas that are potentially self-damaging, e.g., physically self-damaging acts, over-eating, etc.
2. A pattern of unstable and intense interpersonal relationships.

3. Inappropriate, intense anger.
4. Identity disturbance, e.g., uncertainty regarding career choice, gender identity, self-image, etc.
5. Affective instability
6. Intolerance of being alone
7. Physically self-damaging acts, e.g., suicidal gestures, etc.
8. Chronic feelings of emptiness or boredom.

The criteria must be characteristic of the patient, and to be in some way ego dystonic. If the patient is under 18, the diagnosis of Identity Disorder must be ruled out.

It is an acknowledged limitation of this study that it is atheoretical. For instance, in using the approach of descriptive psychiatry in refining the sample, there are no attempts to relate manifestations of BPD to etiology. Yet clinical perception and discrimination of underlying dynamics are necessary as a truly firm base from which to diagnose this disorder.

Some clinicians reject the existence of BPD seeing the character traits as secondary to a primary affective disturbance, giving rise to such terms as "rejection-sensitive dysphoric" or "hysteria dysphoric". Some clinicians argue that the borderline concept as distinct from personality disorder diagnoses in general is impossible to discriminate or of little practical value. As "borderline personality," the diagnosis is included in the International Statistical

Classification of Diseases, Injuries, and Causes of Death (ICD-9) of the World Health Organization, under the same code number as DSM-III, which was written with attention to compatibility. In clinical use, however, training and custom influence diagnosis heavily, thereby influencing reliability studies between ICD-9 and DSM-III. It is reported (Kroll et al., 1982) that patients who would be diagnosed BPD in the U.S. tend in fact to be diagnosed some other form of personality disorder in the U.K. (e.g., hysterical or explosive personality disorder, especially with depressed features).

For this study, psychiatrists were asked to diagnose according to the nomenclature of DSM-III. It was chosen because all art therapists participating in the study worked in the United States, and the DSM-III is the most widely accepted diagnostic manual by that country's clinicians (Thompson et al., 1983).

"Borderline" - A Brief History of the Term

There has been a recognition in psychiatry from the nineteenth century of a type of mental illness that is characterized by disordered emotions or behavior but whose sufferers maintain their facility for reasoning. Concepts of "degeneration" and "moral insanity" broadened psychiatry's concerns from only the asylum-incarcerated, to now include the

new "border-lines" or "borderland" of the merely eccentric patient (Kraepelin, 1905, reported in Mack, 1975).

This turning toward the study of personality in psychiatry coincided with the first discussions of character pathology and typology by the young science of psychoanalysis. The interests of Freud and his followers (Abraham, Jones, Jung, Reich) were not so much the study of traits per se, but rather the interrelationship of trait formation, libido, and conflict. A paper by Alexander in 1927 introduced the term "alloplastic" for individuals of "the neurotic character." Such a group is distinct from other pathological character types because of the presence of intrapsychic conflict coupled with an external, rather than self-absorbed, orientation.

The concept of borderline has received much attention in the intervening years, especially in America, evidenced at first in many impressionistic papers contributing a bewildering variety of terms. The term was widely recognized and investigated because of the psychoanalytic bent of American psychiatry. Less interest and, because of it, less diagnostic and nosological precision is noted elsewhere. Terms originated in the period preceding 1950 which roughly approximate DSM-III BPD include: latent schizophrenia (Bleuler); schizophrenic character; ambulatory schizophrenia (Zilboorg); pseudoneurotic schizophrenia (Hoch and Polatin); pseudocharacterological schizophrenia; subclinical schizophrenia;

neurosis; neuropsychosis; psychotic character (Frosch); and "as-if" personality (Deutsch).

Within the last fifteen years there has been a resurgence of interest in nosology, linking the borderline state with character disorders and focusing less on its relation to psychosis. The first systematic study (Grinker, Werble, and Drye, 1968) of 51 patients suggested four classifications: (1) the group closest to psychosis, on the 'spectrum' of illness, (2) acting-out "core borderlines," (3) identity-disturbed group like the "as-if" personality, and (4) the group bordering on neurosis.

Kernberg (1975) and Kohut have made important contributions to our understanding of this concept. The former emphasizes the importance of primitive mechanisms such as splitting and dissociation.

Singer (1977), on the basis of psychological research, proposed two categories: (1) constricted and (2) core group, described as verbally histrionic or eccentric.

Today most theoreticians and practitioners will readily agree that symptomatology, etiology, and treatment rationale are known, and the diagnosis of borderline is valid and specific (Rinsley, 1977). Very few, now, do not agree with the term "borderline;" but many question whether the term should be followed by personality, syndrome, etc. (Gunderson and Singer, 1975).

Etiology

Pathognomic for BPD is the experience of self and others solely in affect-laden extremes -- as all good or all bad. This primitive "splitting" defense presumes separate mental images (Kernberg, 1975) for one person, that may shift rapidly; yet, the contradiction and lack of synthesis will not be perceived by the borderline. Kernberg postulates this has its origins in infancy in a "constitutional" (p. 28) excess of aggression plus extreme frustration. Mahler (1971) theorizes a character-disordered mother's withdrawal of affection from the growing 18 to 36 month infant, with resultant inability of the child to separate in a healthy manner.

CHAPTER I, Section C. The Art Interview

A History of Structured Art Interviews

The Draw-a-Man (Goodenough, 1926) and all its variants (Machover; Hammer; Levy; Jolles) spawned an era of much interest in and a proliferation of directive, pencil-and-paper drawing tasks -- the 'Draw-a-This' and 'Draw-a-That' era, as it were. Buck's House-Tree-Person (1941), Koch's Baumtest c. 1949 and variants (Bolander, 1977) remained pencil tasks. It was in 1951 that Cane brought the media and sensibilities of the artist to bear on the issue with the scribble task, which influenced the later work of Ulman and Kwiatkowska.

This time of highly structured art interviews continues to influence art therapy. Many clinicians today still use these tests clinically and in research. The pencil tasks, as well as drawing completion tasks (Bender, 1938), are extant in psychological testing.

When it was recognized that art therapy, too, could be used as an effective tool in assessment and diagnosis, some practitioners responded to the opportunity by seeking to clarify and refine their techniques (Wadeson, 1971). The goal was to be able to develop a tool that would elicit the greatest amount of useful information from the subject in an

efficient way, using genuine artistic experience and media. The nondirective approach which was a mainstay of art therapy (Feder and Feder, 1981) blended with systematic procedures. This combination of various levels of structure seems to characterize art therapy assessment tools to this day. In the work of Ulman (1975), Kwiatkowska (1978), and Cohen et al. (1988), the first picture is a free picture. In Kwiatkowska's and Ulman's assessments, the last picture is also a free picture. In Kwiatkowska's and Cohen's assessments, middle pictures are highly structured.

Kwiatkowska (1978) designed a multi-step assessment for entire families to complete. She does not specify in detail what art materials are to be used. At about the same time, Ulman devised a multi-step structured assessment for individuals. Although she specifies materials, there is sufficient ambiguity that disagreement arises among her successors. Cohen's assessment will be discussed below.

Thus, a sort of hybrid was created, one that the developers hoped would meet both the demands for assessment in inpatient psychiatric work, for example, or the need for further research on art productions of psychiatric patients (Russell-Lacy et al., 1979).

There is also a variety of art assessment today that cannot properly be termed 'structured,' and is designed for use with children. These may suggest type of materials to be

used, but do not limit the art expression of the subject in any way (Kramer and Schehr, 1983; Rubin, 1978).

The sense I have is that art therapists become investigators when they use some form of structured art interview. By its use they affirm belief that the drawing behavior and its result are overdetermined, and the attempt to control that which can be controlled is an attempt to simplify and perceive determinants. The implication is that they are looking 'for' something and will not be able to 'see' it if the situation is infinitely variable and complex. By limiting just one element -- let us say, time -- one is already losing the material that would be gained in an open studio with no time limits. Yet one has also made the information-gathering much simpler.

Accompanying the investigative impulse is the need to apprehend the art and art-making in an active manner. Informal self-questioning by the art therapist becomes progressively refined. For example, a question like, do I see peculiar intensity of application to task here, may be transformed into a specific checklist of observations of subjective feelings, the artist's behavior, and how the medium meets the page. Ultimately, this can evolve into a rating system of some sort.

Limitations of Structured Art Interviews

The main goal of the development of the DDS and its protocol was standardization of data. It was believed that drawings from different individuals could be profitably compared and that the observations proceeding from that comparison would be more useful to art therapists than detailed study of a single case. It was also believed that comparison would be easier if the largest possible number of individual or situational variants were eliminated.

These points are deserving of examination. Here the approach is laboratorical, if you will. The DDSs are regarding as so many blood samples--each one unique and particular to its donor--yet collected the same way so that meaningful comparison can be made. It can be questions if complete accuracy in following instructions is achievable, or whether two collection situations are perceived to be 'the same' to the patients, even if the behaviors within them are the same.

It is a truism of psychological work that the content of the client's session (whether words or pictures) will tend to reflect the theoretical orientation of the therapist. The client of the Freudian will have Freudian dreams; the client of the Jungian will make painting full of archetypes. It weakens the notion that one can control for all possible variables, or that drawings reflect only the essence of the artist.

It must be stated that there are many factors affecting the drawing behavior of a patient in a structured art therapy interview. For example, this study attempts to control for drug use, by requiring that the art interview take place within the first five days of admission to a psychiatric hospital. The though is that this minimizes the extent to which a drug taken before or at admission will affect the patient. However, it ignores the situation of a patient who is admitted while on a regimen of psychopharmacology which is then maintained.

We must admit that complete standardization is not achievable. however, a functional level of standardization is acceptable within science and psychology, the gap between the actual and the ideal being dismissed as of little impact in outcomes.

When one dictates when another person is to make a drawing, how 'authentic' is that drawing going to be for that person? Would a person completely unused to art-making, that is, most adults in our society, produce the same image if asked at this time, or at that time?

What role is played by the expectation that they will indeed draw? This is the irony of course in referring to any drawings as 'spontaneous' when one has, in fact, closeted one's self with an anxious participant and art supplies for an amount of time defined as "an art therapy session" (Cohen, 1986).

Obviously, one has altered the art -- destroying all other possible outcomes, in a sense -- when one proscribes materials. Not only does the drawing change, but so too does the tone of the relationship between participants as choices are progressively restricted. This is of special importance as some patients dislike the paper for its size or its good quality or the chalks for their dust and smudginess.

One has also restricted the sort of art that can be created when one chooses the medium, because its inherent expressive properties dictate certain outcomes.

The assumption is that the DDSs will not be the same, for comparison to be of use. Yet they must have some degree of commonality in order to allow the formulation of a way of understanding them, hypothesizing, and possibly measuring, discussing, and attempting to apply the result to any other group of people. If you asked 50 randomly selected people to assemble at a given place with 'a favourite thing' your results would be interesting but probably of little utility in understanding these particular people (sample too large, no time for indepth discussion) or other people (sample too small, can't be generalized). If you asked 50 randomly selected men aged 18 to 24 to assemble with 'a favourite piece of clothing' your results hold more foundation for speculation and conclusions.

The need to organize percepts into concepts is pursued by a path of evaluating the percepts in some way. One such method of evaluation is discussed below.

CHAPTER I, Section D.

Rating Art Products

Art rating and art judging in art therapy share a history with similar investigations in psychology in the 1940s and 1950s. Rating has been pursued far less than judging.

Various goals have been proposed by investigators who have experimented with rating systems. They include: (1) to test the presence of specified elements or qualities (Kwiatkowska, 1978; Goodenough, 1928); (2) to test inter-rater reliability; (3) to find a way to approach the art product as both fellow artist and clinician (Bergland and Moore); (4) to test hypotheses, e.g., of pathological significance of a specified element (McIntyre and Wright, 1979); (5) to judge psychological improvement/outcome studies (Reiner et al., 1977); (6) to aid diagnosis and therapy (Zierer and Zierer, 1960; Wadlington and McWhinnie, 1973); (7) to increase acuity of clinical apprehension (Bergland and Moore); and (8) to do normative and replication studies (Cohen et al., 1988).

Of the above rating systems, those of Bergland and Moore and of Cohen are unpublished.

Rating systems in art therapy tend to address the product only. An earlier version of the Bergland and Moore SPAR Scale

(by Shoemaker and Bergland, also unpublished) addresses content only, while the Cohen (DDS) system, for example, almost completely omits content. Most of the scales extant have categories of assessment based on a combination of so-called aesthetic ("movement") and psychological ("regressive") terms. No scale yet has been widely accepted, and use tends to be limited to research purposes by its creator.

One exception to this is Kwiatkowska's rating guide for family art interviews (1978). It employs a mix of form- and content-oriented criteria and attempts to provide a workable and clear system for rating. However, criteria are not well defined and are often very subjective. For example, "O Crowdedness" is defined as "little or no crowdedness. Picture doesn't feel overfilled". There is a section for rating "individual subjective impressions" where "no definitional frame of reference . . . can be provided". Where two ratings of these differ by one point, "one of the ratings is chosen at random, e.g. flipping a coin" (pg. 29).

In 1977, Reiner et al. published their Picture Regression Scale for Adults. It contains their definitions of 18 criteria, which can be allocated number scores under either the extremes of Regression or that of Organization. The criteria examine content, form, and style. The goal is a ratio of Regression to Organization and is to be used to judge the progress of adult patients.

The rating system of the Zierers (1960) is designed for both diagnostic and therapeutic use. A 16-point scale rates colour interrelationships modulated by brush work, directionality, etc. The result of this is a ratio of integration/disintegration which is reviewed in further analysis of process, content, etc. The goal is assessment of the total personality. What is rated is a battery of seventy-two tests. Not enough information is published on tests or rating to attempt to replicate it.

A rating system that is replicable and has been widely distributed is the scoring method designed for use with the DDS. Created by a number of art therapists, it is devoted chiefly to rating the presence of structural characteristics that are as objectively described as then possible. It has applicability to other graphic art. As it was chosen for use in this project, it is appended (Appendix D) to this work. Information on its interrater reliability is offered elsewhere (Reliability and Validity, Chapter IX).

Limitations of Rating Art Therapy Products

The purpose of assembling many DDSs was to create a resource for others to study in any fashion. One way, for instance, of looking at the art is systematically -- what Arnheim (1969) would call a form of intellectual cognition -- for certain elements that can be described and noted. The

emphasis on observability and the systematic nature of rating reflects the positivist values of science and psychology that predate the interactionist/subjective epistemology of the 1960s. Positivism espouses a sole way to conceive the world and claims great validity. It follows the model of the natural sciences. Positivism contains beliefs about the possibility of data collection by objective observations, which resembles operationalism (the idea that all theories must be definable by measures or tests). This approach was adopted because the study was embedded in the (positivist) medical model -- specifically, American psychiatry. The sociology of knowledge assumes that ideas are generated in a specific milieu.

Rating, as an approach, presumes to note variation in a picture without necessarily attributing meaning to it. The context is not considered. This is a logical fallacy, as if everyone drew much the same except for variables like age, sex, or diagnostic group. There are in fact many variables that overdetermine drawing behavior: how this adult learned to draw as a child; familiarity with materials; familiarity with conventions of art used interpretively/diagnostically; perceptual abnormalities; familiarity with conventions in artistic representation; degree of interest/investment of meaning in art making; intellectual abnormalities; cultural variables; religious injunctions; familiarity with the process of psychotherapy; and sense of humour. To my knowledge, no

rating system notes or controls for these factors. It may indeed not be possible to do so. However, it is crucial to remember that not all deviation from norms is due to psychological factors. For example, many DDSs submitted from Arizona show that participants drew cacti in response to the instruction, "Make a picture of a tree". Sensitive and appropriate research will allow for such human variety.

The value that a single case study has is depth and attention to all aspects and details. Enlarging a sample obviates certain options, for practicality. Would fewer DDss have been contributed if art therapists had to supply video tapes of the sessions? Clearly the answer is, yes. The difficulty for the designer of the rating system, as in all research design, is to decide, sometimes without prior findings, what is the essential data to be collected, and what is to be ignored. Ehrenzweig points out the tendency to ignore or misperceive ambiguous elements in art when one is attempting to understand the art intellectually (1953). As artists these elements are no less important than those that can be grasped -- and psychologically, they may be of paramount import.

Pragmatics, a refusal or inability to conceptualize theory, is used here for short term gain. The shortcoming of a pragmatic approach is that one's findings are not well rooted in theory, with characteristic problems such as unclear basic concepts, and associated problems such as incompletely-

thought-out-measures, or lack of clarity about what percepts constitute reliable representations of actual experience. Also, percepts are not being used in theory construction.

Some of the rating criteria in the DDS system imply the existence of norms from which deviations can be measured. I think here of "idiosyncratic colour", "unusual placement", "tilt", and "integration". It is good to recall that affirming the presence of absolutes in the material world is philosophically problematic, and that art in any case most correctly deals with representation, not replication. As Klee wrote, "Art does not render what is visible, it renders visible". When we see patients' 'tilted' or 'disintegrated' pictures do we only wonder what is 'wrong' with them? Or do we also consider that they are teaching us about their experience of the world?

A further question is, can one work with art noting only observable items that can be described in words? In that perception requires thinking and effort to organize, scan, trace, and explore a picture, in that it is a subjective and interactive process, perhaps the answer is, no. However, Arnheim (1969) asserts that training will not only increase skill at fulfilling certain perceptual goals it actually makes one able to grasp certain percepts for the first time. Despite the circuitous route demanded by perception a perceiver is still able to accomplish a task accurately. Arnheim speaks of the usefulness of such an absolutist, non-contextual

way of seeing "because it facilitates definition, classification, learning, and the use of learning" as well as "consistent thinking" (1969, pp. 45 and 234).

Although it may seem a strange process, an instructed person is capable of perceiving, let us say, a colour apart from its context. With knowledge of the total range of colours available to the artist, one can count how many of the colours have been used -- at least, when the colours are unblended or unmodulated. Admittedly, it is naive to believe that independent factors convey much about the picture as a whole. A model derived from the intellectual, absolutist system that can accommodate the complexity of interrelationships within the picture has yet to be designed -- and perhaps never will. However, as the pictures are constant over time, this can be explored in the future.

It is mentioned above that there are many rating systems in existence but that no one has been used universally in art therapy. The development of new rating scales and new assessment techniques proliferates as a reflection of each 'consumer's' dissatisfaction or lack of familiarity with the available products. Such competition has the negative effect of splintering energy and research into many incompatible and unintegrated parts. Each system has its proponents who usually share similar training and ideology, and who are linked by ties of familiarity and loyalty.

A choice of rating tools becomes somewhat illusory, like choosing between Ford and Chrysler, as Kovel so aptly put it (1981). The competitors for 'the market' use essentially the same theory and practice, and have similar, hidden, ideologies. Like the selection of all paradigms, the consumer's choice of tool is most often based on personal or psychological needs rather than on rational, conscious decision-making (Kuhn, 1962). Such is the case here. Although other published rating systems existed, the DDS rating system was used because I was familiar with it, had been trained in it, helped develop it, and was connected to it by personal and professional ties. Because of learning it first, perhaps I adopted its ideology, by which comparison other rating systems will, by definition, appear lacking.

CHAPTER I, Section E.

Statistical Analysis

The use of statistics has been extant in art therapy since about 1970. It is not widespread. Despite some expression of the need for statistically-oriented research in the art therapy community, most clinicians feel ill-prepared to adopt this approach.

One art therapist who has brought statistics into her research design is Wadeson in her work on depressed patients. In a 1971 article she used, for example, the Wilcoxon matched pairs test. With this tool she tested "the statistical significance of the association of the hypothesized depression characteristics" (p. 199), a rating derived from clinical observation, with spontaneous pictures of 20 mildly and profoundly depressed inpatients.

At about the same time Mosher and Kwiatkowska (1971) investigated family art therapy products by intraclass correlation coefficients and comparison of means. The former statistical tool was used to test inter-rater reliability in the blind scoring of the art made by 22 families with no, one, or two schizophrenic twins. Comparison of means resulted in qualitative judgements of the art of subjects, e.g., "the

mother . . . did substantially worse than her spouse" (p. 176).

