PRIMARY PROCESS MANIFESTATIONS IN THERAPISTS FOLLOWING A PSYCHOTHERAPEUTIC SESSION

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY
STANLEY S. SCHONBUCH

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ABSTRACT

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by Stanley S. Schonbuch

An attempt was made to objectively measure and experimentally demonstrate clinically observed changes in therapist thinking following a treatment session. Discussions of the activity of therapists in dynamic or psychoanalytically oriented psychotherapy have dealt with the intense involvement of the therapist in the therapeutic process. Primary process stimulation is experienced by the therapist due to his need to regress in order to understand and communicate with his patient. Observations of temporary and occasionally inappropriate behavior by therapists following a therapy session were interpreted as manifestations of increased primary process thinking due to a "carryover" of such thinking from the therapy session itself.

Three groups, 11 therapists of schizophrenics, 11 therapists of neurotics and 11 persons involved in a period of "Social Interaction" (SI), and one group of five college students, served as subjects in this study. The first three groups were comprised of psychology graduate students, psychiatric residents and social workers. They were matched for age, sex, and discipline. Every subject was given the

Holtzman Inkblots (Form A or Form B) and a mood scale questionnaire before and after an interpolated activity. A Primary Process-Secondary Process questionnaire for amount of primary process used during the therapy session or interpolated activity was administered and an informal interview with the therapists took place, following this period. For the two groups of therapists, the intervening activity consisted of seeing a familiar patient, either neurotic or schizophrenic, in a treatment session. The third group of subjects were engaged in a "small talk" Social Interaction situation with the experimenter. The five college students, serving as another control group for changes in primary process following cognitive activity, were required to involve themselves in a task consisting of solving relatively simple arithmetical problems.

The "pre" and "post" Holtzman protocols were scored for three "pathology indicators," (Anxiety, Hostility, and Pathognomic Verbalization) as well as by the Holt Manual For The Scoring Of Primary Process Manifestations In Rorschach Responses. These were scored for Level 1 and Level 2 primary process thinking, defense demand, defense effectiveness and form level. The mood scale ratings were also scored for possible changes in feelings following a treatment session.

In contrast to the therapists of neurotics, SI subjects and cognitive activity subjects, therapists of schizophrenics manifested significant increases in Level 2 primary process thinking following a treatment session. No changes were noted in any group, in terms of Defense Demand, Defense Effectiveness, Form Level, Level 1 primary process responses, or mood scale dimensions. A more detailed analysis of the data yielded a significant increase in amount of libidinal content in therapists of neurotics. In terms of the amount of primary process thinking during the interpolated activity, the following ascending order was reported: "cognitive" subjects, then therapists of schizophrenics, therapists of neurotics and last are the SI control subjects.

The above findings were related and discussed in terms of the theory and observations of changes in thinking of therapists following a treatment session and were seen as supporting these propositions.

Approved 

Committee Chairman

Date May 14, 1968

PRIMARY PROCESS MANIFESTATIONS IN THERAPISTS FOLLOWING A PSYCHOTHERAPEUTIC SESSION

By

Stanley S. Schonbuch

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CHAPTER I

INTRODUCTION

Despite the commonly acknowledged role that the therapist's unconscious plays in the process of understanding and communication with the patient, no reported research has attempted to deal with the possible effects or changes that this process may have on the cognition and/or perception of the therapist. Most research in the area of psychotherapy has concerned itself with client variables and the effects of therapy on the patient, and has almost completely ignored any possible changes or effects on the therapist. In fact, it has only been recently that researchers have concerned themselves with the role of the therapist in the therapeutic process.

This study is concerned with the effects of a brief psychotherapeutic encounter on the thinking of therapists. The use of the therapist's unconscious as a means of understanding his patient and the emotional stimulation afforded the therapist because of the intense involvement necessary for therapy, suggests that the therapist's cognitive and/or perceptual functioning undergoes a temporary regressive change or shift from the more mature and integrated secondary

process to the more infantile primary process. For purposes of this study, primary process thinking is defined by the presence of a) libidinal or aggressive content and b) formal distortions of thought such as condensation, symbolization, fragmentations, loose or fluid association, syncretic or autistic logic, logical contradictions and impaired reality testing as reflected in projective responses to inkblots.

CHAPTER II

THEORETICAL BACKGROUND

Psychotherapy and the Unconscious

Freud (1912), in an article addressing itself to the psychoanalytic method of treatment, deals briefly with the therapist's role in understanding his patient. A method, suggested by Freud, for listening to the patient for understanding is "evenly hovering attention." That is, according to Freud, "All conscious exertion is to be withheld from the capacity for attention, and one's 'unconscious memory' to be given full play; or to express it in terms of technique, pure and simple: one has simply to listen and not to trouble to keep in mind anything in particular" (pp. 118-119). This technique was suggested not only for understanding the patient but as a means for counteracting fatigue in the therapist. In the same article, Freud suggests that the therapist must use his own unconscious in order to understand the patient's communication. This is recommended for reconstructing and integrating the patient's communication in a meaningful fashion. Freud states that ". . . he must bend his own unconscious like a receptive organ towards the emerging unconscious of the patient, be as the receiver of telephone to the disc." While the terms may differ somewhat,

the need for the analyst to use his own unconscious and to permit his own free associations to arise in response to his patient's communications has been recognized by others (Ferenczi, 1928; Knight, 1940; Loewald, 1957; Nacht, 1962; Weigert, 1954).

Theodore Reik (1948), in a more literary and phenomenological presentation, deals rather extensively with this problem of the therapist's understanding of the patient and his communications. Initially, Reik appears content with the use of a "third ear" to account for the therapist's sensitivity and ability for dealing with the patient's communications. He describes the treatment situation as one in which there is almost a constant fluctuation between reality and fantasy, on various levels, both for therapist as well as the patient. Within this context, a therapist, through the use of his "third ear," is able to understand the feelings and non-verbal communications of the patient. Reik also indicates that the optimum state of the therapist is one in which he is able to "freely float" and range over all statements by the patient and to neglect any particular and specifically strong focus on any one topic or statement. Reik feels that this latter approach would hamper and limit in scope the analyst's or therapist's ability to understand the patient. He states that the therapist's use of his own unconscious, in attempting to come to grips with the patient's communications, is an emotional process with the role of

reasoning and logic being minimal. Reik also attempts to become more specific in terms of the processes by which his "third ear" can operate. He indicates that in terms of the patient, "The united or conflicting effect of the words, gestures and unconscious signals that point to the existence of certain hidden impulses and ideas will certainly not at first stimulate the observing analyst to psychological comprehension. Their first effect will rather be to rouse in him unconsciously impulses and ideas with a like tendency. The unconscious reception of the signals will not, at first, result in their interpretation, but in the induction of the hidden impulses and emotions that underlie them. In popular language, the unconscious and repressed impulses that betray themselves by these signs act like stimuli or enticements that release certain effects of a similar kind in the analyst" (p. 357).

The Therapist's Regression

Rene Spitz (1956), in an article dealing with counter-transference, defines it ". . . as one part of the analyst's relation to his patient. . . ." He is cognizant of the need of the analyst to regress briefly in order to enable him to comprehend the infantile aspects of the patient's behavior. Spitz proceeds to warn against the dangers of this kind of regression since it may become uncontrollable. He would consider that this is acting out on the part of the therapist.

However, Spitz views the regression as necessary for attempting to understand the patient and for achieving insight. In other words, the controlled regression is an occupational hazard which must be ventured in order to achieve the greater goal of understanding.

In an interesting job analysis or work description for an analyst, Fleming (1960) explores the kinds of skills required of the therapist and the conditions under which the analyst works. The emphasis of the paper is an exploration of the ego functions of a successful analyst. Fleming begins her thesis by stating that the main instrument of the analyst is his own ego and that its use is the only means of reaching the patient. The paper also involves a summary of other works concerned with the role of the analyst in the therapeutic situation, and as such, integrates some papers already presented above. Basically, it presents the therapeutic situation as one in which the therapist is very much involved emotionally with the patient in order to understand the patient's communications. Further, the therapist maintains a "controlled or conditioned daydreaming," closely akin to Freud's concept of "hovering attention," in order to gain as much information as possible from the client's communications. Fleming discusses an article by Kohut in which the latter describes the manner in which the analyst "senses" the primary process thinking in the patient by allowing himself free play between his own fantasies and the patient's

fantasies, while simultaneously maintaining a secondary process critical attitude toward his own regressive thinking. What is required, therefore, is two levels of ego functioning, operating almost simultaneously. There is hypothesized, then, a part of the ego observing externally and a part of the ego which is turned inwardly, or in observing internally. This conceptualization of a split, or shift, in the analyst's ego functioning has been the subject of other papers (Ferenczi, 1928; Greenson, 1960). Fleming summarizes this dynamic yet danger-fraught situation by indicating that "In other words, the analyst's work requires living in two worlds--past and present, real and unreal, of himself and someone else simultaneously."

