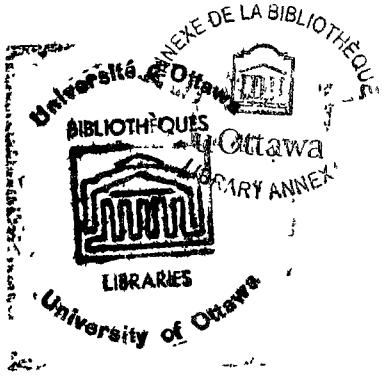
# THE REALITY OF PSYCHOLOGICAL DISTANCE IN CHRONIC SCHIZOPHRENICS

by Gloria M. McDowell

Thesis presented to the School of Psychology and Education of the University of Ottawa as partial fulfillment of the requirements for the degree of Doctor of Philosophy.




Falls Church, Virginia, 1957

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# CURRICULUM STUDIORUM

Gloria M. McDowell was born March 3, 1925 in Dallastown, Pennsylvania. She received the Bachelor of Arts degree in Secondary Education from Pennsylvania State University, State College, Pennsylvania in 1945. She received the Master of Science degree in Clinical Psychology from The Pennsylvania State University, State College, Pennsylvania in 1950. The title of her thesis was: A Study of the Relationship of the Rosenzweig Picture-Frustration Response to the Scholastic Achievement of Two Hundred High School Juniors and Seniors.

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# INTRODUCTION

Long term hospitalized schizophrenic patients create a great problem of care and rehabilitation. Many hospitals, with a steadily rising rate of new admissions, are finding that through the years they are also developing a very large group of permanent residents who have little hope of leaving the institution.

The Mayview State Hospital, Pennsylvania, at which this study was undertaken, is similar to many others in this respect. Much of the actual treatment of the chronic schizophrenics there was conducted as if it were a proven fact that nothing could be done to help them to return to the outside world. They tended to their daily needs but made no concerted effort to try to bring them out of their shell and return to more normal living. Custodial care was usually the prescription.

The present study was undertaken to determine whether this attitude of hopelessness, which was reflected in the day to day treatment of these patients, was justified. The writer hoped to shed some light on the theoretical question of whether the psychological distance that the chronic schizophrenic shows to those around him is real.

The first portion of this paper will outline the present problem in terms of the need for the study. The existing conditions and attitudes toward these patients will be discussed, as a means of expressing the practical need. The theoretical aspect of the problem will also be presented, and the hypothesis formulated.

The presentation of the hypothesis will be followed by a survey of the related literature. This survey will concentrate on the writings related to the self concept and to the tools used in the present study. References related to the existing conditions and attitudes towards chronic schizophrenics will have been incorporated into the discussion of the problem, previously mentioned.

The writer will afterwards present the design of the present experiment by which the hypothesis will be tested. This will give a description of the population and the manner in which it was selected, the rationale for the tools used, and the procedure for using them in this experiment.

The results obtained in the experiment are thereafter presented and discussed. Finally, some possibilities for further research are suggested.

# CHAPTER I

## THE PROBLEM AND THE HYPOTHESIS

The present study is concerned with the problem of the reality of the psychological distance which chronic schizophrenics show to those around them. This chapter will present a discussion of some of the existing attitudes and conditions in many of the hospitals in which these patients are confined. This will help to show the practical need for changes in these attitudes if we are to help these patients. The theoretical aspects of the problem will also be presented, leading into the definitions of terms used in this study and the statement of the writer's hypothesis. Finally, a few studies that bear some relation to the present problem will be discussed in some detail.

### 1. Practical Aspects of the Problem.

About one half of all hospital beds in the United States are occupied by mental patients and about one half of these are schizophrenics. Massachusetts, in its 1950 report, stated that dementia praecox cases constituted 47.4 percent of all its resident population of state hospitals. Bellak reported, "The average length of hospitalization with a diagnosis of dementia praecox, for those who died in hospitals, was 19.3 years, as reported in the New York State hospital survey, for

the hospital population from 1938 to 1943".[1] He found that most improvement occurred during the first eighteen months of hospitalization; 50 percent improvement occurred in patients hospitalized less than six months; 35 percent in those hospitalized from six to eighteen months; and 25 percent in those hospitalized over eighteen months.

In Malzberg's study[2] of the patients in the New York Civil State hospitals on April 1, 1950, 57.4 percent of the patients were found to be schizophrenics. Considering all types of patients, the 93,609 patients listed on the books April 1, 1950 showed that 56.7 percent had been hospitalized over five years while 11.4 percent had been in residence over twenty-five years. The median durations for hospitalization ranged from .7 years for those without psychosis to 11.3 years for the schizophrenics.

Many hospitals, especially the state ones which are frequently overcrowded and understaffed, function on the assumption that only the newly admitted acute schizophrenic can be helped. He is given intensive therapeutic treatment upon entering the hospital. If still in the hospital at the end

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1 L. Bellak, Dementia Praecox, New York, Grune and Stratton, 1948, p.11.

2 B. Malzberg, "A Statistical Study of Patients in the N.Y. Civil State Hospitals, April 1, 1950", Psychiatric Quarterly Supplement, vol. 26, part 1, 1952, p.70-85.

of a year or two, he is considered chronic and moved to the back wards. Here he is frequently forgotten except to have someone care for his routine daily needs. Kraus expressed this attitude when discussing conditions at the beginning of a total push program for chronic schizophrenics in a veteran's hospital. He stated,

> Since this type of "chronic" patient was not expected to show much improvement, only a token force of ancillary personnel had been assigned to the building. This was in accordance with the policy of concentrating therapeutic efforts on wards where it was felt that the most good would result -- that is, on those wards housing "acute" patients.[3]

Gross, in discussing chronic patients at Elgin State Hospital, Illinois, reflected the presence of the same attitude there when he stated,

> The clinical impression that the great majority of these patients will not get well, no matter what the treatment, may not be valid; yet within the realm of ordinary state hospital facilities it remains an inevitable fact.[4]

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3 P.S. Kraus, "Considerations and Problems of Ward Care for Schizophrenic Patients", Psychiatry, Vol. 17, No. 3, issue of August 1954, p.284.

4 M.D. Gross, "Therapy in a State Hospital Regressed Ward", Journal of Nervous and Mental Diseases, Vol. 120, No. 5, issue of November-December 1954, p.328.

The goal was to get the patients to make a better hospital adjustment. The 160 male patients had been in the hospital an average of twelve years and on this ward an average of eight years. They were given electro-convulsive therapy, occupational therapy, recreation, and some informal superficial psychotherapy by the ward physician. The result was that, "... the ward had become a little less chaotic, and considerably more manageable".[5]

The back wards on which these patients find themselves are usually greatly overcrowded and have few staff personnel assigned to them. In order for routine functions to continue, the orderly conduct of the ward often becomes a prime objective for the staff. The static quality of the ward is often encouraged by the staff because it makes it easier for a few to care for so many. It is now being recognized that the withdrawal of the chronic schizophrenic may in part be conditioned by the subculture of the hospital. The patient frequently loses his skills of work and living when he becomes mentally ill and, in many cases, the only new skill he learns is how to live in the subculture of the institution.

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5 Idem., Ibid., p.329.

Miller and Clancy believed,

> It is often apparently necessary for an acutely ill patient to withdraw from interpersonal relations for his own comfort, ...; but by the time the patient's illness becomes less acute, he may be socially conditioned to avoiding others.[6]

These authors studied one hundred chronic patients at Saskatchewan Hospital and they concluded, "... that much of the deterioration from which chronic patients suffer is in the field of social performance, and that this may be an artifact of the hospital subculture itself".[7]

Schizophrenics have great sensitivity to certain attitudes of those around them. They are aware of how other patients react and how the staff expects them to act and may respond accordingly. This is an important variable in the schizophrenic's existence which is often ignored. It was stressed by Frank in his report on group psychotherapy with 174 chronic schizophrenics at Perry Point Veteran's Hospital in Maryland. He said,

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6 D.H. Miller and J. Clancy, "An Approach to the Social Rehabilitation of Chronic Psychotic Patients", Psychiatry, Vol. 15, No. 4, issue of November 1952, p.436-437.

7 Idem., Ibid., p.437.

> These observations made clear that patients in a mental hospital do not exist in a social vacuum but actually are part of a very tightly organized social structure in which they are continually subjected to helpful or noxious influences from treatment personnel and from the other patients. These influences are so pervasive and unchanging that, like the air we breathe, they ordinarily remain out of awareness. Their strength and importance become apparent only when attempts are made to change them, and the results on patients can be systematically observed.[8]

Frank found some success with group therapy with his chronic schizophrenics. They showed increased social awareness and the experimental group had more discharges and extended home visits than a control group.

There is a real need to do something to enable more of these patients to be able to leave the hospital. At present group psychotherapy seems to be a possible answer but many are reluctant to try therapy with chronic patients. It is almost impossible, to give psychotherapy, even in group form, to all patients; and that raises the big question of which patients shall be given the opportunity for this treatment.

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8 J. Frank, "Group Psychotherapy with Chronic Hospitalized Schizophrenics", in E.B.Brody and F.C. Redlich, Psychotherapy with Schizophrenics, New York, International Universities Press, 1952, p.222.

Ellis[9] said a therapist should accept for therapy only those clients who have some real readiness for it. How do we select those who are ready; whether it is for therapy or for a more superficial process of socialization to enable them to function outside an institution? Perhaps the techniques used in this study might be used to select patients who are ready to respond to preparation for living in the outside world. That, however, would require further investigation beyond the scope of this study.

Slavson[10] felt that selecting the patients only on the basis of clinical judgment would place the patients at great disadvantage. He added[11] that individual subjective opinion is the most common criterion used today and the absence of a scientifically reliable criterion is an important contributing factor to the retardation of this development.

We have looked at the practical aspect of the need for this study; the very practical problem of enabling

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9 A. Ellis, "New Approaches to Psychotherapy Techniques", Journal of Clinical Psychology, Vol. 11, No. 3, issue of July 1955, p.211.

10 S.R. Slavson, "Criteria for Selection and Rejection of Patients for Various Types of Group Psychotherapy", International Journal of Group Psychotherapy, Vol. 5, No. 1, issue of January 1955, p.3.

11 Idem., Ibid., p.9-10.

chronic schizophrenics to leave the hospitals and function in the outside world. Let us now turn to another aspect of the problem.

2. Theoretical Aspect of the Problem.

A second need for the study is to attempt to shed some light on the theoretical question of whether this psychological distance which the chronic schizophrenic displays is a real distance. If it is not real, what is it?

It is the opinion of the writer that this psychological distance which the chronic schizophrenic displays is not real, but is only apparent. Other authors have expressed this opinion. Powdermaker stated,

> The dilemma of the schizophrenic presented itself in my observations at the hospital in a thousand ways--but always it was the same dilemma. It is as if the schizophrenic were saying: "I want to communicate. I'll do it but I'm afraid to, so I'll say it so you can't understand it or I'll pretend not to know you are there." The schizophrenic calls attention to himself by negativism, flirting, stereotyped gestures, all of which dare you to communicate with him; and then he retreats. ... His need to relate seems to be second only to his fear of it.[12]

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12 F. Powdermaker, "Concepts Found Useful in Treatment of Schizoid and Ambulatory Schizophrenic Patients," Psychiatry, Vol. 15, No. 1, issue of February 1952, p.61.

The writer conceives this distance as being the chronic schizophrenic's expression of defensiveness. This is his defensive barrier that he has erected between himself and others, and, if properly stimulated at the appropriate level, he can be contacted and can communicate.

3. Definitions and Statement of the Hypothesis.

At this point it is necessary to define the meaning given to "psychological distance" and "engageability" within the framework of this study.

The psychological distance is the breach between the chronic schizophrenic and normal individuals in thinking, feeling, and perceiving. The chronic schizophrenic expresses this breach in his lack of response to attempts to communicate and make contact with him.

Engageability is the ability of an individual to produce change in his responses in any direction. The present writer considers engageability to be a process prior to that of socialization which implies improvement and has a connotation of approval by the individuals who have evaluated the behavior of others. Because engageability is expressed by change in any direction, this change can be recorded simply as present or not. It does not have to be evaluated to determine whether there has been any improvement. An individual can improve his responses only

after he can change them. Thus, the chronic schizophrenic must be engageable before he can be socialized.

In the present study the patient's ability to produce change will be shown in the presence of statistically significant differences between several productions of the same task or between different tasks. Engageability may vary at different personality levels and under different stimulations.

If the breach between the chronic schizophrenic and the normal is permanent and irreversible, the schizophrenic is unengageable and his psychological distance is real. Operationally this will be shown in the chronic schizophrenic's inability to vary his pattern of response. In the present study a real distance will be reflected in the consistent absence of statistically significant changes in the patients' drawings. The presence of any change that is statistically significant will be counterindicative of the reality of this psychological distance and will reflect the presence of engageability.

The writer presents the hypothesis that the psychological distance which the chronic schizophrenic shows to the world around him is not a real distance, but is rather an outward display of distance which is the chronic schizophrenic's method of defending himself against the world and other people. It is further hypothesized that his concept of himself as a person is one thing that is being defended by this show of

distance.