In 1973, Ulman and Levy subjected work on diagnostic judgments on art to simple analysis of variance. It was used to determine if any group, among art therapists and other less specialized participants, had a statistically significant advantage -- that is, was superior -- in making diagnostic judgements from slides of paintings.

McIntyre and Wright (1979) in a study of Kinetic Family Drawings in depressed patients produced one of the few interrater reliability studies in art therapy via product moment correlations. Also, on an ordinal drawing rating scale they used Wilcoxon matched pairs signed rank tests. This was used to discriminate depressed from non-depressed subjects' art, employing a rating scale based in part on Wadeson's findings.

The DDS study of 1988 by Cohen et al., used multiple regression analysis of the linear probability model, as does this study. This approach was chosen as a way to predict degree of belongingness of each DDS to other diagnostic groups in the study. By so doing, a profile of statistically significant observable items in the art was compiled for Controls, schizophrenia, dsythymia, and depression.

Limitations of Statistical Analysis

The use of multiple regression in the DDS research has been criticized for being an unnecessarily sensitive and sophisticated analysis for this period in art therapy research (Wise, 1988). Further, certain ways of creating the equations can strain the sample and thus weaken the results. This latter risk was avoided in this study by successive tests that progressively limited and varied the criteria.

CHAPTER I, Section F.

The Diagnostic Drawing Series

This is a three drawing series developed in Virginia by two art therapists, Barry Cohen and Barbara Lesowitz (c. 1981). The need was felt for a resource library of artwork by psychiatric patients to explore further certain diagnostically-related assertions then current in the literature (Wadeson, 1980). In discussion it was established that it would be necessary to (1) collect original artwork, not reproductions; (2) assure accuracy of psychiatric diagnosis, as much as possible; and (3) control for effects that could be a major influence on the artwork. Such groups could be: group vs. individual settings; structured vs. unstructured art exercise; different art materials; and drug use.

It was determined that standardized instruction and art media were needed. A three drawing series consisting of a free picture, a tree picture, and a feeling state picture was designed. The materials are 18 x 24 inch, good quality white drawing paper and twelve colors of chalk pastels. For details, see Appendix E.

The protocol for this art interview calls for the free picture first, which is an acknowledgement of the significance

of "the first picture in therapy" (Shoemaker), as well as the tradition of free drawing in art therapy. The free picture allows some comparison to be made to free, expressive drawings made outside the structured art interview. The second picture is a tree drawing which is the most highly structured component of the Series and has historical and interpretive connection to previous investigations of tree drawings (Koch; Bolander; Buck). The third picture is semi-structured -- a request for a picture that represents how the patient is feeling. Thus, the client is involved directly in 'telling' the clinician how s/he is feeling, rather than leaving this important information on current or chronic emotional state to the clinician's inference (or projection). This represents a new step in structured art interviews, but again is a link to the body of art therapy practice. It is a theme that many clinicians use often.

Art therapists particularly, but also psychologists and others, have been familiarized with the DDS through professional courses. It is used most in the United States where it is taught in some art therapy training programs. Its predominant use appears to be in research at this time.

The DDS was used for this study because it is the only art therapy assessment tool with a resource library that could provide a substantial number of pre-existing samples of BPD, schizophrenic, and Control artwork. It is the only art therapy assessment to have fully standardized instructions and media,

as well as procedures to attempt to control for drug use and correct diagnosis. Technical support in the form of an existing method of rating and statistical analysis was also felt to be a benefit to this study.

Limitations of the Diagnostic Drawing Series

It is acknowledged that use of the DDS for this research, like the DDS rating guide, was influenced by arational factors such as familiarity (as Kuhn, 1962, asserts is the pattern determining adoption of paradigms in the sciences). However, subsequently introducing the tool to peers, and in clinical use, it must also be said it has proven worthy of that support.

The DDS protocol does not specify whether the DDS is to be drawn on a tabletop or an easel, nor how to situate the art when rating it. This may be seen by some to be problematic. Both the Kwiatkowska and Ulman assessments specify easels or walls are to be used for art making. The Kwiatkowska specifies the art is to be looked at from a distance of two to four feet. In discussing this issue (Cohen et al., 1985; Cohen and Mills, 1988) some art therapists have said they do not have easels, or that using a wall or an easel is inconvenient. It is probable all DDSs are done on tabletops; all are rated on tabletops.

Occasionally, a client will be abashed by the good quality of the paper used, and will request newsprint, feeling their marks will not be "good enough" or will be a waste of the "nice" paper. More often, the size of the paper seems to be intimidating, and clients will ask if they can fold it. Sometimes, the chalks garner complaints, mostly because they are "messy" and cannot be erased. Some clients request the use of a pencil first, to sketch. In all these cases, an attempt is made to follow the protocol. If the client still deviates from the protocol (e.g. produces a pencil and begins to draw) the DDS would not be acceptable in the research sample. I have never heard of such a case, however, in many discussions of DDS use.

Tissues are sometimes offered clients who have concerns about mess or blending, but this is not specified in the protocol.

The protocol calls for the presentation of the release form after drawing and discussion is complete. In this form the protccol has been approved by the committees for research with human subjects in many institutions. An argument could be made that it is ethically preferable to introduce this material before or at the beginning of the session.

An advantage of gray paper (the Ulman assessment) is that white and yellow marks are more easily seen. On the other hand, one then loses the clinically-useful information that proceeds from the use of white chalk on white paper.

The recommended brand of chalks does not have a violet in the required twelve colour pack. Some participants alter their supplies, adding a violet from another selection of the same brand and removing a dull yellow (which leaves a bright yellow and a peach/'flesh' colour in the box). However, this is not addressed in the protocol. This has important implications for the usefulness of the DDS resource library for colour researchers.

A single coding for patients and Controls should have been used. The present design offers an unnecessary piece of information that may bias the rater.

CHAPTER I, Section G

Investigations of Borderline Art

About twenty published references have been found in English on the subject of the artwork of borderlines. (The 1973 paper by Fink was inadvertantly omitted). I include in this survey terms accepted to be roughly equivalent (see above): As-if; borderline syndrome; borderline psychotic; prepsychotic; latent schizophrenic; and character disorder. Here, as elsewhere in this paper, the terms 'BPD' and 'borderline' are used with specificity, and not interchangeably. When 'BPD' is employed it refers only to the DSM-III or DSM-III-R diagnosis of Borderline Personality Disorder.

Five of these references are on the artwork of borderline children only. Nine of the references have no description of the art itself. They may describe the art-making process, or they may label the art with value-weighted words only, terms which are not defined and whose meaning cannot be assumed with any degree of certainty. By this I mean words such as: "incoherent" (Tadi and Trixler, 1980); "painfully barren" (Mottai, 1982), "binding" (Bergland, 1982), "futility" (Hammer, 1975), and "ineffective" (Austin, 1980). Lacking

clear definition, these descriptions offer only a hint at the content or other material that prompted them.

Ten of the papers are by art therapists. Five are by psychoanalysts. Three are by psychologists. Two are by psychiatrists.

Published investigation of borderline art includes use of spontaneous art, modelling, structured 1:1 art therapy, and responses to projective drawing tasks.

Table I has been put together for the reader's benefit to attempt to convey salient points and commonalities in the diverse sources on borderline art. It indicates which sources are art therapy investigations, which are solely on children, how many cases the author(s) observed, observations of process, and observations regarding the products. The entry 'Jadi and Trixler' combines elements from two different papers by these authors. Both published and unpublished sources are included.

Both Hammer (1975) and Kramer (1979) have stated that borderline art looks very much like the art of schizophrenics. Kramer's comparison is based on child borderlines and adult schizophrenics. The support for this position is that both borderlines and schizophrenics show in their art a distorted perception of reality. Others also note distortion of reality in borderline art, but do not explicitly link it to schizophrenic phenomena (Cavallo and Robbins, 1980; Austin, 1980; Obernbreit, 1985).

Hammer's position is that reality is represented by, for example, a groundline drawn in a certain manner with figures firmly in contact with it. Borderline art lacks both these elements, its groundline inclusion being unreliable or execution "choppy," or contact with the figures "tenuous" (p. 179).

Human figures are noted by many investigators to be markedly distorted (Furer, 1977; Obernbreit, 1985). Although the Person drawing of borderline H-T-Ps has been described as carrying less negative emotion than the house or tree, asking for a portrayal of environmental stress (e.g., Draw a Person in the Rain) will evoke great disorganization in figure drawings (Landisberg, 1975). Hammer attributes sexlessness or increasing loss of human features in art over the course of increasing illness, to feelings of depersonalization suffered by the borderline (1975). Depictions of bodily mutilation are noted (Overdorff, 1988; Furer, 1977). Perception of objects with defined boundaries is poor, manifested in art by lack of awareness of the distinctions behind 'inner' and 'outer.' People are drawn shaded, blurred, or fused (Jadi and Trixler, 1981; Wishnie, 1975). This is due to poor ego boundaries (Cavallo and Robbins, 1980). Bassin and her co-authors (1980) cite a case of a young borderline woman who, asked to draw a picture of herself and then a picture of her mother, drew a single picture showing herself inside the body of her mother. Overdorff (1988) also notes themes of sym-

biosis. In a case of psychoanalytic treatment of a 9 year-old girl with an as-if state of personality organization (formerly psychotic), Furer noted the figure drawings became more expressive and less rigid as the patient recovered (1977).

The term 'fragmented' can be understood in many different ways. It has been used by Kramer (1979) and Landisberg (1975) to describe borderline art. In what may be related phenomena, Cavallo and Robbins note use of part forms or images by a borderline adolescent boy -- for example, a drawing of a cat's head, devoid of body (1980).

In the House and Tree, Landisberg notes the presence of "intense, negatively-toned feelings" but does not specify how this judgment has been made (p. 618). Mood is linked meaningfully, if arbitrarily, to colour by the borderline child. Increased use of colour will yield increased psychic disorganization (Kramer, 1979). In some borderline work, colour predominates over form (Obernbreit, 1985).

Overdorff (1988) lists themes of alienation, despair, rage, and dependency in borderline art, which seem to reflect Mottai's (1982, p. 19) observation of "narrow, rigid, unmodulated affects" in the art. Cavallo and Robbins (1980) note primitive, oral-aggressive, and paranoid fantasies in the content of borderline art.

Several authors note disorganization, sometimes subtle, in the art of borderlines (Landisberg, 1975). This seems to

be in response to negative emotion or anxiety-provoking material, and the attempt is made to control the degree of disorganization. Borderlines tend to respond that "a house disordered" is their Most Unpleasant Concept (Harrower, 1975). Similarly, a defense against uncontrolled fantasy is by heavy roof lines in the house of the H-T-P (Hammer, 1975). They experience difficulty organizing space in composition, and compositions gain complexity only as recovery progresses (Furer, 1977). They tend to rely on simple compositional solutions that mirror their inner realities like splitting the picture plane vertically or diagonally into diametrically opposed visual messages (Overdorff, 1988). Borderlines tend to be overwhelmed and frustrated, consequently, by unstructured art techniques or media. In this regard, Austin mentions collage and string art as unsuitable due to borderlines' "lack of integrative ability" (1980, p. 24).

It may be in such situations that the observed tendencies toward perseveration, overworking, smudging, and regression occur (Overdorff, 1988; Austin, 1980).

In related instances of disorganization, difficulty coping with limited time (Obernbreit, 1985) and art supplies (Robbins and Sibley, 1976) were noted.

Pao (1969) raised the possibility that borderlines rely on and are sensitive to visual information to an unusual degree. Borderlines seem to like making art and appear to respond well to art therapy, working with much energy and

intensity of feeling (Obernbreit, 1985; Wishnie, 1975). It is suggested that this, and the impression of creative talent in the borderline, is an illusion (Deutch, 1942; Katan, 1958). Art-making is limited in scope to a reliance on copying and imitation, and enthusiasm vanishes at the end of the relationship with the person identified as 'artistic', for example, the art therapist (Cavallo and Robbins, 1980). Intense involvement in art-making is a function of psychological need. It helps the borderline defend against fears aroused in relationships, to adapt to others, and eventually to aid relating and in building a sense of self (Skolnikoff, 1976). Ultimately, the character disorder is inordinately frustrated by or has little faith in his or her creative abilities, and produces work only fitfully, if at all (Greenson, 1958).

Is a client truly symbolizing if he or she relies on stereotypic forms or cliches, like bleeding hearts, over a long period of time, as reported by Cavallo and Robbins (1980)? Authors Fast (1975), Austin (1980), and Jadi and Trixler (1980) state that borderlines can use art, or symbolic forms, well. Genuine interest and pleasure was noted in clay modeling. Clay work was also reported to evoke a sense of identity.

Overdorff (1988) notes the use of question marks, crossroads, and so on as expressions of ambivalence. Wishnie comments on the use of curvilinear forms and "bright pastel" colours (1975, p. 43).

Although this study was primarily designed to compare drawings of BPDs to Controls and other psychiatric disorders using a rating scale, I will also make use of the literature in comparison. It will be a secondary feature of the paper to compare the literature findings on borderlines to the DDSs of BPDs.

Hypotheses

Some impressions of the above authors have been transformed into seven hypotheses that can be tested using the DDS rating system. All quotations below are from the Rating Guide. The reader is urged to see Appendix D for the full definition.

The hypotheses are limited to those that can be expressed and tested in the terms of the DDS rating scale. They have also been shaped to become meaningful and to be put into a comparative context with other diagnoses. For example, word inclusion is noted by Gerber and Jacobson. Existing DDS research suggests that word inclusion is found in schizophrenia (Cohen et al., 1984). Therefore, to test whether words are included in pictures by BPDs more than by other patients and Controls, and to see how that frequency compares to Schizophrenics, would hold more interest and import than simply whether or not any BPD art included words.

TABLE I

LITERATURE REVIEW OF BORDERLINE ART

	AUSTIN	BASSIN ET AL.	BERGLAND	CAVALLO & ROBBINS	FAST	FURER	GANTT & HOWIE	GERBER & JACOBSON	HAMMER	JADI & TRIXLER	KATAN	KRAMER	LANDISBERG	LESOWITZ	MOTTAI	OBERNBREIT	ROBBINS & SIBLEY	SKOLNIKOFF	WISHNIE
Art therapy	●	●	●	●			●	●				●		●	●	●	●		
Child art				●	●	●						●			●				
No. of cases, where known	3	1	1	1	1	1	?	70 dwgs ? pts		1, ?									
PROCESS Intense involvement in art-making					●											●			●
Gives sense of identity; identifying with art piece	●				●														
Gives pleasure (in some circumstances)					●														
Investment attributable to sig. relationship with someone associated with art; or due to seeking approval; art as a means of relating better					●						●							●	

TABLE I, CONTINUED

LITERATURE REVIEW OF BORDERLINE ART

	AUSTIN	BASSIN ET AL.	BERGLAND	CAVALLO & ROBBINS	FAST	FURER	GANTT & HOWIE	GERBER & JACOBSON	HAMMER	JADI & TRIKLER	KATAN	KRAMER	LANDISBERG	LESOWITZ	MOTTAI	OBERNBREIT	ROBBINS & SIBLEY	SKOLNIKOFF	WISHNIE
Squandering art supplies																	●		
Copying; imitating				●							●								
Has trouble with realistic portrayals	●															●			
Becomes more disorganized psychically when using color												●							
Becomes more disorganized when portraying stressful situation									●										
Has trouble with time							●									●			
Has trouble with composition						●	●							●					
Has trouble with unstructured materials	●																		

TABLE I, CONTINUED

LITERATURE REVIEW OF BORDERLINE ART

	AUSTIN	BASSIN ET AL.	BERGLAND	CAVALLO & ROBBINS	FAST	FURER	GANTT & HOWIE	GERBER & JACOBSON	HAMMER	JADI & TRIXLER	KATAN	KRAMER	LANDISBERG	LESOWITZ	MOTTAI	OBERNBREIT	ROBBINS & SIBLEY	SKOLNIKOFF	WISHNIE
Perseveration	●															●			
Artwork left unfinished	●																		
Artwork destroyed												●?				●			
PRODUCT Distortion of reality (especially human figures)	●			●		●		●	●			●		●		●			
Use of color idiosyncratic, arbitrary							●					●							
Blurred boundaries, fused forms, lacks awareness of "inner" and "outer" distinctions		●						●		●				●		●			●
"Intense" "Dramatic"							●	●					●						

TABLE I, CONTINUED

LITERATURE REVIEW OF BORDERLINE ART

	AUSTIN	BASSIN ET AL.	BERGLAND	CAVALLO & ROBBINS	FAST	FURER	GANTT & HOWIE	GERBER & JACOBSON	HAMMER	JADI & TRIXLER	KATAN	KRAMER	LANDISBERG	LESOWITZ	MOTTA	OBERNBREIT	ROBBINS & SIBLEY	SKOLNIKOFF	WISHNIE
"Fragmented" "Disorganized" and other value-laden descriptors implying "inadequate" or "unpleasant"			●	●			●		●			●	●						
"Rigidity"						●						●							
Curvilinear lines"																			●
"Slashing lines"								●											
Use of "bright pastel" colors																			●
Use of red and black								●						●					
Word inclusion								●						●		●			
Picture plane is "split"							●	●						●					
"Choppy or sporadically drawn groundline"									●										

TABLE I, CONTINUED

LITERATURE REVIEW OF BORDERLINE ART

	AUSTIN	BASSIN ET AL.	BERGLAND	CAVALLO & ROBBINS	FAST	FURER	GANTT & HOWIE	GERBER & JACOBSON	HAMMER	JADI & TRIXLER	KATAN	KRAMER	LANDISBERG	LESOWITZ	MOTTAI	OBERNBREIT	ROBBINS & SIBLEY	SKOLNIKOFF	WISHNIE
Part objects, part forms, body parts, clichés				●															
Empty space, "emptiness"							●	●						●	●				
Used symbolic form well	●									●									
Themes of death, pain, blood, etc.				●			●	●						●					

Sometimes the hypothesis has been shaped by reference to clinical or theoretical backgrounds, rather than to previous research. For example, Hammer relates the borderline lack of adequate groundlines, theoretically, to poor reality testing. He makes explicit the connection of borderline to schizophrenic, emphasizing the transcient latent similarities. Therefore, one might propose that this study's BPDs use groundlines less realistically than all other patients, but more realistically than Schizophrenics.

Some interactive items, like "becomes more disorganized when using colour" can be shaped, with difficulty, into a testable hypothesis within this model. However, such complexity is beyond the scope of this secondary element of the study.

Here is the list of hypotheses.

That blending ("two or more colours combined to create a third, distinct colour, comprising at least two square inches") will be present more than in other psychiatric disorders, as a function of overworking drawings to the point of indistinctness. However, blending proper can be expected less than in the drawings of Controls where its use is characteristic.

That idiosyncratic colour ("any colour used to depict a representational image which is unnatural for that image depicted") will be present more than in other psychiatric disorders with the exception of schizophrenia.

That predominantly biomorphic forms will be used in abstractions, and curvilinear lines will be used in representational pictures. In abstraction, "shapes and lines of an organic nature, emphasized by flowing or curvilinear boundaries (e.g., a scribble). NOTE: Rate spirals as biomorphic." In representational pictures, "comprised primarily of curved lines, arcs."

That a groundline will be present less than in other psychiatric disorders, excluding schizophrenics. "A horizontal element, establishing a baseline (other than the page edge) in a representational picture that denotes the surface upon which a figure or object is resting . . . A table top in a still life . . . if the line drawn is six inches or more long. In the TREE picture, the groundline must extend at least one inch on BOTH sides of the trunk . . . roots alone do not signify a groundline. NOTE: A fence and water horizon can be a groundline in a representational picture or landscape."

Word inclusion's hypothesis is discussed above. This is "any writing or letters/numbers (including signature) on the picture".

A limitation of this rating system is that many other perceptions from the literature cannot be applied to it.

It should be borne in mind that some of the groups compared in order to test hypotheses are so small that their results may be questionable. In this category are bipolar,

depressed patients of whom there are eight, and bipolar, manic patients of whom there are thirteen. One person of a sample of eight who includes a word in one picture makes it appear that 4% will tend to include words in pictures.

The results of testing these hypotheses are presented in Table X, with results from both tabulations and multiple regressions. Table XI contains a summary of all results.

Comments on the Slides and Art

Fifteen slides are included in this paper which are reproductions of the DDSs of five BPD patients. An image is oriented as its creator intended when its code number is facing the viewer on the upper right of the mount. The first number is the code for the participating institution. The second number is the code for that particular patient. The third number denotes whether it is the first, second, or third picture of the DDS. I will review here important features of the pictures for the reader who may not have access to the slides, as well as qualities that may not be apparent in reproduction.

The first DDS is by patient 000-11, a 39-year-old Caucasian woman living in Virginia. The rating of her pictures can be seen in Appendix A(i). The first picture is a faintly rendered, medium-sized yellow sun, above and to the left of the page center. Thirteen pinwheel-like spokes curve

around the sun, count rclockwise. A little more pressure was exerted in picture 2. It is possibly an apple tree, and has no groundline. Note that the criteria are fulfilled for "falling apart" (Appendix D): ". . . disconnected . . . relationship of the trunk to the branches, as well as subsidiary branches to the main branches." The third picture is a horizontal blue line.

The second DDS is by patient 28-20. The same code number on the front of the pictures, lower right, is by a foreign hand; a study participant erred when attempting to follow the instructions for labelling. This patient is a 24-year-old woman from Louisiana, additionally diagnosed with manic-depressive psychosis, depressed mood (Table II). A rating of her pictures can be seen in Appendix A (ii). The first picture is a landscape with a stream, large sun, and many small trees. A seated, tilted man with a handlebar moustache has a fish on the end of his rod-and-reel. The tree picture is drawn only with brown lines and has radiating, enclosed sword or lightning-bolt shaped branches. The rater decided the criteria for groundline presence was not fulfilled, interpreting the somewhat ambiguous lines at the base of the trunk to be roots, which "alone [sic] do not signify a groundline," the latter having to "extend at least one inch on BOTH sides of the trunk" (Appendix D). The feeling picture is a black, predominantly line use only, outlined figure from the hips, up. Arms open wide and grinning broadly, it is

macabre because of the blackened eye sockets, missing teeth, torn clothes, scars on arms, neck, and face, and what seem to be hairs standing straight out from its scalp. It cannot be said with certainty if it is intended to be male or female, a living human, corpse, or mannequin. The distortion of the hands is noteworthy.

The third DDS is by patient 35-10, a 20-year-old man in New York State (rating form: Appendix Aiii). He used broad sweeps of the chalk on its side, in red, green, blue, and blac', to create a full page symmetrical abstract picture of forms radiating from and impinging on a central diamond shape. The tree picture has a billowing, cloud-like crown and markedly split trunk. The feeling picture has three visual statements that seem separate because of colour use, under a strip of sky-like black at the top of the page. The three forms are: fire; lightning bolt; and, as in picture 1, four black arrows pointing at a central form.

The fourth DDS is by patient 116-1, a 15-year-old male at a different New York state institution. He also carries the diagnosis of Conduct Disorder, socialized aggressive (Table II). A completed Drawing Inquiry was submitted for this patient which I shall use here, but was not seen by the rater. He entitled the first picture in black line, "Stretcho," as it is of a "cartoon character", a "superhero who can change shape." The male figure is young and muscular, and appears to be wearing only glasses. The neck and head are

the length of the whole body, and curve out and back toward the figure's hips. Genitals are suggested. The tree, a "weeping willow," has a curving, clawlike branch configuration with a scribbled crown, and a split or hole in the trunk where "squirrels live." There is a small line like a false start, upper right. The feeling picture is entitled "Broken," featuring a "realistic heart" broken by the scalpel and black blob. The patient said the black "meant guilt and sadness," that he was the heart and "someone else" was the "black blob." Part of the heart is shaded in black. The effect in the original could only have been achieved by indirect means, that is, not by the artist but by the art being carried folded so that the black from the blob transferred to the heart area. The picture is rated as including "virtual movement" due to the "dripping blood" (Appendix D).

The fifth DDS is by patient 171-1, a 32-year-old female inpatient at NIMH. The first picture contains what appears, in rating, to be a word ("RAW"), lower left. It is a colourful, full, dynamic abstraction with "implied movement": "movement is suggested but not literally depicted." The second picture is rated as "unrecognizable": "The image, reviewed out of context of being the TREE picture, would not be recognized as a gestalt of a tree." The patient said this was the aerial view of a tree with a cut-off top, the extending flesh-coloured forms being branches. She had said, "Oh, good, structure!" when given the instructions for the second

picture (Appendix E). Picture 3 shows a greater reliance on line, defined as "linear elements", smudging, and the white space of the page, but otherwise has similarities to Picture 1. But as opposed to Picture 1's "integration" ("elements are arranged to suggest an underlying organization or structure. PRESENCE OF THEMATIC OR GRAPHIC [VISUAL] COHERENCE"), picture 3 is rated "disorganized/disintegrated," its opposite.

CHAPTER II, METHOD

Section A. Subjects

The BPD subjects of this study were 32 adolescents and adults, aged 13 through 45. There were 25 females and 7 males. All have been diagnosed as having Borderline Personality Disorder according to the definition of the DSM-III. Each subject was diagnosed by two psychiatrists on the basis of separate, independent interviews. Only if the two psychiatrists' diagnoses were the same, was the subject included in this study. Personality disorders other than BPD were not included in this study except where a subject carries such a diagnostic label in addition to the diagnosis of Borderline Personality Disorder. Such personality disorders were: Borderline Personality Organization; Avoidant Personality Disorder; Schizotypal Personality Disorder; Paranoid Personality Disorder; Histrionic Personality Disorder; Antisocial Personality Disorder; Passive-Aggressive Personality Disorder; Schizoid Personality Disorder; Narcissistic Personality Disorder; Dependent Personality Disorder; Compulsive Personality Disorder; and Atypical, Mixed or Other Personality Disorder).

Seven of the subjects have one or more Axis I diagnoses in addition to an Axis II diagnosis of BPD. Six of the subjects have one or more Axis II diagnoses in addition to BPD. Ten subjects in all have some diagnosis in addition to BPD, there being overlap between the two groups. Most of these ten have two diagnoses, one being BPD. However, for purposes of illustration, it will be mentioned that one subject had five concurrent diagnoses of which four were various personality disorders (for details, see Table II).

Diagnoses in addition to BPD in the study are shown in Figure I. They include various personality disorders, schizophrenia, dissociative disorder, anorexia, and affective disorders. The latter category is strongly represented in the diagnoses of this group.

The subjects participated in this study during inpatient psychiatric treatment in certain hospitals in the United States. The drawings in this study came from institutions in Louisiana, Arizona, Kentucky, New York, Iowa, and Virginia. Seven of the subjects, from various places in America, were participating in an inpatient study by Gardner and Cowdry (1985) at the National Institute of Mental Health in Maryland.

Variables such as sex, age, and general place of residence are noted on all participants (patients and Controls) in DDS studies. Race is sometimes noted by the participating art therapists but this is not part of the DDS protocol.

FIGURE 1

CHARACTERISTICS OF THE BPD SAMPLE

N = 32

ALL ARE DIAGNOSED BPD

25 ARE FEMALE
7 ARE MALE

1. SCHIZOPHRENIA, CHRONIC, UNDIFFERENTIATED
2. SUSPECTED MULTIPLE PERSONALITY DISORDER
3. HISTRIONIC PERSONALITY DISORDER
4. AVOIDANT PERSONALITY DISORDER
5. SCHIZOTYPAL PERSONALITY DISORDER
6. PARANOID PERSONALITY DISORDER
7. ANOREXIA NERVOSA
8. MAJOR DEPRESSION
9. ATYPICAL DEPRESSION
10. BIPOLAR AFFECTIVE DISORDER
11. MIXED SUBSTANCE ABUSE

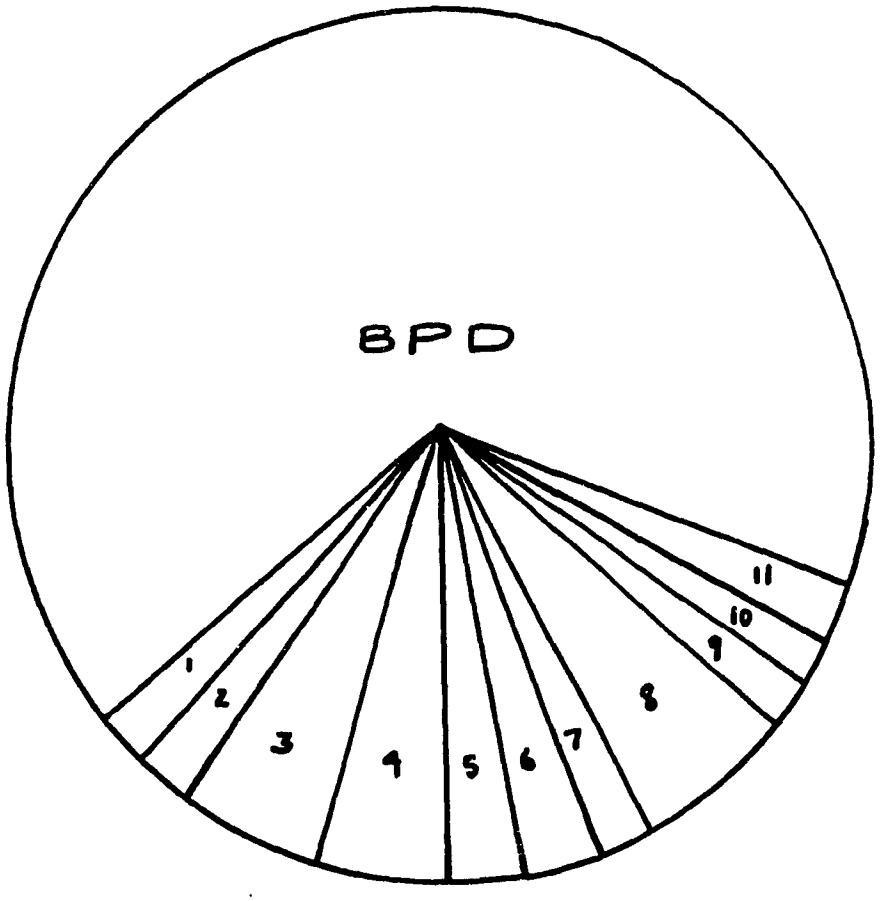

TABLE II

LIST OF DIAGNOSES IN ADDITION TO BPD		
1) 2 - 24 1984	17-year old female	
Axis I	-	Schizophrenia, Chronic Undifferentiated Mixed Substance Abuse
Axis II	-	BPD
2) 2 - 31 - 2	30-year old female	
Axis I	-	Major depressive episode
Axis II	-	BPD
3) 28 - 12	29-year old female	
Axis II	-	BPD Anorexia nervosa
4) 28 -20 1985	24-year old female	
Axis I	-	Bipolar Disorder, Depression with Psychotic Features
Axis II	-	BPD

TABLE II (CONTINUED)

LIST OF DIAGNOSES IN ADDITION TO BPD (CONTINUED)		
5)	116 - A 1986	15-year old male
	Axis II -	BPD
		Conduct Disorder, Socialized, Aggressive
6)	171 - 002	41-year old female
	Axis I -	Major depression
	Axis II -	BPD
7)	171 - 003	22-year old female
	Axis II -	BPD
		Histrionic Personality Disorder
8)	171 - 004	35-year old female
	Axis I -	Bipolar Disorder
	Axis II -	BPD
		Histrionic Personality Disorder

TABLE II (CONTINUED)

LIST OF DIAGNOSES IN ADDITION TO BPD (CONTINUED)			
9)	171 - 005	26-year old female	
	Axis I	-	Major Depression
	Axis II	-	BPD
			Paranoid Personality Disorder
			Schizotypal Personality Disorder
			Avoidant Personality Disorder
10)	171 - 006	26-year old male	
	Axis I	-	Atypical Depression
	Axis II	-	BPD
			Avoidant Personality Disorder

Characteristics such as presenting problem, level of education, and so on are not noted.

In previous DDS work, the term "non-hospitalized" has been used to identify subjects who are not psychiatric patients. It was felt the term "normal" was inappropriate statistically because one could not be sure that this group was a fair sampling of the population, etc. One could only assert that they were not hospitalized psychiatrically at the time of their participation in the study. In my work I learned that the usual and acceptable term in psychiatric studies for the same type of group is "Control" (Wise, 1988). Thus, in this study the non-hospitalized group is referred to as the Control group.

Controls' occupations, in lieu of a diagnosis, are provided. The fifty-four Controls' occupations included expressive therapists, activity therapists, psychiatrists, and so on, but chiefly psychiatric nurses. The Control group does not include art therapists, and represents very few unskilled or semi-skilled workers. Thus, the Control group is heavily skewed.

For purposes of the current study, institutions with BPD subjects were sent a special questionnaire (see Appendix B) for further information on medical history, self-harm history, addiction history, diagnostic changes, and subjective state during the DDS art interviews. This additional data has been

collected on about one-third of the BPD subjects. Self-harm histories are presented in Table IX.

Section B. Design

The structured art interview was done in the first three, or at most first five days of admission. This represented an attempt to control for the effects of drugs used in psychiatric treatment. Psychopharmacology was felt to be an important consideration in research design because of art therapy research on the effects of certain drug regimens on art-making (Perez and Marcus-Ofseyer, 1978; later supported by Kramer and Iager, 1984). However, as a patient may be already taking a prescribed drug regularly at the time of admission, this does not necessarily mean a drug-free sample was obtained. In the case of the seven NIMH participants, who were required to be drug-free before entering the study, this three or five day rule was not observed because it was not necessary. The art interview was generally performed after the two psychiatric interviews had taken place.

As described in more detail in Appendix E, during the 1:1 art interview, the art therapist administers the Diagnostic Drawing Series, explains the nature of the research, and obtains a signed consent form (Appendix C) from the participant. The drawings are discussed, sometimes following the format of the Drawing Inquiry (Appendix G) at the art thera-

pist's discretion. Art therapists have reported that participants find the art interview to be most helpful, and that they themselves find the process helps define priorities for therapeutic work.

The DDS (sprayed with fixative), consent form, response sheets from psychiatrists, and Master List (of age, code number, sex, and diagnoses), and optional Drawing Inquiry form are mailed by participating institutions to the DDS Archives in Alexandria, Virginia. All material is filed by the code name of the participating institution, not by diagnosis.

The drawings are then rated by a person trained by Barry Cohen in the quantifying, 'structural' approach of the DDS Rating Guide. The training given in 1985-86 to a non-art therapy student of McWhinnie (Wadlington and McWhinnie, 1973), for example, consisted of two months of reviewing and rewriting the Rating Guide several times while rating DDSs solo and concurrently with Cohen. The interrater reliability achieved after this intensive teaching is discussed below.

Almost all that the rater knows of the artist when rating is which way the paper was oriented, horizontally or vertically. As the participant can orient the paper as s/he chooses, the code number when placed on the back of the art is written so as to indicate which way each drawing is to be viewed. The code also shows whether the participant was a "Control" or inpatient. The research design would have been improved with the elimination of this unnecessary step. Finally, the code

number on the back of the art says whether it is drawing number one, two, or three of the DDS.

The rater does not know the artist's age, sex, diagnosis, process, associations, or even what part of the country s/he is from.

The rating is done on a specially designed and printed page (Appendices A) that can be 'read' mechanically for data input. It is primarily a "yes/no" rating. The rater uses a Rating Guide at all times to be sure rating decisions are as consistent as possible. Other tools such as rulers are used when necessary. For example, the rater must determine if Blending is present on Picture 1. The definition is checked (see Appendix D). Measuring may be necessary. The rater, having decided in this case Blending is absent, fills in the appropriate square. This procedure is followed for 3 pictures and 23 such definitions. As some definitions can yield more than two options (e.g., Line Quality/Pressure can be Light or Medium or Heavy), an actual sixty-one options are considered per picture.

The rating sheets are entered mechanically for tabulations. From this form the information (or 'data') can be re-entered for analysis by the Statistics Package for the Social Sciences.

In the case of this study, original rating sheets were selected, and used to create a new BPD file. My purpose was to look at the BPD aspect and to set aside other diagnoses

this sample might carry. Various separate tests (or 'runs') were done on the computer:

1) all character disorders compared to (or 'regressed against') all other subjects in the database (repository of all information on all pictures by all subjects in entire DDS study)
2) the BPD file, i.e., all BPDs compared to all other subjects in the database
3) BPDs compared to the 'clean' database (i.e., repository of all DDS picture information minus all non-BPD character disordered subjects, minus all medical or alcoholic subjects, minus dual-diagnosed subjects who are now present in BPD file only)
4) BPDs compared to the Controls (C = 54) and the Schizophrenics (Sch = 25), files respectively
5) BPDs compared to Controls and Thought Disorders (new file = 31 combining Schizophreniform, Paranoid Schizophrenics, Schizophrenics) and Affective Disorders (new file = 107, combining Bipolar Depressed, Bipolar Manic, Dysthymic, Major Depression) respectively
6) Controls compared to 'clean' database
7) Schizophrenics compared to 'clean' database
8) Many small groups of regressors (selected defined qualities) from BPD compared to Controls and Thought Disorders.

The technique of multiple regression was chosen to predict 'degree of belongingness' in each diagnostic category. It could identify elements that can be looked for in each picture of the DDS that are statistically significant for BPDs and for no other diagnostic group. Without this comparison, one could not assert that the finding that this group tended to draw a particular element in a DDS holds much potential for meaning -- for, any group might have the same drawing tendency.

The Control, Thought Disorder, and Affective Disorder samples were selected to be exposed to the same statistical procedures in order to compare results. They were selected because the theoretical work on borderlines suggests a special affinity between the four groups, clinically.

The central question of this study is "what does borderline art look like?" This query leads, essentially, to a normative study, one to provide a standard from which deviation or change in graphic productions can be measured, or one to which other art can be compared. The standard is based on norms within a given group -- here, BPDs. One hopes one's sample or group of BPDs is representative of all BPDs and therefore renders the conclusions valid for all BPDs. One must also consider that comparing pre-DSM-III borderlines with post-DSM-III BPDs may be misleading. Also, one wonders to what degree can a study of the DDSs of these BPDs of the 1980s be meaningfully compared to clinical observations of a

borderline's spontaneous art in the 1970s. Finally, one must look at the possibility that the tests may be nonspecific with poor validity. They may not measure 'borderlineness' as much as, for example, a history of sexual abuse.

The design of the DDS study (Cohen et al., 1988) which this study follows, proposes to explore norms by looking for patterns in elements of structure as a way to link the artist and the pictures to the psychiatric diagnosis. Its particular question is, what is the probability that this subject's art 'belongs to' (looks more like) a given diagnostic group's art?

To do this using the technique of multiple regression analysis of the linear probability model, equations are determined. The equations contain many variables; each is altered to reflect whether a given picture has a given quality or not. These variables are the categories of the rating guide (Appendix D), are listed on the Tabulations, and are the Regressors (or, that which is compared) of Table III. On different Runs or Tests (computer trials), different equations were used with different numbers and choices of regressors (see Table III). This is important as each change affects the power of the equation to discern error, probability, etc. Limitations of the size of the equation were imposed by the available computer.

TABLE III

CHARACTERISTICS OF RUNS

Test 1

BPD - 3 pictures separate - 120 regressors - 334 cases

Range of multiple R	.42192	-	.49000
Range of R square	.17802	-	.24010
Range of Adj. R square	.06890	-	.14800
Range of standard error	.28442	-	.27208
Range of F	1.63260	-	2.60675
Range of signif. F	.0132	-	.0000

Test 2

BPD - 3 pictures combined - 120 regresors - 334 cases

Multiple R	.61965
R square	.38397
Adj. R square	.21703
Standard error	.26083
F	2.30002
Sig. F	.0000

TABLE III (CONTINUED)

CHARACTERISTICS OF RUNS, (CONTINUED)

Test 3

BPD - 3 pictures combined - 26 regresors - 334 cases

Multiple R	.48808
R square	.23822
Adj. R square	.19469
Standard error	.26452
F	5.47264
Sig. F	0.0

Test 4

BPD - 3 pictures combined - 10 regresors - 227 cases (excluded Head Injuries from data base as non-psychiatric; excluded Alcoholics from database as too potentially similar to character disorders).

Multiple R	.44761
R square	.20036
Adj. R square	.17560
Standard error	.34210
F	8.09300
Sig. F	0.0

TABLE III (CONTINUED)

CHARACTERISTICS OF RUNS, (CONTINUED)

Test 5

BPD - 3 pictures combined - 12 regresors - 227 cases (Thought Disorders collapsed, and Affective Disorder collapsed)

Multiple R	.44343
R square	.19663
Adj. R square	.16328
Standard error	.29292

Analysis of Variance

	DF	Sum of Squares	Mean Sq.
Regression	11	5.56532	.50594
Residual	265	22.73793	.08580
F		5.89648	
Sig. F		0.0	

CHAPTER II, SECTION C.

Reliability and Validity

A number of tests of the reliability and validity of the DDS have taken place. A discussion of these will follow the model used by MacFarlane to examine problems of validation in projective methods (1942).

Testing correlations with outside criteria (such as comparing many subjects' results on a single technique) will give normative data. This paper is a part of a body of normative studies of the DDS. The following checks are in place to ensure that testing is done systematically. Collection of DDSs has been centrally coordinated. A clearinghouse gathers and disseminates information regarding the technique. Most of the collection is done by registered art therapists (similar training) using the same set of instructions, art materials, and wording. The sample (over 350 cases) includes Controls, a broad variety of psychiatric disorders, and some specialized medical populations. The sample is broadly distributed across the United States, clustering at the catchment areas for participating institutions.

Comparison with another 'projective' (MacFarlane, 1942) to check for consistency in response by a single subject was

done in 1986. A separated male patient in his 30s with adjustment disorder with depressed features, narcissistic personality disorder, and transvestism that was increasingly ego-dystonic, consented to participate in many drawing exercises and projectives. Over a course of three admissions to two different hospitals in about two months, with two different art therapists (male and female), he drew in addition to group art therapy products: an admission DDS; a House-Tree-Person; Draw-a-Person; Draw-a-Person-of-the-Opposite-Sex; an Ulman Assessment Series (Ulman, 1975); a second admission DDS; and a DDS upon discharge from the third hospitalization. Viewed in terms of symbolism, issues, defenses and structure, there was substantial overlap between all other 'projectives' and the DDSs, as well as overlap in the DDSs in test-retest situations.

Comparison of DDSs with a number of other 'projectives' to check for validity with a group of subjects has shown little correspondence between the DDS and any of the other procedures (Leavitt, 1988). It was compared with the Depression Self Rating Scale (DSRS), child and parent versions of the Children's Depression Inventory, and the Draw-a-Person (Ogden, 1982). The association between DDSs and DSRSs was very weak. No relationship was found between the DDSs and the depression indicators of the DAP (nor were those DAP items found related to depression in the child subjects). However, Leavitt notes an art therapist who could discriminate depres-

sion in drawings with 80% accuracy used some criteria similar to those looked for in DDS rating "but different enough so that they were not noted by the DDS" (p. 119). It should be noted that in this study the researcher altered the materials (smaller paper), the rating system, and the age range of subjects (children).

Validity can also be tested by comparison of projective material with life history material. This has not been done to date with the DDS. Age, sex, and occupation only are noted for Controls; age, sex and DSM-III diagnoses are noted for the psychiatrically hospitalized sample. Historical and objective material from the participant may be recorded at the art therapist's discretion on a Drawing Inquiry form. In this study, a follow-up questionnaire seeking information only about dyscontrol and diagnostic histories (see Appendix B) was sent out for each patient who participated.

Longitudinal studies have not been performed.

Degree of success in prediction has not been tested to investigate validity. However, a trial of a small sample of DDSs was examined by a prototype of artificial intelligence programmed with DDS results. The program was able to predict degree of belongingness in 4 possible diagnostic categories with a 77% accuracy rate (Cohen and Anon, 1987).

Information was gathered for an inter-rater reliability study in 1986 by two experienced DDS raters. The material was analyzed by this writer (see Table IV). The overall correla-

tion between raters was 95.8%. It is difficult to set this figure in context, as this study is somewhat unusual within the field of art therapy. From one perspective, it may support the use of defined criteria such as in the DDS Handbook (see Appendix E), in that it suggests that information regarding certain observable aspects of a drawing can be accurately transmitted.

A concordance study of 29 naive raters (art therapists untrained and inexperienced in the DDS rating system) analyzing a single DDS yielded a 77% rate of correct judgments (Mills et al., 1986).

TABLE IV

INTERRATER RELIABILITY STUDY

CATEGORY		PERCENT	CORRELATION	
Color type	Mono	2 - 3	4 or more	98
Blending	No		Yes	92
Idiosyncratic	Color	No	Yes	97
Line/Shape	Line	Shape	Mix	98
Integration	Disinteg.	Integrat.	Mix	94
Abstraction	Geomet.	Biomur.	Mix	88
Representation	Angular	Curvil.	Mix	77
Image	Single	Multiple	Blank	99
Enclosure	No		Yes	98
Groundline	No		Yes	100
People	No		Yes	100
Animals	No		Yes	99
Inanimate Obj.	No		Yes	97
Abstract Sym.	No		Yes	93
Word Inclusion	No		Yes	100
Landscape	Land O.	W. Water	Water S. blank	93
Line Quality	Light	Medium	Heavy	97
Line Length	Short	Broken	Long	99
Movement	Implied	Virtual	None	97
Space Usage	0 - 33	34 - 66	67 - 99 Full	92
Tree Unrec.	Chaotic	Min. Tru.	Full Ap. Blank	96
Tilt		No	Yes	99
Unusual Placement		No	Yes	99
Overall Average Correlation				95.7

CHAPTER III, RESULTS

Section A. Tabulation

Tabulations of the percentage of occurrence/nonoccurrence of 40 descriptive criteria, or, 183 choices per 3 drawing series, were done. The entire BPD sample was examined as a group, and it was also broken down by sex (e.g., 19 females representing 70.3% of the sample), age and sex (e.g., 4 males under age 20 representing 57% of the male BPD sample) and age (e.g., one patient with an age in the range 45 to 54). A tabulation of the complete Control group was also done. Tabulations of other diagnostic groups were already on file in the DDS Archives.

These tabulations were examined for trends by numerical showing, by comparison among these and other existing DDS tabulations, by comparison with clinical observation, and by theoretical viewpoint -- a psychodynamic understanding of borderline phemomenology.

When the tabulations were studied, certain results looked interesting, either because the percentages were very large or very small, or they seemed different from pervious tabulations of other diagnoses. Such items suggesting the need for further attention were: Use of much colour in the

Series with the exception of the tree drawing; lack of blending; representational, curvilinear first pictures (often landscapes); multiple images; enclosures; lack of ground-lines; realistic colour; a drop in the amount of movement from first to third picture; and 'falling apart' trees.

This tabulation phase also allowed the author to observe where, due to small sample size, what appeared to be an important shift in drawing content, for example, might be attributed to the work of a very small number of actual subjects.

As noted above, throughout this process the BPD sample was refined by the exclusion of patients diagnosed with character disorders other than BPD, even with two psychiatric diagnoses in agreement. The pervasiveness of dual diagnoses is also discussed above.

TABLE V

TABULATION OF BPD SAMPLE

32 patients representing 100.00% of the population.

Category	Picture 1	Picture 2	Picture 3
Color Type			
Mono	7 (21.9%)	4 (12.5%)	5 (15.6%)
Two-three	5 (15.6%)	24 (75.0%)	10 (31.3%)
Four or more	20 (62.5%)	4 (12.5%)	17 (53.1%)
Blending			
No	24 (75.0%)	27 (84.4%)	23 (71.9%)
Yes	8 (25.0%)	5 (15.6%)	9 (28.1%)
Idiosyncratic Color			
No	27 (84.4%)	30 (93.8%)	31 (96.9%)
Yes	4 (12.5%)	2 (6.3%)	1 (3.1%)
Line/Shape			
Line	12 (37.5%)	16 (50.0%)	16 (50.0%)
Shape	1 (3.1%)	0 (0.0%)	1 (3.1%)
Mix	19 (59.4%)	15 (46.9%)	15 (46.9%)
Integration			
Disintegrated	2 (6.3%)	12 (37.5%)	3 (9.4%)
Integrated	30 (93.8%)	18 (56.3%)	27 (84.4%)
Impoverished	0 (0.0%)	2 (6.3%)	2 (6.3%)

TABLE V, CONTINUED

TABULATION OF BPD SAMPLE

Category	Picture 1	Picture 2	Picture 3
Abstraction			
Geometric	0 (0.0%)	0 (0.0%)	6 (18.8%)
Biomorphic	3 (9.4%)	1 (3.1%)	6 (18.8%)
Mix	3 (9.4%)	0 (0.0%)	8 (25.0%)
Representational			
Angular	2 (6.3%)	1 (3.1%)	0 (0.0%)
Curvilinear	16 (50.0%)	27 (84.4%)	5 (15.6%)
Mix	8 (25.0%)	3 (9.4%)	7 (21.9%)
Image			
Single	7 (21.9%)	23 (71.9%)	4 (12.5%)
Multiple	25 (78.1%)	9 (28.1%)	28 (87.5%)
Blank	0 (0.0%)	0 (0.0%)	0 (0.0%)
Enclosure			
No	22 (68.8%)	23 (71.9%)	21 (65.6%)
Yes	10 (31.3%)	9 (28.1%)	11 (34.4%)
Groundline			
No	17 (53.1%)	25 (78.1%)	31 (96.9%)
Yes	15 (46.9%)	7 (21.9%)	1 (3.1%)
People			
No	23 (71.9%)	32 (100.0%)	26 (81.3%)
Yes	9 (28.1%)	0 (0.0%)	6 (18.8%)
Animals			
No	27 (84.4%)	30 (93.8%)	32 (100.0%)
Yes	4 (12.5%)	2 (6.3%)	0 (0.0%)
Inanimate Objects			
No	7 (21.9%)	29 (90.6%)	22 (68.8%)
Yes	23 (71.9%)	3 (9.4%)	10 (31.3%)
Abstract Symbols			
No	31 (96.9%)	32 (100.0%)	23 (71.9%)
Yes	1 (3.1%)	0 (0.0%)	9 (28.1%)

TABLE V, CONTINUED

TABULATION OF BPD SAMPLE

Category	Picture 1	Picture 2	Picture 3
Word Inclusion			
No	27 (84.4%)	31 (96.9%)	30 (93.8%)
Yes	5 (15.6%)	1 (3.1%)	2 (6.3%)
Words Only	0 (0.0%)	0 (0.0%)	0 (0.0%)
Landscape			
Landscape Only	10 (31.3%)	1 (3.1%)	1 (3.1%)
With Water	2 (6.3%)	0 (0.0%)	1 (3.1%)
Water Scene	2 (6.3%)	0 (0.0%)	0 (0.0%)
Line Quality/Pressure			
Light	2 (6.3%)	0 (0.0%)	2 (6.3%)
Medium	27 (84.4%)	29 (90.6%)	26 (81.3%)
Heavy	3 (9.4%)	3 (9.4%)	4 (12.5%)
Line Length			
Short/Sketchy	0 (0.0%)	0 (0.0%)	0 (0.0%)
Broken	1 (3.1%)	0 (0.0%)	3 (9.4%)
Long/Continuous	31 (96.9%)	32 (100.0%)	29 (90.6%)
Movement			
Implied	7 (21.9%)	0 (0.0%)	4 (12.5%)
Virtual	6 (18.8%)	0 (0.0%)	4 (12.5%)
Neither	19 (59.4%)	32 (100.0%)	24 (75.0%)
Space Usage			
0 - 33%	6 (18.8%)	5 (15.6%)	7 (21.9%)
34 - 66%	5 (15.6%)	4 (12.5%)	9 (28.1%)
67 - 99%	12 (37.5%)	21 (65.6%)	11 (34.4%)
Full	9 (28.1%)	2 (6.3%)	5 (15.6%)
Tree			
Unrecognizable	0 (0.0%)	4 (12.5%)	0 (0.0%)
Chaotic Branches	0 (0.0%)	3 (9.4%)	0 (0.0%)
Minimal Trunk	0 (0.0%)	0 (0.0%)	0 (0.0%)
Falling Apart	1 (3.1%)	8 (25.0%)	0 (0.0%)

TABLE V, CONTINUED

TABULATION OF BPD SAMPLE

Category	Picture 1	Picture 2	Picture 3
Tilt			
No	31 (96.9%)	32 (100.0%)	31 (96.9%)
Yes	1 (3.1%)	0 (0.0%)	1 (3.1%)
Unusual Placement			
No	29 (96.6%)	31 (96.9%)	26 (81.3%)
Yes	29 (96.6%)	1 (3.1%)	6 (18.8%)

TABLE VI

TABULATION OF CHARACTER-DISORDERED MALES

8 patient(s) with a sex of male
7 of these 8 are diagnosed BPD

Category	Picture 1	Picture 2	Picture 3
Color Type			
Mono	3 (37.5%)	0 (0.0%)	2 (25.0%)
two-three	0 (0.0%)	6 (75.0%)	1 (12.5%)
4 or more	5 (62.5%)	2 (25.0%)	5 (62.5%)
Blending			
No	7 (87.5%)	6 (75.0%)	7 (87.5%)
Yes	1 (12.5%)	2 (25.0%)	1 (12.5%)
Idiosyncratic Color			
No	7 (87.5%)	8 (100.0%)	8 (100.0%)
Yes	1 (12.5%)	0 (0.0%)	0 (0.0%)
Line/Shape			
Line	4 (50.0%)	4 (50.0%)	5 (62.5%)
Shape	1 (12.5%)	0 (0.0%)	0 (0.0%)
Mix	3 (37.5%)	4 (50.0%)	3 (37.5%)
Integration			
Disintegrated	0 (0.0%)	2 (25.0%)	1 (12.5%)
Integrated	8 (100.0%)	5 (62.5%)	27 (88.5%)
Impoverished	0 (0.0%)	1 (12.5%)	0 (0.0%)
Abstraction			
Geometric	0 (0.0%)	0 (0.0%)	0 (0.0%)
Biomorphic	0 (0.0%)	0 (0.0%)	3 (37.5%)
Mix	1 (12.5%)	0 (0.0%)	1 (12.5%)

TABLE VI, CONTINUED

TABULATION OF CHARACTER-DISORDERED MALES

Category	Picture 1	Picture 2	Picture 3
Representational			
Angular	0 (0.0%)	0 (0.0%)	0 (0.0%)
Curvilinear	5 (62.5%)	6 (75.0%)	2 (25.0%)
Mix	2 (25.0%)	2 (25.0%)	2 (25.0%)
Image			
Single	3 (21.9%)	6 (75.0%)	0 (0.0%)
Multiple	5 (62.5%)	2 (25.0%)	8 (100.0%)
Blank	0 (0.0%)	0 (0.0%)	0 (0.0%)
Enclosure			
No	6 (75.0%)	8 (100.0%)	5 (62.5%)
Yes	2 (25.0%)	0 (0.0%)	13 (37.5%)
Groundline			
No	5 (62.5%)	6 (75.0%)	8 (100.0%)
Yes	3 (37.5%)	2 (25.0%)	0 (0.0%)
People			
No	6 (75.0%)	8 (100.0%)	7 (87.5%)
Yes	2 (25.0%)	0 (0.0%)	1 (12.5%)
Animals			
No	7 (87.5%)	8 (100.0%)	8 (100.0%)
Yes	1 (12.5%)	0 (0.0%)	0 (0.0%)
Inanimate Objects			
No	3 (37.5%)	6 (75.0%)	5 (62.5%)
Yes	5 (62.5%)	2 (25.0%)	3 (37.5%)
Abstract Symbols			
No	7 (87.5%)	8 (100.0%)	5 (62.5%)
Yes	1 (12.5%)	0 (0.0%)	3 (37.5%)

TABLE VI, CONTINUED

TABULATION OF CHARACTER-DISORDERED MALES

Category	Picture 1	Picture 2	Picture 3
Word Inclusion			
No	7 (87.5%)	7 (87.5%)	7 (87.5%)
Yes	1 (12.5%)	1 (12.5%)	1 (12.5%)
Words Only	0 (0.0%)	0 (0.0%)	0 (0.0%)
Landscape			
Landscape Only	2 (25.0%)	1 (12.5%)	0 (0.0%)
With Water	1 (12.5%)	0 (0.0%)	0 (0.0%)
Water Scene	0 (0.0%)	0 (0.0%)	0 (0.0%)
Line Quality/Pressure			
Light	0 (0.0%)	0 (0.0%)	2 (25.0%)
Medium	7 (87.5%)	6 (75.0%)	5 (62.5%)
Heavy	1 (12.5%)	2 (25.0%)	1 (12.5%)
Line Length			
Short/Sketchy	0 (0.0%)	0 (0.0%)	0 (0.0%)
Broken	0 (0.0%)	0 (0.0%)	1 (12.5%)
Long/Continuous	8 (100.0%)	8 (100.0%)	7 (87.5%)
Movement			
Implied	0 (0.0%)	0 (0.0%)	0 (0.0%)
Virtual	1 (12.5%)	0 (0.0%)	0 (0.0%)
Neither	7 (87.5%)	8 (100.0%)	8 (100.0%)
Space Usage			
0 - 33%	2 (25.0%)	3 (37.5%)	2 (25.0%)
34 - 66%	2 (25.0%)	1 (12.5%)	2 (25.0%)
67 - 99%	1 (12.5%)	3 (37.5%)	3 (37.5%)
Full	3 (37.5%)	1 (12.5%)	1 (12.5%)
Tree			
Unrecognizable	0 (0.0%)	1 (12.5%)	0 (0.0%)
Chaotic Branches	0 (0.0%)	0 (0.0%)	0 (0.0%)
Minimal Trunk	0 (0.0%)	0 (0.0%)	0 (0.0%)
Falling Apart	0 (0.0%)	2 (25.0%)	0 (0.0%)

TABLE VI, CONTINUED

TABULATION OF CHARACTER-DISORDERED MALES

Category	Picture 1	Picture 2	Picture 3
Tilt			
No	7 (87.5%)	8 (100.0%)	8 (100.0%)
Yes	1 (12.5%)	0 (0.0%)	0 (0.0%)
Unusual Placement			
No	8 (100.0%)	8 (100.0%)	7 (87.5%)
Yes	0 (0.0%)	0 (0.0%)	1 (12.5%)

TABLE VII

TABULATION OF CHARACTER-DISORDERED ADOLESCENTS

13 patients with an age of 20 or less
10 of these 13 are diagnosed BPD

Category	Picture 1	Picture 2	Picture 3
Color Type			
Mono	1 (7.7%)	0 (0.0%)	2 (7.7%)
two-three	4 (30.8%)	12 (92.3%)	1 (23.1%)
4 or more	8 (61.5%)	1 (7.7%)	9 (69.2%)
Blending			
No	10 (76.9%)	11 (84.6%)	9 (69.2%)
Yes	3 (23.1%)	2 (15.4%)	4 (30.8%)
Idiosyncratic Color			
No	9 (69.2%)	12 (92.3%)	12 (92.3%)
Yes	4 (30.8%)	1 (7.7%)	1 (7.7%)
Line/Shape			
Line	4 (30.8%)	5 (38.5%)	7 (53.8%)
Shape	0 (0.0%)	0 (0.0%)	0 (0.0%)
Mix	9 (69.2%)	8 (61.5%)	6 (42.2%)
Integration			
Disintegrated	1 (7.7%)	4 (30.8%)	1 (7.7%)
Integrated	12 (92.3%)	9 (69.2%)	12 (92.3%)
Impoverished	0 (0.0%)	0 (0.0%)	0 (0.0%)
Abstraction			
Geometric	0 (0.0%)	0 (0.0%)	3 (23.1%)
Biomorphic	2 (15.4%)	0 (0.0%)	0 (0.0%)
Mix	2 (15.4%)	0 (0.0%)	4 (30.8%)

TABLE VII, CONTINUED

TABULATION OF CHARACTER-DISORDERED ADOLESCENTS

Category	Picture 1	Picture 2	Picture 3
Representational			
Angular	1 (7.7%)	1 (7.7%)	0 (0.0%)
Curvilinear	5 (38.5%)	11 (84.6%)	4 (30.8%)
Mix	3 (23.1%)	1 (7.7%)	2 (15.4%)
Image			
Single	2 (15.4%)	10 (76.9%)	1 (7.7%)
Multiple	11 (84.6%)	3 (23.1%)	12 (92.3%)
Blank	0 (0.0%)	0 (0.0%)	0 (0.0%)
Enclosure			
No	8 (61.5%)	9 (69.2%)	5 (53.8%)
Yes	5 (38.5%)	4 (30.8%)	6 (46.2%)
Groundline			
No	7 (53.8%)	9 (69.2%)	13 (100.0%)
Yes	6 (46.2%)	4 (30.8%)	0 (0.0%)
People			
No	9 (69.2%)	13 (100.0%)	9 (69.2%)
Yes	4 (30.8%)	0 (0.0%)	4 (30.8%)
Animals			
No	13 (100.0%)	11 (84.6%)	13 (100.0%)
Yes	0 (0.0%)	2 (15.4%)	0 (0.0%)
Inanimate Objects			
No	4 (30.8%)	13 (100.0%)	7 (53.8%)
Yes	7 (53.8%)	0 (0.0%)	6 (46.2%)
Abstract Symbols			
No	13 (100.0%)	12 (100.0%)	11 (84.6%)
Yes	0 (0.0%)	0 (0.0%)	2 (15.4%)

TABLE VII, CONTINUED

TABULATION OF CHARACTER-DISORDERED ADOLESCENTS

Category	Picture 1	Picture 2	Picture 3
Word Inclusion			
No	10 (76.9%)	13 (100.0%)	12 (92.3%)
Yes	3 (23.1%)	0 (0.0%)	1 (7.7%)
Words Only	0 (0.0%)	0 (0.0%)	0 (0.0%)
Landscape			
Landscape Only	4 (30.8%)	0 (0.0%)	0 (0.0%)
With Water	0 (0.0%)	0 (0.0%)	0 (0.0%)
Water Scene	1 (7.7%)	0 (0.0%)	0 (0.0%)
Line Quality/Pressure			
Light	1 (7.7%)	0 (0.0%)	0 (0.0%)
Medium	11 (84.6%)	12 (92.3%)	11 (84.6%)
Heavy	1 (7.7%)	1 (7.7%)	2 (15.4%)
Line Length			
Short/Sketchy	0 (0.0%)	0 (0.0%)	0 (0.0%)
Broken	1 (7.7%)	0 (0.0%)	2 (15.4%)
Long/Continuous	12 (92.3%)	13 (100.0%)	11 (84.6%)
Movement			
Implied	5 (38.0%)	0 (0.0%)	1 (7.7%)
Virtual	0 (0.0%)	0 (0.0%)	2 (15.4%)
Neither	8 (61.5%)	13 (100.0%)	10 (76.9%)
Space Usage			
0 - 33%	2 (15.4%)	3 (23.1%)	1 (7.7%)
34 - 66%	2 (15.4%)	0 (0.0%)	6 (46.2%)
67 - 99%	6 (46.2%)	9 (69.2%)	5 (38.5%)
Full	3 (23.1%)	1 (7.7%)	1 (7.7%)
Tree			
Unrecognizable	0 (0.0%)	1 (7.7%)	0 (0.0%)
Chaotic Branches	0 (0.0%)	2 (15.4%)	0 (0.0%)
Minimal Trunk	0 (0.0%)	0 (0.0%)	0 (0.0%)
Falling Apart	1 (7.7%)	2 (15.4%)	0 (0.0%)

TABLE VII, CONTINUED

TABULATION OF CHARACTER-DISORDERED ADOLESCENTS

Category	Picture 1	Picture 2	Picture 3
Tilt			
No	12 (92.3%)	13 (100.0%)	11 (84.6%)
Yes	1 (7.7%)	0 (0.0%)	2 (15.4%)
Unusual Placement			
No	13 (100.0%)	13 (100.0%)	10 (76.9%)
Yes	0 (0.0%)	0 (0.0%)	3 (23.1%)

CHAPTER III, Section B.

Discussion of Statistical Results

The reader will note that Table VIII is arranged by 'Test'. Each Test (or computer 'run') brings different results because the components being compared were different each time in type and number (see Table III for details). Differing the number of elements in this way in multiple regressions actually alters the 'power' of the statistical tool (or 'equation') itself.

An element was compared to (or 'regressed against') other specified elements in a test in order to see whether it, for example, occurred in certain types of drawings much more than one would expect by chance alone. Such an element is called here, for simplicity, a 'regressor'. An example of a regressor is the use of "broken line" in the first picture by BPDs as compared to "broken line" in the first picture of all other Controls and psychiatric diagnoses in the study. "Broken line" (see Appendix D) is defined as "picture is predominantly comprised of lines longer than 1/2 inch in length BUT regularly disconnected". Inter-rater reliability on this item was 99% (see Table 1). In the Tabulation, we see that only one

member of the BPD sample used "broken line" in the first picture (Table V).

There are three ways in which one 'watches' for broken line use in the next phase of this study, the multiple regressions: (1) not showing up at all as a significant statistic (that is, of minor importance or random); (2) being present to a statistically significant degree; or (3) being absent to a statistically significant degree. We see that "broken line" in the first picture did not show up at a level of statistical significance (option one above). We know that one patient did use broken lines. That is probably why it does not appear as the third option. That is, we do not clinically consider it 'conspicuous in its absence', as we might if all other diagnostic groups used broken lines in drawings.

"Significance" refers to the likelihood of the results being generated by chance. In other words, a significant coefficient in the equation represents a phenomenon that is unlikely to occur randomly. The level of statistical significance for this study was .05, which is standard. This means that one assumes that five occurrences of an element per 100 cases is random and without statistical meaning. More occurrences than that are assumed to be worthy of attention as meaningful.

The Table of Statistically Significant Regressors is arranged by the same element across the three pictures as

this will give an impression akin the clinician's experiences. For instance, with "broken line", one might have a sense of changes in line quality as one views the progression of the three pictures. Indeed, we see that "broken line" emerges as statistically significant on the third picture. However, it is an artefact of other changes and therefore somewhat misleading. In fact the more usual and characteristic line quality for BPDs on the third picture is "long/continuous...unbroken lines longer than two inches in length". More than 90% of the sample used "long/continuous" lines. The study suggests that use of "broken lines" in the third picture is unique to the BPD sample, so its presence in a DDS would raise one's index of suspicion toward this diagnosis. However, it is not characteristic and its absence would not detract from the likelihood of a BPD diagnosis.

What this presence of "broken line" does, though, is stimulate theoretical thinking about the BPD response to the stress of the Series. Does use of this sort of line, that Buck (1969) would say conveys anxiety, signal an emergence of affect, or perhaps a regression? Overall, one might sense change across a Series, of level of energy or complexity, and begin to explore its meaning. An element like "broken line" changing in concert with many others can yield such an impression.

I will discuss Table VIII in the order of the criteria listed, where possible.

The reader is encouraged to refer to Appendix D for a complete understanding of definitions of these criteria and to Table X for a clarification of the results of testing literature hypotheses.

The number of colours used by BPDs was similar to those used by other diagnostic groups. The exception to this is an indication on Test 4 that, like Affective Disorders, BPDs may tend to use four or more colours on their third, or feeling-state picture. The expansiveness of colour use can be related to the intense affects of the borderline patient noted in the literature. Asking BPDs to draw how they feel seems to elicit passionate, colourful, invested responses.

Higher-functioning borderlines are sometimes difficult to distinguish from what we may call 'normal neurotics'. One way the DDS can help clarify this is on the use of blending which is seen in Controls' work but rarely elsewhere. This study suggests that BPDs will nct use blending in the first or second pictures, but that it may be seen in the third picture (Tests 1, 2). Use of blending was tested also in the hypotheses derived from the literature, as a rough attempt to seek the overworking and blurring of edges mentioned. Both hypotheses (that blending would be present less than in Controls' DDSs, but

more than in other patients') were supported. The importance of the checks and balances of the multiple regressions is shown in the fact that the overwhelming majority of the time (72% to 84%) no blending was rated in BPD work. The evidence for lack of blending thus shown was so strong that it was a trend from the tabulations that was followed through, but not supported in, the final analysis.

Similarly, 'use of idiosyncratic colour' was a hypothesis drawn from the literature; while 'use of realistic colour' emerged as a trend from the tabulations. While hypotheses pitting idiosyncratic colour frequency against Schizophrenics and other diagnoses were supported by tabulations, no type of colour usage in BPD was strong or unique enough to emerge as statistically significant. Ultimately, no trends or hypotheses in this category were supported.

'Shape' corresponds to the third type of measurement. It is absent in the tree picture to a significant degree. This alerts us to the possibility that trees by BPDs will be drawn predominantly either in a 'line only' or 'line and shape mix' style. Test 4 clarifies that in fact, the tendency for BPDs will be a line-shape mix in the tree picture. It also suggests this will be seen in the third picture as well.

Test 1 highlights an aspect of the tree drawings of BPDs. The rating indicates a trend away from trees that appear integrated and toward trees that are so minimally represented ("impoverished") as to be "difficult to ascertain a level of visual organization or integration". This is in the realm of the trend spotted during tabulation for 'falling-apart' trees. However, although such trees are often seen in BPD DDSs, they are apparently not present frequently enough or are not unique enough, compared to other diagnostic groups, to show "disintegrated" rather than "impoverished" tree drawings.

In the next three criteria, one can see that the issue of abstraction pertains only to the third picture. Representation does not show up. We know, then, that BPDs may use some form of abstraction in their third pictures but not in the first and second. This suggests an ability to abstract in response to the instruction for the third picture, which may be seen as a strength. Other diagnostic groups evidencing more impairment (schizophrenics, for example) tend to be able to respond only concretely on the third picture.

Test 3 indicates the third picture will probably not be a "geometric abstraction". Tests 1, 2, and 3 indicate it will not be a "biomorphic abstraction", either. Test 5 provides the answer--that DDS third pictures by BPDs will tend to be abstractions that mix both biomorphic and

geometric qualities so that neither can be said to predominate.

One source in the literature comments on curvilinear line use. The simple presence of curvilinear line (in representational pictures) and biomorphic line (in abstractions) was tested as a hypothesis. It was supported by tabulations showing that such lines are indeed used by BPDs. However, it does not specify to what degree they are relied upon, or how their frequency compares to other diagnostic groups. In fact, such lines seem to be used a similar amount by all groups and Controls. As the multiple regressions show, the mix of angular and curving lines in an abstract feeling picture is much more characteristic of BPDs then curvilinear elements alone.

Use of multiple images ("two or more distinct concepts or shapes") appeared to be a trend in the Tabulations, but was not supported in the final analysis.

Enclosure is defined as when "a boundary completely circumscribes a shape . . . but is not an OUTLINE for that shape . . . Certain elements may 'become' enclosed visually . . . these cases are rated 'No'". In each of the three pictures, about one-third of the sample, or ten patients, used enclosures. They may not be the same one-third each time. No other diagnostic group uses enclosures to this degree. Every test shows it to be

statistically significant. The exception is Test 4; it was not one of the regressors in Test 4 and so does not show up there. This study suggests a BPD DDS may include an enclosure in every one of the three pictures. For clinical purposes it should be noted that enclosures are often subtle.

Character disordered males tended to use enclosure only in the feeling picture (Table VI). Adolescent character disordered patients tended to use enclosure relatively little, suggesting it may be a graphic device relied on more by adult female BPDs.

This result must be viewed with caution. The author, rater of about seven BPD DDSs, noted the presence of enclosures much more than other raters when following her interpretation of the rating guide definition. The results may be skewed by those DDSs which may have been rated differently.

Tests 1, 2, 3, and 5 suggest "groundlines" will be absent from the second and third pictures. This is important for tree pictures, to note that therefore, in their "impoverished", even "disintegrated" tree representations, BPDs may also omit groundlines.

It was noted above that one can expect abstractions in the third pictures of BPDs. Lack of groundlines is consistent with that. Looking ahead in the Table it is seen, though, that some patients may draw a landscape with

water (but not a water scene) in the third picture. It is known that this is a rare response by any participant to the DDS so only a few such responses from the BPD sample would be an artefact of that. Checking the Tabulation it is seen that in fact only one participant drew a landscape with water in the third picture. This groundline result can be presumed to relate to that. Hypotheses regarding groundlines, derived from the literature, were supported by the tabulations and multiple regressions.

It can be seen from the slides that human figure representation by BPDs, as reported in the literature, is distinguished by distortion. However, within this study only presence/absence could be rated. In this regard, the "people" item is not statistically significant. This is also true of "inanimate objects", "abstract symbols", and "tilt".

A very small number of the sample included animals in the first and second picture, but no one did so in the third. This produces the following artefact; a strong indication that animals will be absent from the third picture.

Word inclusion, a hypothesis arising from the literature, was tested and found to not be supported. Although words are used by BPDs as part of drawing, such

use is not unique or frequent enough to be statistically significant.

"Medium pressure" was not used in the third picture (Test 1, 2) nor was heavy pressure (Test 2). As most participants draw with what is here defined as "medium pressure", one assumes that the BPD sample tends to do so also except on the third picture where the pressure is, by deduction, light. This is where a "substantial amount of [the] paper tooth [is] showing through the area where pastel has been applied".

The suggestion that BPDs use broken line extensively in the third picture (Test 1, 2, 3, and 5) has been discussed above.

There was a negative statistical significance to the "neither movement" category in Picture 3 (Tests 1, 3). In other words, there is some movement represented in these pictures, a good deal more than usually seen in the artwork of other diagnostic categories with which this was compared. The program could not express what type ("implied" or "virtual") of movement it was as both were used equally.

Similarly, Tests 1 and 2 detected use of movement in Picture 1, but gave paradoxical readings on it. Virtual and implied movement were used equally often by BPDs in the first picture, more than most other diagnostic categories. Still, about half of the BPD sample did not

use movement at all. "Implied movement" is shown statistically only by inferencing from the results of "virtual movement" and "neither movement", a necessity of simplifying the research design. The paradoxical readings, then, indicate the equal presence of the two variations of movement which are rated.

Results highlight the significance of the BPD sample using a large amount of space for the tree drawing (Tests 2, 3). Understanding this result is complicated by the fact that there are four criteria for space usage: That "page space violated by pastel" is 0-32%, 33-66%, 67-99%, or Full. "Page must be visually divided into grid (thirds) vertically and horizontally... color must extend more than 2 inches perpendicular to either axis (vertical or horizontal) in any section. When 2 inch criteria is marginally met and remaining space is blank, under-rate . . . In instances where space usage measurements between horizontal and vertical grids differ, on the same picture, rate the lower measure". Inter-rater reliability on space usage was 92%. Here, the tabulations are a most accurate guide. Rather than a simple increase in space usage in the second picture, the larger numbers in the 67-99% category are probably largely due to an actual decrease in the number of Full tree pictures produced ("less than 1 inch margin on all sides or picture").

Tabulations also show in the third pictures a trend toward comparatively smaller pictures. Here we see a fairly even distribution of pictures in each space category. No one size of picture is characteristic for BPD third pictures, but it may be that tree treatments using upwards of 67% of the page are unique to this group. This cannot be understood properly without reference to both tabulations and multiple regressions.

Space usage of 0-33% was tested as a hypothesis, responding to observations of "empty space", "emptiness" in the literature. Such space use was found more in BPD DDSs than Controls'. However, this finding did not reach a level of statistical significance.

Finally, there is a suggestion on the second test that "unusual placement" may be found in the feeling picture. "The image is drawn predominantly above the midline of the page . . . or most of the image is drawn to the right or left of the vertical axis; particularly when the remainder of the page is blank".

TABLE VIII

TABLE OF STATISTICALLY SIGNIFICANT REGRESSORS

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
#2 Color type 4 or more 1st picture					
Color type 4 or more 2nd picture					
Color type 4 or more 3rd picture				T=2.742 SIG T = .0065	
#3 Blending yes 1st picture					
Blending yes 2nd picture					
Blending yes 3rd picture	T=2.725 SIG.T = .0068	T=2.126 SIG T = .0345			

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
#5 Shape 1st picture					
Shape 2nd picture	T=-1.681 SIG T= .0938				
Shape 3rd picture					
#6 Line/ Shape mix 1st picture					
Line/ Shape mix 2nd picture				T=3.567 SIG T = .0004	
Line/ Shape mix 3rd picture				T=2.265 SIG T = .0242	
#8 Impover- ished 1st picture					
Impover- ished 2nd picture	T=2.408 SIG T = .0167				

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Impover-ished 3rd picture					
#9 Geometric abstrac-tion 1st picture					
Geometric abstrac-tion 2nd picture					
Geometric abstrac-tion 3rd picture			T = -1.955 SIG T = .0515		
#10 Biomor-phic abstrac-tion 1st picture					
Biomor-phic abstrac-tion 2nd picture					

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Biomorphic abstraction 3rd picture	T = -2.138 SIG T = .0333	T = -2.087 SIG T = .0378	T = -3.095 SIG T = .0021		
#11 Abstraction Geo/Bio Mix 1st picture					
Abstraction Geo/Bio Mix 2nd picture					
Abstraction Geo/Bio Mix 3rd picture					T = 1.984 SIG T =.0482
#16 Enclosure yes 1st picture	T=3.007 SIG T = .0029	T=2.834 SIG T = .0050			

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Enclos-ure yes 2nd picture	T=3.179 SIG T = .0016	T=5.018 SIG T = .0000	T=3.805 SIG T = .0002		T=3.333 SIG T = .0010
Enclos-ure yes 3rd picture	T=3.179 SIG T = .0016		T=1.948 SIG T = .0523		T-1.889 SIG T = .0599
#17 Ground-line yes 1st picture					
Ground-line yes 2nd picture	T = -2.329 SIG T = .0205	T = -2.657 SIG T = .0084	T = -3.488 SIG T = .0006		T = -3.202 SIG T = .0015
Ground-line yes 3rd picture	T = -2.329 SIG T = .0205	T = -1.931 SIG T = .0546	T = -3.562 SIG T = .0004		T = -3.136 SIG T = .0019
#19 Animals yes 1st picture					

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Animals yes 2nd picture					
Animals yes 3rd picture	T = -2.304 SIG T = .0219	T = -1.985 SIG T = .0481			
#25 Land-scape w. water 1st picture					
Land-scape w. water 2nd picture					
Land-scape w. water 3rd picture					
#26 Water scene 1st picture					

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Water scene 2nd picture					
Water scene 3rd picture	T = -1.796 SIG T = .0734				
#27 Med. line qual/ press 1st picture					
Med. line qual/ press 2nd picture					
Med. line qual/ press 3rd picture	T = -1.858 SIG T = .0642	T = -2.498 SIG T = .0131			
#28 Heavy line qual/ press 1st picture					

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Heavy line qual/ press 2nd picture					
Heavy line qual/ press 3rd picture					
#29 Broken line 1st picture					
Broken line 2nd picture					
Broken line 3rd picture	T=2.981 SIG T = .0031	T=2.895 SIG T = .0041	T=3.551 SIG T = .0004		T=3.115 SIG T = .0020
#31 Virtual movement 1st picture	T = -2.405 .0168	T=2.195 SIG T = .0290			

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Virtual movement 2nd picture					
Virtual movement 3rd picture					
#32 Neither movement 1st picture					
Neither movement 2nd picture					
Neither movement 3rd picture	T = -2.037 SIG T = .0425		T = -3.602 SIG T = .0004		
#34 67%-99% Space usage 1st picture					
67%-99% Space usage 2nd picture		T=2.198 SIG T = .0289	T=2.224 SIG T = .0269		

TABLE VIII

REGRESSORS	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5
Space usage 3rd picture					
#40 Unusual place-ment yes 1st picture					
Unusual place-ment yes 2nd picture					
Unusual place-ment yes 3rd picture		T=2.345 SIG T = .0198			

CHAPTER IV - DISCUSSION

Section A - Limitations of the Study

In the design of research, one constantly asks one's self, what type of information do I want? And one attempts to design a plan that will extract that type of information. At the end of the process, you can examine the 'catch' and determine if it's what you wanted. Or, perhaps, were you using the wrong kind of net all along?

Many questions remain unanswered by this piece of work, and many loom even larger than before. For example, questions regarding the meaning of the illness or the art were not addressed. However, in terms of beginning to investigate "What borderline art looks like" it is the beginning of an answer. We can say that, in terms of what may be structurally observed about these pictures drawn under similar conditions by this group of patients, certain things seem to be established.

The reader may be more interested in conjecture about the dynamics of the borderline condition and how they relate to visual enclosures than in how often enclosures occur. My feeling is that, in the absence of clear published material

on borderline art it was logical to look first at what is most easily observed.

I submit that choice of this model of inquiry represents ideology, and is not a choice based on (nonexistent) absolute value. The error, or danger, is not in the choice of one ideology over another but in so doing without critical examination. By following the path of the natural sciences, that of grouping, classification, definition, and observability, a great deal has been omitted from this study, including: the manifest content, what the patient has actually drawn; the latent content; what colours have been used; and the process of the art making.

A limitation of crucial importance is the resultant crude treatment of phenomena that resist classification. In many cases, unique or challenging items were ignored because they could not be described in words and counted. Approaching the topic with atheoretical naiveté, all were 'a surprise'. But the author's 'vision' was restricted by the use of a rating scale. As Heraclitus wrote, if you do not expect the unexpected, you will not find it. In a sense, the use of multiple regressions was a complete preparation for the unexpected, resulting in serendipitous findings. Yet, the statistics could only analyze the expected, that which was described and delimited by the rating scale.

Reification of art and of diagnosis is the consequence of use of a model that denies the existence of that which is

subjective, contextual, or interactive. Thus, the presumption against which one guards: that there is such a thing as 'a borderline' and that it can be differentially diagnosed as a thing distinct from, say, other character disorders. This is of especial importance in art therapy in that study of pictures soon reveals that it is a clustering or an interrelationship of elements that can produce the viewer's response. Further, a false set of absolutes in drawing (e.g., how the properly drawn seated figure is oriented to the horizon) is created to thereby judge.

No research model should be chosen through cynical defeatism or mindless orthodoxy. It should not be thought that enumeration of the weaknesses of the positivist model implies error, in the author's opinion, in its choice. The subjective, interactionist approach has inherent weaknesses, for example, that arguably make it a poor choice for a mode of inquiry in art therapy at this time. Briefly, the discipline of art therapy has been deeply influenced by the historical importance of the concepts of empiricism and individual psychological conflict and growth. Traditionally, neglect of theory construction accompanies a period of interest in the here-and-now (Jacoby, 1975). According to Kant, "concepts without percepts are empty; percepts without concepts are blind". We in art therapy have a mass of observations (percepts) that often do not interrelate to support any given concept. The concepts have not simply

emerged from this proliferation. It seems to this writer that theory cannot be constructed unless on a clear ground, atop firm foundations and with solid materials that have been tested.

However, the weakness of this study not being explicitly linked, itself, to an existing theory has been discussed. It then lacks a reference point for clear thinking on issues, like those of the rating scale.

Similarly, much data was lost or remains unexamined because of the size of the sample. At 32 patients and 96 drawings (for BPDs alone) it is larger than any BPD or borderline sample studied to date. It is more than twice the minimum number required for effective use of this method of statistical analysis. However, to critique again from 'within the method', in this sort of study larger samples are always sought after. A problem that would have been lessened with a larger sample would have been spurious results from random phenomena. A result must now always be checked back to the tabulation, as three patients in a sample of 32 will represent 9.4% of the population. Three patients including a certain element by chance could be misinterpreted as meaningful. The multiple regressions act as a check-and-balance on this.

Other flaws in design mentioned above are possible maintenance drug regimens that are not noted or controlled for, and the unnecessary special notation for coding Con-

trols' pictures. An error by a participant in coding highlights the necessary danger of relying on others' accuracy and honesty in following instructions for collaborative, ostensibly standardized research. Stepping outside the method, one can question the true replicability of art interviews, or the authenticity of art expression within such a situation.

The decision to examine the diagnosis of BPD sidestepped the fact that such a diagnosis may be an illusion. For example, it may be found in the future that all 32 patients in the sample have been rediagnosed as suffering from either dissociative disorders, temporal lobe epilepsy, affective disorders or schizophrenia. Low interpsychiatrist concordance on the diagnosis of BPD has been discussed, above.

It may be, too, that it will be found that the important difference is not between BPD and other diagnoses but between male and female BPDs; or between all character disorders and all other diagnoses. Or, that important differences between how high and low-functioning borderlines draw will have been obscured by not separating them out more. This study is limited by contemporary definitions and understandings of psychopathological categories, and subject to the weaknesses and strengths of the nosological system used, the DSM-III.

As stated above, many questions remain unanswered. Some have been detailed that reflect the sort of 'net' used to

catch results; some reflect the context into which this work is introduced. Regarding the latter, we must note the importance of certain benchmarks in art therapy theory; for example, the crosscultural comparisons of art by Billig and Burton-Bradley (1978), or, the investigation of indications of depression in art by Wadeson (1971). Yet studies that demonstrate results rather than only asserting opinion are few, and fundamental areas remain largely unexplored; for example, norms for adult art. The findings of this study seem to have value for our field, yet are somewhat adrift, not yet atop the firm foundation of theory based on percepts for which we all strive.

CHAPTER IV - DISCUSSION, Sec. B

Implications for Art Therapists

It is hoped that art therapists will find this demonstration of a method of research of interest and of value. It is the author's belief that more normative studies of this and similar designs will be of benefit to our field. I have found the collaborative aspect of this work immensely helpful and hope it will encourage others to try the same approach. As we are a relatively small field, individual art therapists may feel isolated but our knowledge base can grow exponentially if we cooperate in research and share our results.

Given the scattered and somewhat unsystematic knowledge regarding borderline art, perhaps this study will be accepted as clarifying a part of the puzzle. Perhaps it will offer a foundation for much needed work with content and process in BPD art.

For example, let us very briefly review the findings in terms of a dynamic approach. The art of BPDs generally gives an impression of vulnerability that the patient seems to feel compelled to share. In manifest context we may see scarification, blood, or biographical accounts of feeling or being hurt. It may be that this is a way of trying to elicit a

feeling response so that the patient can thereby test the ego boundary and the reality of 'the other'. This is especially seen in the affectively-loaded use of colour in the fragmented third picture of the DDS. In contrast, the unstructured free picture highlights the patient's defenses. The BPD patient seems to be invested in making the best first impression possible. This picture often gives graphic clues to specific coping strategies on which the patient relies: a stereotypic/highly conventional response; rigid compartmentalization; focus on positive accomplishment. Throughout the Series, the BPD patient seems to illustrate the illness, reflecting the split or damaged internal objects in a very direct way on the page. The art supplies and the art therapy relationship becomes a theatre for the acting-out of the patient's internal dramas of self-definition, negation, and negotiating reapproachement with the time, space, and proffered symbolic 'food' of the material world.

Contrasted with the dynamic approach, art therapists may find that the statistics put them off, or that the structural analysis is unfamiliar. One hopes it can be seen as another dimension, and they will attempt to read this work on its own terms. I have found in my own clinical work that the structural approach is a useful tool for clarifying impressions, for communicating with professional peers, and for diagnosis.

Art therapists wishing to do research feel they should use a tool with a patina of legitimacy--legitimate because of

longevity and because of many studies using it. Yet these criteria lead them to pencil drawing tasks and away from materials and instructions more appropriate for an art therapist's use. This study demonstrates a tool, the DDS, which is appropriate for art therapy yet is replicable for research goals.

This is the first time the rating guide for the DDS has been published and the second time, to this author's knowledge, that an interrater reliability study has been published in the field of art therapy.

CHAPTER V, Section A

Summary

This work originated in my reaction as a beginning art therapist to the self-mutilating behaviors of two young men, one briefly psychotic, the other profoundly retarded. It seems that turning to the medical charts, to the literature, to research, represents my attempt to master and come to terms with a deeply affecting human behavior that spans many eras and many sources of motivation. In so doing, my inquiry was transformed into research questions regarding a particular psychiatric diagnosis, Borderline Personality Disorder, whose sufferers characteristically manifest self-harming behaviors, and regarding the making of marks not on the body, but on the page.

This work is a study of how a sample of thirty-two adolescents and adults diagnosed Borderline Personality Disorder responded to the Diagnostic Drawing Series, a three picture art therapy assessment tool. The design of the study incorporated many aspects of psychological research. Reliability and validity were tested. Subjects were admitted to the study only with two independent concurring diagnoses. The art materials and protocol for the art interview were

standardized. The focus of the study was on observable, measurable aspects of the completed drawings such as counting how many colours were used, as opposed to which colours were used. A rating guide comprised of written definitions was used. Art products were blind rated. The ratings were submitted to statistical analysis.

As all aspects of the design are somewhat controversial in the field of art therapy, rationales are given for the author's choices, and limitations are discussed.

The above elements of the research design were each reviewed singly. By tracing past use of a given strategy, an attempt was made to show each aspect as part of the context of contemporary art therapy inquiry. As reliance on a structural, absolutist approach to art analysis and on the paradigm of positivist research is uncommon in art therapy, the reader is offered discussion of both the rationale and the limitations of each of these research design choices.

The rating process mentioned above involved making decisions about the presence or absence of 40 criteria--chiefly yes/no evaluations. The ratings were then tabulated and subsequently converted to equations. In this form the DDS ratings were added to the computer database of all DDSs, which consisted of more than 350 DDSs from Controls, other psychiatric diagnoses, and specialized medical populations. This collection was employed for various statistical tests. Of central importance were the multiple regressions, used to

ascertain that factors seen as essential to the BPD DDSs were not also seen in the DDS responses of other psychiatric groups or Controls.

The Results focus on five tests of the BPD data and what they suggest the BPDs in this study have done when asked to draw a free picture, a tree picture, and a feeling state picture.

There is no single Series that completely exemplifies the findings of this or any other DDS research. What the clinician gains from such research is a sense of how members of a given diagnostic group will tend to respond to the DDS, as well as strong single signs that also raise the index of diagnostic suspicion. For didactic purposes, I describe a purely hypothetical Series that integrates the most important findings of this work.

A Series that reflects this BPD study's results would show no blending except perhaps in the feeling picture, which may also show several more colours, but lighter pressure, then the preceding pictures. There is a slight possibility one would also see broken line use, which is unusual in other diagnoses, in the feeling picture. However, the use of long, continuous lines in the feeling picture is more characteristic. The Series throughout will evidence no use of shape alone but rather a great reliance on line use, especially in the tree drawing. A mixture of line and shape

will probably be seen in the first picture, which may include a representational drawing of an inanimate object.

In the move to the more structured tree picture, a loss of visual integration will be noted. Although of a good size, the tree may look impoverished or even seem to be falling apart, and will lack a groundline. Here, though, in an emphasized squirrel hole or other trunk scarification will be seen an enclosure. An enclosure, even a subtle one, can also probably be found in the other two pictures as well.

The feeling picture is most likely to be an abstraction with both geometric and biomorphic elements. Although it will appear integrated, it may be composed of multiple, discrete units, and may be drawn off-centre on the page.

The thesis also includes the results of tests of hypotheses regarding borderline art drawn from the literature and from the tabulation phase of the research. The study sample represents, to the author's knowledge, the largest number of BPDs and drawings yet gathered. Original work is included, such as: tabulations of the ratings of DDSs by character disordered males and adolescents; a survey of self-harm in the sample; and two tests of reliability (concordance of two trained raters; concordance of an untrained group).

Recommendations

I shall look first at recommendations regarding the DDS, moving outward to increasingly global issues.

The efforts to create a blind rating situation would be furthered by elimination of a distinction in how patients and Controls are coded.

The recommended brand of chalks has shortcomings in the hues offered. Perhaps a substitution could be found that would preserve the best points of this brand, such as the fact that they are square, unwrapped, a limited number, and soft.

The rating guide, created by a number of art therapists from diverse backgrounds, shows a lack of consistent theoretical outlook, a weakness attributable to the eclecticism of its creators. It could be improved by rewriting for clarification of terms and rating procedures, and for inclusion of illustrations to augment verbal definitions. However, ratings resulting from the improved system would then differ from the ratings resulting from using the 1986-B format, and results would not be comparable.

Many rating systems use interval variables (i.e., from Kwiatkowska's: "very little detail" "some detail" "a great deal of fine detail" "the whole picture is in fine detail, even including the background".) Some researchers prefer interval variables. My belief is that such a scale would be cumbersome, its potential drawback of lowering reliability

outweighing its possible benefits. However, use of this drawing series does not preclude use of any other different rating guides to accompany it.

Interesting use of space and the picture plane (e.g., splits) by BPDs are not covered by the present rating guide.

Two important concepts, progression and interrelationships, aid clinical work with the DDS but at present seem too complex to be measured for research purposes. By progression I mean changes across a single Series, chiefly as a response to different levels of stress and structure. In interrelationships it is acknowledged that tracking a single criteria may mislead the researcher, in a blind men-and-the-elephant fashion. Clinically it is the clustering, interactions, and change of criteria that lead one to a clinical impression. Can a research model be designed to mimic this organizing aspect of perception?

A study of structure is like a skeleton. It is incomplete without muscles, or content, and skin, or, the artist's associations, verbalizations and process. (Cohen 1988). Each type of material is needed. Similarly, in future studies, it is recommended that normative works of all three levels be a priority.

All studies would be improved by being larger. This one, and the DDS Archives are no exception. This model of controlling for diagnosis, materials, and so on is recommended to other studies which may be hampered by many confounding

factors and consequent low validity. In the long term our true goal must lie in an epistemology of art therapy and a mode of inquiry that emerges from the unique nature of this discipline.

There are many paths to follow investigate borderline art. This study has followed one path and has obtained, perhaps, a part of the answer. Undoubtedly the results, restricted by the procedures used, may differ somewhat from results garnered by another methodology. One hopes that this work contributes to serving the needs of our clients. It may aid us in substantiating our clinical impressions, which is a way of interacting responsibly toward clients and other professionals. In addition, the language and findings of this work can be used to track and concisely describe change, and support increasing sophistication in art therapy treatment planning.

TABLE IX

FORMS OF DELIBERATE SELF-HARM, WHERE KNOWN

Sample = 32

N = 11

This information is not available for the remaining 21 sample members.

One patient (16 year old female) is known to have no history of serious dyscontrol.

Cutting self	7
Overdose drugs	6
Alcoholism	3
Hitting self	3
Headbanging	3
Hairpulling	2
Drug Abuse	1
Mixed substance abuse	1
Step in front of car	1
Pricking self	1
Burns self	1
Self-asphyxiation	1

Patients characteristically employ more than one form of deliberate self-harm.

TABLE X

SOME HYPOTHESES DERIVED FROM LITERATURE

Item	Data (Average Per Cents)							Outcome
	BPD (32)	Maj. depression (66)	Dysthymic (20)	Bipolar dep. (8)	Bipolar manic (13)	Schizophrenic (25)	Controls (54)	
(smearing, overworking) blending is present, more than in other selected dxs	23	16	17	4	13	9	-	hypothesis supported in Tabulations; in mult. regressions, hyp. supported in 3rd pic.
blending is present, less than Controls	23	-	-	-	-	-	35	hypothesis supported in Tabulations; in mult. regressions, hyp. supported in 3rd pic.
(colour used arbitrarily) colour idiosyncratic more than other dxs and Controls (except Schizo.)	7	5	3	4	0	-	0	hypothesis supported in Tabulations; hyp. not supported in mult. regressions
colour idiosyncratic less than schizophrenics	7	-	-	-	-	-	8	hypothesis supported in Tabulations; hyp. not supported in mult. regressions
curvilinear lines present in representations, biomorphic lines present in abstractions	30	36	30	34	32	34	38	hypothesis supported in Tabulations; hyp. not supported in mult. regressions (data too similar for all dxs)

TABLE X

Item	Data (Average Per Cents)							Outcome
	BPD (32)	Maj. depression (66)	Dysthymic (20)	Bipolar dep. (8)	Bipolar manic (13)	Schizophrenic (25)	Controls (54)	
(choppy/sporadic groundline) groundline present less than other dxs, except Schiz. (tree only)	22	41	45	38	62	-	61	hypothesis supported in Tabulations; hyp. supported in mult. regressions
groundline present more than in Schizophrenics (tree only)	22	-	-	-	-	32	-	hypothesis not supported in Tabulations; not testable in mult. regressions
word inclusion, more than other dxs and Controls	8	5	10	4	25	-	3	hyp. not supported in Tabulations (no research on manics yet to help shape hypothesis); not significant in mult. regressions
word incl. compared to Schizo., will be similar	8	-	-	-	-	18	-	hyp. not supported in Tabulations; not significant in mult. regressions
(emptiness) use of 0-33% space will be more than Controls	19	27	23	42	12	21	2	hypothesis supported in Tabulations; not significant in mult. regressions

TABLE XI

Table of Hypotheses, Trends, and Findings

item	Lit. derived from literature, or multiple	Tabs. from tabulations	Stats. regressions	indicates stat. signif.
use of much colour	●			●
much blending	●			●
lack of blending		●		
idiosyncratic colou	●			
realistic colour		●		
line/shape mix			●	●
impoverished tree			●	●
curvilinear lines	●			
rep., curv. 1st pic.		●		
geo/bio mix abs. 3rd			●	●
multiple image		●		
enclosure		●		●
sporadic groundline	●			●
no animals, 3rd			●	●
word inclusion	●			
no water sc., 3rd			●	●
lt. line press. 3rd			●	●
broken line, 3rd			●	●
lack of move., 3rd		●		
movement, 3rd			●	●
empty space	●			
67-99% tree			●	●
falling apart tree		●		
unusual place., 3rd			●	●

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APPENDIX Ai

Diagnostic Drawing Series - Drawing Analysis Form

Mount Vernon Hospital • 2501 Parker's Lane • Alexandria, VA 22306

Important:

Use #2 pencil.

Erase mistakes completely.

Make marks through equal signs and numbers or letters, as in:

Patient Number

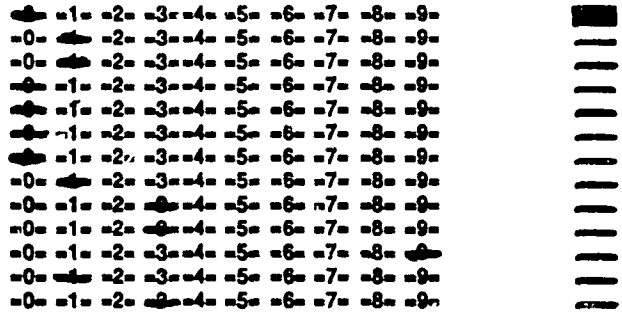
Hospital Code

Rater

Sex

Age

Diagnosis Code



	Picture 1	Picture 2	Picture 3
Color type: Mono Two-three Four or more	=l= =f=	=m= =f=	=l= =f=
Blending: No Yes	=y=	=y=	=y=
Idiosyncratic color: No Yes	=y=	=y=	=y=
Line/shape: Line Shape Mix	=l= =s=	=l= =s=	=s= =m=
Integration: Disintegrated Integrated Impov.	=d= =m=	=l= =m=	=d= =l=
Abstraction: Geometric Biomorphic Mi	=g= =b= =m=	=g= =b= =m=	=g= =m=
Representational: Angular Curvilinear Mix	=a= =m=	=a= =m=	=a= =c= =m=
Image: Single Multiple Blank	=m= =b=	=s= =b=	=m= =b=
Enclosure: No Yes	=y=	=y=	=y=
Groundline: No Yes	=y=	=y=	=y=
People: No Yes	=y=	=y=	=y=
Animals: No Yes	=y=	=y=	=y=
Inanimate objects: No Yes	=y=	=y=	=y=
Abstract symbols: No Yes	=n=	=n=	=y=
Word inclusion: No Yes Words only	=y=	=y=	=y=
Landscape: Land only w.Water water Scene	=y= =w=	=y= =w=	=y= =w=
Line qual/press.: Light Medium Heavy	=l= =w= =s=	=l= =w= =s=	=l= =w= =s=
Line length: Short/sketchy Broken Long	=m= =h=	=l= =h=	=l= =h=
Movement: Implied Virtual Neither	=s= =b=	=s= =b=	=s= =b=
Space usage: 0-33% 34-66% 67-99% Full	=l= =v=	=l= =v=	=l= =v=
Tree: Unrec. Ch. branch Min. trunk Fell apart	=0= =3= =6= =f=	=0= =6= =f=	=3= =6= =f=
Tilt: No Yes	=u= =c= =m= =f=	=u= =c= =m= =f=	=u= =c= =m= =f=
Unusual placement: No Yes	=y=	=y=	=y=
	=n=	=y=	=y=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=

APPENDIX Aii

Diagnostic Drawing Series - Drawing Analysis Form

Mount Vernon Hospital • 2501 Parker's Lane • Alexandria, VA 22306

Important:

Use #2 pencil.

Erase mistakes completely.

Make marks through equal signs and numbers or letters, as in:

Patient Number _

Hospital Code _

Rater _

Sex _

Age _

Diagnosis Code _

=0= =1= =2= =3= =4= =5= =6= =7= =8= =9=

	Picture 1	Picture 2	Picture 3
Color type: Mono Two-three Four or more	=m= =t=	=m= =t= =f=	=m= =t= =f=
Blending: No Yes	=y=	=y=	=y=
Idiosyncratic color: No Yes	=y=	=y=	=y=
Line/shape: Line Shape Mix	=l= =s=	=s= =m=	=s= =m=
Integration: Disintegrated Integrated Impov.	=d= =m=	=d= =m=	=d= =m=
(Abstraction: Geometric Biomorphic Mix	=g= =b= =m=	=g= =b= =m=	=g= =b= =m=
(Representational: Angular Curvilinear Mix	=a= =m=	=a= =m=	=a= =c=
Image: Single Multiple Blank	=s= =b=	=m= =b=	=m= =b=
Enclosure: No Yes	=y=	=y=	=y=
Groundline: No Yes	=n= =y=	=y=	=y=
People: No Yes	=n= =y=	=y=	=y=
Animals: No Yes	=n= =y=	=y=	=y=
Inanimate objects: No Yes	=n= =y=	=y=	=y=
Abstract symbols: No Yes	=y=	=y=	=y=
Word inclusion: No Yes Words only	=y= =w=	=y= =w=	=y= =w=
Landscape: Land only w.Water water Scene	=w= =s=	=l= =w= =s=	=l= =w= =s=
Line qual/press.: Light Medium Heavy	=l= =h=	=l= =h=	=l= =h=
Line length: Short/sketchy Broken Long	=s= =b=	=s= =b=	=s= =b=
Movement: Implied Virtual Neither	=i= =n=	=i= =v=	=i= =v=
Space usage: 0-33% 34-66% 67-99% Full	=0= =3= =f=	=0= =3= =f=	=0= =6= =f=
Tree: Unrec. Ch. branch Min. trunk Fall apart	=u= =c= =m= =f=	=u= =c= =m= =f=	=u= =c= =m= =f=
Tilt: No Yes	=y=	=y=	=y=
Unusual placement: No Yes	=y=	=y=	=y=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=

APPENDIX Aiii

Diagnostic Drawing Series - Drawing Analysis Form

Mount Vernon Hospital • 2501 Parker's Lane • Alexandria, VA 22306

Important:

Use #2 pencil.

Erase mistakes completely.

Make marks through equal signs and numbers or letters, as in:

Patient Number _ _ _ _

Hospital Code _ _ _

Rater _ _ _

Sex _

Age _ _

Diagnosis Code _ _ _

=0= =1= =2= =3= =4= =5= =6= =7= =8= =9=

	Picture 1	Picture 2	Picture 3
Color type: Mono Two-three Four or more	=m= =l=	=m= =l=	=m= =l=
Blending: No Yes	=y=	=y=	=y=
Idiosyncratic color: No Yes	=y=	=y=	=y=
Line/shape: Line Shape Mix	=l= =m=	=l= =s=	=l= =s=
Integration: Disintegrated Integrated Impov.	=d= =m=	=d= =m=	=d= =m=
(Abstraction: Geometric Biomorphic Mix	=g= =b=	=g= =b= =m=	=g= =b=
(Representational: Angular Curvilinear Mix	=a= =c= =m=	=a= =m=	=a= =c= =m=
Image: Single Multiple Blank	=s= =b=	=m= =b=	=s= =b=
Enclosure: No Yes	=n=	=y=	=y=
Groundline: No Yes	=y=	=y=	=y=
People: No Yes	=y=	=y=	=y=
Animals: No Yes	=y=	=y=	=y=
Inanimate objects: No Yes	=n=	=y=	=n=
Abstract symbols: No Yes	=y=	=y=	=n=
Word inclusion: No Yes Words only	=y= =w=	=y= =w=	=y= =w=
Landscape: Land only w.Water water Scene	=l= =w= =s=	=l= =w= =s=	=l= =w= =s=
Line qual/press.: Light Medium Heavy	=l= =h=	=l= =h=	=l= =h=
Line length: Short/sketchy Broken Long	=s= =b=	=s= =b=	=s= =b=
Movement: Implied Virtual Neither	=i= =v=	=i= =v=	=i= =v=
Space usage: 0-33% 34-66% 67-99% Full	=0= =3= =6=	=0= =6= =f=	=0= =3= =f=
Tree: Unrel. Ch. branch Min. trunk Fall apart	=u= =c= =m= =f=	=u= =c= =m= =f=	=u= =c= =m= =f=
Tilt: No Yes	=y=	=y=	=y=
Unusual placement: No Yes	=y=	=y=	=y=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=

APPENDIX Aiv

Diagnostic Drawing Series - Drawing Analysis Form

Mount Vernon Hospital • 2501 Parker's Lane • Alexandria, VA 22306

Important:

Use #2 pencil.

Erase mistakes completely.

Make marks through equal signs and numbers or letters, as in:

=2=

Patient Number _

Hospital Code _

Rater _

Sex _

Age _

Diagnosis Code _

=0= =1= =2= =3= =4= =5= =6= =7= =8= =9=

	Picture 1	Picture 2	Picture 3
Color type: Mono Two-three Four or more	=l= =m=	=m= =l=	=m= =l=
Blending: No Yes	=y=	=y=	=y=
Idiosyncratic color: No Yes	=y=	=y=	=y=
Line/shape: Line Shape Mix	=s= =m=	=s= =m=	=s= =m=
Integration: Disintegrated Integrated Impov.	=d= =m=	=i= =m=	=d= =m=
(Abstraction: Geometric Biomorphic Mix	=g= =b= =m=	=g= =b= =m=	=g= =b= =m=
(Representational: Angular Curvilinear Mix	=a= =m=	=a= =m=	=a= =c=
Image: Single Multiple Blank	=s= =b=	=s= =b=	=s= =b=
Enclosure: No Yes	=n= =y=	=n= =y=	=y=
Groundline: No Yes	=y=	=y=	=y=
People: No Yes	=n= =y=	=y=	=y=
Animals: No Yes	=n= =y=	=y=	=y=
Inanimate objects: No Yes	=n= =y=	=y=	=n= =y=
Abstract symbols: No Yes	=y=	=y=	=n=
Word inclusion: No Yes Words only	=y= =w=	=y= =w=	=y= =w=
Landscape: Land only w.Water water Scene	=w= =s=	=w= =s=	=w= =s=
Line qual/press.: Light Medium Heavy	=h=	=h=	=h=
Line length: Short/sketchy Broken Long	=b=	=b=	=b=
Movement: Implied Virtual Neither	=n=	=v=	=n=
Space usage: 0-33% 34-66% 67-99% Full	=0= =3= =f=	=0= =3= =f=	=0= =3= =f=
Tree: Unrec. Ch. branch Min. trunk Fall apart	=u= =c= =m= =f=	=u= =m= =f=	=u= =c= =m= =f=
Tilt: No Yes	=y=	=y=	=y=
Unusual placement: No Yes	=n= =y=	=y=	=y=

=0= =1= =2= =3= =0= =1= =2= =3= =0= =1= =2= =3=

=0= =1= =2= =3= =0= =1= =2= =3= =0= =1= =2= =3=

=0= =1= =2= =3= =0= =1= =2= =3= =0= =1= =2= =3=

APPENDIX Av

Diagnostic Drawing Series - Drawing Analysis Form

Mount Vernon Hospital • 2501 Parker's Lane • Alexandria, VA 22306

Important:

Use #2 pencil.

Erase mistakes completely.

Make marks through equal signs and numbers or letters, as in:

Patient Number _ _ _ _ _

Hospital Code _ _ _

Rater _ _ _

Sex _

Age _ _

Diagnosis Code _ _ _

=0= =1= =2= =3= =4= =5= =6= =7= =8= =9=

	Picture 1	Picture 2	Picture 3
Color type: Mono Two-three Four or more	=m= =t=	=m= =t=	=m= =t=
Blending: No Yes	=n= =y=	=n= =y=	=n= =y=
Idiosyncratic color: No Yes	=y=	=n= =y=	=y=
Line/shape: Line Shape Mix	=l= =s=	=l= =s=	=l= =s=
Integration: Disintegrated Integrated Impov.	=d= =m=	=l= =m=	=l= =m=
(Abstraction: Geometric Biomorphic Mix	=g= =m=	=g= =b= =m=	=b= =m=
(Representational: Angular Curvilinear Mix	=a= =c= =m=	=a= =m=	=a= =c= =m=
Image: Single Multiple Blank	=s= =b=	=s= =b=	=s= =b=
Enclosure: No Yes	=n= =y=	=n= =y=	=n= =y=
Groundline: No Yes	=y=	=y=	=y=
People: No Yes	=y=	=y=	=y=
Animals: No Yes	=y=	=y=	=y=
Inanimate objects: No Yes	=y=	=y=	=y=
Abstract symbols: No Yes	=y=	=y=	=y=
Word inclusion: No Yes Words only	=n= =y= =w=	=y= =w=	=y= =w=
Landscape: Land only w.Water water Scene	=l= =w= =s=	=l= =w= =s=	=l= =w= =s=
Line qual/press.: Light Medium Heavy	=l= =m=	=l= =h=	=l= =m=
Line length: Short/sketchy Broken Long	=s= =b=	=s= =b=	=s= =b=
Movement: Implied Virtual Neither	=v= =n=	=l= =v=	=v= =n=
Space usage: 0-33% 34-66% 67-99% Full	=0= =3= =6=	=0= =3= =6=	=0= =3= =f=
Tree: Unrec. Ch. branch Min. trunk Fall apart	=u= =c= =m= =f=	=c= =m= =f=	=u= =c= =m= =f=
Tilt: No Yes	=y=	=y=	=y=
Unusual placement: No Yes	=y=	=y=	=y=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=
	=0= =1= =2= =3=	=0= =1= =2= =3=	=0= =1= =2= =3=

CONFIDENTIAL
For Research Purposes only

Client Identification: Hospital Code _____; Master List # _____

Year DDS Submitted:

Does the client have a history of serious dyscontrol episodes (overdose or self-inflicted injuries)? YES NO DON'T KNOW

If yes, continue with the questionnaire.

Specify, if you can, the kind of deliberate self-harm this client practiced:

_____

_____

Does the client have a history of drug or alcohol abuse/drug or alcohol addiction: YES NO DON'T KNOW

Does the client have diagnosed seizures, hypertension, or major medical conditions requiring treatment? YES NO DON'T KNOW

Additional information you may recall about the client's response to the DDS. (drawing inquiry form, verbal comments, subjective state, unusual art-making process).

_____

_____

Alteration in client's status since DDS submitted (change in diagnosis, suicide).

_____

_____

I understand the professional opinions expressed here and the identity of the client will remain confidential.

_____ Signature

_____ Name, Degrees

_____ (Please Print)

Please return to : Anne Mills, c/o Barry Cohen, DDS Project, Department of Expressive Therapies, 3A, Mount Vernon Hospital, 2501 Parker's Lane, Alexandria, Virginia 22306.

Thank you!

83LL1087.087

The Fairfax Hospital

3300 Gallows Road, Falls Church, Virginia 22046

THOMAS N. YOUNG
Administrator

RELEASE AND PERMISSION OF PHOTOGRAPHS AND OBSERVATION

I hereby consent to the taking of photographs of any or all art products produced during the research project sessions conducted by the staff of the Creative Arts Therapy Department. I further grant permission that my art products and the photographs of these may be reproduced and/or displayed for educational purposes.

I transfer and vest in the Creative Arts Therapy Department all property rights that I may have to any and all productions resulting from my participation in the research projects of the Creative Arts Therapies program.

I grant this consent as a voluntary contribution in the interest of medical education, subject only to the condition that I will not be identified by name in any of the photographs or art objects.

Sign:_____

Date:_____

Witness:_____

Mount Vernon Hospital

DIAGNOSTIC DRAWING SERIES

REVISED RATING GUIDE 1986 - B

The following constitutes a guide to the Drawing Analysis Form of the Diagnostic Drawing Series. Each category (color, blending, etc,) is defined and rating criteria are delineated. When filling out the DAF, please rate all three pictures in all categories. Exceptions to this will be noted.

When rating a series, please follow these guidelines as faithfully as possible. You will undoubtedly find images that defy categorization. Please use your best judgement and proceed in the spirit of these classifications.

Please note: In the TREE picture there are many "special" rating considerations. Please read each section thoroughly before rating the TREE picture.

** USE PENCIL ONLY TO COMPLETE THE DAF FORMS **

COLOR TYPES

Monochrome - One color used
2-3 colors
4 or more colors

BLENDING

Two or more colors combined to create a third, distinct color, comprising at least two square inches. NOTE: In TREE picture, any element of the picture may be rated on this scale.

IDIOSYNCRATIC COLOR

Any color used to depict a representational image which is unnatural for that image depicted. Idiosyncratic color is rated "No" in abstractions.
NOTE: Monochrome line only pictures are considered like pencil, and are rated "No" in this category. Pictures drawn entirely in yellow and/or white (except SUN images) are rated idiosyncratic. All colors except blues and greens may be used to denote skin/flesh on people drawings.

Caution: Colors may be used to delineate or enclose an area that is meant to be white. This is not necessarily rated idiosyncratic.

In TREE picture, rate tree only. Black, brown, green (trunk) and autumnal colors (crown) are not considered idiosyncratic use of color. Bluish tones are not considered idiosyncratic only in conifers.

NOTE: Other colors used as "artistic highlights in skillfully drawn trees are acceptable. Not acceptable, for instance, is a blue tree trunk.

LINE/SHAPE

LINE (only) - Picture is comprised solely of linear elements, no shapes are present. Small dots may be considered the same as lines.

SHAPE (only) - Color must be used to denote a bounded volume or enclosed form. Shapes must be fully colored in with no evidence of linear fill in. For example, pastels used lengthwise to draw, resulting in at least an area of one square inch of discernible form, create shape.

-- In TREE picture, solid, filled in (even with the outline) rate SHAPE only.

MIXTURE OF LINE/SHAPE - Both line and shape are present in the picture.

SPECIAL CONSIDERATION: In the TREE picture, judge only the tree itself.

INTEGRATION

DISORGANIZED/DISINTEGRATED - Elements of the picture are neither visually nor thematically interrelated (in abstractions or representational pictures). LACK OF THEMATIC OR GRAPHIC COHERENCE.
NOTE: If the drawing is a literal depiction of disintegration, rate "Yes".

FREE PICTURE: Pure scribbles are also rated disintegrated.
TREE PICTURE: See TREE scale to determine level of integration.
FEELING PICTURE: Pure scribbles are also rated disintegrated.

Integrated - Elements are arranged to suggest an underlying organization or structure. PRESENCE OF THEMATIC OR GRAPHIC (VISUAL) COHERENCE.

Impoverished - A minimum of graphic expression is present (in an abstraction or representation) which makes it difficult to ascertain a level of visual organization or integration.

ABSTRACTION

** Only ABSTRACTION OR REPRESENTATION can be rated in one picture. **
Leave the category not chosen blank.

ABSTRACTION - Pictures in which the image is not easily recognizable or identifiable must be rated as abstractions.

Geometric - Shapes and lines of a straight or angular nature, e.g. crosses, stripes; standard geometric shapes, e.g. circles, polygons.

Biomorphic - Shapes and lines of an organic nature, emphasized by flowing or curvilinear boundaries (e.g., a scribble).

NOTE: Rate spirals as biomorphic.

Mixture - Neither GEOMETRIC nor BIOMORPHIC elements predominate.

REPRESENTATION

Free and feeling pictures including a recognizable focal image, or multiple recognizable images (in an otherwise abstract picture) should be rated REPRESENTATIONAL.

REPRESENTATION: Pictures where the image is easily recognizable/identifiable. In cases where a landscape is suggested, see LANDSCAPE for criteria.

Angular - Representational images comprised primarily of sharp edges, sharp corners.

Curvilinear - Representational images comprised primarily of curved lines, arcs.

Mixture - Neither angular nor curvilinear predominates. If picture is comprised of words or numbers only, rate as MIXTURE.

NOTE: In TREE picture, rate tree only.

IMAGE

SINGLE - In a representational picture, a single image is one concept or object. For instance, a bottle with a label on it is considered a SINGLE image. In an abstract picture, a single image is one shape or linear image. Multiple shapes drawn in MONOCHROME and connected by line are rated SINGLE.

MULTIPLE - In a representational picture, a multiple image has two or more distinct concepts or shapes. Details adding new concepts to the image, not intrinsically part of the subject, create MULTIPLE image. When apples are added to trees, and hats on people, the image is rated MULTIPLE.

NOTE: A TREE picture, including both "filled in" sky and grass, or a tree and sun are rated multiple images. A tree with GROUNDLINE (or tree with grass) is NOT RATED multiple image.

In an abstract picture, a multiple image may consist of an aggregate of overlapping lines drawn in two or more colors.

Any drawn image to which writing is added should be rated multiple image. Cases when the word is intrinsic to the item (i.e. cigarette packs, food or beverage containers) are NOT rated MULTIPLE.

BLANK - No marks on page at all.

ENCLOSURE

Any instance in which a boundary completely circumscribes a shape or series of lines, but is not an OUTLINE for that shape. In certain cases, the page edge may substitute for the missing section of an otherwise complete enclosure. Certain elements may "become" enclosed visually, even when an enclosure has not been drawn; these cases are rated "No".

In TREE picture, a hole is NOT an enclosure unless something is inside it (or a nest). In a scribble picture, at least one filled-in section creates an enclosure. In an X-Ray image, enclosure may be present. In a HOUSE picture, windows /doors are NOT enclosures. NOTE: Tears on face are NOT rated enclosure.

GROUNDLINE

A horizontal element, establishing a baseline (other than the page edge) in a representational picture that denotes the surface upon which a figure or object is resting. (Rate "No" in abstractions.) A tabletop in a still life is rated "Yes" if the line drawn is six inches or more long.

In the TREE picture, the groundline must extend at least one inch on BOTH sides of the trunk. A continuous line that spans the base of the trunk must also extend at least one inch on one side of the trunk. Roots along do not signify a groundline.

NOTE: A fence and water-horizon can be a groundline in a representational picture or landscape.

PEOPLE

Human or human-like images that include head and/or head/body images. Include human cartoon images. Heads must include eyes plus a nose, mouth or hair (do not confuse with "smiley faces" or sun/moon faces).

ANIMALS

Any non-human living creature (real or imaginary) including face and/or face/body combinations. Also, animal cartoon images. Include birds, fish, dragons, insects, etc. Exclude plants.

INANIMATE OBJECTS

Concrete, immobile objects including food items, plant life, nature images (within a landscape context), etc.

In a TREE picture, do not rate the tree itself or grass as an inanimate object; only rate items such as fruit, flowers, coconuts, swings clearly delineated clouds, or extra trees.

Mundane signs are included: Stop signs, dollar signs, flags, peace signs, smiley faces, question marks, exclamation points, arrows.

Isolated body parts (other than eye, heart, hand, mouth) are rated as inanimate objects. Rate blood and tears "yes" (except when intrinsic to an abstract symbol, i.e. = bleeding heart).

ABSTRACT SYMBOLS

Single images that stand for larger concepts, including nature images (out of the landscape context) and religious images, as well as particular body parts, e.g. rainbow, Star of David, cross, swastika, eye, heart, hand, mouth. Also, in cases where representational images are amplified by writing, indicating a connection with larger concepts, e.g., drawing of a butterfly, amplified by the slogan, "Butterflies are free".

*NOTE: Rater must be able to identify what the abstract symbol represents, thus excluding idiosyncratic personal emblems and designs.

WORD INCLUSION

Any writing or letters/numbers, (including signature) on the picture.

WORDS ONLY - Lettering and/or numbers on page; no drawn imagery.

NOTE: Rate words only pictures as MIXTURE, angular and curvilinear under REPRESENTATIONAL.

LANDSCAPE

LANDSCAPE ONLY - Minimum of ground and plant life (tree, cactus, flower, shrubs) PLUS at least one other image including: sun, hill, person, animal, object.

WITH WATER - Landscape plus body of water (pool, stream, lake or rain).

WATER ONLY - Water is the predominant subject of the picture. Landscape elements are minimal. Inanimate objects may be present. Rain scenes can be rated, if rain predominates.

NOTE: In TREE picture, rate LANDSCAPE with inclusion of grass and sky, or grass plus one or more environmental object.

IF LANDSCAPE IS NOT PRESENT, LEAVE SECTION BLANK.

LINE QUALITY/PRESSURE

LIGHT - Substantial amount of paper tooth showing through the area where pastel has been applied.

MEDIUM - Average pressure of pastel on paper; neither heavy nor light as defined herein.

HEAVY - Color is saturated on the page, so that little or no paper tooth is evident in areas covered by pastel.

NOTE: The predominant pressure must be considered for each picture. Raters should pay particular attention to monochromatic pictures drawn in pale colors (yellow, beige), as they may be misleading.

LINE LENGTH

SHORT/SKETCHY - The picture is predominantly comprised of lines averaging no more than 1/2 inch in length.

BROKEN - Picture is predominantly comprised of lines longer than 1/2 inch in length BUT regularly disconnected.

LONG/CONTINUOUS - Picture is predominantly comprised of unbroken lines longer than two inches in length. Rate also in tiny images composed of unbroken short lines.

NOTE: In pictures of SHAPE ONLY, L/C length is rated.

MOVEMENT

IMPLIED - Motion is suggested but not literally depicted; particularly in abstractions. Dynamically drawn arrows, leaning trees, spirals and bending flowers also suggest movement. In disintegrated TREE picture, CHAOTIC BRANCHES do not imply movement.

VIRTUAL - Actual movement is depicted in (only) representational pictures. Include obviously flowing bodies of water/waves, moving boats, trains, cars, rain falling leaves, flying birds, blowing/waving branches, dripping blood.

NEITHER - No implied or virtual movement is depicted.

NOTE: "S" shapes, smoke, rainbows, DO NOT imply movement.

SPACE USAGE

0-32% - Up to one third of space violated as defined below.
33-66% - Up to two thirds of space violated as defined below.
67-99% - More than two thirds of space violated as defined below.
FULL - Less than 1 inch margin on all sides of picture.

Amount of page space violated by pastel. Page MUST be visually divided into grid (thirds) vertically and horizontally to measure space usage. Color must extend more than 2 inches perpendicular to either axis (vertical or horizontal) in any section. When 2 inch criterion is marginally met and remaining space is blank, underrate.

NOTE: In instances where space usage measurements between horizontal and vertical grids differ, on the same picture, rate the lower measure.

TREE

To rate the TREE picture, and in the FREE picture when a single tree is the dominant image of the drawing, only one of the four categories can be chosen.

Choose the category that best describes the image. If no category is appropriate, leave the section blank.

UNRECOGNIZABLE - The image, viewed out of context of being the TREE picture, would not be recognized as a gestalt of a tree. This cannot be chosen if the TREE has been rated 'Integrated'. Rate this picture according to guidelines for abstractions, except for the category of IDIOSYNCRATIC COLOR.

CHAOTIC BRANCH SYSTEM - Lack of organization among branches when articulated, or in crowns drawn by scribbling. Do no confuse with °curlicue' crowns.

MINIMAL TRUNK - The trunk extending below the branch system is less than 1/4 the length of the tree.

FALLING APART - Elements of the tree are primarily disconnected and disjointed. Rater should pay particular attention to the relationship of the trunk to the branches, as well as subsidiary branches to the main branches. Trunk has two sides, at least one of which is not solid or clearly delineated. Once FALLING APART is chosen, should be rated as 'disintegrated'. Integrated looking crowns having falling apart branches within should be rated °disintegrated'.

TREE INTEGRATION - Any tree which cannot be classified as °unrecognizable', °chaotic branch', or °falling apart'.

TREE DISINTEGRATION - See above scale.

TREE IMPOVERISHED: Line-only trees in monochrome; particularly when spiderlike, keyhole or crude lollipop shapes.

TILT

The major focal image has a vertical axis that slants 15 degrees or more. Usually rated in representational pictures only. Rate "No" in abstractions.

In TREE picture, tilt must occur at base of trunk.

UNUSUAL PLACEMENT

The image is drawn predominantly above the midline of the page (horizontal axis) OR most of the image is drawn to the right or left of the vertical axis; particularly when the remainder of the page is blank.

NOTE: Judgments should be based on the actual page placement, not on the content/context of the image drawn.

APPENDIX E

DIAGNOSTIC DRAWING SERIES ADMINISTRATIVE HANDBOOK

Dear Participant:

Thank you for joining us in this exciting and important research. We were pleased by the enthusiasm generated at the Chicago Conference, and hope that these feelings will continue to motivate everyone toward the final goal of this project.

As you may have noticed in the AATA Newsletter, we must limit collection of data to adolescent and adult inpatient psychiatric settings. Outpatient and non-psychiatric populations cannot be studied due to financial and time constraints. Others wishing to join us now, however, are strongly encouraged to collect CONTROL samples from non-hospitalized, non-psychiatric populations ages 13-90.

This Handbook describes the Diagnostic Drawing Series, the general theory behind its creation, how it is administered for research purposes, and some simple information regarding its use as a clinical tool. At the present time there is no guide for the interpretation of the Diagnostic Drawing Series (DDS) - that is what you will be contributing your time and effort toward. We hope that we can gather at the 1984 AATA conference in Washington, D.C. to share our experiences and begin to compile guidelines for its diagnostic use in the clinical setting.

A POSTCARD IS INCLUDED IN THIS PACKET. RETURNING IT TO US COMPLETE WITH YOUR NAME AND FACILITY WILL INDICATE YOUR ACTIVE PARTICIPATION IN THE STUDY.

THE DIAGNOSTIC DRAWING SERIES: A SYSTEMATIC APPROACH TO ART THERAPY EVALUATION AND RESEARCH

As mental health professionals we are called upon and often pressured into aiding or establishing diagnostic labels for our patients with little more information than can be garnered from a single session. We no longer have the luxury of relying on gut reactions or intuition in the clinical arenas where we once mystified our peers. The need for an efficient art therapy tool to gather varied and useful information toward the clarification of clinical diagnoses is evident. The authors wish to introduce a diagnostic drawing series designed by art therapists, expressly for practicing in the clinical setting. The authors combine the task of a multi-drawing series, with the systematic study of these productions. Structural characteristics of the drawings are correlated with the DSM III categories ascribed to their creators through diagnostic interviews by psychiatrists.

THE DRAWING SERIES

It is important to focus on the materials that are to be used for making the drawings in addition to the drawing task itself. The authors selected a standard twelve-pack of unwrapped pastels as the drawing media. Consideration was given to crayons, oil pastels, markers and colored pencils; pastels were singled out for their versatility in application. Pastels can create lines as well as shapes, faint as well as saturated color areas, distinct as well as blended colors. Pastels also facilitate a sense of sophistication for adults who may be disdainful of crayons or markers. White (60 lb) drawing paper was chosen over grey, manilla and newsprint papers for its durability and bright surface. Aside from their fragility, newsprint and manilla papers often remind adults of childhood art activities, while grey paper offers a dull, dirty ground. Full size drawing paper (18 X 24) was chosen to maximize potential for expansive expression and to underscore constricted use of space.

A three-picture series was constructed, allowing for a broad range of psychological and graphic response. Each one of the trio of pictures reflects the particular way an individual responds to a specific directive and structure.

The initial picture is often referred to as a "free" picture. The individual is asked to "make a picture using these materials" (paper and pastels). It is the unstructured task of the series. This non-specific directive evokes a variety of non-verbal responses ranging from enthusiasm and spontaneity to resentment and hostility. The resulting image may be viewed as particularly significant inasmuch as it is a first picture in therapy. We can quickly ascertain what the individual is willing to share of himself from this first image.

"Draw a picture of a tree" is the next directive. It is quite obviously the structured task of the series, and constitutes a link with the traditional diagnostic drawing tests of the past three decades. The tree is an ancient symbol; it is one of the first concrete images drawn by young children.

Trees and their symbolic components have been researched in relation to projective drawings extensively. The authors share the opinion that the tree drawing represents the deepest tapping of the psyche in the realm of projective drawing subject matter. In working with adults who insist they "cannot draw" or "cannot think of anything to draw", the tree picture provides a welcome relief from the anxiety-provoking initial picture. Everyone has seen a tree, and most people believe they can draw one. The tree provides a rich symbolic portrait of the individual's vegetative/psychic state.

The third and final drawing task is to "make a picture of how you're feeling using lines, shapes and colors." This picture may facilitate closure on an affective level for the individual. The drawing may reflect a change in attitude or flexibility from the initial picture, in addition to providing valuable clues regarding the individual's capacity and willingness to express himself on a feeling level. This semi-structured task, decidedly subjective in nature, allows for self-assertion and self-reflection by the individual where he is otherwise performing expressly for the therapist. The feeling picture also requires the ability to abstract. Once the drawing series is completed, the art therapist gathers specific verbal associations from the individual, using the drawing inquiry questionnaire. The drawing inquiry is not being used as part of the research protocol at this time.

It is interesting to note the progression that occurs during the execution of the drawing series as different levels of the individual's internal experience are engaged. Viewed as a gestalt, the drawing series furnishes a rich source of material for diagnostic as well as therapeutic work.

Through working in conjunction with psychiatrists, this represents the first art therapy diagnostic tool to be systematically studied. All individuals executing this drawing series are interviewed and diagnosed by two independent psychiatrists shortly after admission to the hospital. Their drawings are studied by an outside art therapist in an attempt to clarify the various dimensions of graphic expression employed. Pictorial characteristics including use of line, shape, color and structural organization are correlated with the diagnoses of the individuals who created them.

PREPARATION FOR PARTICIPATION

In order to participate in the study, you will need:

1) An accessible inpatient psychiatric population (adolescents and/or adults)

2) Cooperation of at least two psychiatrists - willing to provide diagnosis for their individual patients, as well as provide cross-reference diagnoses.

3) Materials: 18 X 24 60 lb white drawing paper
boxes of Alphacolor 12 Square Pastels
spray fixative (Krylon Crystal Clear)

4) Forms and organizational charts: Included are samples of all forms, which may be used as originals. Please prepare sufficient numbers of blank copies in advance. Below is a listing and brief description of each form.

a) Psychiatric Diagnosis Form

The cooperation of two psychiatrists is an essential feature of this study. Please arrange to automatically administer the DDS with all patients admitted by each participating psychiatrist. Ask both the attending psychiatrist and the cross-reference psychiatrist to fill out the "Psychiatric Diagnosis Form" which should simplify collection of information. The cross-reference psychiatrist is expected to have an interview of at least twenty minutes duration with each patient, and may interview the patient at any point during the hospitalization. The cross-reference psychiatrist may not read the patient's chart prior to interviewing the patient or formulating a diagnosis.

Provide the psychiatrists with sufficient "Psychiatric Diagnosis Forms" and arrange a simple way they can return the forms to you. PLEASE FILL IN THE HOSPITAL CODE ON EACH FORM.

b) Drawing Inquiry Form

This form serves as a tool for the verbal processing of the pictures. The Drawing Inquiry, however, is not part of the study; it is included for the convenience of research participants.

c) The Working List

The working list is the central reference point for organizing all information pertinent to the patient sample. Keeping this list in a readily accessible place is highly recommended.

d) Physician Reminder Note

Include the necessary information and pass the note on to the psychiatrists.

e) Patient Consent Form

Participants are responsible for obtaining patients' consent for submitting pictures to this study. These forms should be retained by the Art Therapist.

f) Master List

This form is a consolidation of pertinent patient information for use in the study.* Please submit this list with your drawings, and retain a copy for yourself.

* The final diagnosis must represent a consensus between the two psychiatrists. In the event of diagnostic disagreement, do not include that individual's drawing series in your return sample.

HOW TO ADMINISTER THE SERIES

The DDS is administered within three days of the patient's admission. Under extenuating circumstances, this may be extended to five days, but in no case can the research series be accepted when administered after five days following admission.

The DDS is obtained during the first individual art therapy contact. Drawing time is limited to no more than fifteen minutes per picture. Prior to the session, the patient is advised that s/he is scheduled for an "art therapy session". At the beginning of the session it is explained that the patient will be asked to draw three pictures and to talk about the pictures afterwards. S/he is told that up to fifteen minutes is alloted for drawing each picture.

Paper and pastels are placed in front of the patient and (s)he is told that "the page may be turned in any direction." Instructions for the first drawing are to "Make a picture using these materials." When the patient indicates (s)he is finished with the picture, immediately proceed to instructions for drawing #2, "Make a picture of a tree." Likewise, after completion, proceed to drawing #3, "Make a picture of how you're feeling using lines, shapes and colors." Should the patient be unable to initiate or complete any of the three drawings, the blank or incomplete drawing is saved as an integral part of the series.

Although not a required element of the research, the Drawing Inquiry (DI) questions may then be administered as a way of processing the pictures. We recommend that drawings be discussed in the order of completion and that responses be recorded verbatim.

At the end of the session, the release form is introduced to the patient with the following explanation: "Art therapists all over the country are collecting these drawings to help psychiatrists and other mental health professionals to understand people better through their pictures. By signing this form, you will allow us to submit these pictures to the study. No names are attached to any of the drawings and your confidentiality will be preserved."

Following the session, the patient is assigned a number on the Master List. This number is copied onto the lower right corner of the back of each drawing, followed by a slash to indicate Drawing 1, 2, or 3 (Example: 34/1, 34/2, 34/3). The hospital code number is written beneath it. Please use pencil or pen. Drawings are then sprayed with fixative to avoid smudging, and stored in a portfolio designated for research filing.

We are not offering guidelines for interpretation of the DDS at this stage of the research. Structural characteristics of all artwork submitted will be rated by judges and data will be presented in a presentation at the 1984 American Art Therapy Conference in Washington, D.C.

COLLECTING CONTROL SAMPLES

Those of you who are not working in psychiatric inpatient settings and wish to participate are encouraged to collect control samples. Art therapists already participating in the study who also wish to collect control samples are welcome to do so. Subject number, age and sex can be entered directly onto the master list for control subjects (no working list is necessary). Enter the individual's occupation under diagnosis column when possible (control subjects are neither interviewed nor diagnosed for this study). Keep patient and control subjects separated on master lists. Place a large "C" next to any subject numbers on backs of drawings and forms related to control subjects.

SUBMITTING YOUR SAMPLE

After considerable discussion with a research consultant, it was concluded that all drawings would need to be rated by a single panel in order to insure maximum reliability. The authors will perform this function. Inter-rater reliability may be established in the future, thus enabling others to join in this phase of the project.

When your sample is collected, please ship all drawings and the master list to:

Barry Cohen, Director, Expressive Therapies
The Mount Vernon Hospital
2501 Parker's Lane
Alexandria, Virginia 22306

Please be sure that the drawings are well sprayed with fixative, each individual series numbered, clipped together and packed securely. If possible, ship the pictures flat; rolling them into a tube, however, may prove to be the simplest method. UPS will accept tubes and boxes only (no paper, string, or masking tape wrappings). They estimate a twenty-five pound box of drawings to cost approximately ten dollars mailed coast-to-coast. Your facility's receiving department may be willing to help you with the details of shipping. Insurance is not necessary.

Should you have any further questions you may contact:

Anna Reyner (703) 698-3646
Shira Singer (703) 698-3687

ONCE AGAIN, IT IS IMPERATIVE YOU FOLLOW ALL PROCEDURES AS OUTLINED IN THESE PAGES AND ADHERE TO THE 15 JULY MAILING DEADLINE.

STEPS TO TAKE IN ORDER TO PARTICIPATE

1) Contract with two or more psychiatrists to participate in the study.

2) Prepare working list for logging patient information.

3) Contact patients and administer DDS

4) Label, spray, and file pictures.

5) Contact cross-reference psychiatrist to interview patient.

6) Transfer final information to master list as it is returned.

7) Clip DDS series together by individual patient and pack all drawing samples for mailing.

DEADLINE FOR SHIPPING PICTURES: 15 July 1984

A NOTE OF THANKS

Getting involved in a research project of this scope can be both exasperating and exhilarating. We realize it will take time away (or add onto) your busy schedule at work; the supplies will even cost your department a bit of money. Please keep in mind the long range benefits of having an art therapy diagnostic tool that has been systematically tested, and how this will enhance your accountability as a clinician. We also realize that giving-up your patients' artwork may be difficult. However, the results of the study will be much stronger when rated unified panel.

When this information is presented and/or published, both you and your facility will be given credit for participation. Thank you again for your time and continued cooperation.

APPENDIX F

LIST OF ADDRESSES RELATED TO THE BIBLIOGRAPHY

Anne Mills, 3307 Beechcraft Drive, Alexandria, Virginia, USA, 22306.

Department of Psychiatry, The Fairfax Hospital, 3300 Gallows Road, Falls Church, Virginia, USA, 22042.

DDS Archives 3A, Mount Vernon Hospital, 2501 Parker's Lane, Alexandria, Virginia, USA, 22306

Unpublished references by art therapists: addresses available through the American Art Therapy Association, 1202 Allanson Road, Mundelein, Illinois, USA, 66060.

DIAGNOSTIC DRAWING SERIES:
DRAWING INQUIRY

Patient _____
Therapist _____
Admission Date _____
Evaluation Date _____
Age _____
Sex _____

MAKE A PICTURE USING THESE MATERIALS

1) How would you describe this picture?

2) What do these colors mean to you?

3) What do these images represent for you?

4) What else would you like to say about this picture?

5) What would you title the picture?

MAKE A PICTURE OF A TREE

1) How would you describe this tree?

2) Is this a tree you know, or is it imaginary?

3) Where would it be located?

4) What might be a special meaning(s) to the colors?

5a) What part of the tree do you like best? Why?

5b) What part of the tree do you like least? Why?

6) What else would you like to say about the picture?

MAKE A PICTURE OF HOW YOU'RE FEELING, USING LINES, SHAPES, AND COLORS

1) How would you describe this picture?

2) What do these colors mean to you?

3) What do these images represent for you?

4) What would you title this picture?