Frijling-Schreuder (1966), in an article addressing itself to the adaptive use of regression as opposed to pathological regression says that "The continuous confrontation with regressive processes and with primary process functioning, makes psychoanalysis, however, an unhealthy job from the point of view of integration and logical thining" (p. 367). That is, he too believes that the situation is fraught with danger, because of the potential acting out on the therapist's part.

Psychotherapy with Schizophrenics

Kernberg (1965), dealing with countertransference and its vicissitudes and dangers, in addition to presenting

various opposing definitions of the term, is mainly concerned with both a description and explanation of the experiences of the analyst occurring in the therapeutic situation. Most germane to the present paper is Kernberg's interest in the therapy of severely regressed individuals and how potentially dangerous this treatment can be for the therapist. Kernberg distinguishes between the analyst's regression because of the "onslaught" on the analyst by the patient, and the analyst's regression in order to maintain emotional contact with the patient. In contrast to Glover (1955), Kernberg believes that the regression occurs because the analyst wishes to maintain contact with the patient and that he "voluntarily" engages in a regression in the service of the ego. In working with severely regressed patients, Kernberg says that "At some point of regression, the therapist's own early identifications may become reactivated, together with the mechanism of projective identification. The therapist is now faced by several dangers from within: (i) the reappearance of anxiety connected with early impulses, especially those of an aggressive nature which now are directed towards the patient; (ii) a certain loss of his ego boundaries in the interaction with that particular patient; (iii) the strong temptation to control his patient in consonance with an identification of him with an object of the analyst's own past" (p. 45). Despite Kernberg's statement that there are compensatory mechanisms operating within the analyst so that

some aspects of his ego remain intact, he does point out that it is easy for the analyst to lose his objectivity temporarily because of the quality of the communication between himself and the patient, and because of the severity and extent of the regression required of the analyst. He states that "Even with severely regressed patients, the therapist may have lost his 'analytic objectivity' during the hour, but after leaving the sessions or a few hours later slowly regains his equilibrium. A process of working through occurs in the therapist by which the stable, adaptive and cognitive structures formed around his later and more mature ego identity act, one might say, in a supportive way to the part of his ego in which primitive identifications, defense mechanisms and impulses have been activated and where ego boundaries have become fluid" (p. 46). Fromm-Reichmann (1952, 1955, 1958) has often discussed the therapist's anxieties and the potential danger of loss of ego boundaries in dealing with schizophrenics.

Savage (1961), dealing specifically with countertransference in the treatment of schizophrenics defines countertransference in somewhat broader terms than those usually encountered. In his definition, Savage includes the influence of the therapeutic process on the therapist's unconscious reactions. He indicates that "Many problems, anxieties, worries, and discomforts beset the analyst in the treatment of schizophrenia, all of which may have unconscious--that is,

countertransference--implications for the analyst" (p. 53). He further indicates that the therapist's energies devoted towards communicating with the very symbolic and defensive nature of the psychotic's communications weigh more heavily on the analyst because the regressions must be so severe that the swing back from the experiencing ego to the observing ego is very difficult to achieve and ". . . is seldom accomplished in toto."

In summary, then, what psychoanalytically oriented clinicians and theoreticians have been describing is a treatment situation in which both the patient and the analyst are intensely involved with each other emotionally. That is, a situation in which the analyst, in order to understand and communicate with the patient, must be free to regress and to use his own unconscious extensively. This necessary shift and oscillation between the observing and the experiencing ego of the analyst portend possible dangers for the therapist. Particularly when dealing with psychotics, the analyst is exposed to a situation in which he is apt to experience archaic impulses and conflicts in his own unconscious functioning. The "deep" regressions required with these patients contributes significantly to the danger.

Current Observations

While involved in a research project dealing with the effectiveness of various psychotherapeutic methods on

schizophrenics, it has been my own observation, as well as that of other psychologists involved or acquainted with the project, that some very distinct and observable changes occur in therapists after seeing a patient for one session. While the changes may differ somewhat, depending on the patient seen for any one session, there appear to be some elements common to all therapists. These changes may be conceptualized as somewhat inappropriate affect and verbalizations, at times, manifested in cursing, depression, anger, giggling and laughing when discussing particular aspects of their interactions with their patients. These changes, although distinct and substantial, appear to be of a temporary nature. These observations, closely parallelling the theoretical discussions presented above, appear to be temporary manifestations of primary process. The present paper is an attempt to objectively demonstrate this phenomenon. The theoretic hypothesis of this paper is that <u>therapists exhibit a greater amount of primary process thinking following a treatment session with a schizophrenic patient</u>. Operational hypotheses will follow.

CHAPTER III

METHODOLOGY

Subjects

The subjects employed in this study were 33 psychotherapists. This total group was comprised of psychiatric residents, psychology graduate students and social workers. Of the total number of subjects, 11 were therapists treating schizophrenic patients while the remaining 22 subjects included a group of 11 therapists engaged in psychotherapy with neurotic patients (Control Group 1) and a third group of 11 therapists served as a control for the fatigue factor in therapy (Control Group 2). Control Group 1 was included for the purposes of determining if the hypothesized changes in therapists are related specifically to the treatment of schizophrenics or if they are general phenomena encountered in the treatment of other psychopathologies. The therapists were matched on variables such as age, field of discipline and experience (Table 1). A fourth group of five college students (Control Group 3) was also employed in order to control and measure changes in hypothesized variables following cognitive or secondary process activity.

Table 1. Subject characteristics and composition of experimental and control groups.

	Discipline			Sex			
	Psychiat. Res.	Soc. Worker	Psych. Grad.	Male	Fem.	Av. Age	Years of Experience
Schiz.	2	2	7	9	2	28	2.5
Neur.	2	2	7	9	2	26.6	2.1
SI	2	2	7	9	2	26.1	2.6

Procedure

The 11 therapists, doing psychoanalytically-oriented treatment with schizophrenic patients, comprised the experimental group and were given Form A of the Holtzman Inkblot Technique (HIT) (1961) immediately preceding a therapy session and Form B of the HIT immediately following a therapy session with one of their schizophrenic patients. This same procedure was followed with Control Group 1 subjects. Control Group 2 therapists were individually engaged in "small talk" or social interaction (SI) for one hour with the experimenter. Form A of the HIT was administered to these subjects immediately preceding the SI and Form B of the HIT immediately following the SI hour. Control Group 3 subjects were required to solve simple mathematical problems between administrations of the Holtzman inkblots.

In addition to the Holtzman inkblots, a mood scale was administered to all subjects, both before and after the

particular interpolated activity, as well as a questionnaire designed to measure the amount of primary process thinking used during the interval between test sessions. All subjects were tested individually. The experimental group and Control Group 1 were told that the experimenter is interested in communication and its possible effects on the therapist in the therapeutic process and that we wish to demonstrate or observe these effects through testing. Control Group 2 subjects were informed of the experimenter's interest in interpersonal communication and its effects on people and that we are interested in measuring people's reactions to social interaction.

Data were obtained from five sources: (1) HIT protocols scored, using The Holt Manual For The Scoring Of Primary Process Manifestations In Rorschach Responses (1963), (2) HIT protocols using the Holtzman scoring schema, (3) an informal appraisal of the therapy session by the therapist, (4) measurement of mood changes, and (5) scores on the primary process-secondary process questionnaire following the interpolated activity.

The Holtzman Inkblot Technique

The Holtzman Inkblot Technique (1961), designed to overcome both the clinical and experimental deficiencies and shortcomings of the Rorschach, was the preferred projective test for use, in part, because its norms are least familiar

to the subject population of the study and because it offers two equivalent forms. The sophistication of the subject population as well as the relatively short test-retest interval required that these criteria were of prime importance in test selection. While maintaining a structure and format similar to the Rorschach, Holtzman not only increased the number of inkblots but, among other things, also increased the variety of the blot characteristics, provided new scorable dimensions, a means for keeping constant the number of responses each subject gives to the series and made parallel forms available.

(1) The Holtzman protocols were administered and scored using a combination of some of Holtzman's scoring schema and the Holt Manual for scoring primary process. It was felt that the use of parts of both scoring systems would provide us with a greater range of data. Inasmuch as both the Rorschach and the Holtzman appear to be structurally similar and tend to elicit parallel material or responses, it was felt that the use of the Holt scoring system, in its present form, was justified. We followed Holt's method of administration and type of inquiry with the exception that the inquiry was undertaken after each response as suggested by Holtzman.

Holt Scoring System

In contrast to the empirically derived and nontheoretical basis of Holtzman's system, the Holt scoring system for

primary process thinking is a systematic and formalized method of scoring projective test material based on the general psychoanalytic theory of thinking. Beginning with Freud's (1900) discussions on the nature of primary process and secondary process thought, supplemented by his description of unconscious processes and Rapaport's (1950, 1951, 1960) elaboration of the psychoanalytic theory of thinking, a scoring system was devised which would serve as a more formal and objective means of evaluating and interpreting Rorschach responses within a psychoanalytic framework. Guided by psychoanalytic assumptions about thought and perception, the manual is composed of three parts: a) Content, b) Formal Aspects and c) Control and Defense.

a) Scoring responses for Content entails both evaluating for the kind of drive that enters thinking as well as its primitiveness. That is, responses are scored according to whether they reflect drives with libidinal aims or ones with aggressive aims. The distinction in primitiveness or degree of closeness to the primary process pole of thinking is one made by scoring either Level 1 or Level 2. Level 2 corresponds to the more socialized, civilized and mature pole of the primary process continuum. For example, responses such as "mouth" or "lips," classified as libidinal responses, seen in isolation, would be given a Level 1 Oral Score (L 10). If, however, the "mouth" or "lips" response was given, but seen as part of a person or animal and unduly emphasized,

it would be considered a less primitive response and would receive a Level 2 Oral Score (L 20). Similarly, within the aggressive categories, a response involving mutilation would receive a Level 1 Results of Aggression Score (Ag 1R) while a response dealing with injury and deformity would receive a Level 2 Results of Aggression Score (Ag 2R).

b) The Formal categories, for the most part, correspond to Freud's description of the formal characteristics of primary process thinking and unconscious ideation. That is, responses in these categories deal with formal deviations and distortions in thinking such as condensation, symbolization, fragmentations, displacement, loose associations, autistic logic, logical contradictions and poor reality testing. For example, one result of condensation occurs when parts from two or more percepts are combined to make a new creation that does not exist in a common cultural reality. One such response could be "witches with tails" and this would receive a Level 1 Composition Score (C-co 1). If the composite image actually exists in mythology, art or folklore, such as "Pegasus," it would be scored Level 2 Composition (C-co 2).

c) The third and last category is intended to evaluate the way in which an individual deals with his primary process (pripro). That is, it is a means of objectively judging the manner in which an individual reacts to or uses the expression or manifestation of his primary process material and

to what degree he is in control of it. Responses in this category, among others, are ones such as 1) Criticism of Response or S's verbalization of his awareness that something is wrong with the content or organization of his response; 2) Remoteness or the way in which the S puts distance between himself and the response to make it more acceptable; 3) Context or the setting in which the S places his response to make it more acceptable. For example, aggression may be more acceptable if given within a cultural context such as "soldier," "surgeon," or "butcher." 4) Projection of Responsibility--S denies that he is responsible for giving the response.

When all responses are scored, several total or summary scores are then available for evaluation. For the present study, the following summary measures were derived:

1) Sum Level 1--Consists of the total number of responses scored as having Level 1 primary-process manifestations. Responses receiving one or more full primary-process scores were counted as one, and responses with weak scores were tallied as one-half.

2) Sum Level 2--See procedure for Level 1 derivation above.

3) Mean Defense Demand (DD), defined as the degree to which a response requires that some defensive measures be taken to make it socially acceptable for communication, is rated on a 6 point scale with responses at the upper extreme

(4,5,6) indicating the greatest need for defense. Each response given a primary process score is also rated on DD. The mean Defense Demand consists of the sum of the ratings for DD divided by the total number of responses given a primary process score.

4) Mean Defense Effectiveness (DE), defined as the extent to which the Control or Defense was effective in reducing anxiety and making an acceptable response to the blots, is rated on a 12 point scale from +2 (Completely successful Control and Defense, in a successful response) to -3a (Disorganized responses, Undefended). Undefended responses are designated by both a number (+2 to -3) and the letter a. Again, each response scored for primary-process also received a score for DE. Mean Defense Effectiveness is the sum of ratings for DE divided by the total number of responses given a primary process score.

5) Mean Form Level--Some measure of form accuracy or the degree of similarity between the percept and the inkblot characteristics. Every response receives one of 8 Form Level Scores. These scores range from an F+ with a rating of +2 to an F- with a rating of -4. The mean Form Level is the sum of the ratings for Form Level divided by total productivity.

While Holt reports a large number of correlations dealing with scoring reliability, the most pertinent finding is that a satisfactory level of scoring reliability can be attained for major summary scores.

(2) Holtzman's scoring system is comprised of 22 scoring variables, many similar or identical to those already used on the Rorschach. The 22 variables include such categories as Location, Rejection, Penetration, Balance, Form Definiteness, Color, Integration, and Barrier, among others. In view of this author's observations concerning behavior and affect change in the therapist following a therapy session, attention was given to those scoring categories which Holtzman empirically found to be correlated most highly with emotional conflict and pathology of thought processes. These factors are Pathognomic Verbalization, Anxiety and Hostility. The variable of Anxiety (Ax) is scored on a 3 point scale and is composed of 4 broad categories: Emotions and Attitudes expressed or implied, Expressive behavior, Symbolic responses and Cultural stereotypes of fear. The Hostility (Hs) variable is scored on a 4 point scale and is based on symbolic, implicit or explicit signs of hostility in the response. Pathognomic Verbalization (V) is a variable scored on a 5 point scale and measures the degree of disordered thinking. It is comprised of the following categories: Fabulation (FB), Fabulized Combination (FC), Queer Responses (QR), Incoherence (IC), Autistic Logic (AL), Contamination (CT), Self Reference (SR), Deterioration Color (DC), and Absurd Response (AB). Each response was scored for these three variables and every subject received a total score for the three variables individually as well as a score based on the summation of the 3 scoring categories.

(3) Because the course of psychotherapy can be so variable, it was felt useful to obtain, following the second administration of the HIT, some informal measure or indication of the status and functioning of the patient in the particular session as well as the therapist's feelings and comments about the session he has just had. Accordingly, each therapist was interviewed briefly. This informal and largely unstructured question and answer period was intended to elicit specific information concerning the therapist's expectations and goals of the session, specific topics that were discussed and the therapist's reactions and feelings to the patient during the session.

(4) In view of the previously reported observed increase in the seemingly inappropriate feelings or moods of therapists following a treatment session, a mood scale was introduced to evaluate this variable objectively. The mood scale (see Appendix B) employed was a modification of one suggested by Nowlis and Green (1965). Mood factors used were Aggression, Concentration, Anxiety, Fatigue, Sadness, Friendliness, Surgency, and Relaxation. Each of the eight "factors" was represented by three or four adjectives. The first seven "factors" were derived by the authors from the administration of over 100 mood adjectives to various groups of adults. The data were factor analysed and have consistently yielded these factors. As such, the ratings for all adjectives in a factor were added and averaged. While "factor" 8 adjectives (Relaxation) have not been found to cluster or correlate

reliably, they too appear to be relevant to the study.

(5) A questionnaire was given to all subjects in order to gain some indication of the extent of use of primary process thinking during the interpolated activity. On this multiple choice test, each subject must choose, from one of three alternatives, the word or phrase which best describes his activity on nine dimensions. The three choices can be ranked on a continuum from least to most use of primary process thinking. The scores can vary from a low of 9 (most primary process) to a high of 27 (most secondary process). This questionnaire was derived by the author and seems to have face validity (see Appendix A).

Two psychologists familiar with both the HIT and with Holt's scoring system served as scorers. Twelve pre-therapy protocols, selected at random, were used for a reliability check. Reliability coefficients obtained were .73, .74, .71, .78 and .81 for Level 1 primary process, Level 2 primary process, Defense Demand, Defense Effectiveness and Form Level respectively.

Operational Hypotheses:

It is hypothesized that, following a treatment session, in contrast to control therapists, therapist of schizophrenics

1) will manifest an increase of both Level 1 and Level 2 primary process responses;
2) will manifest an increase in the Mean Defense Demand characteristics of their responses;

3) will exhibit a lower Mean Defense Effectiveness score;
4) will manifest a greater degree of pathology as measured by Holtzman's 3 "pathology" indicators;
5) will manifest negative changes in Form Level;
6) will manifest changes in mood factors.

CHAPTER IV

RESULTS

Hypothesis I:

In contrast to the Control therapists (therapists engaged in Social Interaction (SI) and the therapists of neurotic patients), therapists of schizophrenics will manifest an increase in both Level 1 and Level 2 primary process responses following a treatment session.

As seen in Table 2, despite a moderate increase in the average number of Level 1 primary process responses in all three groups of therapists, these changes are not statistically significant. In terms of Level 2 responses however, both the therapists of neurotics and the SI therapists decreased somewhat while the therapists of the schizophrenic patients increased in the mean number of Level 2 primary process responses, receiving an average increase score of +3.1. This increase is statistically significant ($p < .05$). An analysis of variance yielded a significant F of 3.66 ($p < .05$) and indicates that the three group means differ (Table 6). Duncan's Multiple Range Test (Edwards, 1962) further denotes a significant difference between the therapists of the schizophrenics and both the therapists of neurotics and SI therapists.

Table 2. Changes in number of Level 1 and Level 2 primary responses.

	Therapists of Schiz. (N=11)		Therapists of Neurotics (N=11)		Control 2 Therapists (N=11)	
	L1	L2	L1	L2	L1	L2
Pre-therapy Mean	3.0	13.7	1.4	14.6	1.0	10.5
Post-therapy Mean	4.1	16.8	2.7	13.6	1.1	8.9
Difference	+1.1 N.S.	+3.1 $p < .05$	+1.3 N.S.	-1.4 N.S.	+.1 N.S.	-1.6 N.S.

Hypothesis II:

In contrast to control therapists, therapists of schizophrenics will manifest an increase in the mean defense demand characteristics of their responses following a treatment session.

Data in Table 3 clearly indicate that the average change in the defense demand characteristics of the primary process responses for all three groups of therapists is slight and is not significantly different from what one might expect entirely on the basis of chance variation.

Hypothesis III:

In contrast to control therapists, therapists of schizophrenics will exhibit a lower mean defense effectiveness score following a treatment session.

Table 3. Changes in Defense Demand and Defense Effectiveness.

	Therapists of Schiz. (N=11)		Therapists of Neurotics (N=11)		Control 2 Therapists (N=11)	
	DD	DE	DD	DE	DD	DE
Pre-therapy Mean	2.42	.90	2.19	.90	2.11	.93
Post-therapy Mean	2.27	.98	2.19	.74	2.19	.78
Difference	-.15 N.S.	+.02 N.S.	0.00 N.S.	-.16 N.S.	+.08 N.S.	-.15 N.S.

The data in Table 3 reveal that the therapists in all three groups manifested little change in defense effectiveness and further that these changes were not statistically significant.

Hypothesis IV:

In contrast to control therapists, therapists of schizophrenics will manifest negative changes in the form level of their responses following a treatment session.

Again, the data in Table 4 illustrate a small and insignificant change in the form level scores for all therapists.

Table 4. Changes in Form Level

	Therapists of Schiz. (N=11)	Therapists of Neurotics (N=11)	Control 2 Therapists (N=11)
Pre-therapy Mean	.02	.17	.011
Post-therapy Mean	-.02	.16	.012
Difference	-.04 N.S.	-.01 N.S.	+.001 N.S.

Hypothesis V:

In contrast to control therapists, therapists of schizophrenics will manifest a greater degree of pathology following a treatment session, as measured by Holtzman's three "pathology" indicators.

The data in Table 5 indicate that the therapists of schizophrenic patients increased in the average number of "pathology indicators" while there was an average decrease in Holtzman factors for both therapists of neurotics and the SI therapists. The +9.4 average increase in "pathology indicators" for the therapists of schizophrenic patients is a significant change ($p < .05$). The decrease in both control groups is relatively small and insignificant. An analysis of variance yielded an F of 3.89, significant at the $p < .05$ level (Table 6), and indicates that the mean changes in

Table 5. Changes in Holtzman Factors

	Therapists of Schiz. (N=11)	Therapists of Neurotics (N=11)	Control 2 Therapists (N=11)
Pre-therapy Mean	27.6	30.3	19.4
Post-therapy Mean	37.0	26.4	18.9
Difference	+9.4 $p < .05$	-3.9 N.S.	-.5 N.S.

Table 6. Summary table of group comparisons on primary process measures, defenses and Holtzman factors.

Measure	F	d.f.	Significance Level
Level 1 primary process	.68	30	N.S.
Level 2 primary process	3.66	30	$p < .05$
Defense Demand	.19	30	N.S.
Defense Effectiveness	.41	30	N.S.
Form Level	.22	30	N.S.
Holtzman Factors	3.89	30	$p < .05$
Libidinal Responses	3.32	30	$p < .05$

Holtzman factors in the three groups of therapists differ from each other significantly. Duncan's Multiple Range Test further suggests a significant difference between the mean score of the therapists of schizophrenic patients and both groups of control therapists. The therapists of neurotics with a mean decrease of -3.9 and the SI therapists with a mean decrease of -.5 did not differ from each other significantly.

A further analysis, treating each of the three Holtzman variables separately, reveals a lack of significant change in these variables for both the therapists of schizophrenics and the SI therapists (Tables 7 and 8). However, while therapists of neurotics do not change on Pathognomic Verbalization or Hostility, they exhibit a significant <u>decrease</u> (-3.6) in the Anxiety variable (Table 9). Nevertheless, an analysis of variance of the difference scores for the comparison of the three groups on this variable barely fails to reach statistical significance (Table 10).

Table 7. Changes in individual Holtzman Factors in therapists of schizophrenics.

	Pre-Therapy Mean	Post-Therapy Mean	Diff (Post-Pre)	t	Sig. Level
V	9.2	13.9	+4.6	2.19	N.S.
Ax	7.7	9.4	+1.7	1.54	N.S.
Hs	10.7	13.6	+2.9	1.81	N.S.

Table 8. Changes in individual Holtzman Factors in SI therapists.

	Pre-Therapy Mean	Post-Therapy Mean	Diff (Post-Pre)	t	Sig. Level
V	4.6	5.5	+.91	.83	N.S.
Ax	6.9	6.2	-.72	.68	N.S.
Hs	8.0	7.0	-1.0	.55	N.S.

Table 9. Changes in individual Holtzman Factors in therapists of neurotics.

	Pre-Therapy Mean	Post-Therapy Mean	Diff (Post-Pre)	t	Sig. Level
V	9.0	10.1	+1.1	.50	N.S.
Ax	9.1	5.5	-3.6	2.50	$p < .05$
Hs	12.2	10.8	-1.4	.63	N.S.

Table 10. Comparison of groups for changes in individual Holtzman Factors

	Mean Change Schiz.	Neurotic	Control	F	d.f.	Sig. Level
V	+4.6	+1.1	+.91	1.08	30	N.S.
Ax	+1.7	-3.6	-.72	3.29	30	N.S.
Hs	+2.9	-1.4	-1.0	1.84	30	N.S.

Therapists and Mood Changes:

As will be recalled, a mood scale was administered to all therapists in order to measure changes in reported feelings or moods following a therapy session. The data in Table 11 are clearly indicative of a lack of significant change in the subjective ratings of mood, in either direction, for any of the thirteen mood dimensions.

Table 11. Summary table of group comparisons on mood scale adjectives.

Mood	Mean Change			F	d.f.	Sig.
	Schiz.	Neurotic	Control			
Aggression	-.16	-.02	-.13	1.3	30	N.S.
Concentration	+.08	+.18	-.45	2.3	30	N.S.
Anxiety	-.36	-.05	-.34	.57	30	N.S.
Fatigue	-.15	-.24	-.18	.03	30	N.S.
Sadness	-.09	+.14	-.07	.40	30	N.S.
Friendliness	+.39	+.17	-.15	1.41	30	N.S.
Surgency	+.06	+.03	+.15	.05	30	N.S.
Quiet	-.09	.00	-.27	.17	30	N.S.
Nonchalant	+.09	-.09	+.18	.27	30	N.S.
Restful	+.09	-.18	+.91	2.29	30	N.S.
Placid	+.36	-.27	.00	.75	30	N.S.
Still	-.54	-.36	+.09	2.10	30	N.S.
Leisurely	-.27	-.27	+.45	.98	30	N.S.

Additional Findings and Assumption of the Study

While hypotheses concerning variables derived from a more specific analysis and evaluation of primary process responses were not formulated, these responses were divided and classified according to their libidinal or aggressive content. Evaluated in this way, a substantial and significent increase in the mean number of libidinal responses is noted in the group of therapists of neurotic patients. This +1.86 increase (Table 12) in the number of responses of a libidinal nature is a significant change ($p < .05$) and an F of 3.32 (Table 6) suggests further that the three group means differ significantly from each other. Duncan's Multiple Range Test indicates that a significant difference exists between the therapists of the neurotics and the SI therapists on this variable. The mean increase evident for the therapists of schizophrenics does not differ significantly from either the therapists of neurotics or the SI therapists. Although not regarded as a significant change, the therapists of the neurotics decreased in number of responses with aggressive content ($\bar{X} = -1.7$, Table 12).

These changes are also graphically illustrated in Figure 1 (page 35).

Table 12. Comparison of groups for libidinal and aggressive content.

	Therapists of Schiz. (N=11)		Therapists of Neurotics (N=11)		Control 2 Therapists (N=11)	
	Agg	Sex	Agg	Sex	Agg	Sex
Pre-therapy Mean	9.8	4.86	10.3	4.40	6.7	3.18
Post-therapy Mean	11.1	5.60	8.6	6.26	6.4	2.82
Difference	+1.3 N.S.	+.74 N.S.	-1.7 N.S.	+1.86 $p < .05$	-.30 N.S.	-.36 N.S.

Color Scores

In view of the generally accepted relationship between color perception and affect, it was felt that perhaps the color variable may be related to, and correlated with, manifestations of primary process thinking in therapists. More specifically, since FC scores are generally thought to reflect more adaptive affective responsiveness while C and CF responses reflect greater immaturity and ego-centricity, further evidence of regression in therapists following a treatment session might be evident in the predominance of color in responses given to the HIT. According to the Holtzman scoring schema, the use of color is rated on a 4 point scale ranging from 0 (no color) to 3 (purely color).

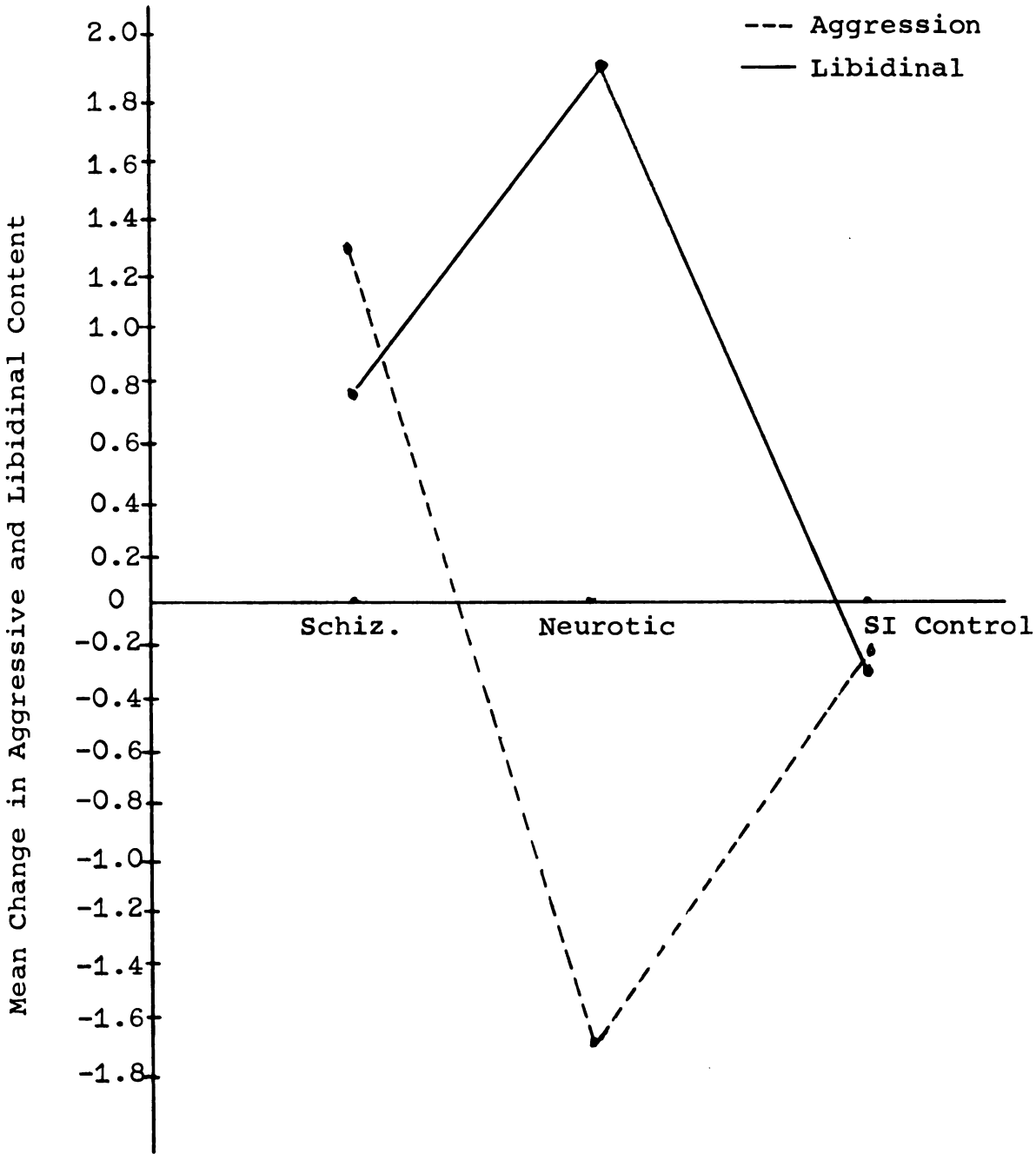

Figure 1. Comparison of groups for changes in libidinal and aggressive responses.

The mean color score was derived by a summation of all color ratings divided by the highest color score obtainable. Since only the chromatic or "mixed" cards were used for scoring color, the highest color score possible was 99 for Form A (33 cards) of the HIT and 93 for Form B (31 cards).

Contrary to expectations, inspection of Table 13 suggests a lack of significant change on this variable.

Table 13. Changes in Color Scores

	Therapists of Schiz.	Therapists of Neurotics	SI Therapists
Pre-therapy Mean	.151	.165	.125
Post-therapy Mean	.144	.134	.105
Difference	-.007 N.S.	-.03 N.S.	-.02 N.S.

Primary Process Thinking During the Session:

Inasmuch as evidence concerning the levels of therapist thinking during the therapy sessions was based on theoretical discussions and phenomenological, subjective reports, a questionnaire was administered to all therapists in order to obtain a more quantitative indication of this variable. Data in Table 14 indicate that compared with the SI therapists,

both the therapists of schizophrenic patients and the therapists of neurotics report that they engage in more secondary process thinking during the therapy session. The therapists of schizophrenics received a score of 21.6, therapists of neurotics a score of 20.8 and the SI control therapists a score of 18.5 on the Primary Process-Secondary Process questionnaire.

Table 14. Amount of primary process thinking during the therapy and control sessions.

	Therapists of Schiz. (N=11)	Therapists of Neurotics (N=11)	Control 2 Therapists (N=11)
Mean	21.6	20.8	18.5

An analysis of variance yielded a significant F of 13.5 ($p < .01$) and Duncan's Multiple Range Test further indicated that both groups of therapists differ significantly from the SI therapists.

Primary Process in a Cognitive Activity Control Group:

In order to check further on the major assumption of this research paper, a fourth group of subjects was included and given a "cognitive" task to perform between the two test sessions. This interpolated task involved solving simple arithmetic problems.

In summary, Tables 15 and 16 indicate that this group did not change significantly on any variable. In terms of thinking during the "cognitive" activity, they manifested much use of secondary process thinking as measured by the primary process-secondary process sentence completion test ($\overline{X}$ = 24.2). This amount of secondary process thinking is significantly greater than that used in any of the other three groups.

Table 15. Changes in Level 1, Level 2 primary process, Defense Demand, Defense Effectiveness, Form Level and Holtzman factors in the Cognitive Activity Control Group.

	Pre-therapy Mean	Post-therapy Mean	Diff. (Post-Pre)	t	Sig. Level
Level 1 P.P.	1.2	1.8	+.6	.57	N.S.
Level 2 P.P.	12.2	12.4	+.2	.41	N.S.
DD	2.4	2.38	+.02	.09	N.S.
DE	.72	.88	+.16	1.2	N.S.
F. Level	.22	.23	+.01	.06	N.S.
Holtzman Factors	19.6	22.0	+2.4	.83	N.S.

Table 16. Summary table of mood changes in the Cognitive Activity Control Group.

Mood	Mean Change	t	Sig. Level
Aggression	+.25	1.1	N.S.
Concentration	-.20	1.5	N.S.
Anxiety	+.15	.60	N.S.
Fatigue	-.40	2.1	N.S.
Sadness	-.20	2.5	N.S.
Friendliness	-.40	2.1	N.S.
Surgency	-.53	2.1	N.S.
Quiet	0	0	N.S.
Nonchalant	0	0	N.S.
Restful	-.60	1.5	N.S.
Placid	-.20	.54	N.S.
Still	-.40	.50	N.S.
Leisurely	0	0	N.S.

CHAPTER V

DISCUSSION

Changes in Primary Process

While the data do not support the hypothesis of a significant increase in Level 1 primary process responses, they are clearly indicative of a significant increase in the number of Level 2 primary process responses. More specifically, unlike the lack of significant change in blatantly regressive thinking, therapists of schizophrenic patients do increase in the relatively more socialized and socially acceptable forms of regressive or primary process thought. This divergence is not too surprising, however, in view of the comparatively healthy and sophisticated subject population. Further, one would expect that individuals who have reached the educational level of that of our subjects would be those who are creative and intelligent and who have sufficient control over their impulses and thinking within a broad range of stimulating situations and conditions. Their clinical training and experience, though limited, might also counterindicate significant or extensive changes in the more raw and blatant kinds of regressive thinking (see Table 1). Parenthetically, therapists of schizophrenics and therapists

of neurotics differ, to some extent, in their Level 1 pre-therapy means (Table 2). Since most, if not all, therapists select the kind of patient they wish to work with, this initial difference in therapists suggests that perhaps therapists with manifestations of more bizarre thinking choose to work with patients exhibiting greater pathology.

As one might expect, as with the increase in Level 2 primary process responses, the therapists of the schizophrenic patients exhibited a significant increase on the Holtzman "pathology" indicators and that this increase is significantly different from both the therapists of neurotics and the SI subjects. This would appear to be corroborating confirmation of a change to more regressive thinking in therapists of schizophrenics following a treatment session.

Defense Evaluation

Contrary to expectations, there is a lack of any significant change in either the "shock value" or defense demand of the primary responses recorded for the therapists or in their ability to deal effectively with the increase in primary process or regressive thinking. That is, even a more qualitative approach or analysis of the Level 1-Level 2 dimension fails to reveal a significant increase in the extent to which the primary process responses require more extensive defensiveness. Also, it appears that the therapists do not have more difficulty in effectively managing the increased primary process. The defensive structure seems to remain intact.

This latter result would counterindicate any suggestion that the observed behavioral changes in therapists following a treatment session with a schizophrenic patient are the result or manifestations of any unmanageable breakdown in defenses or the therapist's inability to deal capably with the increased primary process. Rather, it appears that the only change is in an increase in the amount of primary process thinking and that the observed and reported changes in behavior and thinking are manifestations of the therapist's need to deal more <u>frequently</u> with primary process. More specifically, if a therapist giggles once before a treatment session, this may go unnoticed. If, however, a therapist needs to giggle ten times, this will be noted and may be incorrectly interpreted as the therapist's declining capacity to control or effectively defend primary process material. An additional independent indication of the therapist's continued capability to manage the increase in primary process thinking appropriately, is the absence of significant changes in the rated form level of the therapist's responses. That is, reality testing, ego strength and/or the therapist's ability to deal logically, objectively and critically with his environment appears unimpaired and parallels the lack of significant change in defense effectiveness. Taken together, these results may be interpreted as a demonstration of a "regression in the service of the ego" by the therapist. More particularly, this may be experimental evidence of a

"partial, temporary, controlled lowering of the level of psychic functioning . . . without disruptive anxiety and guilt" (Schafer, 1958). It is as though the therapist were allowing himself to regress and so still maintains control over his thinking.

Mood Evaluation

As will be recalled, a mood scale was administered to all therapists and was introduced in order to arrive at a more objective method of measuring changes in therapist's feelings and thinking. Interestingly, no significant changes on any of the thirteen mood scale factors were evident. Superficially, this finding may appear inexplicable in view of the obtained increase in Level 2 primary process responses and "pathological" thinking. From the self report of therapists, it would appear that they do not at least consciously experience changes in their moods or feelings even on such primary process related variables such as aggression, anxiety and sadness. While this may suggest a lack of frank reporting of their real feelings both before and/or following a therapy session, this interpretation would have to be minimized because of the type of subjects they were, and because they were, at times, painfully honest with their perceptions and feelings on the Holtzman test. The apparent discrepancy between the increase in Level 2 primary process responses and the absence of reported change in feelings or moods may

better be explained as the difference between unconscious changes as reflected in the responses to the Holtzman protocols and the need to report conscious changes on the mood scales. That is, changes may have been occurring without awareness. More will be said about this later.

Primary Process in Therapists of Neurotics

As indicated previously, although not originally predicted, a more detailed analysis of the data in terms of type of content responses produced by the therapists, suggests that the therapists of the neurotic patients display greater variability in reacting to patients than either the therapists of schizophrenic patients or the SI therapists. Specifically, the therapists of neurotics increase significantly in the number of libidinal responses while they decrease in number of responses with aggressive content. This result is of interest for two reasons. First it suggests that changes in amount of primary process in therapists following a therapy session is a more generalized phenomenon than originally conceived, although the effects on therapists of neurotics are relatively less extensive or generic. Unfortunately, the information gained from informal questioning of the therapists following the therapy session does not suggest any simple or direct relationship between the content of the treatment session and the type of primary process content produced in the period following the therapy session.

Secondly, in conjunction with other data, this result has implications concerning the unstated underlying assumption of this study. There is an implication from subjective reports of therapists, observations and theoretical discussions concerning therapist activity during and following a treatment session, that any changes in primary process thinking in therapists following a therapy session were due to a "carryover" of increased primary process thinking during the therapy session itself. For this reason, a questionnaire was administered to all subject therapists. If this assumption was correct, then the therapists of schizophrenic patients, in contrast to both therapists of neurotics and SI therapists, should report relatively greater use of primary process during the therapy session. At first glance, the data derived from this questionnaire appear to invalidate this assumption. The therapists of both the schizophrenic and neurotic patients, compared to the SI therapists, report a significantly greater use of secondary process thinking during the therapy session. This greater use of secondary process during the therapy session by both therapists of schizophrenics and therapists of neurotics, concurrent with the general increase in Level 2 primary process thinking in therapists of schizophrenics and the increased amount of libidinal content responses in therapists of neurotics, favors an interpretation or assumption that the increased amount of primary process following a treatment session is

the result of a "safety valve," "relaxation" or "homeostasis" factor or principle. On the other hand, it is conceivable that the greater use of secondary process thinking during the session by both the therapists of schizophrenics and neurotics reflects some anxiety and defensiveness of the therapists and that despite this defensiveness, therapists were exposed to, and experienced, primary process thinking at some level. Hence, the increases in primary process thinking following the therapy session can still be viewed as a function of "carryover" rather than "relaxation." This tentative interpretation of unconscious experiencing of somewhat anxiety-provoking primary process thinking despite defensiveness (increased secondary process thinking during the session), can be seen in the light of the "subception" experiments of McGinnies (1949) and McCleary and Lazarus (1950). In these studies, subjects were unable to identify tachistoscopically presented anxiety-provoking stimulus words (either socially tabooed words or nonsense words associated with shock) while simultaneously, GSR recordings indicated that recognition was present. This result could, in part, also explain the discrepancy between the measured increase in Level 2 primary process responses in the therapists of schizophrenics and the absence of significant findings in the reported moods or feelings of the therapists as measured by the objective mood scale.

What remained then were two alternative, yet equally plausible, assumptions. In order to check further in deciding between the two interpretations, another group of subjects were tested. In this group, an arithmetic task was interpolated between the two testing sessions. It was felt that if subjects were required to perform a task necessitating increased secondary process in a relatively non-threatening context, one in which defensiveness was unnecessary, that the subjects would manifest an increase in primary process responses following the cognitive activity if the "release" or "safety valve" assumption was correct and an insignificant change in amount of primary process if the assumption of "carryover" was more appropriate. Our results with the cognitive activity control group clearly support this latter assumption. Unlike the therapists of both schizophrenics and neurotics, these subjects do not increase significantly on amount of primary process nor on any other variable. This is particularly striking inasmuch as this control group, during the interpolated task, employed a significantly greater amount of secondary process thinking than any other of the three groups of subjects.

Implications and Suggestions for Future Research

As a whole, our results support the theoretical discussions and observations concerning the effects on level of thinking in therapists of schizophrenics. As a group, we find

that following a treatment session, therapists of schizophrenics exhibit a greater amount of primary process thinking while maintaining adequate defense capability and that the assumption of a "carryover" of primary process thinking from the therapy session to the period subsequent to it, is a reasonable one. Although nothing explicit from theory or observation clearly indicates a negative change in adequateness of defense following a treatment session, the absence of a significant change on this variable was contrary to expectations and an important theoretical finding. While not of principal interest, the finding of a change in level of thinking in therapists of neurotics, though somewhat more circumscribed, suggests that this phenomenon is of a more general nature in the area of dynamic psychotherapy.

The finding of more primary process oriented thinking in therapists following a treatment session raises some interesting practical questions concerning the scheduling of patients. That is, what effect does this increased primary process thinking have on therapist's functioning and effectiveness if he needs to see three, four or any number of patients in a single day? Does the increase in primary process diminish effectiveness or does the increase have facilitating consequences? Is the increase correlated with heightened or lowered "therapeutic creativity"? On an individual basis, perhaps we should be concerned with the therapist's "rate of recovery" if the primary process increase has inhibiting results on treatment effectiveness.

The difference obtained between therapists of neurotics and therapists of schizophrenics not only suggests the need to observe and measure changes in therapists of other types of patients but also indicates the necessity for a more detailed and direct measuring of the content of the therapy sessions. This may furnish evidence for some relationship between the content of the session and the kind and extent of the measured changes in thinking of therapists following the session. More specifically, does dealing with aggressive and/or libidinal content during the therapy session produce like or dissimilar changes in the thinking of therapists? Possibly, stimulation by any primary process during the session produces changes in primary process thinking in therapists which are directly related to problem areas or concerns of the particular therapist.

Quite possibly, the difference between therapists of schizophrenics and therapists of neurotics is, in part, a function of the difference in states of regression for these two diagnostic entities. With this in mind, one wonders what changes would result from treating children where, presumably, there is a greater need for the therapist to regress and/or more extensive primary process stimulation for the therapist.

CHAPTER VI

SUMMARY AND CONCLUSIONS

An attempt was made to objectively measure and experimentally demonstrate clinically observed changes in therapist thinking following a treatment session. Discussions of the activity of therapists in dynamic or psychoanalytically oriented psychotherapy have dealt with the intense involvement of the therapist in the therapeutic process. Primary process stimulation is experienced by the therapist due to his need to regress in order to understand and communicate with his patient. Observations of temporary and occasionally inappropriate behavior by therapists following a therapy session were interpreted as manifestations of increased primary process thinking due to a "carryover" of such thinking from the therapy session itself.

Three groups, 11 therapists of schizophrenics, 11 therapists of neurotics and 11 persons involved in a period of "Social Interaction" (SI), and one group of five college students, served as subjects in this study. The first three groups were comprised of psychology graduate students, psychiatric residents and social workers. They were matched for age, sex, and discipline. Every subject was given the

Holtzman Inkblots (Form A or Form B) and a mood scale questionnaire before and after an interpolated activity. A Primary Process-Secondary Process questionnaire for amount of primary process used during the therapy session or interpolated activity was administered and an informal interview with the therapists took place, following this period. For the two groups of therapists, the intervening activity consisted of seeing a familiar patient, either neurotic or schizophrenic, in a treatment session. The third group of subjects were engaged in a "small talk" Social Interaction situation with the experimenter. The five college students, serving as another control group for changes in primary process following cognitive activity, were required to involve themselves in a task consisting of solving relatively simple arithmetical problems.

The "pre" and "post" Holtzman protocols were scored for three "pathology indicators,"(Anxiety, Hostility, and Pathognomic Verbalization) as well as by the Holt Manual For The Scoring Of Primary Process Manifestations In Rorschach Responses. These were scored for Level 1 and Level 2 primary process thinking, defense demand, defense effectiveness and form level. The mood scale ratings were also scored for possible changes in feelings following a treatment session.

In contrast to the therapists of neurotics, SI subjects and cognitive activity subjects, therapists of schizophrenics

manifested significant increases in Level 2 primary process thinking following a treatment session. No changes were noted in any group, in terms of Defense Demand, Defense Effectiveness, Form Level, Level 1 primary process responses, or mood scale dimensions. A more detailed analysis of the data yielded a significant increase in amount of libidinal content in therapists of neurotics. In terms of the amount of primary process thinking during the interpolated activity, the following ascending order was reported: "cognitive" subjects, then therapists of schizophrenics, therapists of neurotics and last are the SI control subjects.

The above findings were related and discussed in terms of the theory and observations of changes in thinking of therapists following a treatment session and were seen as supporting these propositions.

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APPENDICES

APPENDIX A

THERAPIST QUESTIONNAIRE

These questions pertain to your activity during (the therapy session, cognitive activity, our conversation). Please select and circle the answer which best describes your thinking during that part of the experiment.

1. During the interview I did a) little b) some c) a lot of diagnostic formulating.

1a. During the interview (cognitive activity), I did a) some b) little c) a lot of rational and logical thinking.

2. The interview (cognitive activity) required a) some b) a lot of c) a little effort.

3. During the interview (cognitive activity) I found myself doing a) a lot of b) a little c) some daydreaming.

4. I would consider the session a) good b) average c) poor.

4a. In terms of satisfaction, I found (the cognitive activity) our conversation a) good b) average c) poor.

5. I felt a) distressed b) comfortable c) wonderful during the interview (cognitive activity).

6. I found myself doing a) constant b) some c) no thinking concerning the dynamics of the case.

6a. I found myself doing a) constant b) some c) no thinking concerning the real reasons behind (cognitive activity) our conversation.

7. I found myself concentrating a) constantly b) to some extent c) very little.

8. My interest during the interview (cognitive activity) was a) intense b) fluctuating c) lacking.

9. During the session (cognitive activity) I a) repeatedly b) occasionally c) never experienced erotic or aggressive feelings.

10. During the interview (cognitive activity) I experienced
a) much b) some c) no primary process ideation.

*Questions 1a, 4a, and 6a, are alternate or substitute questions to be used for subjects in SI and cognitive activity control groups.

APPENDIX B

INSTRUCTIONS FOR THE MOOD SCALE AND THE MOOD SCALE ADJECTIVES TO BE RATED

Instructions for Mood Scale

Each of the following words describes feelings or mood. Please use the list to describe your feelings at the moment you read each word. If the word definitely describes how you feel at the moment you read it, circle 4 to the right of the word. For example, if the word is relaxed and you are definitely feeling relaxed at the moment, circle the 4 as follows:

relaxed (4) 3 2 1 (This means you definitely feel relaxed at the moment).

If the word only slightly applies to your feelings at the moment, circle 3 as follows:

relaxed 4 (3) 2 1 (This means you feel slightly relaxed at the moment).

If the word is not clear to you, or you cannot decide whether it applies to your feelings at the moment, circle 2 as follows:

relaxed 4 3 (2) 1 (This means you cannot decide whether you are relaxed or not).

If you definitely decide the word does not apply to your feelings at the moment, circle 1 as follows:

relaxed 4 3 2 (1) (This means you are definitely not relaxed at the moment.(

Work rapidly. Your first reaction is best. Work down the first column, then go to the next. Please mark all words. This should take only a few minutes. Please begin.

defiant 4 3 2 1

clutched up 4 3 2 1

introspective 4 3 2 1

affectionate 4 3 2 1

blue 4 3 2 1

still 4 3 2 1

tired 4 3 2 1

on edge 4 3 2 1

attentive 4 3 2 1

understanding 4 3 2 1

leisurely 4 3 2 1

sorry 4 3 2 1

angry 4 3 2 1

sleepy 4 3 2 1

grouchy 4 3 2 1

engaged in thought 4 3 2 1

fed up 4 3 2 1

at rest 4 3 2 1

kindly 4 3 2 1

unhappy 4 3 2 1

placid 4 3 2 1

restless 4 3 2 1

worn out 4 3 2 1

shakey 4 3 2 1

quiet 4 3 2 1

sad 4 3 2 1

playful 4 3 2 1

nonchalant 4 3 2 1

lively 4 3 2 1

lighthearted 4 3 2 1

APPENDIX C

INSTRUCTIONS AND ARITHMETICAL ITEMS USED FOR THE COGNITIVE ACTIVITY

The following are some simple math problems I would like you to solve. Work carefully, for it is important that you arrive at the correct answers.

Add

721	8250	10063	22018
563	653	3207	5689
223	9422	56722	78242
521	860	6528	8433
655	683	560	6424
15	1043	7222	8943
28	422	861	
67			

Multiply

42346	563547	422358	655320
6420	62536	4202	89922

14325682	7825632	9634235
5604232	973255	854326

Divide

4220 / 65432206

421 / 62544387965

43222 / 5789235442

65325898 / 632572549121

432568 / 8638989325

421 / 41256895466

APPENDIX D

DATA PERTAINING TO CHANGES IN LEVEL 1, LEVEL 2 PRIMARY PROCESS, DEFENSE DEMAND AND AMOUNT OF PRIMARY PROCESS DURING THE SESSION

THERAPISTS OF SCHIZOPHRENIC PATIENTS

S	Pre-Therapy L1	Post-Therapy L1	Diff. (Post-Pre)	Pre-Therapy L2	Post-Therapy L2	Diff. (Post-Pre)	Pre-Therapy D.D.	Post-Therapy D.D.	Diff. (Post-Pre)	P.P. During Session
1	0	0	0	5.5	9.5	+4.0	2.00	2.00	0	22
2	1	1	0	11.0	11.5	+ .5	2.08	1.71	-.37	23
3	0	2	+2	1.5	7	+5.5	1	2.37	+1.37	21
4	3	3	0	22.0	22.5	+ .5	2.33	2.26	-.07	20
5	1	1	0	12.5	11.5	-1.0	2.00	2.00	0	22
6	9	17	+8	23.5	31.0	+7.5	2.85	3.17	+.32	25
7	1	5	+4	10.0	16.0	+6.0	2.31	2.68	+.37	21
8	12	7.5	-4.5	13.0	23.5	+10.5	2.96	2.41	-.55	23
9	5	5	0	27.5	25.5	-2.0	2.42	2.55	+.13	19
10	0	2	+2	16.0	12.0	-4.0	1.89	2.20	+.31	20
11	1	2	+1	8.5	15.5	+7.0	1.83	1.65	-.18	22
Σ	33	45.5	12.5	151.0	185.5	34.5	26.67	25.00	1.67	238
$\bar{X}$	3.0	4.1	1.1	13.7	16.8	3.1	2.42	2.27	-.15	21.6

APPENDIX E

DATA PERTAINING TO CHANGES IN DEFENSE EFFECTIVENESS, FORM LEVEL AND HOLTZMAN FACTORS

THERAPISTS OF SCHIZOPHRENIC PATIENTS

S	Pre-Therapy DE	Post-Therapy DE	Diff. (Post-Pre)	Pre-Therapy F.L.	Post-Therapy F.L.	Diff. (Post-Pre)	Pre-Therapy Holtzman	Post-Therapy Holtzman	Diff. (Post-Pre)
1	1.0	1.2	+.20	+.18	-.02	-.20	13	11	-2
2	1.33	1.07	-.26	+.33	+.36	+.03	20	31	+11
3	1.0	1.12	+.12	-.22	-.05	+.17	7	18	+11
4	.71	.67	-.04	-.09	-.24	-.15	47	45	-2
5	1.07	1.00	-.07	+.11	-.02	-.13	15	15	0
6	.73	.32	-.41	-.44	-.91	-.47	65	93	+28
7	.62	2.68	+1.99	+.31	+.24	-.07	14	44	+30
8	.46	.57	+.11	-.31	+.33	+.64	28	38	+10
9	.65	.34	-.31	-.02	-.42	-.40	51	73	+22
10	1.89	.87	-1.02	+.20	+.22	+.02	26	22	-4
11	1.08	.95	-.13	+.16	+.27	+.11	18	17	-1
Σ	10.54	10.78	+.24	+.21	-.24	-.45	304	407	+103
$\bar{X}$	.96	.98	+.02	+.02	-.02	-.04	27.6	37.0	+9.4

APPENDIX F

DATA PERTAINING TO CHANGES IN LEVEL 1, LEVEL 2 PRIMARY PROCESS, DEFENSE DEMAND AND AMOUNT OF PRIMARY PROCESS DURING THE SESSION

THERAPISTS OF NEUROTIC PATIENTS

S	Pre-Therapy L1	Post-Therapy L1	Diff. (Post-Pre)	Pre-Therapy L2	Post-Therapy L2	Diff. (Post-Pre)	Pre-Therapy D.D.	Post-Therapy D.D.	Diff. (Post-Pre)	P.P. During Session
1	4.5	0	-4.5	13.0	15.5	+2.5	2.50	2.00	-.50	20
2	1.0	7.0	+6.0	13.0	13.5	+ .5	1.94	2.75	+.81	22
3	0	3.0	+3.0	14.0	9.5	-4.5	2.07	2.23	+.16	20
4	0	2.0	+2.0	12.5	15.5	+3.0	1.71	.89	-.82	23
5	0	0	0	14.0	10	-4.0	1.87	2.18	+.31	22
6	2.0	2.0	0	15.5	15.5	0	2.26	1.94	-.32	19
7	3.0	5.0	+2.0	28.0	14.5	-13.5	2.27	2.42	+.15	22
8	2.0	3.0	+1.0	15.5	16.0	+1.0	2.35	2.39	+.04	20
9	0	4.0	+4.0	17.5	17.5	0	2.28	2.43	+.15	21
10	0	3.0	+3.0	11.5	7.0	-4.5	1.92	2.73	+.81	20
11	3.5	1.0	-2.5	7.0	11.0	+4.0	2.92	2.08	-.84	20
Σ	15.4	29.7	14.3	161.5	145.5	-16	24.09	24.04	-.05	229
$\bar{X}$	1.4	2.7	+1.3	14.6	13.2	-1.4	2.19	2.19	0	20.8

APPENDIX G

DATA PERTAINING TO CHANGES IN DEFENSE EFFECTIVENESS, FORM LEVEL AND HOLTZMAN FACTORS

THERAPISTS OF NEUROTIC PATIENTS

S	Pre-Therapy DE	Post-Therapy DE	Diff. (Post-Pre)	Pre-Therapy F.L.	Post-Therapy F.L.	Diff. (Post-Pre)	Pre-Therapy Holtzman	Post-Therapy Holtzman	Diff. (Post-Pre)
1	.57	1.00	+.43	.22	.38	+.60	37	27	-10
2	1.25	.50	-.75	.36	-.25	-.61	33	34	+ 1
3	1.27	1.08	-.19	.16	.31	+.15	27	15	-12
4	1.14	.89	-.25	.29	.18	-.11	14	27	+13
5	.93	.82	-.11	.42	.40	-.02	22	17	- 5
6	.68	.72	+.04	.11	.20	+.09	33	17	-16
7	.13	.53	+.40	-.31	-.22	+.09	63	45	-18
8	1.06	.67	-.39	.16	.31	+.15	21	38	+17
9	1.11	.38	-.73	.07	.07	.0	42	25	-17
10	1.15	.64	-.51	.33	.10	-.23	18	23	+ 5
11	.62	.92	+.30	.04	.31	+.27	24	23	- 1
Σ	9.90	8.14	-1.76	1.85	1.78	-.07	334	291	-43
$\bar{X}$	.90	.74	-.16	.17	.16	-.01	30.3	26.4	- 3.9

APPENDIX H

DATA PERTAINING TO CHANGES IN LEVEL 1, LEVEL 2 PRIMARY PROCESS, DEFENSE DEMAND AND AMOUNT OF PRIMARY PROCESS DURING THE SESSION

CONTROL THERAPISTS

S	Pre-Therapy L1	Post-Therapy L1	Diff. (Post-Pre)	Pre-Therapy L2	Post-Therapy L2	Diff. (Post-Pre)	Pre-Therapy D.D.	Post-Therapy D.D.	Diff. (Post-Pre)	P.P. During Session
1	0	2	+2	12	18	+6.0	1.77	2.37	+.60	17
2	1	1	0	9.0	6.5	-2.5	1.91	2.25	+.34	18
3	0	1	+1	12	8.5	-3.5	1.92	2.00	+.08	18
4	0	0	0	10.5	11.5	+1.0	2.00	2.17	+.17	18
5	0	0	0	9.5	5.5	-4.0	2.09	2.17	+.08	21
6	4	5	+1	16.5	9.0	-7.5	2.67	3.07	+.40	18
7	3	0	-3	5.5	9.5	+4.0	2.33	1.70	-.63	19
8	1	0	-1	11.5	8.0	-3.5	2.15	1.87	-.28	17
9	0	2	+2	15.5	10.0	-5.5	2.13	2.40	+.27	18
10	2	1	-1	7.5	7.5	0	2.40	2.56	+.16	19
11	0	0	0	6.5	4.0	-2.5	1.86	1.60	-.26	21
Σ	11	12	1.0	116.0	98.0	-18.0	23.23	24.16	+.93	204
$\bar{X}$	1.0	1.1	+ .1	10.5	8.9	-1.6	2.11	2.19	+.08	18.5

APPENDIX I

DATA PERTAINING TO CHANGES IN DEFENSE EFFECTIVENESS, FORM LEVEL AND HOLTZMAN FACTORS

CONTROL THERAPISTS

S	Pre-Therapy DE	Post-Therapy DE	Diff. (Post-Pre)	Pre-Therapy F.L.	Post-Therapy F.L.	Diff. (Post-Pre)	Pre-Therapy Holtzman	Post-Therapy Holtzman	Diff. (Post-Pre)
1	1.15	.74	-.41	+.18	+.29	+.11	21	48	+27
2	.64	.38	-.26	-.09	-.40	-.31	22	13	- 9
3	1.17	1.10	-.07	+.29	+.29	.00	10	17	+ 7
4	1.18	1.17	-.01	+.18	-.13	-.31	16	16	0
5	.73	.50	-.23	-.11	+.07	+.18	29	21	- 8
6	.90	.79	-.11	+.02	.00	-.02	34	22	-12
7	1.11	1.00	-.11	-.14	+.10	+.24	15	15	0
8	1.00	.62	-.38	-.47	-.31	+.16	21	14	- 7
9	.94	1.00	+.06	+.36	+.33	-.03	19	18	- 1
10	.60	.11	-.49	-.40	-.48	-.08	17	19	+ 2
11	.86	1.20	+.34	+.30	+.37	+.07	10	5	- 5
Σ	10.28	8.61	1.67	+.12	+.13	+.01	214.0	208.0	- 6.0
$\overline{X}$	.93	.78	-.15	+.011	+.012	+.001	19.4	18.9	- .5