Hogan[13] defined defense as behavior in response to threat, the goal of which is the maintenance of the structure of the self. He further stated,

> ..., as the self organizes its perceptions more in terms of defense, layer after layer of defense is built up around threatened areas. Defense is echeloned in depth, maintaining the sensitive area against experience, and the resulting conative-cognitive organization can be discussed in terms of levels of defense. As each level of defense is threatened, another level is added to strengthen the defense.[14]

As will be discussed in detail in the experimental design, the present study will attempt to assess engageability on two levels; a superficial one where the need for defense may not be too strong, and a deeper more emotionally involved level which may be more firmly defended. It is expected that the patients will show more ability to change on a superficial level than on a deeper level. This would reflect more freedom to express his engageability on a superficial level than on a deeper one. Since the patient would not have as strong an emotional investment in the superficial level, the need for defense would not be as

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13 R.A. Hogan, "A Theory of Threat and Defense", Journal of Consulting Psychology, Vol. 16, No. 6, issue of December 1952, p.419.

14 Idem., Ibid., p.420.

strong here as on a deeper level where he is more emotionally involved. Operationally this would show itself in this study in the production of more change than could have resulted from chance.

Since praise is generally felt to be an effective motivating factor, it is also expected that the group of patients which receives praise will produce more change than the group that does not get this added incentive.

4. Selected Studies on the Topic.

There are a few studies which the writer feels are related to the present one which will now be discussed in some detail. They too are concerned with the question of the schizophrenic's ability to maintain environmental contact on different personality levels; a central one and a more peripheral one. They, however, were concerned with individuals who had made a schizophrenic adjustment to living more recently than the chronic patients used in the present study.

Rickers-Ovsiankina,[15] following Lewinian formulations, considered mental structure as a differentiated

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15 M. Rickers-Ovsiankina, "Studies of the Personality Structure of Schizophrenic Individuals: I The Accessibility of Schizophrenics to Environmental Influences", Journal of General Psychology, Vol. 16, 1st. half, issue of January 1937, p.153-178.

system of interests, needs, and activities. These maintain a state of tension and are separated from each other by differently permeable walls. These regions are both central and peripheral in the personality. She proposed to study the validity of the assumption of firm, functional walls between individuals of a schizophrenic group and their environment. An attempt was made to investigate the accessibility of the schizophrenic to environmental influence. Each of the 123 schizophrenics and 75 normals was placed in a room containing twelve brightly colored objects and observed at five minute intervals for thirty minutes through a one-way screen.

Results suggested that, in peripheral areas at least, the two groups did not differ markedly for amount of time spent with one object of the intensity of the response. Rickers-Ovsiankina concluded that the patients were able to form segregated tension systems in peripheral regions, but because of the diffuse nature of these peripheral regions, there was no formation of a tension system involving central regions. The latter part of this conclusion came from the observation that the schizophrenic did not engage in directed activities to as great an extent as did the controls. Directed activities involve firm, centralized tension systems.

In a second study, the same worker advanced the hypothesis that the failure of schizophrenics to apply themselves to directed activities to the same extent as normal individuals

was due to an insufficiency of firm segregated tension systems, at least in peripheral levels of the personality. She[16] utilized an interrupted task method to determine the relative storing or dissipation of the drive or need to discharge the energy of the tension system. Again schizophrenics were compared with normal subjects. The normals resumed 72 percent of the interrupted tasks; the schizophrenics resumed 40 percent. Indifference, casualness, and no difference in manner for interposed and original tasks marked the attitude of the patient group. The author offered the conclusion that the normals form firmly segregated tension systems to a greater degree than do patients. Since superficial and impersonal activities were involved in both studies she felt the conclusions applied to the peripheral levels of personality. The possibility was indicated that this did not apply to the more central, and possibly more intact, layers of personality in patients.

Bennett, in two papers[17,18], reported on attempts to examine this last consideration. She also used an interrupted

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16 M. Rickers-Ovsiankina, "Studies of the Personality Structure of Schizophrenic Individuals: II Reaction to Interrupted Tasks", Journal of General Psychology, Vol. 16, 1st half, issue of January 1937, p.179-196

17 G.Bennett, "Structural Factors Related to the Substitute Value of Activities in Normal and Schizophrenic Persons: I A Technique for the Investigation of Central Areas of Personality", Character and Personality, Vol.10, No.1, issue of Sept., 1941, p.42-50.

18 G.Bennett, "Structural Factors Related to the Substitute Value of Activities in Normal and Schizophrenic Persons; II An Investigation of Central Areas of the Personality", Character and Personality, Vol.10, No.3, issue of March 1942, p.227-245.

task method. The schizophrenics and normals were presented with an interesting situation which was interrupted by a second neutral task or a second personalized task. When the interposed task was relatively neutral, all subjects returned to the initial task after the interruption. When the second task was more personal, the number and rate of resumption were still greater than that of Rickers-Ovsiankina's subjects for a situation in which one neutral task was disturbed by a second neutral task.

Bennett reported a 65 percent resumption within the first two minutes after completion of the interposed task while Rickers-Ovsiankina reported 57.3 percent. For Bennett's schizophrenics the resumption was 76 percent or approximately the same as Rickers-Ovsiankina's normals when engaged by two neutral tasks. Bennett wrote that the schizophrenic could be less fluid in central areas than in peripheral areas because of the higher resumption rate when compared with normals.

When Bennett compared the schizophrenics and normals for resumption after interruption of one central task by a second, she found the normals much less prone to resume. In terms of numbers who resumed and time for resumption, this was borne out. The mean time for the normals was 295.8 seconds while for the patients it was 141.8 seconds. In normals, central tension systems appear to be less isolated; tension release can occur in central systems and so there is less need to resume the original task. She also concluded,

> Tasks which are dissimilar can serve as substitutes in normal persons if central material is involved, but for schizophrenics, substitute discharge of one system by another is relatively weak or infrequent.[19]

These studies were mentioned here because they were considered related to the general problem of the present study. Though they did not deal with chronic schizophrenics as the present study does, they did attempt to assess schizophrenic response to environmental influences on two personality levels; a central one and a peripheral one.

The next section of this paper will present the survey of the literature related to the self concept and to the drawing techniques used in this experiment. In the following section, the detailed design of this experiment will be presented. Following that, the results obtained will be presented and discussed.

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19 Id[illegible]., Ibid., p.244.

## CHAPTER II

## THE SURVEY OF THE LITERATURE

The present study is concerned with tapping the patient's engageability and thus indicating that the psychological distance he manifests is not a real one. It has been previously hypothesized that the distance the patient reveals is his way of defending his concept of himself as an individual. For this reason the concept of self is basic to this study and the writer has attempted to assess it through the drawings of the human figure. This survey of the literature will cover four aspects; the self concept, the use of art in general in working with mental patients, the drawings of children, and the use of the drawings of the human figure.

### 1. The Self Concept.

The concept of self is vital to the chronic schizophrenic as to more healthy individuals. Powdermaker stated, "The fears of these patients appear in numerous forms but many of them are fundamentally related to the fear of the loss of self".[1] In speaking of the schizophrenic she referred to,

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1 F. Powdermaker, "Concepts Found Useful in Treatment of Schizoid and Ambulatory Schizophrenic Patients", Psychiatry, Vol. 15, No. 1, issue of February 1952, p.67.

> ... the desperate battle between wanting to maintain the "self" which is identified with one's perceptions, ideas, and feelings and one's need to relate to other people. These patients' experiences have led them to believe that if they express what they perceive and their reactions to it, they will not be accepted.[2]

Kraus reflected somewhat the same attitude when he said,

> It is of the utmost importance, ..., that the schizophrenic patient be provided with an environment which not only tolerates and understands his need for occasional expression of deviant behavior, but which also strives to reenforce what remains of his self esteem and of his latent motivation to abandon his dependent and isolated state.[3]

What is this self? It is a controversial concept that has many meanings to many people. Taylor stated,

> ...with the rebirth of interest in the self, came increased attention to a relatively new self-referent logical construct, the self-concept. This intervening variable was proposed as an important factor in adjustment and psychotherapy by Victor C. Raimy at Ohio State in 1943. He defined the self concept as the 'more or less organized perceptual object resulting from present and past self-observation, comprising what a person believes about himself.'[4]

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2 Idem., Ibid., p.67.

3 P.S. Kraus, "Considerations and Problems of Ward Care for Schizophrenic Patients", Psychiatry, Vol. 17, No. 3, issue of August 1954, p.284.

4 D.M. Taylor, "Changes in Self-Description as a Function of Replication", Paper presented to Southern Society for Philosophy and Psychology, 1954, p.1.

Its increasing prominance in the literature is reflected in Newcomb's statement that, "Within more recent years such otherwise divergent students of personality as Horney, Sullivan, Lecky, Murphy, and Rogers have either noted the indispensibility of self concepts or have given them a central place in their systems".[5] Helper said, "Perhaps the most common definition of the self concept is that it is the referent of the pronoun I".[6] Murphy, Murphy, and Newcomb described the self very tersely. "The self is something we like and from which we expect much".[7] In a study of college students, Brownfain found,

> The individual with a stable self-concept is the individual who accepts himself... . When he asks of himself the question, "Who am I?", he is able to answer himself in a confident manner, and he is generally pleased with his answer.[8]

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5 T.M. Newcomb, "Role Behaviors in the Study of Individual Personality and of Groups", Journal of Personality, Vol. 18, No. 3, issue of March 1950, p.276.

6 M.M. Helper, "Learning Theory and the Self Concept", Journal of Abnormal and Social Psychology, Vol. 51, No. 2, issue of September 1955, p.184.

7 G.Murphy, L.B. Murphy, and T.M. Newcomb, Experimental Social Psychology, New York, Harper, 1937, p.210 as cited in E.R. Hilgard, "Human Motives and the Concept of the Self", American Psychologist, Vol.4, No. 9, issue of September 1949, p.374-382.

8 J.V. Brown fain, "Stability of the Self-Concept as a Dimension of Personality", Journal of Abnormal and Social Psychology, Vol. 47, No.3, issue of July 1952, p.605.

Brownfain found that students with a stable self-concept knew more people in the group and were better known by the group. They showed more active social participation and less evidence of defensive compensatory behavior.

Concepts of self differ in different cultures. Lee[9] found that among the Wintu Indians the self has no bounds, is not named, and is not recognized as an entity. To the Wintu a person is holistic. They do not have a word for the self. They consider a person's family, relatives, possessions, and even nature as a part of him. With the Wintu the universe is not centered in the self as it is with us. The third person, for them, is primary and the first is derived. The author summed the difference by stating,

> The Wintu conception of the self then differs from our own in that it contains the total person and the activities of all its aspects, and in that it fades out gradually and without distinct demarcation.[10]

The newborn infant does not have a concept of self. He develops this as he grows and begins to

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9 D.Lee, "Notes on the Conception of the Self among the Wintu Indians", Journal of Abnormal and Social Psychology, Vol. 45, No. 3, issue of July 1950, p.538-543.

10 Idem., Ibid., p.541.

distinguish between "me" and "not me". Later he makes further distinctions between "good me" and "bad me", etc. He learns to distinguish himself as someone with a past, present, and future. For this he needs continuity of memory. The knowledge and acceptance of his name helps to delimit his self. Self-evaluation and self-criticism also help in the development of the self-concept. In addition, the self-concept is to some extent the product of interpersonal relations since there are many diverse roles that the individual finds ready-made for him and to which he conforms with varying degrees of success.

Bertocci suggested the hypothesis that,

> I refers to a complex, unitary activity of sensing, remembering, imagining, perceiving, wanting, feeling, and thinking. These activities are the dynamic unity referred to by the word self.[11]

He considered these activities as distinguishable aspects, but not distinct parts, of the total unitary activity of what he calls the psychological self. He considered the self as more basic than the ego. As the individual grows the functions of the self mature and change through learning. As a vital part of this process of adjustment, an ego

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11 P.A. Bertocci, "The Psychological Self, the Ego, and Personality", Psychological Review, Vol. 52, No. 2, issue of March 1945, p.91-92.

and a personality are developed. Bertocci conceived the self as a psychological agent which endures throughout changes in the personality and the ego. He considered the ego as the self's evaluation of its activities in the life-situation and the personality as the self's mode of survival.

The use of the drawings of the human figure and its relation to the self concept has a long and varied history. There is a reference to a book written by Carus[12] in 1853 in which he stated that perceptions we have of ourselves are symbolic of the structure of the psyche. This was almost a century before Schilder[13] said that we perceive the environment as we perceive ourselves. He believed that emotions, pathology, and physical deformities could cause distortions in an individual's perception of the body image of others.

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12 C.G. Carus, Symbolik der Menschlichen Gestalt, Einhandbuch der Menschenkenntins, Leipzig, Brockhaus, 1853, p.371 cited by A. Lewis, A Check on the Validity of Some of Machover's Claims, Unpublished Ph. D. Thesis, University of Ottawa, 1955, ix-79p.

13 P. Schilder, Image and Appearance of the Human Body, New York, International University Press, 1950, p.44.

The literature survey will now turn to historical developments in the use of art in studying and working with mental patients. Later in the discussion, as it takes its place in the overall historical development, we will again return to the drawings of the human figure and its relation to the self concept.

## 2. Art of the Abnormal.

In his Treatise on Insanity in 1806, Pinel[14] referred to the art of the insane. He reported cases of versification and painting during institutionalization. Another very early reference to artistic behavior in the insane was in the writings of the American Benjamin Rush, who in 1812 reported, "talents for eloquence, poetry, music and painting, and uncommon ingenuity in several of the mechanical arts, are often evolved in this state of madness".[15]

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14 A. Anastasi and J.P. Foley, Jr., "A Survey of the Literature on Artistic Behavior in the Abnormal, I. Historical and Theoretical Background", Journal of General Psychology, Vol. 25, 1st. half, issue of July 1941, p.114.

15 B. Rush, Medical Inquiries and Observations upon the Diseases of the Mind. Philadelphia, Kimber and Richardson, 1812, p.153 as cited in A. Anastasi and J.P. Foley, Jr., Op. cit., p.129.

Tardieu[16] in 1872, like Marce in 1864, pointed out the importance of the patient's writings and drawings to thepsychiatrist in determining diagnosis and treatment. In 1876 the French psychiatrist Max Simon[17] emphasized the diagnostic value of patients' drawings and discussed the correlation between drawing attributes and clinical syndrom. Simon's work exerted a great influence on subsequent investigators in France and Germany. In 1887 Regnard[18] analyzed eight drawings supposedly made by four paralytics but later Prinzhorn believed they more nearly resembled the work of dementia praecox or paranoid patients.

In Italy, Lombroso[19] leads the field in the study of artistic productions of the insane. With du Camp in 1880 he reported on special characteristics of the drawings such as originality, eccentricity, symbolism, uselessness, minuteness of detail, atavism, arabesques, obscentiy, absurdity, imitattion, and uniformity.

Division of drawings into those related to psychosis and those not related was made at the end of

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16 A. Anastasi and J.P. Foley, Jr., Op., cit., p.115.

17 Idem., Ibid., p.115.

18 Idem., Ibid., p.115.

19 Idem., Ibid., p.113-114.

the nineteenth century by Seglas and at the beginning of the twentieth century by Rogues de Fursac[20]. de Fursac felt that artistic talent is not incompatible with mental and emotional disorder but contended that true creative ability is not commonly found in the psychoses proper but may be found in constitutional psychopathy or intermittent disorders. In 1907 Reja[21] concluded that mental disorders may lead to the appearance of relatively complex artistic behavior but the artistic value of such productions has wide variability.

In 1896, Chizh[22] contended that aesthetic feelings were among the first to show the effect of insanity because they were the most recent and unstable acquisitions of mankind. Hyslop[23] reported an exhibit in 1900 of about six hundred works of art by Bethlehem Royal Hospital patients. He noted the many similarities to the schools of modern art and attempted to explain many of the characteristics in terms of specific disorders.

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20 Idem., Ibid., p. 116.

21 Idem., Ibid., p.117.

22 Idem., Ibid., p.125.

23 Idem., Ibid., p.128.

In 1906, Mohr[24] in Germany gave a comprehensive discussion of the problem of drawing behavior in the insane and outlined thirteen possible approaches to the study of insane drawings. These were:

(a) copying a drawing of an object
(b) copying a complicated geometric figure
(c) drawing simple object from nature
(d) drawing from memory, as in drawing hallucinations
(e) illustrating a simple story
(f) colored drawing and painting
(g) completing partial drawings
(h) interpretation by the patient of his own drawings
(i) recognizing slight differences between drawings
(j) interpretation by the patient of narrative pictures
(k) the use of pictures as stimuli for free association, requiring either a verbal response or another drawing
(l) reaction to emotional tone in pictures, such as humor or sadness
(m) comparison of drawings produced before and after onset of disease

To illustrate the first method, he obtained copies of a schematic drawing of a church-liek building from about eighteen adult patients. His results agreed with what other investigators learned from spontaneous drawings; that is, both approaches suggest specific differentia for the various forms of abnormality.

It was with the work of Mohr that a systematic experimental approach to the art of the insane was

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24 Idem., Ibid., p.120.

introduced. Using these approaches, he[25] analyzed the expressive movements into their basic psychological components which were:

(a) optico-physiological activity
(b) perception
(c) apperception
(d) combination of visual perceptions with kinaesthetic and volitional impulses
(e) purposiveness, attentuon, motor memory, and general memory
(f) training and practice in drawing
(g) comparison of the drawing with the original

In 1913 Jaspers[26] said it was important to determine whether or not the picture drawn is meaningful for the patient. He differentiated between lack of talent, true schizophrenic productions, and artistic creations that express the soul. Aschaffenburg's Handbuch[27] contained possibly the most complete discussion of insane drawings up to 1915. He leaned heavily upon the work of Simon, Rogues de Fursac, and Mohr, but he also made some original observations mainly from a psychiatric-diagnostic viewpoint.

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25 A. Anastasi and J.P. Foley, Jr., "A Survey of the Literature on Artistic Behavior in the Abnormal, IV. Experimental Investigations", Journal of General Psychology, Vol. 25, 1st. half, issue of July 1941, p.188-190.

26 A. Anastasi and J.P. Foley, Jr., "A Survey of the Literature on Artistic Behavior in the Abnormal, I. Historical and Theoretical Background", Journal of General Psychology, Vol. 25, 1st. half, issue of July 1941, p.121.

27 Idem, Ibid., p.122.

In an article published in 1919, Prinzhorn[28] pointed out that in its early stages interest in insane drawings was usually just descriptive; later Simon emphasized the use of drawings in diagnosis; and the experimental approach was introduced by Mohr. Prinzhorn also emphasized the autistic and egocentric nature of schizophrenic art and the schism between content and formal tendencies. Prinzhorn's extensive work, Bildnerei der Geisteskranken,[29] published in 1922 remains the most comprehensive treatment of the field as a whole. The book contains 187 black-white and colored illustrations, of which 170 are of works in the collection of the museum of insane art at the Heidelberg Psychiatric Clinic.

Pfister[30] in Switzerland at various times described the drawings produced by an eighteen year old neurotic boy during psychotherapy. In 1923 he emphasized the need for studying the activity and experience of the artist rather than the picture itself. In 1928 Plaut[31] agreet with Prinzhorn that art is not the product of sanity or

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28 Idem, Ibid., p.122.

29 Idem, Ibid., p.122-123.

30 Idem, Ibid., p.118.

31 Idem, Ibid., p.124.

insanity but rather the expression of the whole personality.

We shall now look briefly at some of the work that was done with children's drawings. A complete understanding of the artistic expressions of adults calls for an awareness of what is expected and found in the productions of children.

### 3. The Drawings of Children.

As early as 1885 Cooke[32] published an article describing the successive stages of development he had observed in children's drawings. He also urged that art instruction in school be changed to agree more closely with the mentality and interests of the child. In 1887 Ricci[33] wrote an account of a group of Italian children's drawings. He was the first to collect children's drawings in extensive numbers.

Sully,[34] in 1897, studied children's drawings at different developmental stages and reached conclusions

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32 F. Goodenough, Measurement of Intelligence by Drawings, Yonkers, New York, World Book Co., 1926, p.1.

33 Idem., Ibid., p.1.

34 L. Bender, Child Psychiatric Techniques, Spring-Field, Illinois, Charles C. Thomas, 1952, p.39.

similar to those later established by Goodenough's systematized study. He outlined three stages: an early one of vague formless scribbling, a second one of primitive circular design best characterized by lunar schemes of the human face, and third one of more sophisticated treatment of the human form. He further observed that the early pictorial forms of human beings have an embryonic configuration. He also concluded that the child as an artist is more symbolist than naturalist.

Between 1900 and 1915 there was much interest in children's drawings but the investigations were incomplete. In Belgium, the child psychologist Rouma[35] in 1912 described the characteristics of the drawings of sub-normal children. Lamprecht[36] received thousands of drawings from almost every nation in the world, including a few primitive African tribes. Though summaries of certain parts of the study have been published, there has been no adequate comparative study of the entire collection.

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35 A. Anastasi and J.P. Foley, Jr., Op., cit., p.118.

36 F. Goodenough, Op., cit., p.2.

In 1907 Claparede[37] proposed a careful study of developmental stages in children's drawings with the purpose of seeing what, if any, relationship exists between drawing aptitude and general intellectual ability as indicated by school work. Ivanoff[38] adopted Claparede's plan in a study of the drawings of school children in four Swiss cantons. He used a scoring scale which considered (a) sense of proportion, (b) imaginative conception, and (c) technical and artistic value-- equal weight being given to each of the three criteria. He compared the values he obtained with teacher's ratings for general ability, standing in school subjects, and certain moral and social traits and found a positive correlation in nearly all instances. Ivanoff was the first to present a methodical approach to scoring procedures.

In 1904 Schuyten[39] reported on a study which had extended over several years. Children were asked to draw a man "in whatever way they were accustomed to draw it" and he attempted to establish a series of age norms. He

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37 Idem., Ibid., p.2.

38 Idem., Ibid., p.2-3.

39 Idem., Ibid., p.3.

made very minute measurements of each of the separate parts of the body and then compared them with classic standards. He was not successful but it was one of the earliest attempts to devise a purely objective measuring scale based upon age standards.

One of the most extensive and carefully controlled studies in this field was that by Kerschensteiner[40] in Munich from 1903 to 1905. He studied almost 100,000 drawings and found, among other things, that feebleminded children produce more primitive and more incoherent drawings than those made by normal children.

One of the best studies of the drawings of an individual child was that by Luquet[41]. He preserved every drawing his daughter made between age three years three months and eight years six months. About 1500 drawings were collected and great care was taken to keep them free from outside influence, both by adults and children. He found that a child's drawings show great fluctations from day to day. A new feature may appear once but then it may be a long time before this becomes a fixed characteristic of the drawings.

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40 Idem., Ibid., p.4.

41 Idem., Ibid., p.8.

In 1908 Kik[42] observed the development of thirteen children who appeared to be especially gifted in drawing. He emphasized the difference between real creative ability and mere ability to copy.

The first study using an experimental method[43] was in 1926 when Goodenough devised her method of determining intelligence of children with mental ages from four to ten. She classified the drawings into those recognizable as human figures and those not. Scoring was done on a fifty-one point scale which included certain proportions as well as specific body parts. Goodenough devised her method partly from Rouma's ideas about the evolution of the representation of the human figure. Both Dallinger and Spielrein[44] have also pointed out the relationship between the child's growing awareness of his own body parts and his inclusion of these parts in drawings.

In 1932 an extensive study of over six thousand drawings by subjects ranging from preschool to adult was

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42 Idem., Ibid., p.9.

43 A. Lewis, A Check on the Validity of Some of Machover's Claims, Unpublished Ph.D. Thesis, University of Ottawa, 1955, p.5.

44 F.L. Goodenough and D.B. Harris, "Studies in the Psychology of Children's Drawings: II.1928-1949", Psychological Bulletin, Vol. 47, No. 5, issue of September 1950, p.391.

published by Graewe[45]. The study included free drawings and drawings from a model with later reproduction from memory. His treatment of the data is descriptive only but he made some keen observations about developmental changes. In 1935 he did a study of the developmental changes in children's drawings of animals. At first the child distinguishes animals from human figures only by naming. Later the animal is placed in a horizontal position while the human figure remains vertical. In the final stage, emphasis is placed on the total outline; that is, the animal is an animal from the start.

Paget,[46] in 1932 studied more than 60,000 drawings by children from Africa, China, South Sea Islands, and elsewhere. He did not agree with most investigators that their difference from the drawings of children in Western culture was a matter of level rather than manner of development. He did agree that children draw not to depict nature but to tell what interests them. Because they attempt scenes and objects far beyond their technical skill, they are forced to invent their own symbols and devices for indicating them.

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45 Idem., Ibid., p.375.

46 Idem., Ibid., p.395.

John Levy[47], in 1934, was among the first to use art in child psychotherapy to help overcome resistance and to handle material below the level of consciousness. He felt the value in the technique was in reinterpreting to the child his own interpretations of his art productions.

In 1936 Anastasi and Foley[48] presented an elaborate description and comparison of child art in forty-two modern civilized countries. The drawings had been displayed in an international exhibition in New York. Spoerl severely criticized this study saying,

> (a) the small sample from many of the countries made it difficult to consider chronological age in the comparisons.
> (b) the mental age of the children was not known.
> (c) many of the differences ascribed to nationality corresponded to the age progression shown in the drawings of children in this country.

Goodenough and Harris further criticize the selection of the drawings. This was done by art teachers and critics in the country of origin, and thus reflects differences that exist from one country to another in regard to standards of what is good art.

In a 1940 experiment with children, pencil or crayon drawings, partially or completely colored with

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47 L. Bender, Op., cit., p.15.

48 F. Goodenough and D.B. Harris, Op., cit., p.396.

crayons of different hues were used by Spoerl[49]. Judges were able to sort the four drawings of each subject. Spoerl then concluded that personality can be judged through drawings and that the drawings of an individual child are consistent and easily identified.

The work with the drawings of children that has been briefly surveyed has included some use of the drawings of the human figure. However, we shall now turn to writings most specifically concerned with that technique. Though the two sections overlap somewhat, the preceding one was primarily concerned with children while in the one to follow the drawings of the human figure is the predominant feature.

4. The Drawing of the Human Figure.

In 1948 Buck[50] said that the picture of a person drawn lends itself well as a self portrait. He also said this picture may represent how the person is now, how he feels, or how he would like to be. Until then no definite rationale had been established. In the following year

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49 D.T. Spoerl, "Personality and Drawing in Retarded Children", Character and Personality, Vol. 8, No. 3, issue of March 1940, p.227-239.

50 J.N. Buck, "The H-T-P Test", Journal of Clinical Psychology, Vol.4, No. 2, issue of April 1948, p.151-159.

Machover[51] presented her rationale for the projection of personality through the drawing of the human figure.

Stonesifer[52] in 1949 used Goodenough's scale to compare the drawings of white male schizophrenics and non-psychotic veterans awaiting dental treatment. The results were not significant. In the same year, another study in which the results were not statistically significant was done by Royal.[53] He used the drawing of a man and a woman technique on veterans diagnosed as anxiety neurotics and anxiety states. He compared the drawings for twenty-eight characteristics derived from clinical hunches.

With only ten cases selected from two hundred in the files of a veteran's administration clinic, Albee and Hamlin in 1949 stated that fifteen experienced clinical psychologists were able to determine from drawings which subjects were the best adjusted individuals. This judgment

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51 K. Machover, Personality Projection in the Drawing of the Human Figure, Springfield, Illinois, Charles C. Thomas, 1949, ix-181p.

52 F.A. Stonesifer, "A Goodenough Scale Evaluation of Human Figures Drawn by Schizophrenic and Non-psychotic Adults", Journal of Clinical Psychology, Vol.5, No. 4, issue of October 1949, p.396-398.

53 R.E. Royal, "Drawing Characteristics of Neurotic Patients Using a Drawing of a Man and Woman Technique", Journal of Clinical Psychology, Vol. 5, No. 4. issue of October 1949, p.392-395.

was made without the aid of case histories or clinical material. The correlations with the Wechsler were negligible and insignificant. The authors concluded, "This would suggest that factors other than intelligence were operative to determine the qualities of the drawings which led to the judgments of adjustments"[54]. They further concluded, "... it appears that clinical psychologists can make reliable judgments of 'global adjustment' from drawings-of-a-man-and-woman ..."[55].

Though Levy[56] agreed that the drawing may be a projection of the self concept, he felt that the drawing can also be a projection of attitudes toward someone in the environment, or an expression of the ideal image. He conceived of drawings as a situational test of the individual.

The drawings of a man and a woman, made by 136 children, were judged by five elementary school teachers in

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54 G.W. Albee and R.M. Hamlin, "An Investigation of the Reliability and Validity of Judgments Inferred from Drawings", Journal of Clinical Psychology, Vol. 5, No. 4, issue of October 1949, p.391

55 Idem., Ibid., p.391.

56 S. Levy, "Figure Drawing as a Projective Test", in L.E. Abt and L. Bellak, Projective Psychology, New York, Knopf, 1950, p.257-297.

a study by Tolor[57]. The teachers were requested to select the five sets in each class which were representative of the most popular children, and the five sets drawn by the least popular children. Though some individual teachers did quite well, as a group the teachers were far less successful than clinical psychologists had been in an earlier study. Tolor concluded that judgments of popularity from drawings required the specialized training and experience of the clinical psychologist.

Berman, Klein, and Lippmann[58] obtained the human figure drawings of both sexes from one hundred psychoneurotic patients at the Rehabilitation Clinic of the Jewish Hospital of Brooklyn. The psychologists then described the patient's personality structure on the basis of the drawings. This was later compared with the patient's personality structure as evaluated in a psychiatric interview. The authors felt there were enough points of agreement to consider the use of the

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57 A. Tolor, "Teachers' Judgments of the Popularity of Children from Their Human Figure Drawings", Journal of Clinical Psychology, Vol. 11, No. 2, issue of April 1955, p.158-162.

58 A.B. Berman, A. A. Klein, and A. Lippmann, "Human Figure Drawings as a Projective Technique", Journal of General Psychology, Vol. 45, 1st. half, issue of July 1951, p.57-70.

drawings as a projective technique for personality evaluation a reliable one.

King[59] used the drawings of the human figure during a course of psychotherapeutic interviews with a college student who had returned from summer vacation and was having difficulty making any therapeutic progress. In his drawings and his associations to them, the patient again brought his basic confusion of sex identity into the focus of therapy. Though King's report is on a single case, he did feel the results warranted at least serious consideration of the use of the drawings within the therapeutic framework.

The validity of the Machover Draw-a-Person method was investigated by Blum[60] in a study using thirty-one patients in an Army Neuropsychiatric Center in Korea. About the fourth day of the patient's stay at the center his behavior was rated independently on a rating scale by his psychiatrist, his chief wardsman, and psychologists. A psychological battery which included the Draw-a-Person

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59 F.W. King, "The Use of Drawings of the Human Figure as an Adjunct in Psychotherapy", Journal of Clinical Psychology, Vol. 10, No. 1, issue of January 1954, p.65-69.

60 R.H. Blum, "The Validity of the Machover DAP Technique", Journal of Clinical Psychology, Vol. 10, No. 2, issue of April 1954, p.120-125.

was given each patient and then given a blind interpretation by two psychologists who pooled their judgments. The rating scales included thirty-eight personality characteristics that Machover said could be assessed with the human drawings. Each characteristic was rated on a three-point continuum; minimal, moderate, or maximal. The drawings were interpreted separately from the remainder of the battery. They found no consistent significant agreement between the drawings and any other procedure. However, none of the other procedures showed any significant agreement with each other. Therefore, they concluded that the human drawings seemed to have questionable validity, but proved to be no worse than any of the other common clinical procedures used for personality assessment.

In 1955 Lewis[61] attempted to validate Machover's claims in terms of diagnostic signs. He used twenty white male subjects in each of ten different diagnostic categories, giving a total population of two hundred. Twenty normal subjects were used as controls. The diagnosis was made upon the agreement of a psychologist and a psychiatrist. Lewis tried to make the scoring as objective as possible

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61 A. Lewis, A Check on the Validity of Some of Machover's Claims, Unpublished Ph. D. Thesis, University of Ottawa, 1955, ix-79p.

in terms of measurables, observables, and qualifiables. He tried to establish patterns of the significantly present and absent items in different groups but found lots of overlapping. However, he found that the psychotic groups always showed significant absences. There was a predominance of significantly absent signs in the schizophrenic group. In the neurotic group, on the other hand, the signs of disturbance were significantly present.

Some of the work with the drawings of the human figure has been in attempts to develop other tests that were variations of this technique. Rosenberg[62] asked his subjects to change their completed drawing. This was possible through the use of carbons. This variation uncovered hostility particularly.

Levy[63] developed the Draw-and-Tell-a-Story variation. The subject draws two figures of his own sex and one figure of the opposite sex. He is then asked to identify the characters and make up a story involving the three figures. He found that children have great difficulty handling the

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62 L. Rosenberg, "Modifications of 'Draw-a-Person' Test, Unpublished thesis, New York University, 1948, cited in S. Levy, Op., cit., p.283-285.

63 S. Levy, Op., cit., p.285-288.

three figures and tend to destroy one of the same sex figures.

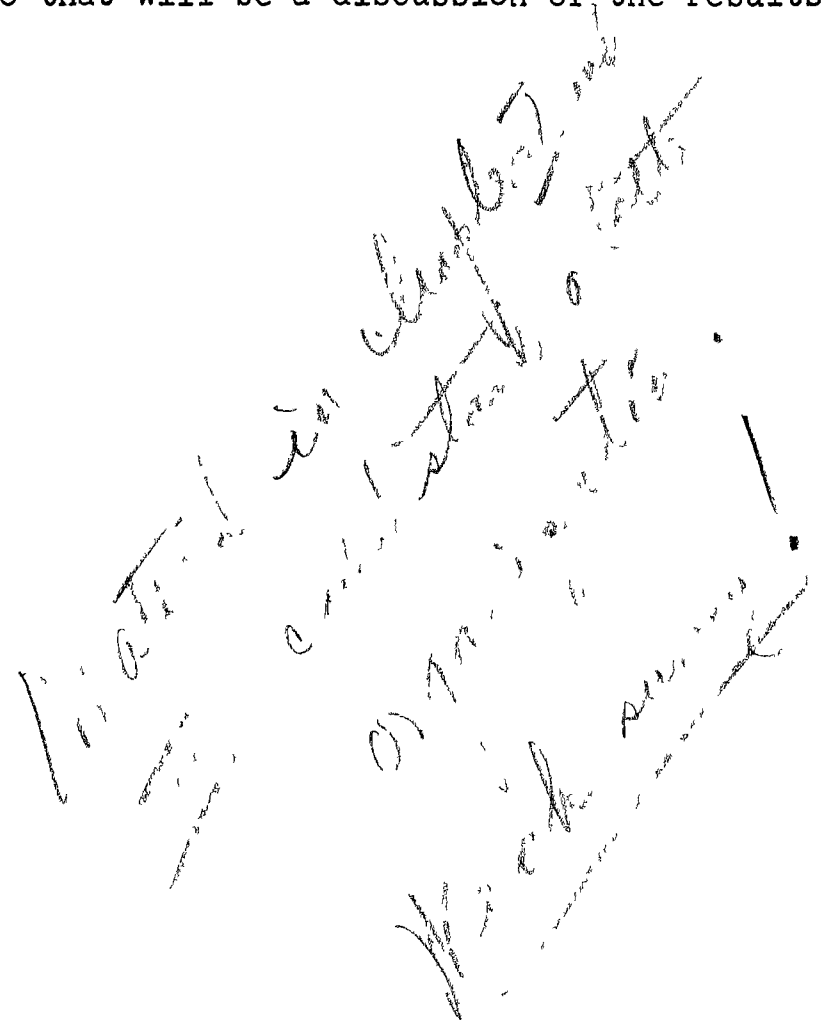
### 5. Summary.

The history related to this study was long and varied. It started from the general use of many types of artistic expression as a means of understanding mental patients. As time passed the drawing of the human figure came into its own; first as a tool for measuring intelligence and then with a rationale for its use in assessing personality dynamics and the vital self concept. Some references to studies of children's drawings have also been included because to understand the drawings of an adult, whether normal or psychotic, we must know the developmental stages through which drawing goes as it progresses from that of the child to that of the man.

A history this long and varied produced a voluminous literature and many references could not be included. The writer tried to fulfill several objectives in the selection of references. It was hoped that a somewhat chronological survey of the various historical developments could be given. This called for the inclusion of some references that were possibly not too pertinent to the present study. They show some of the tangents on which the historical development branched. The writer also

included references that were felt to be pertinent to this paper. References which did not serve these purposes were not included. There were many references which the writer felt would neither be pertinent to this paper nor leave a serious gap in this historical survey by their omission.

With the background established, it is now appropriate to turn to the experimental design of the present study. The following chapter will present this in terms of the tools used and the population smapled. Subsequent to that will be a discussion of the results obtained.



# CHAPTER III

## THE DESIGN OF THE EXPERIMENT

Since the "distance" maintained by a schizophrenic between himself and people around him is considered a"defense of his concept of himself", we need tools to probe this concept on a population selected for its manifestation of distance. Hence it is now in order to introduce the appropriate sample, to present and justify the tools, and to describe the procedure of the experiment.

### 1. The Population.

The population of this study consisted of fifty-two male chronic schizophrenics, age 30 to 50. Only men were used because there was no evidence in the literature that sex is a variable that would influence the extent of the patient's engageability. All patients carried a diagnosis of some form of schizophrenia given them by the psychiatric staff of the hospital.

Schmidt and Fonda did a study of the reliability of psychiatric diagnosis. They studied 426 patients who were diagnosed independently by two psychiatrists upon admission and then again by one of a group of three chief psychiatrists three weeks later. All diagnoses used the nomenclature in the 1952 revision of the American Psychiatric Association's

Diagnostic and Statistical Manual. Though subtype diagnosis was not always satisfactory, the authors concluded, "Thus, when an official diagnosis is either chronic brain syndrom or schizophrenia, the odds are four to one that an independent tentative diagnosis would be in agreement"[1]. They also stated that, "Reliability of the schizophrenic diagnosis was indicated by values of $r_t$ between .73 and .95, depending upon the range of discrimination required"[2].

In this study there was no attempt to separate the various subclasses of schizophrenia. It has been found in practical experience that among patients who have been long term residents of a mental hospital, the differentiating criteria for the various subtypes have levelled off and the resulting symptomatology is most markedly that of schizophrenia rather than any of the subgroups. About half of the patients in the present study were diagnosed paranoid schizophrenia, and the other half were distributed among the other subclasses. When the present population was divided into two groups for the purpose of this study, the diagnostic makeup

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1 H.O. Schmidt and C.P. Fonda, "The Reliability of Psychiatric Diagnosis: A New Look", Journal of Abnormal and Social Psychology, Vol. 52, No. 2, issue of March 1956, p.266.

2 Idem., Ibid., p.266.

of the groups was as shown in Table I on page 47.

The patients in this study were chronic schizophrenics who had been in hospital residence for a period of six to thirteen years. They were the patients who were admitted from 1943 through 1950. They were obtained by checking the hospital files for all male patients how age 30 to 50, with a schizophrenic diagnosis, who were still in the hospital. This gave a master list of 72 patients. Of this group, seven died, were discharged, or were transferred to another hospital before the study began. The remaining sixty-five were all contacted by the writer. Of those contacted, thirteen had to be rejected because they did not meet the criterion for intelligence that had been established, and which will be discussed later. Therefore, fifty-two patients remained for the study. When divided into the two groups, the distribution for terms of residence in the hospital was as shown in table II on page 48. Group A had ten patients admitted before 1947 and 16 after that. Group B had nine admitted before 1947 and 17 after.

The age limits of 30 to 50 were set up for two reasons. The lower limit of 30 was established to eliminate patients who had been too young when admitted. It was felt by the writer before setting up the master list that there might be some patients who had come into the hospital at a very early age

Table I.-

Distribution of Diagnostic Categories Among the Patients of Group A (N=26) and Group B (N=26).

| Diagnosis | Group A | Group B |
|---|---|---|
| Catatonic Schizophrenia | 3 | 2 |
| Paranoid Schizophrenia | 12 | 14 |
| Hebephrenic Schizophrenia | 5 | 4 |
| Simple Schizophrenia | 4 | 5 |
| Schizophrenia, Mixed | 1 | 1 |
| Schizophrenia, Unclassified | 1 | 0 |

Table II.-

Distribution of Year of Admission to the Hospital Among the Patients of Group A (N=26) and Group B (N=26).

| Year Admitted | Group A | Group B |
|---|---|---|
| 1943 | 2 | 2 |
| 1944 | 2 | 2 |
| 1945 | 2 | 3 |
| 1946 | 4 | 2 |
| 1947 | 4 | 5 |
| 1948 | 6 | 4 |
| 1949 | 3 | 4 |
| 1950 | 3 | 4 |

and thus would not have had sufficient time for outside living before being hospitalized. This, however, did not develop as a problem. The upper limit of age 50 was set to eliminate any beginning rigidity as a result of increased age. The two groups are comparable in age. Both range from 30 to 50 and the mean of group A is 38.31 years while the mean of group B is 38.65 years. A "t" test on the difference between these means was .19 which is not statistically significant at the .01 level. Thus, the two groups were not significantly different from each other in age. The formula used for the "t" test is the same throughout the study and will be given with the presentation of the date.

As mentioned earlier, there was an intellectual criterion that had to be met for the patient to be included in the study. IQ 80 was set as a cut-off point to eliminate any rigidity due to limited intellectual ability. Since this was the only influence intelligence was felt to have on the study, there was no effort made to set an upper limit. It was not felt that higher intelligence would interfere with the patient's response to the study. The two groups were comparable for distribution of intelligence. On the Block Design of the Wechsler-Bellevue Intelligence Scale, Form I both groups obtained IQ's ranging from 83 to 132. The mean IQ for group A was 96.76 while fro group B it was 95.81. The "t" test on the

difference between these means was .29 which is not statistically significant at the .01 level. Thus, the two groups were not significantly different from each other in level of intelligence.

The patients were placed in group A or B while being tested. This was done on the basis of an estimate by inspection of the overall amount of difference between lines 1 and 2. The purpose of using this inspection as a basis of placement was to have the groups be similar as to amount of spontaneous change they make on a superficial task in the beginning of the study. The mean change between lines 1 and 2 for group A was fifty-six while for group B it was sixty-three. A "t" test on the difference between these two means was 1.11 which is not statistically significant at the .01 level. This indicates that the two groups were not significantly different from each other in their spontaneous production of change in a superficial level in the beginning of the study.

This was the population who manifested "distance" in their daily contacts with others. Let us now turn to the tools that were used to tap their engageability and the manner in which they were used.

2.. The Rationale of the Techniques.

The Block Design subtest of the Wechsler-Belevue Intelligence Scale, Form I was used to evaluate intelligence. Hereafter it will be referred to as the Wechsler Blocks.

The Wechsler Blocks was used for the purpose of selection. The criteria used to compile the master list of patients available for this study has been discussed in detail in the description of the population. The Wechsler Blocks were then used to determine which of these patients were to be included in the study and which were to be omitted.

As mentioned in the discussion of the population, the only intellectual criterion was the cut-off point of 80 IQ. For this reason it was felt that a short method to evaluate intelligence would suffice. A short method was also desirable because the nature of the population and the purpose of the study did not indicate a long testing session. The Wechsler Blocks was chosen because it is short, easy to administer, and correlates highly with the complete Wechsler scale.

In his presentation of the test, Wechsler[3] stated that Block Design turned out to be the best single performance item in the scale. It correlates well with total score and individual test items, but is one of the few performance tests that seemingly measures much the same sort of thing that verbal tests measure. Its "r" with total score (for ages 35-49) is .73.

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3 D. Wechsler, Measurement of Adult Intelligence, Baltimore, Williams and Wilkins, 1944, p.92,93-94.

Hilden, Taylor, and Dubois[4] studied 161 male psychoneurotics age 20-44. They found Block Design correlated .81 with full weighted score and .79 with full scale IQ. McNemar[5] reported on the validity of various short-form combinations of the Wechsler subtests. His report was based on the 355 cases of Wechsler's standardization group. He lists the ten best combinations of pairs, triads, quartets, and quintets of subtests. Block Design is listed in each of the three highest ranking combinations of two, three, four, or five subtests.

Another reason for using the Wechsler Blocks is that it is a test on which mental defectives, organics, and seniles do poorly. It was felt that patients who were able to obtain an IQ of 80 based on the Wechsler Blocks would not have the deterioration of age, organic involvement, or mental deficiency; all of which produce rigidity. Though the rigidity may be present in the patients used in this study, the writer wanted to eliminate these three possible causes of it.

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4 A.H. Hilden, J.W. Taylor, and P.H. DuBois, "Empirical Evaluation of Short W-B Scales", Journal of Clinical Psychology, Vol. 8, No. 4, issue of October 1952, p.323-331.

5 Q. McNemar, "On Abbreviated Wechsler-Bellevue Scales", Journal of Consulting Psychology, Vol. 14, No. 2, issue of April 1950, p.79-81.

In working with the patients the writer felt that those who did not meet the criterion set for the Wechsler Blocks had been sufficiently cooperative on this test, and on the other tests which had been given prior to this one, that by eliminating them from the study the variable psychological distance was not also being eliminated. However, the elimination of some patients on the basis of the Wechsler Blocks at its worst could have simply restricted the variable psychological distance rather than completely eliminated it.

The experimental variables were measured by the changes produced in the two drawing tests. The drawing of a straight line was evolved by the writer for the purpose of this study. This technique consisted of the drawing of a straight line on $5\frac{1}{2}$" by $8\frac{1}{2}$" paper which was obtained by cutting $8\frac{1}{2}$" by 11" paper in half. Since only one line was to be put on the paper, the writer felt that this would be of sufficient size.

As will be discussed in the section on the drawing of a man, the drawing of the human figure is frequently a threatening task for the person who has been asked to draw. The writer wanted a second measure which would be more superficial and less threatening. A geometric figure was considered but the writer wanted it to be as simple a figure as possible. One line seemed to be the solution.

Various approaches were tested before the present one was adopted. First a two inch line was drawn on a sheet of

paper and the patient was asked to copy it. This did not allow enough possibility for change for the purpose of this study. The stimulus situation was felt to be too restricting on the patient's response. A second approach consisted of asking the patient to draw his own two-inch line. It was found that the patients had great difficulty with the "two-inch" concept and this was also rejected.

Finally the present method of just asking him to draw a straight line was tried. All of these methods were tested in pilot studies on chronic patients who were not on the master list for this study. The present method of drawing a straight line was well accepted by the patients, did not appear too difficult for them to comply, and showed sufficient possibilities for change. It was therefore accepted as the method to be used in the research.

The historical development of the use of the drawing of a human figure as an instrument for studying personality has been outlined earlier in this paper. Because the individual who is drawing often considers the figure a representation of himself as he is or as he would like to be, this task is frequently threatening to him. If there are areas in his own body image about which he is sensitive or with which he is reluctant to deal, he may have difficulty handling these areas in his drawing. The writer felt that the drawing of a man would thus tap a deeper level and arouse more emotional involvement than the more superficial task of drawing a line.

The writer also believed that the patient's concept of self, a concept important to the schizophrenic as to the normal, would be a means of assessing this deeper level. The drawings of the human figure were considered to be an instrument through which this concept of self could be expressed.

That was the writer's rationale for the use of each of the techniques in this study. Now, let us turn to the specific manner in which each technique was presented to the subjects.

### 3. Procedure Used in This Study.

Each patient in this study was examined individually by the writer. The same procedure was used for all except where otherwise specified.

An initial greeting was given to all patients. This was very brief and consisted of telling them the writer's name and position at the hospital. They were then told the writer had some things for them to do. The testing then proceeded. This preliminary greeting was purposely kept short and there was no attempt to establish rapport as is usually done in a testing session. As discussed elsewhere, the writer did not want to expose the patients to much social stimulation before starting testing.

The drawing of a straight line was administered first because it was considered the easiest and least threatening of the techniques used. The patient was given a sheet of paper

and a pencil with the instruction, "Draw a straight line". A second sheet of paper was then given to him and he was again told, "Draw a straight line". In the meantime the first drawing had been removed. Upon a quick evaluation by inspection of the amount of difference between lines one and two, the writer decided whether the patient should go into group A or B and proceeded accordingly. At this point the patients in group A received praise for the second drawing while those in group B received no comment on it. All patients were then given a third piece of paper with the instructions, "Draw a straight line, making it as different from this one as you can". While this instruction was being given, the patient's second drawing was shown to him.

The second test administered was the drawing of a man. The same procedure was followed as for the line. He was given a sheet of paper ($8\frac{1}{2}$" by 11" this time) with the instruction, "Draw a man". Upon completion of the task he was given a second sheet of paper with the same, "Draw a man" direction. As with the line, the instructions were identical for the first two drawings so that the instructions would not suggest in any way that he should change the second drawing. Group A was then given praise on the second drawing, Group B was not. While looking at his second drawing, each patient was then directed to, "Draw a man, making it as different from this one as you can".

The Wechsler Blocks was then administered according to the standardized instructions. Those who received the IQ criterion were retained in the study, the others were rejected. Of this, of course, the patients were not aware.

When the testing for the study was completed, the writer spent a few minutes talking to each patient. This was done to relieve any anxiety and give him a feeling of having done well, especially those who sensed failure on the test items. The patient's feeling was the prime concern at this point and the conversation did not interfere with the testing proper for the study. The patient was then thanked for his cooperation and returned to the ward.

This section has presented the population who served as the subjects of this study, the tests which were administered to them, and the manner of administration. The following chapter will present the data obtained by their response to this situation.

# CHAPTER IV

## THE PRESENTATION AND DISCUSSION OF THE DATA

The present chapter will present and discuss the data that was obtained on the basis of the procedures that had been described in the preceding chapter. The scoring method for the experimental procedures, the drawings of a line and a man, will be explained. This will be followed by the statistical evaluations that were to be made between the two groups and between the two tasks. Finally, the results of these evaluations will be given and discussed.

### 1. The Scoring Procedures.

The drawings of a straight line were scored for the differences between lines 1 and 2, between lines 2 and 3, and between these two differences. The 1-2 difference showed the amount of change the patients made spontaneously. The 2-3 difference showed the amount of change made when requested to do so. The 1-3 difference was also computed even though it was sometimes smaller than the 2-3 difference because the patients would return to something similar to the original production rather than making something new.

The differences being scored related to four categories: length, distance of the beginning of the line from the left margin of the paper, distance from the top of the paper, and angle. The two papers being scored were

put on top of each other in front of a light and the lines were observed to be different or not for each of the four categories. To be considered the same, the lines had to be identical. Any deviation, no matter how slight, was considered a difference in that particular category and was given a score as such. A score of one was given for a difference in each category; a score of zero indicated no difference.

The difference score for the line as a whole was then computed in terms of a 100 point scale. A change in only one category received a difference score of 25; in two categories, a score of 50; in three, a score of 75; and in all four, a score of 100. This was done for all of the line comparisons. The difference score each patient received for the line as a whole; that is, for the total of the four categories scored, was added to obtain total scores for the group as a whole in each of the line comparisons. This was done for each of the groups separately.

These total difference scores or changes were then used to determine the mean difference or change for each of the groups in each category. The "t" test was then run to determine whether any of these mean changes for the groups was significantly different from any other at the one percent level.

The drawing of a man was scored for difference between drawings 1 and 2, between drawings 2 and 3, and between these two differences. The 1-2 difference showed the amount of spontaneous change and the 2-3 difference showed the amount of change made under pressure to do so. The 1-3 difference was also computed as has been mentioned earlier in the discussion of the drawing of the line.

The drawings of a man were scored for thirty items; four general areas and twenty-six details. The list of items was adapted from Goodenough's[1] listing of drawing items. A difference was considered to be any readily noticeable omission or change in each item that was being scored. The item was given a plus if there was a difference between the two drawings, a minus if the item was absent in both drawings, and a blank space to indicate the item was present and similar in both drawings. Each was then totaled. The minus total was disregarded. Further evaluation was done only on the basis of the items that were plus or blank; that is, either the same or different but present in at least one of the pair of drawings being compared (see Appendix 1). A score of the change in what had been

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1 F. Goodenough, Measurement of Intelligence by Drawings, Yonkers-On-Hudson, New York, World Book, 1926, p.91-110.

produced was then computed on a 100 point scale. This was done by dividing the total of the plus items (differences) by the sum of the plus and blank items (total items produced so as to be scorable) and multiplying the result by 100. The difference or change score each patient received for the drawing as a whole was added to obtain a total change score for each group. This total score was used to obtain a mean change score for each group in each of the drawing comparisons. Then the "t" tests were done to determine whether any of the mean changes were different from each other to a statistically significant degree. Comparisons were made between the two tasks within a group and between the two groups on the same and on the different tasks. The specific comparisons will be listed later in the discussion.

The drawings were judged for changes by two clinical psychologists, the writer of the study and one other. The results are given in Table III on page 62. This table gives the total scores and the means of the changes as judged by each of the psychologists in each of the comparisons. The difference between these means is listed as is the result of the "t" test which was made to determine whether or not it was statistically significant in each case. The formulas that were used for the

Table III.-

Comparison of Two Judges' Ratings of Changes in the Man Drawings by Each Group (N= 26) and the "t" Test for the Difference in the Judgments.

| | Total Change | | Mean Change | | | |
|---|---|---|---|---|---|---|
| | $R_1$* | $R_2$* | $R_1$* | $R_2$* | Diff. | t# |
| Group A (1-2) | 1333 | 1288 | 51.27 | 49.54 | 1.73 | 1.35 |
| (2-3) | 1405 | 1392 | 54.05 | 53.54 | .50 | .395 |
| (1-3) | 1578 | 1563 | 60.69 | 60.11 | .58 | .36 |
| Group B (1-2) | 1261 | 1306 | 48.50 | 50.23 | 1.73 | 2.31 |
| (2-3) | 1653 | 1672 | 63.58 | 64.31 | .73 | .74 |
| (1-3) | 1670 | 1677 | 64.08 | 64.50 | .42 | 1.05 |

*The two raters of the changes in the drawings.

#In the "t" test X equals the difference between two drawings. The formulas used are given in the text.

computation of the "t" test were as follows:[2]

$$t = \frac{D}{\sigma_{D_M}}$$

The standard error of the difference between means ($\sigma_{D_M}$) is equal to the standard error of the mean of the differences ($\sigma_{M_D}$) which is obtained by the following method:

$$\sigma_{M_D} = \frac{\sigma_{diff.}}{\sqrt{N-1}} \qquad \text{in which} \qquad \sigma_{diff.} = \sqrt{\frac{\Sigma x^2}{N}}$$

This involves working with the mean of the differences rather than the difference between the means since these values are equal. According to Guilford this is the most direct manner in which to find the standard error of the difference between the means. (See appendix 2 for example.) Guilford further states that when using this more direct method,

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2 Explanation of symbols in the formulas above.

$\sigma_{D_M}$= Standard error of the difference between the means between two groups (A,B) or two tasks (line, man) for all items. Equal to standard error of themean of the differences.

$\sigma_{diff.}$= Standard Deviation of the differences between the two groups or the two tasks for each item.

$\sigma_{M_D}$= Standard Error of the mean of these differences.

x= Deviation of each difference from the mean of the differences.

> We do not even need to know the SE's of the two means or the amount of correlation present, yet our direct procedure has taken these things into account. ..... This more direct method is very strongly recommended whenever it can conveniently be applied.[3]

The ratings of the two psychologists were not significantly different from each other in any of the comparisons. Therefore, the ratings of either psychologist of the amount of change in the drawings could have been used for the evaluations of the study. However, as a further check the writer used the average of the two ratings rather than either rating itself for the other evaluations.

## 2. Statistical Evaluations.

Throughout the remainder of this paper, in discussing the various comparisons that were made on the data, the following labels will be used:

In group A, the difference between

| | | |
|---|---|---|
| lines 1 and 2 | will be called | (a) |
| lines 2 and 3 | will be called | (b) |
| lines 1 and 3 | will be called | (c) |
| man 1 and 2 | will be called | (d) |
| man 2 and 3 | will be called | (e) |
| man 1 and 3 | will be called | (f) |

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3 J.P. Guilford, Fundamental Statistics in Psychology and Education, New York, McGraw-Hill, 1956, p.190.

In group B, the difference between

| | | |
|---|---|---|
| lines 1 and 2 | will be called | (g) |
| lines 2 and 3 | will be called | (h) |
| lines 1 and 3 | will be called | (i) |
| man 1 and 2 | will be called | (j) |
| man 2 and 3 | will be called | (k) |
| man 1 and 3 | will be called | (l) |

It was these differences between two drawings of either the line or the man, the labels for which are listed above and on the preceding page, that were used for the various comparisons made in the study. A somewhat graphic presentation of the labels may make their relationship to the differences themselves clearer to the reader. This is as follows:

| | Line | | | Man | | |
|---|---|---|---|---|---|---|
| Group A: | a (1-2) | b (2-3) | c (1-3) | d (1-2) | e (2-3) | f (1-3) |
| Group B: | g (1-2) | h (2-3) | i (1-3) | j (1-2) | k (2-3) | l (1-3) |

In all comparisons the "t" test was made to determine whether or not the means of the changes between the two drawings being compared were significantly different from each other at the one percent level. All the "t" tests were done with the same formulas that have been mentioned previously,

The following comparisons were made:

Between groups A and B

a to b
b to c
a to c
g to h
h to i
g to i
a to g
b to h
c to i
d to e
e to f
d to f
j to k
k to l
j to l
d to j
e to k
f to l
a-b to g-h
d-e to j-k

Between line and man

a to d
b to e
g to j
h to k
a to j
b to k
d to g
e to h
a-b to d-e
g-h to j-k
a-b to j-k
d-e to g-h
e-b to e-h

3. Discussion of the Results.

Of the thirty-three "t" tests that were made on the comparisons listed above, only seven were statistically significant at the .01 level. This is not too surprising since the N in this study was small, making it more difficult to obtain significant "t's" than when a large N is used. The results of all of the "t" tests are given in table IV on page 67.

The first significant difference was in the comparison of a to b with a "t" of 3.53. This was the comparison of the difference produced by group A between lines 1 and 2 which was a total of 1450 with a mean of 55.77 and the difference between lines 2 and 3 which was

Table IV.-

The "t" Tests on the Difference between the Means in the Comparisons between Group A (N=26) and Group B (N=26) and between the Line and the Man.

| Comparison | t | Comparison | t |
|---|---|---|---|
| a to b | 3.53* | k to l | .17 |
| b to c | .37 | j to l | 3.87# |
| a to c | 3.63* | d to j | .18 |
| g to h | 4.21# | e to k | 1.41 |
| h to i | 1.41 | f to l | .51 |
| g to i | 2.24 | a to d | .81 |
| a to g | 1.11 | b to e | 3.77# |
| b to h | .48 | g to j | 1.69 |
| c to i | .22 | h to k | 2.32 |
| d to e | .58 | a to j | .73 |
| e to f | 2.19 | b to k | 1.39 |
| d to f | 2.71 | d to g | 1.63 |
| j to k | 3.54* | e to h | 3.85# |
| a-b to g-h | .44 | a-b to j-k | .68 |
| d-e to j-k | 1.77 | d-e to g-h | 2.26 |
| a-b to d-e | 2.76 | e-b to e-h | .48 |
| g-h to j-k | .46 | | |

* Significant at the .01 level.

\# Significant at the .001 level.

1975 with a mean of 75.96 (see Appendix 3). The (b) difference between lines 2 and 3 had been produced under pressure to do so and after praise had been given for previous performance. The (a) difference between lines 1 and 2 was what the patient produced spontaneously without any knowledge that a change was desired. The fact that the patients were able to produce a significantly greater difference between the second and third drawings than they had made between the first and second ones reflects their ability to be contacted and respond to the request and direction to which they were exposed. This comparison suggests the presence of engageability on a superficial level as they were able to produce change on a superficial task. This interpretation, and all others to follow, keeps in mind the fact that in this study any change was scored as a change. As has been mentioned earlier in this paper, the writer was not concerned with either the size or the direction of the change. It was the ability to produce change in itself that was under investigation.

Group A also had a total difference (c) of 2000 with a mean of 76.92 between lines 1 and 3. This was significantly greater, with a "t" of 3.63, than their (a) difference of 1450 with a mean of 55.77 between lines 1 and 2 (see Appendix 3). The difference between lines 1 and 3 reflects

the change between the final drawing, in which they were requested to make different, and the original drawing. This difference was significantly greater than the change they spontaneously made when drawing the second line. The previous comparison showed that they could make a significant change between lines 2 and 3 when requested to do so. This comparison shows that the change they made in line 3 was also a significantly greater difference from line 1 than the difference spontaneously made in line 2. This suggests that when asked to make line 3 different from line 2, they did not return to the same thing they had produced for line 1. Instead they were able to produce a new line, suggesting a greater capacity for change than if they had simply returned to a former production. This reenforces the suggestion of the presence of engageability on a superficial level because it again shows their ability to produce a significant change on a superficial task.

Group B was also able to produce change on a superficial task. This is shown in the comparison of g to h with a "t" of 4.21 which is also significant at the .001 level. Between lines 2 and 3 they produced a total difference (h) of 2075 with a mean of 79.81 which was significantly greater than the difference (g) between lines 1 and 2 of 1625 with a mean of 62.50 (see Appendix 3). Again the results indicate

the patients were able to reflect engageability on a superficial level. This group received no praise or comment of any kind on previous productions as group A had but nevertheless were still able to produce change greater than that possible by chance when requested to do so. Therefore, praise does not appear to be a vital factor in eliciting appropriate response from these patients.

Group B also showed a difference that could not have occurred by chance on the drawing of a man. They had a total difference (k) of 1663 with a mean of 63.96 between drawings 2 and 3. This was significantly greater, with a "t" of 3.54, than their difference (j) of 1283 with a mean of 49.34 between drawings 1 and 2 (see Appendix 3). This indicates that, when requested to do so, they were able to produce greater change between the second and third drawings of a man than they had spontaneously produced between the first and second drawings. They were able to do this without having received any praise for their previous performance. This suggests the presence of engageability on a deeper level as they were able to produce change on a task that reflects a deeper level of personality with more emotional involvement on the part of thepatient.

Further evidence of the presence of engageability on a deeper level was given in group B's significant

difference between j and l with a "t" of 3.87 which is also significant at the .001 level. They produced a difference (l) of 1673 with a mean of 64.34 between the first and third drawings which was significantly greater than the difference (j) of 1283 with a mean of 49.34 (see Appendix 3) between the first and second drawings of a man. The previous comparison showed that they were able to make a significant change in the third drawing when requested to do so. This comparison indicates that this change was significantly different from the first drawing of a man as well as from the second one.

When requested to produce a change in the third drawing, they were able to draw a new figure rather than returning to a reproduction of the original drawing of a man. This reflects a greater capacity for change than if they had returned to a repetition of the first figure. This reenforces the suggested presence of engageability on a deeper level, because they were again able to produce change in a task reflecting a deeper personality level. Again this was done without receiving any praise. Thus, praise does not appear to be a vital factor to enable the patients to express engageability.

Returning to group A, a significant difference was also found between b and e. The "t" test for this

comparison was 3.77 which is also significant at the .001 level. The difference (b) between lines 2 and 3 of 1975 with a mean of 75.96 was significantly greater than the difference (e) between the second and third drawings of a man which was 1389 with a mean of 53.42 (see Appendix 3). In an earlier comparison (a to b) the difference between lines 2 and 3 was found to be significantly greater than that between lines 1 and 2.

Group A did not produce any difference greater than that possible by chance between the second and third drawings of a man in comparison with the difference between the first and second ones. However, the difference they produced between the second and third drawings of a man is significantly lower than the difference they produced between the second and third drawings of a line. These results suggest a greater expression of engageability on a superficial level than on a deeper level. They were able to produce significantly more change on a superficial task than on a task assessing a more emotionally involved level. This is the group which received praise for previous productions before the third drawing was made. Praise did not appear to be an effective motivating factor for producing change. Instead it appeared to be a possible handicap.

Group B which had no praise was able to make significant changes on the third drawing of a man. They were also able to make changes that were new rather than returning to something already produced in the first drawing. It appears that when no praise was given the patients felt no need to continue earlier responses and could go on to new and different ones. Group A, which was praised, was not able to produce significant changes on the third drawing of a man. It appears that they felt more bound to previous responses and thus were less able to change to a different one. Since the two groups were not significantly different in their initial spontaneous production of change, the presence or absence of praise, which was the only factor of the situations which was different, appears to be quite important.

It seems possible that group A, having received praise, would feel that previous performance was acceptable and therefore it would be safer to produce something similar so it would also be acceptable. The definite acceptance that had been received, as expressed in the praise, may be more desirable than the uncertainty of whether the changes made, even though following directions to change, would be acceptable. This suggests the possibility that the desire for acceptance and approval for a finished product is

stronger than the desire for acceptance and approval that may come from following directions. This need to hang on to acceptance already won seems greater on the more emotionally involved level of personality. On a superficial level where there is less emotional involvement they appear more ready to take a chance on gaining acceptance for a changed production. Thus, they were able to produce significant changes on the drawing of a line but not on the drawing of a man.

The final comparison that was statistically significant was e to h with a "t" of 3.85 which is also significant at the .001 level. This was a difference that cut across both groups and both tasks. Group B had a total difference (h) of 2075 with a mean of 79.81 between lines 2 and 3 which was larger than the difference (e) of 1389 with a mean of 53.42 (see Appendix 3) that group A had between the second and third drawing of a man. Group B's difference was larger than A's to a degree that could not be caused by chance.

In the last comparison that was discussed, it was shown that group A's difference between drawings 2 and 3 of a man was significantly lower than its difference between lines 2 and 3. Now it is further evident that group A's difference between the second and third drawings of a

man is also significantly lower than group B's difference between lines 2 and 3. In other words, group A made a significantly smaller change from the second to the third drawing of a man than either group did between the second and third lines. Though, as previously discussed, group B had been able to produce a significant change between drawings 2 and 3 of a man, this difference is not significantly lower than that produced by either group between lines 2 and 3. Again it might be questioned whether group A's reception of praise may have been a handicap to expression of engageability on a more emotionally involved level.

### 4. Summary.

The writer had hypothesized that the psychological distance the chronic schizophrenic shows to the world around him is not a real distance, but is rather his method of defending himself against the world and other people. If the psychological distance were not real, he would be engageable. Operationally it was felt that the presence of engageability would be reflected in the patient's ability to produce any statistically significant change in several productions of the same task or between different tasks. It was felt that engageability may vary under different

stimulation and on different levels of the personality.

The present study supports the hypothesis that the psychological distance is not "real." Both groups of patients were able to produce changes that were statistically significant beyond that of chance possibilities.

Both groups produced significant changes on the superficial task of drawing a line. This reflects their engageability on a superficial level where they are not too emotionally involved and don't feel too much need for defense. On this superficial level praise seemed to help motivate the patients toward change. Group A, which received praise, was able to produce change without returning to the original production. Group B, without praise, also produced significant change but tended to return to something similar to the original. However, the praise did not enable group A to produce changes greater than the changes produced by group B.

On the deeper level, where the patient is more emotionally involved and the need for defense is greater, praise seemed to be a handicap rather than an aid to change. Group A, with praise, could not make significant changes in the drawing of a man and thus could not express engageability on a deeper level. However, group B, without praise, could do so. Group B was further able to produce significant

changes without returning to the original production. It is felt that the praise may be the hindering factor since the two groups were not significantly different in their initial spontaneous production of change, and the presence or absence of the praise was the only factor of the experimental situation that differed for the two groups.

The engageability expressed by group A on the deeper level was not greater than that possible by chance. However, it was significantly less than the engageability expressed by both groups on the superficial level. It appears that when they received no praise, as in group B, the patients were more able to go on to new and different responses. When praise was given, as in group A, they felt bound more to earlier responses. The definite acceptance that had been received in the praise seemed to be more desirable than the uncertainty of whether the changes, though requested, would be approved. This suggests that approval for the production was more satisfying to these patients than the approval for following directions. This need to hang on to already won approval was stronger on the more emotionally involved level than it was on the superficial level.

# CONCLUSIONS AND SUGGESTIONS FOR RESEARCH

Chronic schizophrenics, of the type used in this study, have been able to express their engageability and have thus indicated that the psychological distance which they manifest is not a real one. They have been somewhat freer to express this engageability on a superficial level but have also been able to express it on a deeper level. Contrary to expectations, praise has appeared to be a hindrance to the expression of engageability, especially on the more emotionally involved level.

The results of this study show that engageability can be found in chronic schizophrenics and suggest that we should no longer define chronic schizophrenics in terms of the presence or absence of engageability. This study merely showed that these patients were engageable. It offers no guarantee that attempts at socialization will succeed. Perhaps this presence of engageability may spur other research to the next step, that of socialization.

Further research might also cover this study's finding that praise appeared to hinder the patient's ability to change. This might be further investigated in other experimental situations. Possibly a neutral, non-committal attitude would be more effective than the praising one we tend to use in trying to help these patients. Only continued

research will answer this question.

It was suggested early in this paper that these techniques, or variations of them, might be used to select patients for therapy. Further research might check this by using this method of selection and then evaluating the patient's response or lack of it to a course of psychotherapy. More refined scoring would be needed since the present study was interested in comparison of groups rather than the selection of individuals.

Finally, more research is needed on larger groups of chronic schizophrenics over a wider ranged of age, period of hospitalization, andintelligence to determine whether conclusions reached in this study can be generalized for chronic schizophrenics or whether they can be applied only to those who meet the same restrictions used in this study.

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Frank, J., "Group Psychotherapy with Chronic Hospitalized Schizophrenics", p. 216-230 in Brody, E. B. and F. C. Redlich, Psychotherapy with Schizophrenics, New York, International Universities Press, 1952, 246p.

Seven papers on psychotherapy with schizophrenics are presented. In his paper, Frank suggested that from the start group therapy diminished the depth of emotional disturbance as measured by insomnia, need for electro-convulsive therapy, etc.

Goodenough, F. Measurement of Intelligence by Drawings, Yonkers-on-Hudson, New York, World Book Co., 1926, iii-177p.

Description of a technique for measuring intelligence in children by the use of drawings. Also presents a historical survey of the use of drawings.

Goodenough F. and D. B. Harris, "Studies in the Psychology of Children's Drawings: II. 1928-1949", Psychological Bulletin, Vol. 47, No. 5, issue of September 1950, p. 369-433.

The following trends were noted; increased interest in projective techniques; developmentally interest was shifting from generalizations to details; increased concern with methodology; increased use of drawings in studies in general psychology.

Gross, M. D., "Therapy in a State Hospital Regressed Ward", Journal of Nervous and Mental Diseases, Vol. 120, No. 5, issue of November - December 1954, p. 324-329.

Describes the value of an active program of recreation and electroconvulsive therapy in a regressed ward housing 160 chronic patients.

Helper, M. M., "Learning Theory and the Self Concept", Journal of Abnormal and Social Psychology, Vol. 51, No. 2, issue of September 1955, p. 184-194.

Sketches a conception of the self-concept based upon reinforcement theory. Study showed children's ideal-self concepts were as similar to the ideal-child concepts of randomly selected parents as to the ideal-child concepts of their own parents.

Hilden, A. H., J. W. Taylor, and P. H. Dubois, "Empirical Evaluation of Short W-B Scales", Journal of Clinical Psychology, Vol. 8, No. 4, issue of October 1952, p. 323-331.

Briefly reviews previous studies of short forms of the Wechsler-Bellevue. Evaluates various short forms against total weighted score. Found short form composed of Similarities, Vocabulary, and Block Design most useful.

Hogan, R. A., "A Theory of Threat and Defense", Journal of Consulting Psychology, Vol. 16, No. 6, issue of December 1952, p. 417-424.

Presents his theory of threat and defense. Illustrates with excerpts from "client-centered" interviews. Discusses the implications of the theory for maladjustment, mental hygiene and research.

King, F. W., "The Use of Drawings of the Human Figure as an Adjunct in Psychotherapy", Journal of Clinical Psychology, Vol. 10, No. 1, issue of January 1954, p. 65-69.

Presents a case in which Draw-a-Person was very effectively used as an adjunct to psychotherapy.

Kraus, P. S., "Considerations and Problems of Ward Care for schizophrenic Patients", Psychiatry, Vol. 17, No. 3, issue of August 1954, p. 283-292.

A therapeutic program for a group of long-term hospitalized patients is described. Emphasis is placed upon teamwork and an appreciation of the social vacuum in which the patient finds himself.

Lee, D., "Notes on the Conception of the Self among the Wintu Indians", Journal of Abnormal and Social Psychology, Vol. 45, No. 3, issue of July 1950, p. 538-543.

The Wintu's conception of self is markedly diffenent from our own. Most of what is other for us is generally identified with the self for the Wintu. Data from Wintu culture are cited.

Levy, S., "Figure Drawing as a Projective Technique", p.257-297 in Abt, L. E. and L. Bellak, Projective Psychology, New York, Knopf, 1950, xvii-485-xiv p.

A description of a drawing technique. Supports Machover's assumption that the drawing may be a projection of the self-concept but adds other concepts it may also reflect.

Lewis, A., A Check on the Validity of Some of Machover's Claims, Unpublished Ph. D. Thesis, University of Ottawa, 1955, ix-79p.

Attempted to validate Machover's claims in terms of diagnostic signs. Psychotic groups always showed significant adsences. Neurotics had signs of disturbance significantly present. Lots of overlapping in patterns.

Machover, K., Personality Projection in the Drawing of the Human Figure, Springfield, Illinois, Charles C. Thomas, 1949, ix-181 p.

Outlines a personality analysis based upon interpretations of the drawing of a human figure. INterpretations are based on hypothesis that the figure drawn is related intimately to the person doing the drawings.

Malzberg, B. "A Statistical Study of Patients in the N. Y. Civil State Hospitals, April 1, 1950", Psychiatric Quarterly Supplement, Vol. 26, part 1, issue of 1952, p.70-85.

Discusses statistics on the 93,609 patients on the books of the N. Y. civil state hospitals as of April 1, 1950.

McNemar, Q., "On Abbreviated Wechsler-Bellevue Scales", Journal of Consulting Psychology, Vol. 14, No. 2, issue of April 1950, p. 79-81.

Statistical analysis of Wechsler's data. Lists ten best subtests in teams of two, three, four, and five in terms of correlating highest with total score.

Miller, D. H. and J. Clancy, "An Approach to the Social Rehabilitation of Chronic Psychotic Patients", Psychiatry, Vol. 15, No. 4, issue of November 1952, p.435-443.

An approach to social rehabilitation based on the hypothesis that deterioration may be due to the environmental crippling. Studied the subculture of a custodial care ward.

Murphy, G., L. B. Murphy, and T. M. Newcomb, Experimental Social Psychology, New York, Harper, 1937, as cited in Hilgard, E. R., "Human Motives and the Concept of the Self", The American Psychologist, Vol. 4, No. 9, issue of September 1949, p. 374-382.

Presents the assumption that all the defense mechanisms imply a self-reference. Discusses three aspects of the self; the mechanisms and the self; the self present in awareness; the inferred self.

Newcomb, T. M., "Role Behaviors in the Study of Individual Personality and of Groups", Journal of Personality, Vol. 18, No. 3, issue of March 1950, p. 273-289.

Much of personality can be understood in terms of self-other attitudes and perceptions. The concept of role is as essential for understanding of groups as for the individual. Role behaviors are units of observation in the study of order and regularity in individual and group behavior.

Powdermaker, F., "Concepts Found Useful in Treatment of Schizoid and Ambulatory Schizophrenic Patients", Psychiatry, Vol. 15, No. 1, issue of February 1952, p.61-71.

Observations and concepts derived from a study of ambulatory schizophrenics and schizoid patients are presented. Implications for treatment are indicated.

Rickers-Ovsiankina, M., "Studies of the Personality Structure of Schizophrenic Individuals: I The Accessibility of Schizophrenics to Environmental Influences", Journal of General Psychology, Vol. 16, 1st. half, issue of January 1937, p. 153-178.

Used Lewinian concepts in analyzing the results. Compared normals and schizophrenics. Her hypothesis was that schizophrenics do not have sufficiently firmly segregated tension systems to produce goal-directed activity.

--------, "Studies of the Personality Structure of Schizophrenic Individuals: II Reaction to Interrupted Tasks", Journal of General Psychology, Vol. 16, 1st. half, issue of January 1937, p.179-196.

Attempted to test the hypothesis of the previous study. She felt the results indicated that the schizophrenic has a definite impediment in forming firmly segregated tension systems.

Royal, R. E., "Drawing Characteristics of Neurotic Patients Using a Drawing of a Man and Woman Technique", Journal of Clinical Psychology, Vol. 5, No. 4, issue of October 1949, p. 392-395.

This study showed no significant differences between anxiety neurotics and non-anxiety neurotic veterans on twenty-eight drawing characteristics.

Schilder, P., Image and Appearance of the Human Body, New York, International University Press, 1950, 353p.

Emotional influence, physical deformities, and organic pathology can cause distortions in a person's perception of the body image of others.

Schmidt, H. O., and C. P. Fonda, "The Reliability of Psychiatric Diagnosis: A New Look", Journal of Abnormal and Social Psychology, Vol. 52, No. 2, issue of March 1956, p.262-267.

Studied 426 patients in an attempt to answer the question of "how reliable are psychiatric diagnoses?". Felt that satisfactory reliability was demonstrated for general diagnosis but it was not too satisfactory for the diagnosis of specific subtypes.

Slavson, S. R., "Criteria for Selection and Rejection of Patients for Various Types of Group Psychotherapy", International Journal of Group Psychotherapy, Vol. 5, No. 1, issue of January 1955, p.3-30.

Stresses the need for therapeutic specificity but mentions some general criteria for selection of patients. Detailed discussion of indications and counterindications for therapy for different types of patients, both adults and children.

Spoerl, D. T., "Personality and Drawing in Retarded Children", Character and Personality, Vol. 8, No. 3, issue of March 1940, p.227-239.

On the basis of this study the author concluded that personality could be judged from children's drawings. She also felt that a child's drawings are consistent and easily identified.

Stonesifer, F. A., "A Goodenough Scale Evaluation of Human Figures Drawn by Schizophrenics and Non-Psychotic Adults", Journal of Clinical Psychology, Vol. 5, No. 4, issue of October 1949, p.396-398.

The author found no significant differences between male schizophrenics and non-psychotic veterans. Goodenough's scoring scale was used.

Taylor, D. M., "Changes in Self Description as a Function of Replication", Paper presented to Southern Society for Philosophy and Psychology, 1954, p.1-8, 1-12.

The self concept possesses significant concsistency over a period of time. Reprated intensive self-description tends toward increased consistency of such description.

Tolor, A., "Teachers' Judgment of the Popularity of Children from Their Human Figure Drawings", Journal of Clinical Psychology, Vol. 11, No. 2, issue of April 1955, p.158-162.

Teachers' ability to judge children's popularity on the basis of human figure drawings was compared with that of experienced clinical psychologists. As a group, teacher prediction was less accurate than that of the psychologists.

## Appendix 1

### Scoring Sheet for Changes in Drawing of a Man[1]

The rater is to place a plus (+) for each listed item wherein there is a readily observed difference between the pair of drawings under comparison. Place a minus (-) where the item is absent in both drawings. All blank spaces will then indicate items that are present and similar in the two drawings being compared.

A difference is any readily noticeable omission or change in placement, size, line, treatment, or detail.

| | | Differences between: | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1-2 | | 2-3 | | 1-3 | |
| | | $R_1$ | $R_2$ | $R_1$ | $R_2$ | $R_1$ | $R_2$ |
| General | | | | | | | |
| 1 Location | 1 | | | | | | |
| 2 Background | 2 | | | | | | |
| 3 Size | 3 | | | | | | |
| 4 Line Quality | 4 | | | | | | |
| Details | | | | | | | |
| 5 Head | 5 | | | | | | |
| 6 Forehead | 6 | | | | | | |
| 7 Eyes | 7 | | | | | | |
| 8 Eyebrows | 8 | | | | | | |
| 9 Eyelashes | 9 | | | | | | |
| 10 Nose | 10 | | | | | | |
| 11 Nostrils | 11 | | | | | | |
| 12 Mouth | 12 | | | | | | |
| 13 Teeth | 13 | | | | | | |

1 F.L. Goodenough, Measurement of Intelligence by Drawings, The above list has been adapted from Goodenough's listing of drawing items.

| | | Differences between: 1-2 | | 2-3 | | 1-3 | |
|---|---|---|---|---|---|---|---|
| | | $R_1$ | $R_2$ | $R_1$ | $R_2$ | $R_1$ | $R_2$ |
| 14 Chin | 14 | | | | | | |
| 15 Ears | 15 | | | | | | |
| 16 Hair | 16 | | | | | | |
| 17 Facial Expression | 17 | | | | | | |
| 18 Facial Markings | 18 | | | | | | |
| 19 Neck | 19 | | | | | | |
| 20 Shoulders | 20 | | | | | | |
| 21 Chest | 21 | | | | | | |
| 22 Waist | 22 | | | | | | |
| 23 Hips | 23 | | | | | | |
| 24 Legs | 24 | | | | | | |
| 25 Feet | 25 | | | | | | |
| 26 Toes | 26 | | | | | | |
| 27 Arms | 27 | | | | | | |
| 28 Hands | 28 | | | | | | |
| 29 Fingers | 29 | | | | | | |
| 30 Appurtenances | 30 | | | | | | |
| Total ↓ | | | | | | | |
| Total Blank Difference Score | | | | | | | |
| Average Score | | | | | | | |

## Appendix 2

### Sample of the Application of the "t" Test Formulas.

Table V.-

Comparison of the Differences between the Mean Changes of Groups A and B in the Drawings of Line 1 and Line 3.

| | Group A | Group B | Difference | x | $x^2$ |
|---|---|---|---|---|---|
| 1 | 75 | 100 | -25 | -26.92 | 724.6864 |
| 2 | 100 | 75 | 25 | 23.08 | 532.6864 |
| 3 | 75 | 75 | 0 | -1.92 | 3.6864 |
| 4 | 50 | 75 | -25 | -26.92 | 724.6864 |
| 5 | 75 | 100 | -25 | -26.92 | 724.6864 |
| 6 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 7 | 75 | 25 | 50 | 48.08 | 2311.6864 |
| 8 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 9 | 100 | 50 | 50 | 48.08 | 2311.6864 |
| 10 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 11 | 100 | 0 | 100 | 98.08 | 9619.6864 |
| 12 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 13 | 50 | 75 | -25 | -26.92 | 724.6864 |
| 14 | 100 | 25 | 75 | 73.08 | 5340.6864 |
| 15 | 100 | 25 | 75 | 73.08 | 5340.6864 |
| 16 | 75 | 100 | -25 | -26.92 | 724.6864 |
| 17 | 100 | 50 | 50 | 48.08 | 2311.6864 |
| 18 | 25 | 75 | -50 | -51.92 | 2695.6864 |
| 19 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 20 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 21 | 100 | 75 | 25 | 23.08 | 532.6864 |
| 22 | 0 | 50 | -50 | -51.92 | 2695.6864 |
| 23 | 0 | 100 | -100 | -101.92 | 10387.6864 |
| 24 | 100 | 100 | 0 | -1.92 | 3.6864 |
| 25 | 25 | 75 | -50 | -51.92 | 2695.6864 |
| 26 | 75 | 100 | -25 | -26.92 | 724.6864 |
| Total | 2000 | 1950 | 50 | | 51153.8464 |
| Mean | 76.92 | 75.00 | 1.92 | | |

Sample of the Application of the "t" Test Formulas (con't.)

Comparison of the differences (c to i) between the mean changes of Groups A and B in the line drawings 1 and 3.

$$t = \frac{D}{\sigma_{D_M}} \qquad \sigma_{M_D} = \frac{\sigma_{diff.}}{\sqrt{N-1}} \qquad \sigma_{diff.} = \sqrt{\frac{\Sigma x^2}{N}}$$

$$\sigma_{diff.} = \sqrt{\frac{51153.8464}{26}}$$

$$\sigma_{diff.} = \sqrt{1967.4556} = 44.36$$

$$\sigma_{M_D} = \frac{44.36}{\sqrt{26-1}} = \frac{44.36}{\sqrt{25}} = \frac{44.36}{5}$$

$$\sigma_{M_D} = 8.87$$

$$t = \frac{D}{\sigma_D} = \frac{1.92}{8.87} = .22$$ not significant at .01 level

Appendix 3

Table VI.-

The Total Difference and the Mean Difference between Two Drawings for Group A (N=26) and Group B (N=26).

| Comparison | Total Difference | | Mean Difference | |
|---|---|---|---|---|
| | Group A | Group B | Group A | Group B |
| Line (1-2) | 1450 | 1625 | 55.77 | 62.50 |
| Line (2-3) | 1975 | 2075 | 75.96 | 79.81 |
| Line (1-3) | 2000 | 1950 | 76.92 | 75.00 |
| Man (1-2) | 1318 | 1283 | 50.69 | 49.34 |
| Man (2-3) | 1397 | 1663 | 53.73 | 63.96 |
| Man (1-3) | 1572 | 1673 | 60.46 | 64.34 |

Appendix 4

Table VII.-

Raw Data for Diagnosis, Year of Admission, Age, and Intelligence for Group A (N=26)

| | Schizophrenic Diagnosis | Year Admitted | Age | IQ |
|---|---|---|---|---|
| 1 | Catatonic | 1944 | 30 | 106 |
| 2 | Mixed | 1950 | 37 | 102 |
| 3 | Hebephrenic | 1945 | 43 | 85 |
| 4 | Paranoid | 1943 | 45 | 99 |
| 5 | Catatonic | 1945 | 46 | 93 |
| 6 | Hebephrenic | 1943 | 33 | 99 |
| 7 | Simple | 1946 | 30 | 86 |
| 8 | Paranoid | 1946 | 35 | 102 |
| 9 | Paranoid | 1949 | 42 | 97 |
| 10 | Paranoid | 1948 | 33 | 99 |
| 11 | Paranoid | 1948 | 41 | 91 |
| 12 | Paranoid | 1950 | 35 | 83 |
| 13 | Paranoid | 1947 | 38 | 96 |
| 14 | Paranoid | 1948 | 37 | 108 |
| 15 | Simple | 1947 | 35 | 96 |
| 16 | Paranoid | 1949 | 43 | 91 |
| 17 | Simple | 1946 | 39 | 83 |
| 18 | Paranoid | 1947 | 34 | 92 |
| 19 | Simple | 1948 | 33 | 86 |
| 20 | Unclassified | 1950 | 50 | 132 |
| 21 | Paranoid | 1949 | 44 | 91 |
| 22 | Hebephrenic | 1948 | 49 | 99 |
| 23 | Hebephrenic | 1947 | 41 | 85 |
| 24 | Hebephrenic | 1946 | 37 | 102 |
| 25 | Paranoid | 1948 | 31 | 86 |
| 26 | Catatonic | 1944 | 35 | 127 |

Table VIII.-

Raw Scores for Difference between the Drawings of a Line And the Average Difference between the Drawings of a Man for Group A (N=26).

| | Line Differences | | | Average Man Differences | | |
|---|---|---|---|---|---|---|
| | 1-2 | 2-3 | 1-3 | 1-2 | 2-3 | 1-3 |
| 1 | 50 | 50 | 75 | 59 | 48 | 72 |
| 2 | 50 | 100 | 100 | 27 | 96 | 95 |
| 3 | 50 | 75 | 75 | 71 | 93 | 89 |
| 4 | 75 | 75 | 50 | 44 | 39 | 52 |
| 5 | 50 | 50 | 75 | 73 | 77 | 65 |
| 6 | 25 | 100 | 100 | 46 | 59 | 61 |
| 7 | 50 | 75 | 75 | 59 | 67 | 66 |
| 8 | 100 | 100 | 100 | 41 | 54 | 56 |
| 9 | 100 | 100 | 100 | 75 | 75 | 79 |
| 10 | 50 | 100 | 100 | 17 | 46 | 50 |
| 11 | 25 | 100 | 100 | 32 | 54 | 54 |
| 12 | 100 | 100 | 100 | 32 | 25 | 25 |
| 13 | 50 | 50 | 50 | 25 | 12 | 30 |
| 14 | 75 | 100 | 100 | 76 | 69 | 61 |
| 15 | 75 | 100 | 100 | 53 | 60 | 72 |
| 16 | 75 | 50 | 75 | 66 | 62 | 51 |
| 17 | 50 | 100 | 100 | 74 | 35 | 76 |
| 18 | 50 | 50 | 25 | 90 | 68 | 71 |
| 19 | 50 | 100 | 100 | 14 | 14 | 14 |
| 20 | 75 | 100 | 100 | 59 | 82 | 82 |
| 21 | 25 | 100 | 100 | 59 | 72 | 81 |
| 22 | 0 | 0 | 0 | 13 | 9 | 14 |
| 23 | 0 | 0 | 0 | 42 | 46 | 46 |
| 24 | 100 | 75 | 100 | 46 | 68 | 75 |
| 25 | 50 | 50 | 25 | 31 | 36 | 36 |
| 26 | 50 | 75 | 75 | 94 | 31 | 94 |

Appendix 5

Table IX.-

Raw Data for Diagnosis, Year of Admission, Age, and Intelligence for Group B (N=26).

| | Schizophrenic Diagnosis | Year Admitted | