Self Revelation, Pathology Scores, and Thought Disorder in Affective Illness

by

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Introduction

This dissertation is concerned with characteristics of unipolar affective disorder, bipolar affective disorder, and schizoaffective disorder measured through defensive style scores, Rorschach pathology scores and qualities of self revelation in quasi-therapeutic interviews. Is there a continum among the diagnostic groups? What are the interrelationships among paper and pencil neuroticism items, a complaint list, measured mood changes induced by the interview procedure, Rorschach thought disorder measures, and measures of interview content, all of which relate to expression of disturbed feeling? Patients in an ambulatory affective disorders clinic were utilized as Ss because they represent a range of psychological disorder with restricted variability as to actual ability to function and uniform treatment (all receive chemotherapy; largely antidepressant medication). The sample is traditionally characterized as likely to be emotionally labile, so that mood effects were likely to be pronounced.

Defensive Style and Pathology: Many studies of defensive style and self-revelation concern themselves with painful or psychically important elements of the personal

psychological history. Although studies of defensive style are typically carried out with normal Ss, their concern with traumatic self revelation is closely related to an interest in neurotic and psychotic processes. Emphasis on psychologically traumatic events derives from the psychoanalytic use of self revelation associated with degrees of defensiveness or effectiveness of defenses in keeping psychic events out of awareness. Many experimental studies of defensive styles have involved the dichotomy of sensitizers, for whom painful psychic events do enter awareness, and repressors, for whom painful psychic events are prevented from entering awareness.

Some perceptual measures of sensitizer-repressor style were based on the perceptual defense experiments of Postman and his colleagues (Cf., Goldstein, et al., 1965). Analogous paper and pencil measures tapped the tendency of an S to describe himself in emotional terms. Goldstein (1959) used a sentence completion test to measure "coping" (i.e., sensitizer) and "avoiding" (i.e., repressor) tendencies. He scored the test by rating the emotional intensity and emotional specificity of self descriptions. Questionnaire measures of sensitization-repression are scored in terms of Ss admission of intense and specific emotional states (Byrne & Sheffield, 1965).

Lefcourt (1966) found that Byrne Sensitizer-Repressor Scale, which is derived from MMPI pathology scales, correlates $r=.91$ with the Taylor Manifest Anxiety Scale. However, apparently research on defensive style and research on anxiety scales have developed rather independently and have begun with curiously antithetical presumptions. According to researchers dealing with defensive style the tendency to describe oneself as emotional signifies greater emotional responsiveness and lower levels of denial. According to researchers concerned with anxiety scores a strong tendency to describe oneself as emotional is an indication of poor adjustment.

The question is: who shows poorer adjustment, sensitizers or repressors? Lazarus and Alfert (1964) find that sensitizers actually show less autonomic response to a stressful film than repressors. Lomont (1965) found that sensitizers show less disruption of reaction times in response to threatening words on a word association test than repressors. Thelen (1969) found that among male college students seeking counselling, more repressors dropped out of counselling prematurely than sensitizers. Andrew (1970) found that sensitizers make better use of presurgery instructions in speeding recovery from hernia operations than repressors, but that the best use of instructions was made by a middle

scoring group. Finally, Sappington (1973) observed that among schizophrenics, those with best prognosis (reactives) show sensitization toward threat; those with poorest prognosis (process) show repression orientation toward threat. All these findings suggest lower levels of pathology among sensitizers.

In a recent study, Scarpetti (1973) relates high levels of autonomic stress responses shown by repressors to preparatory defenses. He suggests that trait measures such as the Byrne scale or the Manifest Anxiety scale do not reflect level of anxiety but defensive orientations toward impending or potential stress. According to Scarpetti, repressors show an orientation of denial associated with heightened emotionality prior to expected stress; whereas sensitizers openly admit or even exaggerate frightened feelings.

Authors concerned with anxiety scores as measures of pathology also emphasize defensive orientations. Edwards (1957) interpreted high anxiety shown on the Taylor Manifest Anxiety scale as indicating a negative attitude toward self, a sign of psychopathology. He based his interpretation on the finding of a strong negative correlation between the Taylor Manifest Anxiety scale and tendency to endorse

associations of oneself with personal properties chosen by clinicians as "socially desirable" characteristics. Wiggins (1962) suggests that anxiety scores do not reflect attitudes toward the self, but only the amount of agreement between S and test constructor as to which characteristics are desirable. Herzberg and Hamlin (1963) and Rim (1961) agree with Wiggins but add that high anxiety scores appear to indicate values which are associated with psychopathology. They reason that high anxiety scorers do not value independence and potency but tend to take a passive position orienting towards extrinsic rewards and the generosity of others. Cattell and others (Cattell & Eber, 1954; Cattell & Saunders, 1954) have shown that high anxiety scorers exhibit a preference for slower, softer, and less dynamic music than low anxiety scorers. Schaeffer (1967) found that high neuroticism scorers show less positive evaluations than low neuroticism scorers of characteristics of potency and action perceived in cartoon faces.

Much emphasis is placed on the issue of neurotic values in the ongoing research regarding defensive styles. A peripheral finding of a recent study by Davis, Fisher, & Davis (1973) was that in a sample of 25 clinicians taking the Byrne Repression-Sensitization scale, all fell on the repression end. One speculation would be that, if these

findings can be generalized, the results would characterize clinicians as devaluating characteristics implied by the high anxious or high sensitization end of anxiety type questionnaires.

The discrepancy between findings that suggest beneficial aspects of sensitization and findings that high anxiety or neuroticism scores may represent endorsement of a pathological set of values may be the result of the fact that studies of the sensitizer-repressor dimension are done largely with normal Ss whereas studies of anxiety and neuroticism are done with a range of Ss extending further into the abnormal, pathological population. Among normal Ss extreme repressor scores may signify qualities of caution and reserve. Among neurotic or pathological groups extreme sensitizer scores may signify a breakdown in defenses.

Depression and Pathology: Freud (1917) introduced his conception of depression with an insightful observation regarding the function of depressive complaints. He described the complaints of depressive patients as a form of self revelation leading ultimately to a kind of truth unattainable by people who are not sick. What he said also reflects the view that depressive complaints in pathological cases serve as the overt manifestiation of a hidden defensive and

compensatory process.

> ...it must strike us that after all the melancholic does not behave in quite the same way as a person who is crushed by remorse and self-reproach in a normal fashion. Feelings of shame in front of people, which would more than anything characterize this latter condition, are lacking in the melancholic, or at least are not prominant in him. One might emphasize the presence in him of an almost opposite trait of insistent communicativeness which finds satisfaction in self-exposure...we perceive that the self-reproaches are reproaches against a loved object which have been shifted away from it onto the patient's own ego...They are not ashamed and do not hide themselves, since everything derogatory that they say about themselves is at bottom said about someone else. (Pp. 239f).

A difference postulated by Freud between pathological and normal depression is that the tendency to communicate feelings increases in pathological depression and decreases in normal depression. The tacit assumption that the need to express feelings increases in pathological depression lies behind the use of symptom scales and questionnaires to

assess the degree of clinical depression. However, the discrepancy, noted by Freud, between normal and pathological depression, which suggests that report of depressed feeling may correspond to some variable beyond mood itself has remained a troublesome paradox discussed by Beck (1967) in the introduction to his general treatment of depression.

According to Beck, the paradox of depression is that clinical depression includes features which are identical to normal depressed mood as well as features which seem utterly different from normal mood. Clinically depressed patients while showing increasing tendency to communicate feelings and delusional and even hallucinatory thinking (Beck, 1967; Arieti, 1957), also show emotional effects of social and environmental factors which seem to resemble normal mood change, and utilize an emotional vocabulary which seems understandable from the standpoint of normal mood change.

Depression and Thought Disorder: Depressive illness appears to include a dimension of thought disorder as well as a dimension of depressed mood. Moreover, the presence of manic episodes in the history of the depressed patient may be an important indicator of potential for thought disorder. Leonhard (1968) reviews clinical case studies and suggests

that the distinction between unipolar depressive illness (without manic episodes) and bipolar depressive illness (with manic episodes) represents a meaningful nosological distinction. He (Leonhard, 1968) studied the data of Angst on over 300 unipolar and bipolar depressed patients and their families. Among bipolar patients greater frequency of occurence and greater evidence of heredity than among unipolar patients were found. Perris (1966) reviewed data on 183 bipolar and 139 unipolar patients. He found greater intrafamilial and co-twin concordance for affective illness and lower age of onset among bipolar than unipolar patients. Leonhard (1968) and Perris (1966) suggest that unipolar and bipolar affective disorders represent separate diseases (Cf., Perris, 1969). Moreover, their evidence supports the conjecture that the occurence of a manic episode is indicative of pathological potential beyond the occurence of clinical depression itself (also Cf., Court, 1968).

Furthermore, the additional pathological potential of bipolar over unipolar affective illness may have a hereditary component. Such a hereditary component has been indicated in co-twin studies cited by Price (1968) as well as intrafamilial studies (Winokur, et al., 1969; Slater, 1944, 1936; Pollock, et. al., 1939). Price's tabulation of

97 monozygotic twin probands shows a concordance rate for affective disorder of 68%, among 119 dizygotic probands the concordance rate was 23%.

According to co-twin studies of schizophrenia heredity (Book, 1960; Rainer, 1969) the concordance rate for schizophrenia among monozygotic probands was between 76% and 91%, for dizygotic probands between 10% and 17%. The heredity evidence obviously cannot establish a continuum between schizophrenia and affectivedisorder. But the suggestion that stronger heredity is evident in cases of bipolar affective disorder than unipolar disorder, and the suggestion of stronger evident heredity in schizophrenia is consistent with the notion of an underlying continuum between affective disorders and schizophrenia, and with the notion that mania may have some important kinship with schizophrenia.

Two independent dimensions of affective disorder were suggested by Eysenck (1970) on the basis of a factor analytic study of data from Kendall (1968). Eysenck's "reactive depression" dimension (equated with neurotic depression by Kendall) may correspond with emotional depressed mood (high loadings on precipitating psychological cause, previous subjective tension feelings, etc.). Eysenck's "endogenous depression" dimension (called "psychotic illness" by Kendall)

may correspond with pathology of functioning (high loadings on delusions of guilt, persecution, bodily change, quality of agitation, etc.,).

Beck (1967) summarizes an extensive literature as suggesting the interaction of a psychotic variable (which he calls a "schizophrenic" variable) and an affective variable in functional mental illness. Beck describes a continuum between "pure manic-depressive" illness and "pure schizophrenic" illness ranging along the prognostic variable with schizoaffective disorder near the center of the continuum.

Kendall (1968; Kendall & Gourley, 1970) used discriminant function analysis to show the continuity between neurotic and psychotic depression and between affective disorder and schizophrenia. Based on the finding that the multiple regression formula best differentiating affective disorder from schizophrenia yields a normal distribution of predicted scores, not bimodal, with most cases falling between the extremes of a schizophrenia-affective disorder continuum, Kendall concludes: "At all events, the results of this further analysis do not lend support to the view that schizophrenic and affective psychoses are distinct entities" (Kendall & Gourlay, 1970, p. 226).

Thought Disorder and Verbal Fluidity: The common observation made by Freud (1917) and modern workers (Beck, 1967) that depression or anxiety in pathological forms are associated with heightened attempts at self-revelation in speech appears consistent with the observed relationship between pathology and increased tendency to endorse questionnaire items referring to feelings. Pope and his associates (1970) found experimental evidence that heightened anxiety in quasitherapeutic interviews does not appear to increase speech rate.

Recent evidence appears to point to the possibility that unipolar depression, bipolar affective disorder, schizoaffective disorder, and ultimately schizophrenia, showing monotonic increases in thought disorder severity and perhaps in defensive style or neuroticism scores, belong in a uniform model of psychiatric nosology. The question is: what role would the variable of heightened verbal expressiveness or heightened tendency toward self revelation play at the extreme pathological end of the continuum?

The concept of thought disorder as it occurs in schizophrenia refers to a quality of irrelevancy in the patient's response to questions and social interaction. In describing the incoherence of schizophrenic speech Benjamin

(1944) mentions a patient's "refusal" to undertake the task given him by the questioner. The implication of what Benjamin calls "refusal" is clearly that disordered language has a willful component which is expressive of rejecting attitudes toward tasks considered unpleasant or irrelevant by the patient.

Beck (1944) notes that the presence of thought disorder is indicated on the Rorschach by the tendency to depart from what is "given" in the stimulus. The origin of the schizophrenic response to the Rorschach plates, according to Beck, is a compromise between description of the objective stimulus and report of internal events, which is resolved among schizophrenics more in the direction of the internal than it is for normal respondants

Rorschach scoring for thought disorder appears to reflect the schizophrenic tendency to communicate or to express his interior, emotional life rather than to follow the questioner's instructions in an appropriate way. Conventional indicators of thought disorder on the Rorschach test (Weiner, 1966) include "failure to establish focus" shown when a patient expresses an overwhelming number of communications at once; "inappropriate distance" referring to the patient's tendency to identify with the plates or to express personal

content in an inappropriate setting disregarding the test instructions; "combinative thinking" referring to the way plates are used when patients try to find in them some relevance to their situation; "circumstantial thinking" referring to a patient's attempt to cover his track by justifying his self-reference; "idiosyncratic symbolism" referring to the schizophrenic use of abstraction and idiosyncratic shorthand (Cf., Beck, 1944) in an attempt to compress his message in time.

Form level or "reality appropriateness" of Rorschach response, scored as an indicator of thought disorder, is described by Mayman (cited by Lohrenz & Gardner, 1967) as a continuum ranging between adhering "to the determining influence of the blot..." on the normal side, to, on the abnormal side, allowing an idea to "emerge and become more compelling than the objective reality... In which the perceiver seems to be immersed in his associative process and disregards...the tacit social obligations to...gear himself and report on what the Rorschach examiner can also see and share with him."

Wilensky's (1959) developmental level Rorschach scoring system based on Werner's conception of thought disorder as a primitive thought pattern is similarly based on

the continuum between "good form" on the normal end and, on the abnormal end, responses that are "amorphous, confabulatory, perseverative, etc. ."

Confabulation, lack of "good form" and lack of "reality testing" in the Rorschach may be associated with intense needs for self revelation as well as perceptual or cognitive deficit. If so, thought disorder on the Rorschach may closely parallel the heightened anxiety scores, neuroticism scores, or sensitization scores shown in more pathological cases. (Cf., Harrower, 1959).

Background Study: The present study has been concerned with the relationship between self revelation or self reference in speech, thought disorder, and anxiety or neuroticism questionnaire scores as they occur among unipolar, bipolar, and schizoaffective forms of affective disorder. The impetus for this interest was supported by a preliminary study using the Inventory of Psychic and Somatic Complaints (NIMH Depression Study Group, 1967), the items later incorporated into the depression Q-sort used in the present study. Items in this scale were analyzed using the McQuitty Elementary Linkage Analysis (McQuitty, 1961, 1957) and comparisons among a total of 66 hospitalized unipolar, bipolar, and schizoaffective patients was made. The McQuitty analysis

indicated that groups of patients were differentiated best on the basis of total complaint scores rather than patterns of part scores. On this basis unipolar Ss made fewer complaints than schizoaffectives (Exact test, $p. < .005$). Although depressed bipolar Ss made more complaints than unipolar Ss (Chi-Square, $p < .10$), bipolar Ss in a manic state expressed fewest complaints of all.

Expectations: The research is designed to test the idea that thought pathology is related to pathology and self revelation and concerns itself with interrelationships among these.

1. Neuroticism scores, total depression symptom Q-sort scores, and Rorschach thought disorder indicators will be positively interrelated. Such a tendency is suggested in the statements of Freud (1917). The intensely driven motivational qualities of thought disordered statements are implicit in Benjamin's (1944) treatment of schizophrenic speech as well as Beck's (1944) treatment of schizophrenic fantasy, as well as in conventional description of Rorschach pathology scoring (Weiner, 1966). The link between neuroticism, symptom or complaint scores, and self revelation is evident in the formulation of items, explaining the overlap between neuroticism measures and measures of sensitization.

2. Diagnostic categories of unipolar, bipolar, and schizoaffective disorder will form a continuum of increasing neuroticism scores, depression symptom Q-sort scores, and Rorschach pathology scores. These diagnostic categories represent a severity continuum, where the presence of mania is indicative of pathological potential beyond that of depression alone, and that schizoaffective disorder (going beyond mania) is related to schizophrenia in its chronicity.

3. High pathology in neuroticism, depression Q-sort or Rorschach scores will be associated with positive (or less negative) mood changes over the course of the quasi-therapeutic interview. This expectation is justified on the basis of the previously advanced formulation that thought disorder and pathology relate to an impulse towart cathartic self revelation.

4. Neuroticism, depression Q-Sort, and Rorschach pathology will be related to a tendency to utilize emotion words (particularly negative emotion words). Neuroticism, depression Q-Sort, and Rorschach pathology will also relate to increased reference to the self during the quasi-therapeutic interview. This formulation is justified in the findings of Edwards (1957) who finds negative correlation between neuroticism and social desirability. Wessman and

Ricks (1966) find a correlation between neuroticism and negative feelings. This expectation is also justified through the work of Byrne and Sheffield (1965) who conceptualize items from neuroticism tests in terms of a sensitization-repression measure related directly to self reference.

Original Hypotheses: Prior to the actual data collection expectations regarding the outcome of the study had rather misplaced emphases. Stress on the importance of certain variables was based on the conceptualization of the study as having an experimental rather than a correlational form. The original hypotheses for the study were written with misplaced stress on the variables which were, as it turns out, empirically of minor importance. In the original hypotheses, variables were grouped and nested in ways which did not clarify the results when they appeared. The refined expectations, appearing above, were written as a restatement and reorganization of the hypotheses in the light of the empirical findings. The fundamental understandings of the hypotheses were communicated in a form which more clearly summarized the empirical results. The original hypotheses themselves are stated in appendix C.

Method

Groups of patients in unipolar, bipolar, and schizo-affective disorder diagnostic groups were tested on a symptom Q-Sort, a Rorschach test and a form interview. Mood over the course of the procedure was assessed, and speech content in the interview measured.

Subjects: Thirty Ss used in the study represented most of the available population of the clinic. All Ss were being treated with antidepressant drugs, none were given significant psychotherapy. Of the 30, 13 Ss were diagnosed unipolar disorder (no manic episodes), 10 Ss were bipolar (manic and depressive episodes), and seven were schizoaffective.

Nine Ss were male, 21 female. All but one were Caucasian. Twenty-one of the Ss were born in the United States; six were born in Europe and immigrated during Hitler's ascent to power; two were born in Puerto Rico; and one was born in Isreal. The educational level ranged from elementary school through Ph.D. Fourteen Ss had not graduated from high school, nine had received at least some college. The age range of Ss was broad, between 19 and 72 years, but skewed toward the older end. The median age was about 55. Data on Ss are listed in appendix D.

The unavailability of a large subject pool led to a

lengthy (one year) period of data collection. The possibility of subject matching and subsample size matching was limited. Ss were scheduled without regard to diagnosis by Ms. Georgette Ruta, the assistant for the clinic. Much consideration had to be given to the availability of Ss. The majority of Ss were scheduled on an outpatient basis. However, under the circumstances some Ss were scheduled while they were hospitalized during intense depressive episodes or (in one case only) during a clinically significant manic state. Scheduling also took into account the reluctance of the psychiatrist to include patients suffering a severe crisis outside of the supportive ward setting. In several cases, more severely involved prospective Ss exhibited confusion or hostility which led them to reject the procedure. Every attempt was made to complete the procedure with every patient. An S could exclude himself only by specific and repeated rejection of the procedure.

In all but a few cases, Ss followed the procedure as described below without modification. The modal duration of the procedure was about 90 minutes, however the range of times was considerable. In one hospitalized case requiring nearly three hours, the lengthy interview interrupted the ward routine. The interview had to be cut off and

resumed the following day. In one case, mechanical failure of the tape recorder was discovered near the end of the interview. The S had to be rescheduled more than a month later to complete the interview.

Setting: Ss came from the patients registered with a research clinic in the Department of Psychiatry, Mount Sinai Hospital Center in New York City. Service as an S in research studies is uniformly designated as a precondition of psychiatric treatment at the clinic. The clinic is devoted to study of treatment for affective disorders. A diagnosis of affective disorder is established prior to referral of the patient to the clinic. This diagnosis and referral is made at a screening interview elsewhere in the Psychiatry Department, and when the patient is accepted for anti-depressant therapy or other chemotherapy with a treating psychiatrist (of whom there were two). No patients in the clinic undergo psychotherapy as such. Differential diagnoses of unipolar, bipolar, or schizoaffective disorder were made for the present study through an evaluation of the social history and current behavior of patients by the treating psychiatrist. Diagnostic information was kept secret from E until all data were collected and analysis had begun.

Procedure: Appointments were made at least one week prior to the experimental session. Ss were asked to allow about two hours so that they would not be pressed for time. They were informed that they would undergo a series of diagnostic procedures. When the S entered the testing session, E introduced himself as a psychologist working with Dr. Rosenblatt, the chief of the clinic.

Ss were given the Inventory of Psychic and Somatic Complaints (Cf., appendix A) in Q-sort form (here called the depression Q-Sort). This test is a complaint check list in card sort form. Ss are asked to sort each of 68 complaint cards in piles signifying four degrees of severity from "not at all" through "extremely."

Then Ss were given a Maudsley Personality Inventory questionnaire.

Following the Maudsley, Ss were given items from the Personal Feelings Scales (Wessman & Ricks, 1966, 1970) and instructed to indicate their mood at the present moment. The Personal Feelings Scales used consisted of four sets of ten scaled statements in the form of a Likert scale reflecting dimensions of "harmony vs. anger," "activity vs. exhaustion, " "tranquility vs. anxiety," and "elation vs. depression." The scales are presented in appendix B.

Ss were administered the Rorschach according to

standard instructions with an inquiry following the response to each plate. Following the Rorschach, Ss again responded to the Personal Feelings Scales. This time they were asked to indicate how the previous test affected their mood.

Low Revelation Interview: Ss were then asked the following biographical questions designed to elicit specific, relatively low ego-involving content. Each lettered group of questions was asked as a unit. The interview was tape recorded with the recorder in view.

a. Tell me about your family. How many brothers and sisters do you have? Are you the oldest? the middle? the youngest?

b. Do you remember where you first went to school? Tell me about it. What kind of school was it?

c. Tell me about your high school years, what courses did you take in high school?

d. What did you do after high school? Did you go to college? get married? Go to work?

Following the low revelation interview, Ss again responded to the Personal Feelings Scales. They were instructed to indicate how the previous interview affected their mood.

High Revelation Interview: Ss were then asked the

following biographical questions designed to elicit responses on more emotionally laden topics. The lettered group of questions was asked as a unit. Follow-up questions were asked only to clarify confusing points. The interview was tape recorded with the recorder in full view.

a. How did you get along with your family when you were a child? How did you feel about your parents? How did your parents treat you?

b. Do you remember being separated from your mother for the first time when you went to school? How did you feel being without your mother?

c. How did you feel about school when you were a child? Do you remember anything you especially disliked or liked about it? How did the teachers treat you?

d. How did you feel about your childhood? Was there anything that especially worried you or bothered you?

e. How did you feel about high school? Did the teachers usually like you or dislike you? Did you get frightened or worried by exams? What were the worst things about high school?

f. Did you find yourself getting emotional during your teenage years? How did you feel? How did you

get along with the opposite sex?

g. How do you feel about events after high school? Were there things that made you angry or depressed? Tell me about some of the things that bothered you most.

h. How do you feel about working? Do you think you've been successful? Have you been able to reach your potential? Has anything held you back?

i. Do you find life satisfying? What bothers you most? What would you like most to change?

Following the high revelation interview Ss were asked to respond once again to the Personal Feelings Scales. They were instructed to indicate how the previous interview affected their mood.

Measures: The intention of the study was to assess interrelationships among several forms of self revelation and to determine the relationships of these with diagnosis and background variables. Each measure was selected to represent a form of self report in widespread practical or research use.

A. Neuroticism: The Maudsley Personality Inventory is a brief questionnaire in wide research and screening use. The instrument was designed by Eysenck to tap two major

personality factors, neuroticism and extraversion. In addition to Eysenck's own studies (Eysenck, 1959), correlational research has confirmed that the Maudsley Personality Inventory scores do correspond with the principal M.M.P.I. factors (Hinchcliffe, 1971). The Neuroticism score of the Maudsley, used here, is an anxiety trait measure which correlates r=.75 with I.P.A.T. Anxiety score and r=.78 with the Manifest Anxiety Scale (Bull & Strongman, 1971).

B. Depression Q-Sort: The depression Q-Sort was taken from an NIMH document, the NIMH Depression Study Group(NIH T 36-57, revised 1967) under the title "Inventory of Psychic and Somatic Complaints." The symptom list was originally drawn from several sources as symptoms or complaints likely to be found among depressed patients. The 68 patients were on cards to be sorted into four levels of severity by Ss. This instrument has been used regularly at the clinic to measure clinical change. Use of the symptom list was justified by previous findings of a strong relationship between neuroticism and symptom self ratings (Kear-Colwell, 1969).

F. The Personal Feelings Scales are Likert type mood scales used by Wessman and Ricks (1966, 1969) in their longitudinal studies of mood. In an extended multivariate study the scales were found to be sensitive to mood changes.

The scales appeared to be valid mood state indicators. The four scales chosen were from the original set of 16 scales. These were selected to represent a sampling of three important affective dimensions (anxiety, depression, and anger) plus an energy dimension.

D. Rorschach: The Rorschach test was scored on two Holtzman scores related to pathology, namely pathognomic verbalization and form definiteness (Cf., Holtzman, 1961). These scores were selected because they were thought to represent components of the developmental level scoring system devised by Becker (1956) and later revised by Wilensky (1959, Staples & Wilensky, 1968). At the same time, the Holtzman scores did represent a more or less conventional scoring for thought disorder (Cf., Weiner, 1966).

Considerable research has confirmed the validity of developmental level types of Rorschach scoring in diagnosis of psychopathology. Mayman (Lohrenz & Gardner, 1967) developed a form level index which significantly correlated with clinical judgements of Ss on categories ranging from normal through pathological (Pryor, 1968). Becker (1956) utilized a scoring system combining form level (largely in terms of form definiteness) and disordered logic elements. Using his scoring system he was able to significantly

predict prognosis in schizophrenics. Wilensky (1959) utilized a modified Becker scoring system (a Developmental Level score). He was able to significantly predict the degree of social contact among schizophrenic Ss. Knopf (1962) was able to significantly differentiate among psychopathic, neurotic, and psychotic groups using content categories of Rorschach responses which reflected childlike thought processes. The psychopathic group was least childlike in Rorschach content, the psychotic group showed most childlike Rorschach content.

Although research has confirmed the usefulness of a developmental conceptualization of Rorschach content, little has been done to differentiate the purely form definiteness from the purely pathognomic expression aspects of the developmental level score. Even conventional form level scores combine appropriateness with definiteness elements. The Holtzman monograph (Holtzman, et. al., 1961) presents a series of intercorrelational matrices among scoring variables for different populations. Correlations between form definiteness and pathognomic verbalization are inconsistent. They are distributed slightly on the positive side of zero, except for the correlation in a particular sample of male schizophrenics where $r = -.37$. Similarly, correlations be-

tween form appropriateness and form definiteness are inconsistent, distributed around zero, except in the sample of male schizophrenics where r=.44. On the other hand, the correlation between form appropriateness and pathognomic verbalization were consistently negative, reaching r=-.44 in the male schizophrenic sample (the median was r=-.30). Form appropriateness and pathognomic verbalization showed a consistent relationship, but form definiteness and form appropriateness did not. Interrelationships among supposedly kindred measures of thought disorder turned out rather ambiguous. Lack of clarity in the relationships among developmental level components justified the separation of form definiteness from pathognomic verbalization in the present study.

Holtzman (1961, Pp. 26-38) carefully defines eight categories of pathognomic verbalization (fabulation, fabulized combination, queer responses, incoherence, autistic logic, contamination, deterioration color, and absurd responses). In the present study responses falling into any of these categories were counted. The pathognomic verbalization score was the proportion of total percepts judged to be pathognomic.

Holtzman (1961, Pp. 13-17) categorizes five degrees of form definiteness which he defines by examples. For the

present study Holtzman's five categories were collapsed into four. A response was scored "0" when it was amorphous (e.g., clouds, colors), "1" for insects, anatomical responses, irregular objects or ambiguous responses, "2" for popular responses and less elaborated animal and human responses, and "3" for human movement responses with distinctive integration and identification.

Interscorer reliability for the Rorschach scores was obtained by correlating the scoring done by a blind scorer with a set of scores generated by E. For the pathognomic verbalization score a satisfactory level of interscorer reliability, r=.88, was obtained using the Holtzman categories with the blind scorer proceeding independently. However, for the form definiteness score an initial run through of the data was followed by discussion and adjustment of the scoring categories. The resulting form definiteness interscorer reliability was r=.75.

E. Interview Content: Transcripts of the interviews were used to obtain frequency of first person singular pronouns and frequency of emotion words falling in positive and negative categories. These variables were intended as measures of the quality of self revelation in the interview.

Only the words "I," "me," and "myself" were included in the first person word count. First person plural, "we" was not included because it was thought that inclusion of other people additional to the self would complicate the measure. Possessive words such as "mine" were not included because their frequencies are tied to mention of other pronouns and nouns. The word count measure was stated as the proportion of first person pronouns over total words.

Two lists of emotion words were drawn up, one list representing positive affective states, one negative affective states. Transcripts of the interviews were scored by counting occurences of words from these lists. Occurrences were counted only when the context indicated that the emotion word use referred to an experience of the S himself rather than another person. Occurrences of positive and negative emotion words were then stated as proportions of total words. The emotion word lists were as follows:

List I. Positive Feelings: Happy, gay, feeling good, joy, enjoy, satisfied, liked or enjoyed doing something.'

List II. Negative Feelings: Sad, depressed, unhappy, feeling bad, afraid, anxious, fear, hate, resented, crying.

Measurement of self disclosure and emotionality using word counts and counts of speech units has yielded interest-

ing and replicable results in studies of clinical interviews (Marsden, 1965). Total word count or speech rate has been used as a measure of interview productivity or participation in the interview. White and her associates (1964) found that the amount of silence in the initial clinical interview correlates with tendency to drop out of psychotherapy early. Jourard and Friedman (1970) utilized a measure of time spent in self-disclosure speeches. His study demonstrated greater self-disclosure by the client when the therapist also made self revelatory gestures. Heller, Davis and Meyer (1966) measured self disclosure by counts of spoken words related to family, sex, and personal problems. They found certain interviewer-client personality matches to optimize degree of self disclosure. Using counts of words related to self and related to feeling, Bracten (1961) found increases in self disclosure over the course of client-centered therapy. Marjerrison and Keogh (1967) found differences among diagnostic groups in frequency of self related "speech units" and feeling related "speech units" during an interview. (Cf., Gottschalk & Gleser, 1969).

Analysis: Interrelationships were determined among the following variables.

1. Diagnostic categorization into unipolar, bipolar and schizoaffective groups on a double-blind basis.

2. Total neuroticism score on the Maudsley Personality Inventory.

3. Total score on the depression Q-sort.

4. Rorschach scores using Holtzman scoring categories for form definiteness and pathognomic verbalization.

5. Word count measures of interview content in terms of proportion (per word) of first person singular pronouns, and proportion (per word) of emotion words in positive and negative feeling lists.

6. Total scores on Personal Feelings Scales, added across four administrations, across four individual scales, and taken individually.

Results

Subjects: Diagnostic groups differed markedly on variables associated with developmental or functioning level. The Schizoaffective group showed more chronic unemployment or marginal employment against relative frequency of steady employment (including housewife) in the unipolar and bipolar groups. Part time or unsteadily employed Ss were not counted in the comparison (Table 1a.). Exact test comparison of schizoaffective and unipolar groups on employment was significant at $p < .02$ (two-tailed comparisons were used throughout the statistical analyses). The difference between schizoaffective and bipolar groups on employment was also significant at $p < .02$. The schizoaffective group showed a lower proportion of marriage than the unipolar group (Exact test, $p < .05$) and the bipolar group (Exact test $p < .10$) (Table 1b). The average age of the unipolar group was 57.5 years, for the bipolar group was 56.3, and for the schizoaffective group was 37.4 years. The age differences contained a highly significant effect ($F=7.13$, df. ,2,27, $p < .01$) (Table 1c). Unipolar and bipolar groups were not distinguishable on any of these variables.

Neuroticism and Q-Sort Scores vs. Diagnosis: Based on prior studies, neuroticism was conceptualized as a general measure of pathology which was expected to relate to the

diagnosis pathology continuum. However, neither neuroticism nor depression Q-sort score showed the predicted relationship to diagnosis (neuroticism, $F=1.0$, df. 2, 27; Q-sort, $F=1.24$, df., 2,27) (neuroticism distribution given in Table 2).

A moderate correlation was found between neuroticism and depression Q-sort ($r=.43$ $p<.02$).

The distribution of neuroticism was rectangular, ranging between one and 45 (out of a possible range of zero to 48) with a median score of 25. No significant difference was indicated between the distribution of scores for this supposedly disturbed sample of clinic patients and the distribution among normal Ss. A normative sample of 84 college students showed a median neuroticism score of 24.7 (Schaeffer, 1967).

Neuroticism and Q-Sort Scores vs. Mood: The neuroticism and Q-sort scores were moderately correlated with summed Personal Feelings Scale (mood) ratings. The mood scale was included to measure any differential reactions to Rorschach and interview parts of the procedure. However, mood ratings did not vary significantly over the four administrations ($F<1.0$, df. 3, 81), nor were any significant effects of diagnosis ($F<1.0$, df., 2,27), nor any significant interactions ($F<1.0$, df., 6, 81) found.

The analysis of variance comparing neuroticism levels on mood revealed a highly significant main effect without significant interactions. When the distribution of neuroticism was divided into thirds and modd scores were summed over administrations, the following effects were obtained: anger scale, $F=10.26$, $p < .01$; fatigue scale, $F=5.73$, $p < .02$; anxiety scale, $F=7.60$, $p < .01$; and depression scale, $F=4.42$, $p < .10$ (df. 2, 27 for all tests). Mean mood ratings for three neuroticism levels are given in Table 3. Correlations of mood ratings and neuroticism were uniform over the four dimensions (Chi-square=2.74, $.50 > p > .30$). They were as follows: anger vs. neuroticism, $r=.708$ ($p < .01$); fatigue vs. neuroticism, $r=.449$ ($p < .02$); anxiety vs. neuroticism, $r=.651$ ($p < .01$); depression vs. neuroticism, $r= .571$ ($p < .01$). The total mood ratings summed over administrations and scales correlated with neuroticism $r=.655$ ($p < .01$), and with Q-sort score $r=.569$ ($p < .01$).

Intercorrelations among the four mood scales were uniformly high suggesting a single underlying dimension (Table 4a). Test-retest correlations of the summed mood scores among the four administrations were uniformly high (greater than .8), suggesting a high degree of stability of the measured dimension over the course of the procedure (Table 4b).

Rorschach Scores vs. Diagnosis and Neuroticism: A highly significant effect of diagnosis on the Rorschach pathognomic verbalization score was found ($F=7.12$, $p<.01$, df. 2,27). Higher pathognomic verbalization was shown by schizoaffective and bipolar groups than unipolar. A significant t test value (using Duncan's Multiple Comparison tables) was obtained in comparing schizoaffective and unipolar groups ($t=3.98$, $p<.05$, 18 df.) and the bipolar vs. unipolar groups comparison approached significance ($t=2.55$, $p<.10$, 21 df.) (Cf., Edwards, 1962). No significant difference between schizoaffective and bipolar groups was obtained using the pathognomic verbalization score of the Rorschach ($t=1.68$, 15 df.). Table 5a. gives the distribution of pathognomic verbalization scores by diagnosis.

A highly significant effect of diagnosis on Rorschach form definiteness score was also found. Exact tests using a median break of form definiteness scores indicated that unipolar Ss showed higher form definitenss than schizoaffective Ss ($p<.05$). Unipolar Ss did not show higher form level scores than bipolar Ss. The difference between schizoaffective and bipolar groups approached significance ($p<.10$) (Table 5b.).

No significant correlation between pathognomic verbalization and form definiteness scores of the Rorschach was found ($r=.12$). Schizoaffective Ss perform in the pathological

extremes of both scores (upper two-third of pathognomic verbalization scores and lower two thirds of form definiteness). Bipolar Ss perform in a mixed manner, pathological on the pathognomic verbalization score but evenly distributed on the form definiteness score. Unipolar Ss were evenly distributed on both scores (Cf., Table 6). The obtained correlation of r=-.12 between pathognomic verbalization and form definiteness does not appear inconsistent among correlations obtained by the Holtzman group (Holtzman, et al., 1961).

Neither pathognomic verbalization nor form definiteness Rorschach scores correlated significantly with neuroticism, Q-sort, mood score or age. No relationship of pathognomic verbalization or form definiteness with marital or vocational status was found.

Speech vs. Rorschach, Diagnosis, and Neuroticism:

A. First Person Pronouns: As a test of effects of diagnosis and low vs. high revelation interview condition on first person word usage, diagnostic groups were compared on low minus high revelation difference scores. Largest difference scores were obtained for schizoaffective Ss; unipolar and bipolar Ss averaged roughly equal difference scores ($F = 5.15$, $p < .05$, df. 2, 27). In the low revelation interview schizoaffective Ss tended to use a high percentage

of first person singular pronouns. Bipolar and unipolar Ss showed much less pronounced preference for the low revelation interview in their first person usage. A binomial test applied to the data for the schizoaffective group confirmed that a significantly greater number of schizoaffectives used first person pronouns preponderantly in the low revelation than the high revelation interview ($p < .04$) (Table 7a).

To rule out the possibility that the differences obtained above could have resulted merely from much reduced first person pronoun usage by schizoaffective Ss in the high revelation interview, mean first person proportions were examined. Examination of the means suggested that significant effects of diagnosis were really associated with elevated proportion of first person pronouns in the low revelation condition among schizoaffective Ss. The mean proportions for the three diagnostic groups were as follows: schizoaffective group, low revelation, .110, high revelation, .084; bipolar group, low revelation, .097, high revelation, .096; unipolar group, low revelation, .095, high revelation, .095.

A similar trend is shown when first person pronoun proportion is considered by Rorschach pathognomic verbalization scores. When middle and upper thirds of the distribution of pathognomic verbalization scores are combined, 11 Ss show

a preponderance of first person pronoun usage in the low revelation interview, only two Ss show a preponderance of first person pronoun usage in the high revelation interview. Among Ss in the low third of the pathognomic verbalization distribution three show a preponderance of first person pronoun usage in the low revelation interview against four in the high revelation interview. A binomial test applied to the high and middle data shows that the preponderance of first person usage in the low re velation interview is significant ($p=.022$) (Table 7b.).

No significant relationship between first person pronoun usage and Rorschach form level score was shown (Table 7c.).

The trend appears again using neuroticism scores. When middle and upper thirds of the distribution of neuroticism scores are combined, 11 Ss show a preponderance of first person pronoun usage in the low revelation interview; only three show a preponderance of first person usage in the high revelation interview. Among Ss in the lowest third of the neuroticism distribution three show a preponderance of first person words in the low, three in the high revelation interview. The binomial test applied to data from the upper two thirds of the distribution approaches significance

(p=.058), suggesting a trend (Table 7d.).

B. Emotion Words: Both positive and negative emotion words occurred more often in the high revelation interview than the low revelation interview. For negative emotion words, 20 Ss used negative emotion words more often in the high revelation interview than the low revelation interview, only seven did the reverse (one-way Chi-square =6.26, $p < .04$). For positive emotion words, 18 Ss used positive emotion words more often in the high revelation interview than the low revelation interview, only eight Ss did the reverse (one-way Chi-square=3.82, $p<.10$). This finding is interpreted as an indication that the high revelation interview elicited more emotionally involving material than the low revelation interview.

Comparing negative and positive emotion word usage, schizoaffective Ss all showed greater negative than positive emotion word usage in the high revelation interview. However, roughly equal use of negative and positive emotion words was shown by the unipolar group. In the bipolar group, a slight majority of Ss showed greater positive than negative emotion word usage. A binomial test applied to the schizoaffective group data showed that the preponderance of negative emotion word users in the schizoaffective group was significant($p<.02$).

An Exact test comparing schizoaffective and bipolar Ss was significant ($p < .05$) indicating greater use of negative emotion words among schizoaffective than bipolar Ss. An Exact test comparison of schizoaffective and unipolar Ss was not significant ($p = .11$). These results applied only to the high revelation interview; no significant results of this kind were found for the low revelation interview (Table 8a.). No difference between unipolar and bipolar groups was shown in these data.

When the distribution is broken down by Rorschach Scores, eight Ss among the highest third of Rorschach pathognomic verbalization scorers showed greater use of negative over positive emotion words. While only one S among this highest third did the reverse (binomial test, $p < .04$). Approximately equal numbers of low and medium pathognomic verbalization scorers used negative emotion words more often or positive emotion words more often (Table 8b.).

No significant relationship between form definiteness Rorschach score and relative use of negative and positive emotion words was found (Table 8c.).

The results for neuroticism are suggestive as they are for diagnosis and pathognomic verbalization breakdowns

of the data. Among high neuroticism Ss eight showed greater use of negative than positive emotion words, only one S doing the reverse. Low neuroticism scorers show the opposite trend, six Ss using positive emotion words more often, only two using negative words more often. Exact test comparison of low and high thirds of the neuroticism distribution was significant ($p < .05$). When high and middle thirds of neuroticism scores are combined, these Ss show greater use of negative over positive emotion words than low neuroticism scorers (Exact test, $p = .012$) (Table 8d.).

In each case, no significant trend was observed for the low revelation interview. All significant results were obtained in the high revelation condition.

Emotion Words, First Person Usage, and Mood: Degree of negative over positive emotion word usage and degree of greater first person pronoun usage in low over high revelation interview were significantly related to one another (Chi-square $= 5.36$, $p < .05$, corrected for continuity). Both negative over positive emotion word usage and low revelation over high revelation first person usage were found to relate with diagnosis, neuroticism, and Rorschach pathognomic verbalization (not definiteness).

No significant relationships were found between emotion word usage or first person pronoun usage and mood ratings. Lack of significant relationship with speech measures was found despite the moderately strong correlation demonstrated between mood and neuroticism scores.

Discussion

The present study was not designed to assess the dimensionality of affective disorder diagnosis even though certain evidence concerning the dimensionality of pathology measures may be noteworthy in the results. Because a study of dimensionality was not intended, pathology measures used were not well sampled but were selected for specific purposes only. The Eysenck (Eysenck & Eysenck, 1968) psychoticism factor was not included, for example, because it was not considered especially relevant to the issue under consideration. The issue considered in the study was the general belief that psychotic symbolism may represent attempts at message compression related to an exaggerated impulse for self expression associated with bad feelings in mental disorder. This general belief gave rise to the expectation that measures of pathology related to self revelation or self reference, expression of negative feelings, and symbolic thought pathology would be positively interrelated and related as well to diagnostically defined pathology levels. Complete confirmation of this expectation of overall interrelatedness did not occur inthe results, but a more complex conception of the meaning of diagnosis and pathology emerged.

The moderate correlation between Maudsley neuroticism

score, depression Q-Sort score, and negative mood ratings on the Personal Feelings Scales is in agreement with findings of correlation between neuroticism and sensitizer scales (Lefcourt, 1966) and between neuroticism and symptom list scores (Kear-Colwell, 1969). The relationship of neuroticism and symptom list scores (Q-Sort) with rated bad feelings on the Personal Feelings Scales confirms similar findings by Wessman & Ricks (1966).

The expected correlation of diagnosis and Rorschach variables with neuroticism and depression measures did not occur. The neuroticism test did not appear to differentiate the clinic sample from normative groups, nor did it differentiate among diagnostic groups within the clinic population.

The finding that neuroticism relates to mood measures on the Personal Feelings Scales but not to diagnostic groups in the clinic may be interpreted in the light of findings by Kerr and associates (1970). In a longitudinal study of depression, neuroticism levels were found to increase and decrease with periods of depression and remission of the Ss. Neuroticism was described as a state rather than a trait measure of depression. In the present study all Ss showed the potential for clinical depression but were actually seen in various states of depression and recovery since control of

level of depression could not be maintained. State variance may easily have obliteraated any effects on neuroticism score of trait variance associated with diagnosis.

The diagnostic categories, unipolar, bipolar, and schizoaffective disorder are identified as representing a severity continuum (Leonhard, 1968, Perris, 1966, etc.). The unipolar affective disorder, considered least severe, consists of a simple affective disturbance. The bipolar disorder, more severe than unipolar, contains the element of mania in addition to depressed affective states. Schizoaffective disorder, most severe of the three, is directly akin to schizophrenia. The ordinal severity of the diagnostic categories was confirmed in the present study using social background and Rorschach variables.

A factor of social competence or developmental level and a factor of symbolic bizarreness or thought disorder appear to have been important in differentiating among the three diagnostic groups.

Schizoaffective Ss were distinguished as showing poor vocational and marital history (low social competence) as well as significant thought disorder on Rorschach form definiteness and pathognomic verbalization measures, relative to unipolar Ss. The unipolar group showed good social

competence backgrounds and no thought disorder on either Rorschach measure. The bipolar group fell between the other two diagnostic groups. Although bipolar Ss showed good social competence backgrounds and high form definiteness on the Rorschach (indistinguishable from the social competence and form definiteness of the unipolar group), they showed high levels of pathognomic verbalization on the Rorschach (indistinguishable from the schizoaffective group). In the bipolar group the factors of thought disorder and social competence were interestingly juxtaposed. Consistent with findings of Court (1968), the occurrence of mania seems to go with an element of pathognomic verbalization added onto the basic unipolar disorder picture of good social competence and perceptual sophistication.

Overall, Rorschach form definiteness did not significantly correlate with Rorschach pathognomic verbalization, even though both measures are included as basic pathology indicators. Interpreted according to results with the three diagnostic groups, the pathognomic verbalization score may reflect a component of pathology not strongly related to prognostic background variables and social competence. Instead, the pathognomic verbalization score seems to reflect short term motivations or stylistic elements which may not greatly influence social

or vocational functioning. High form definiteness on the Rorschach was coincident with high social competence among diagnostic groups. The Rorschach form definiteness variable may reflect perceptual or intellectual habits whose effects on social or vocational level may be greater.

Results of the study did give some credence to the general principle that pathology measures must reflect unpleasant feelings which gain expression in speech. A unified concept of pathology as being related to expression of unpleasant feelings is supported despite the finding that intercorrelations among pathology measures do not indicate a general pathology factor.

The low revelation interview appears to have provided a setting which encouraged use of reference to the self. Lack of question specificity may have created a desirable atmosphere of low confrontativeness. Under this condition of the low revelation interview Ss generally showed a high degree of first person usage as compared with the high revelation interview. However, in the low revelation interview the more pathological groups(i.e., schizoaffective, high Rorschach pathognomic verbalization, and high neuroticism scorers) show the most pronounced tendency to refer to self.

The high revelation interview, apparently causing greater amotional involvement, elicited greater use of emotion words. Although greater use of both positive and negative words occurred in the high revelation interviews, Ss generally show a tendency to greater use of negative emotion words than positive emotion words. More pathological groups (i.e., schizoaffective diagnosis, high pathognomic verbalization scorers on the Rorschach, and high neuroticism scorers) show the most pronounced tendency to utilize negative emotion words.

Rorschach form definiteness did not show effects on speech content variables in the study even though Rorschach pathognomic verbalization did. Lack of relationship between form definiteness and speech variables which do show effects of all other pathology variables invites some speculation about the nature of the form level variable.

Apparent correspondence between form definiteness and background variables was discussed with respect to the bipolar Ss. Lack of correspondence between form definiteness and verbal behavior otherwise related to pathology level was also observed. These findings give the impression that form definitensss may correspond with the developmental level notion advanced by Werner (Wilensky, 1959) much more exactly

than pathognomic verbalization. Rorschach pathology indicators consisting of pathognomic verbalization as well as form definiteness elements may be two dimensional, tapping perceptual aspects of pathology through form definiteness, and independent motivational and verbal aspects of pathology through the pathognomic verbalization component. These speculations need confirmation through other studies.

Finally, although Ss frequently showed intense emotional expressiveness during the interviews, the mood scale showed high consistency of mood across parts of the procedure. Parts of the procedure differentially affected the behavior of Ss but did not affect their mood in any measurable way. Very high consistency across successive administrations of the Personal Feelings Scales show that the mood measure was highly responsive to intersubject effects.

Conclusion

The Maudsley Neuroticism scale and the depression symptom Q-Sort were correlated with negative mood as expressed on the Personal Feelings Scales. However, this cluster of variables was unrelated to diagnosis, background variables and Rorschach scores. The finding that neuroticism and symptom score measures relate to mood but not to diagnosis was interpreted in the light of a study by Kerr and associates (1970) as suggesting that neuroticism as measured on the Maudsley scale is a state rather than a trait measure of neuroticism-like or depression-like pathology.

Rorschach and background variables significantly differentiated among unipolar, bipolar, and schizoaffective groups which fell into a pathology continuum. Unipolar Ss showed good social competence, high Rorschach form definiteness and low Rorschach pathognomic verbalization. Bipolar Ss showed good social competency, high Rorschach form definiteness, but high Rorschach pathognomic verbalization. Schizoaffective Ss showed poor social competence, low Rorschach form definiteness, and high Rorschach pathognomic verbalization.

Rorschach form level and pathognomic verbalization were not significantly correlated. Form definiteness corresponded to developmental variables not expressive measures. Pathognomic verbalization corresponded to expressive measures

not developmental level. These results suggest possible important differences between form definiteness and pathognomic verbalization components of Rorschach pathology scores.

All measures associated with pathology, except Rorschach form definiteness, namely neuroticism, diagnosis, and Rorschach pathognomic verbalization showed some relationship to a tendency to refer to the self and to utilize negative emotional terms in the interview. This finding lent some support to the concept of an underlying association between pathology and negative emotional expression.

Negative mood seems to have been a stable intersubject variable, highly reliable over the course of the procedure. Although the behavior of the Ss was affected by the procedure, the Personal Feelings Scales indicated that the mood of the Ss was not affected to a measurable degree.

References

Andrew, June M. Recovery from surgery with and without preparatory instructions for three coping styles. Journal of Personality and Social Psychology, 1970, 15, 223-26.

Arieti, S. Manic-depressive psychosis, in Arieti, S. (ed.), American Handbook of Psychiatry. New York:Basic Books, 1959, Pp. 419-54.

Beck, A.T., Errors in perception and fantasy in schizophrenia. in Kasanin, J.S. (ed.), Language and Thought in Schizophrenia. New York: W.W. Norton, 1944.

Beck, A.T., Depression: Clinical, Experimental, and Theoretical Aspects. New York: Harper and Row, 1967.

Becker, W.C. A genetic approach to the interpretation and evaluation of the process-reactive distinction in schizophrenia. Journal of Abnormal and Social Psychology, 1956, 53, 229-36.

Benjamin, J.D. A method for distinguishing and evaluating formal thinking disorder in schizophrenia. in Kasanin, J.S. (ed.) Language and Thought in Schizophrenia, New York: W.W. Norton, 1944.

Book, J.A. Genetic aspects of schizophrenic psychoses. in Jackson, D.D. (ed.), The Etiology of Schizophrenia, New York: Basic Books, 1960, Pp. 23-36.

Bracten, L.J The movement from non-self to self--in client centered psychotherapy. Journal of Counselling Psychology, 1961, 8, 20-25.

Bull, R.H. and Strongman, K.T., Anxiety, neuroticism, and extraversion. Psychological Reports, 1971, 29, 11-1-02.

Byrne, D. and Sheffield, J., Response to sexually arousing stimuli as a function of repressing and sensitizing defenses. Journal of Abnormal Psychology, 1965, 70, 114-18.

Cattell, R.B., and Eber, M. Manual for the I.P.A.T. Music Preference Test. Champaign, Ill.: Institute for Personality and Abilities Testing, 1954 (mimeo).

Cattell, R.B. and Saunders, D.R., Musical preferences and personality diagnosis: 1. Factorization of one hundred and twenty themes. Journal of Social Psychology, 1954, 39, 3-24.

Court, J.H., Manic-depressive psychosis; an alternative conceptual model. British Journal of Psychiatry, 1968, 1523-30.

Edwards, A.L., The Social Desirability Variable in Personality Assessment and Research. New York: Dreyden, 1957.

Edwards, A.L., Experimental Design in Psychological Research. New York: Holt, Rinehart, and Winston, 1962.

Eysenck, H.J., Manual of the Maudsley Personality Inventory London: University of London Press, 1959.

Eysenck, H.J., The classification of depressive illness. British Journal of Psychiatry, 1970, 117, 241-50.

Eysenck, H.J. andEysenck, S.B.G., A factorial study of psychoticism as a dimension of personality. Multivariate Behavioral Research, 1968, Special, 15-31.

Freud, S., Mourning and melancholia (1917), in Strachey, J. (trans.), Standard Edition. London: Hogarth Press, 1957, Pp. 239-58.

Goldstein, M.J., The relationship between coping and avoiding behavior and responses to fear arousing propoganda. Journal of Abnormal and Social Psychology, 1959, 58, 247-52.

Goldstein, M. J., Jones, R.B., Clements, T.L., Flogg, G.W., and Alexander, F.G., Coping style as a factor in psychophysiological response to a tension-arousing film. Journal of Personality and Social Psychology, 1965, 1, 290-302.

Gottschalk, L.A.' and Gleser, Goldine C., The Measurement of Psychological States through the Content Analysis of Verbal Behavior. Berkeley: University of California Press, 1969.

Harrower, Molly R., Group techniques for the Rorschach test. in Abt, L.E., and Bellack, L., Projective Psychology, New York: Grove Press, 1959, Pp. 146-84.

Heller, K., Davis, J.D., and Meyers, R.A., Effects of interviewer style in a standardized interview. Journal of Consulting Psychology, 1966, 30, 501-08.

Herzberg, F. and Hamlin, R.M., The motivator-hygiene concept and psychotherapy. Mental Hygiene, 1963, 48, 384-97.

Hinchcliffe, R., Intercorrelations of M.M.P.I. and M.P.I. Scales on vertiginous populations, Personality, 1971, 2, 315-23.

Holtzman, W.H., Guide to Administration and Scoring: Holtzman Inkblot Technique, New York: Psychological Corporation, 1961.

Holtzman, W.H., Thorpe, J.S., Swartz, J.D., and Herron, E.W. Inkblot Perception and Personality: Holtzman Inkblot Technique, Austin: University of Texas Press, 1961.

Jourard, S.M. and Friedman, R. Experimenter-subject "distance" and self-disclosure. Journal of Personality and Social Psychology, 1970, 15, 278-82.

Kear-Colwell, J.J., Neuroticism (Cattell) and its relationship to the presence of neurotic symptomotology. Multivariate Behavior Research, 1969, 4, 223-33.

Kendall, R.E., The Classification of Depressive Illnesses. London: Oxford University Press, 1968.

Kendall, R.E., The clinical distinction between the affective psychoses and schizophrenia. British Journal of Psychiatry, 1970, 117, 261-66.

Kendall, R.E., and Gourlay, Jane, The clinical distinction between psychotic and neurotic depressions. British Journal of Psychiatry, 1970, 117, 257-66.

Kerr, T.A., Schapira, K., Roth, M., and Garside, R.F., The relationship between the Maudsley Personality Inventory and the course of affective disorders. British Journal of Psychiatry, 1970, 116, 11-19.

Knopf, I.J., Rorschach summary scores in differential diagnosis. in Hirt, M. (ed.), Rorschach Science, Glencoe, Ill.: Free Press, 1962, Pp. 202-14.

Lazarus, R.S., and Alfert, E., Short circuitry of threat by experimentally altered cognitive appraisal. Journal of Abnormal and Social Psychology, 1964, 69, 195-205.

Lefcourt, H.M., Repression-sensitization: a measure of the evaluation of emotion expression. Journal of Consulting Psychology, 1966, 30, 444-49.

Leonhard,K., Uber monopolare und bipolare endogene psychosen, Nerenarzt, 1968, 39, 104-06.

Lohrenz, L.J., and Riley, W.G., The Mayman form-level scoring method: Scorer reliability and correlates of form-level. Journal of Projective Testing and Personality Assessment, 1967, 31, 39-43.

Lomont, J.F., The repression-sensitization dimension in relation to anxiety responses. Journal of Consulting Psychology, 1965, 29, 84-86.

Marjerrison, G. and Keogh, R.P., A study of the psychiatric interview. Canadian Psychological Association Journal, 1967, 12, 293-303.

Marsden, G., Content-analysis studies of therapeutic interviews: 1954 to 1964. Psychological Bulletin, 1965, 63, 298-321.

McQuitty, L.L., Elementary factor analysis. Psychological Reports, 1961, 9, 71-78.

McQuitty, L.L., Elementary linkage analysis for isolating both orthogonal types and typal relevancies. Educational and Psychological Measurement, 1957, 17, 207-29.

Perris, C., A study of bipolar (manic-depressive) and unipolar recurrent depressive psychoses. Acta Psychiatrica Scandanavia Supplement, 1966, 194.

Perris, C., The separation of bipolar (manic-depressive) from unipolar recurrent depressive psychoses. Behavioral Neuropsychiatry, 1969, 1, 17-24.

Pollock, H.M., Malzberg, B., and Fuller, R.G., Hereditary and Environment Factors in the Causation of Manic-Depressive Psychosis and Dementia Praecox. Utica, N.Y.: State Hospital Press, 1939.

Pope, B Siegman,A.W., and Blass, T. Anxiety and speech in the initial interview. Journal of Consulting and Clinical Psychology, 1970, 35, 233-38.

Price, J., The genetics of depressive behavior. in Coppen. A., and Walk, a. (eds.), Recent Developments in Affective Disorders. Ashford, Kent, England:British Journal of Psychiatry Special Publication #2, 1968, Pp. 37-54.

Pryor, D.B., Correlates of the Mayman form level scoring system. Journal of Projective Testing and Personality Assessment, 1968, 32, 462-65.

Rainer, J.D., A reappraisal of genetic studies in schizophrenia. in Sankar, D.V.S. (ed.), Schizophrenia: Current Concepts and Research, Hicksville, N.Y.: P.J.D. Publishers, 1969, Pp. 303-21.

Rim, Y. Dimensions of job incentives and personality. Acta Psychológica Amsterdam, 1961, 18, 332-36.

Sappington, J. Perception of threatening stimuli in process and reactive schizophrenics. Journal of Consulting and Clinical Psychology, 1973, 41, 48-50.

Scarpetti, W.L., The repression-sensitization dimension in relation to impending painful stimulation. Journal of Consulting and Clinical Psychology, 1973, 40, 377-82.

Schaeffer, D.S., Effects of Neuroticism on Semantic Differential Ratings. Unpublished M.A. Thesis, University of Illinois, 1967.

Slater, E.T., The inheritance of manic-depressive insanity and its relation to mental defect. Journal of Mental Science, 1936, 82, 625 ff..

Slater, E.T., Genetics in psychiatry. Journal of Mental Science, 1944, 90, 17 ff..

Staples, E.A., and Wilensky, H., A controlled Rorschach investigation of hypnotic age regression. Journal of Projective Techniques and Personality Assessment. 1968, 32, 246-52.

Thelen, M.H., Repression-sensitization: its relation to adjustment and seeking psychotherapy among college students. Journal of Consulting and Clinical Psychology, 1969, 33, 161-65.

Weiner, I.B., Psychodiagnosis in Schizophrenia, New York: Wiley, 1966.

Wessman,A.E., and Ricks, D.F., Mood and Personality, New York: Holt, Rinehart, and Winston, 1966.

Wessman, A.E. and Ricks, D.F., Personal Feelings Scales, revised 1970 (mimeo).

White, Alice M., Fichtenbaum, L., and Pollard, J., Evaluation of silence in initial interviews with psychiatric clinic patients. Journal of Nervous and Mental Diseases, 1964, 39, 550-57.

Wiggens, J.S., Definitions of social desirability and acquiescence. in Messick, S., and Ross, J. (eds.). Measurement in Personality and Cognition, New York: Wiley, 1962.

Wilensky, H. Rorschach developmental level and social participation of chronic schizophrenics. Journal of Projective Techniques, 1959, 23, 87-92.

Winokur, G., Clayton, P.J., and Reich, T., Manic-Depressive Illness, St. Louis, Mo.: C.V. Mosby, 1969.

Table 1

Employment, Marriage, and Age by Diagnosis (Number of Ss)

Diagnosis:	Unipolar	Bipolar	Schizoaffective
a. Employment			
Never worked, marginal	0	0	4
Unsteady, part time	3	3	3
Steady, full time, housewife	10	7	0
b. Marital Status:			
Never married	2	2	5
Divorced	0	1	1
Steadily married	11	7	1
c. Age (years)			
below 20	0	0	2
21-40	0	0	1
41-60	7	4	4
above 60	6	4	0

Table 2

Frequency Distribution of Maudsley Neuroticism Scores by Diagnosis

Diagnosis:	Unipolar	Bipolar	Schizoaffective	Total
Score				
1-5	1	2	0	3
6-10	2	1	1	4
11-15	1	1	1	3
16-20	0	0	1	1
21-25	4	0	0	4
26-30	1	3	0	4
31-35	2	0	1	3
36-40	1	1	1	3
41-45	1	2	2	5
	—	—	—	—
	13	10	7	30

Table 3

Mean Personal Feelings Self Ratings (Summed over All Administrations) by Neuroticism Level

	Neuroticism		
Range:	Low (1-15)	Medium (16-32)	High (33-45)
Scale			
Anger	3.42	4.59	5.72
Fatigue	4.52	5.64	6.03
Anxiety	4.17	5.45	6.42
Depression	4.48	5.64	6.22

Table 4

Intercorrelations among Personal Feelings Scales and Neuroticism by Scale and Administration

A. Intercorrelations among Personal Feeling Rating Scales and Correlations with Neuroticism (When ratings are summed over 4 administrations).

Scale or Score	2.	3.	4.	5.
1. Anger	.633	.841	.717	.708
2. Fatigue		.736	.778	.449
3. Anxiety			.929	.651
4. Depression				.571
5. Neuroticism Score				

B. Test-retest correlations of Personal Feelings Ratings and Correlations with Neuroticism (When ratings are summed over 4 scales).

Administration or Score	2.	3.	4.	5.
1. Following Q-Sort and Maudsley	.854	.975	.849	.686
2. Following Rorschach		.944	.821	.624
3. Following low-revelation interview			.964	.636
4. Following high revelation interview				.585
5. Neuroticism Score				

Table 5

Distribution of Rorschach Scores by Diagnosis (Numbers of Ss)

A. Rorschach Pathognomic Verbalization

Range:	Low Scores (0-.04)	Middle Scores (.05-.21)	High Scores (.22 or more)
Diagnosis			
Unipolar	8	3	2
Bipolar	2	4	4
Schizoaffective	0	3	4

B. Rorschach Form Definiteness

Range	Low Scores (.85-1.22)	Middle Scores (1.23-1.46)	High Scores (1.47-2.00)
Diagnosis			
Unipolar	4	4	5
Bipolar	2	3	5
Schizoaffective	4	3	0

Table 6

Pathogonomic Verbalization vs. Form Definiteness Scatter Plot

Showing Distribution of Ss by Diagnosis

Pathognomic Verbalization	Form Definiteness					
	.80-.00	1.01-1.20	1.21-1.40	1.41-1.60	1.61-1.80	1.81-2.0
.00-.05	UUB	B		UB	UUU	B
.06-.10		U	BB		B	
.11-.15	SS		U			B
.16-.20			S			
.21-.25			B	U		
.26-.30			S	U		
.31-.35						
.36-.40		B		B	B	
.41-.45						
.46-.50						
.51-.55		S		B		
.56-.60			SS			

Key: U-Unipolar; B-Bipolar; S-Schizoaffective

Table 7

Relative First Person Pronoun Usage in Low vs. High Revelation Interviews: Distributions by Diagnosis, Rorschach Scores, and Neuroticism

		First Person Pronoun Usage	
	(N)	Greater in low than High revelation (Ss)	Greater in high than Low revelation (Ss)
A. Diagnosis			
Unipolar	13	6	4
Bipolar	10	2	2
Schizoaffective	7	6----------p < .05----------	0
B. Rorschach Pathognomic Verbalization			
Low	10	3	4
Middle	10	6	1
High	10	5	1
Middle + High	20	11----------p < .05--------	2
C. Rorschach Form Definiteness			
Low	10	3	2
Middle	10	4	2
High	10	7	2
Middle + High	20	11	4
D. Neuroticism			
Low	10	3	3
Middle	11	7	2
High	9	4	1
Middle + High	20	11----------p < .058-------	3

Table 8

Relative Negative vs. Positive Emotion Word Usage
by Diagnosis, Rorschach Scores, and Neuroticism Score

	Low Revelation Interview (number of Ss)		High Revelation Interview (number of Ss)	
	Negative> Positive	Positive> Negative	Negative> Positive	Positive> Negative
A. *Diagnosis*				
Unipolar	5	4	7	4
Bipolar	2	5	4	6
Schizoaffective	2	2	7---p < .05---0	
B. Rorschach Pathognomic Verbalization				
Low	4	4	5	4
Middle	1	4	5	5
High	4	3	8---p < .05---1	
C. Rorschach Form Definiteness				
Low	6	3	3	4
Middle	5	4	3	3
High	7	3	3	4
D. Neuroticism				
Low	3	2	2	6
Middle	4	4	8	3
High	2	5	8---p < .05---1	

Appendix A.

The Inventory of Psychic and Somatic Complaints

Anxiety

Feeling painfuly self conscious with others.
Suddenly scared for no apparent reason.
Feeling fearful.

Sadness

Crying easily.
Feeling blue.

Hopelessness

Feeling hopeless about the future.
Thoughts of death or dying.

Low Self-Esteem

Feeling useless and of little value to anyone.
Feeling worthless.
Feeling inferior to others.

Guilt

Blaming myself for things.
Feeling shame for things I did in the past.

Suicidal Ideation

Thoughts of ending my life.
Feeling others would benefit if I were dead.

Hostility

Feeling critical of others.
Feeling easily annoyed or irritated.

Suspiciousness

Feeling that people are unfriendly.
Feeling others do not understand me or are unsympathetic.
Feeling people are watching or discussing me.

Appendix A. (continued)

Interest Loss

Loss of sexual interest or pleasure.
Feeling no interest in things.
Loss of interest in activities once enjoyed.

Energy Loss

Feeling everything is an effort.
Feeling tired, worn-out, lacking in energy.
Drowsiness during the day time.
Having to push myself to get going in the morning.

Insomnia

Awakening early unable to fall asleep again.
Sleep that is restless and disturbed.
Difficulty falling asleep.

Diurnal Cycle

Feeling worse in the evening than the morning.
Becoming more depressed as the day wears on.

Poor Appetite

Poor appetite.

Obsessiveness

Having to avoid things because of fear.
Having to repeat things such as touching, washing, counting, etc.
Having to do things very slowly in order to make sure I am doing them right.
Having to check and double check what I do.
Unable to get rid of bad thoughts or ideas.

Destructive Impulses

Temper outbursts I could not control.
Having impulses to smash things.
Having impulses to beat, injure, or harm someone.

Appendix A. (continued)

Somatic Complaint

Skin eruptions, hives, itches or rashes.
Sensation of choking or suffocating.
Pains in the stomach.
Constipation.
Loose bowel movements.
Faintness or dizziness.
Backaches or muscular aches.
Sweating.
Nausea or upset stomach.
Heart pounding or racing.
Nervousness or shakiness inside.
Trembling.
Dry mouth.

Disorientation

Feeling confused.
Difficulty in making decisions.
Trouble remembering things.
Trouble concentrating.

Appendix B

Personal Feelings Scales

Harmony vs. Anger

9) Boundless good will and complete harmony.
8) Enormous good will and great harmony.
7) Considerable good will.
6) Get along well and rather smoothly.
5) Get along O.K., more or less good feeling.
4) A bit annoyed, slightly "put out"; minor irritation.
3) Quite annoyed and irritated.
2) Very angry. Strongly hostile.
1) Enraged. Seething with anger and hostility.
0) Violent fury. Desire to attack, destroy.

Tranquility vs. Anxiety

9) Perfect and complete tranquility. Unshakably secure and relaxed.
8) Exceptional calm, wonderfully secure and carefree.
7) Great sense of well-being. Essentially secure and at ease.
6) Pretty secure generally and free from care.
5) Nothing particularly troubling me. More or less at ease.
4) Somewhat concerned with minor worries or problems. Slightly ill at ease, a bit troubled.
3) Experiencing some worry, trouble or uncertainty. Somewhat nervous, jittery, on edge.
2) Considerable insecurity. Very troubled by significant worries, fears, uncertainties.
1) Tremendous anxiety and concern. Harrassed by major worries, fears, uncertainties.
0) Completely beside myself with dread, worry, fear. Overwhelmingly distraught and apprehensive. Obsessed or terrified by insoluble problems and fears.

Energy vs. Fatigue

9) Limitless zeal for activity. Surging with energy. Tremendous vitality.
8) Exuberant vitality, tremendous energy, great zest for activity.

Appendix B. (continued)

Energy vs. Fatigue (continued)

7) Great energy and drive.
6) Very fresh, considerable energy.
5) Fairly fresh. Adequate energy.
4) Slightly tired. Somewhat lacking in energy.
3) Rather tired. Not much energy.
2) Great fatigue. Can hardly keep going. Meager resources.
1) Tremendously weary. Nearly worn out and practically at a standstill. Almost no resources.
0) Utterly exhausted. Entirely worn out. Completely incapable of even the slightest effort.

Elation vs. Depression

9) Completely elated. Rapturous joy and soaring ecstasy.
8) Very elated and in very high spirits. Tremendous delight and bouyancy.
7) Elated and in high spirits.
6) Feeling very good and cheerful.
5) Feeling pretty good, "O.K.".
4) Feeling a bit low. Just so-so.
3) Spirits low and somewhat "blue".
2) Depressed and feeling very low. Definitely "blue".
1) Tremendously depressed. Very terrible, miserable, "just awful".
0) Utter depression and gloom. Completely down. All is black and leaden.

Appendix C.

The Original Hypotheses

1. Unipolar depressed patients will show lower total depression complaint (i.e., pathology) scores than schizoaffective patients. Bipolar depressed patients are likely to overlap both unipolar and schizoaffective groups. The bipolar depressed mean will probably fall between the unipolar and schizoaffective means.

2. Depression pathology scores will be positively associated with self-referenced verbalization and feeling related verbalization. The association between pathology scores and verbalizations will be shown by (a) group differences (unipolar vs. schizoaffective groups--with bipolar mean falling between means of other groups) and (b) by Pearson R when subject groups are pooled.

3. Depression pathology scores will be positively associated with thought disorder signs on the Rorschach. The relationship will be shown using (a) analysis of group differences (unipolar depressed--fewest signs, schizoaffective depressed--most signs, bipolar depressed showing overlap into both groups with mean between those of two other groups) and (b) by a Pearson R when all groups are pooled.

Appendix C. (continued)

4. Depression pathology scores will be associated with positive (or less negative) mood changes over the course of an interview in which self-revelation is encouraged. (a) Schizoaffective patients will show greatest positive mood change, unipolar patients will show least positive mood change. (b) The relationship between pathology score and mood change will be shown by a Pearson R when three subject groups are pooled.

Appendix D.

Ss Listed by Diagnosis Giving Sex, Age, Marriage, Education, Employment, Country of Origin, and Apparent Race

Unipolar Affective Disorder

1. male; 62; married, children; college graduate; managerial; USA: Caucasian
2. male; 65; married, children; high school graduate; trades; USA: Caucasian
3. male; 65; married, children; 2 yrs. high school; trades; USA: Caucasian
4. male; 42; married, children; college graduate; sales; USA; Caucasian
5. female; 43; married, children; high school graduate; clerical; USA: Caucasian
6. female; 52; married, children; high school graduate; trades; Europe; Caucasian
7. female; 56; married; elementary school; trades, house wife; Puerto Rico; Caucasian
8. female; 66; married, children; elementary school; trades, h.w.; Europe; Caucasian
9. female; 63; unmarried; part high school; musician; Europe; Caucasian
10. female; 65; married, children; 2 yrs. high school; clerical, h.w.; USA: Caucasian
11. female; 58; unmarried; part high school; part time clerk; USA; Caucasian
12. female; 52; married; part college; unsteady secretary; USA; Caucasian
13. female; 59; married, children; part college; part time clerk, h.w.; USA; Caucasian

Bipolar Affective Disorder

1. male; 56; married, children; part high school; trades; USA; Caucasian
2. male; 40; unmarried; college graduate; professional; Israel; Caucasian
3. female; 58; married, children; high school graduate; secretary; USA: Caucasian
4. female; 57; divorced, children; part high school; unsteady waitress; USA: Caucasian

Appendix D. (continued)

Bipolar Affective Disorder (continued)

5. female; 58; married; part high school; clerical, h.w.; USA; Caucasian
6. female; 67; married; high school graduate; secretary; USA; Caucasian
7. female; 65; married; children; part high school; part time sales; USA; Caucasian
8. female; 72; married, children; high school graduate; house wife; Europe; Caucasian
9. female; 67; married, children; high school graduate; house wife; Europe; Caucasian
10. female; 23; unmarried; college graduate; unsteady professional; USA; Caucasian

Schizoaffective Disorder

1. male; 19; unmarried; elementary school; marginal; USA: Caucasian
2. male; 19; unmarried; part high school; marginal; USA; Caucasian
3. male; 50; married, children; part high school; marginal; USA; Caucasian
4. female; 49; divorced, children; Ph.D.; part time clerk; Europe; Caucasian
5. female; 45; unmarried; college graduate; unsteady modelling; USA: Caucasian
6. female; 32; unmarried; college graduate; unemployed; Puerto Rico; Negroid
7. female; 48; unmarried; elementary school; temporary clerk; USA; Caucasian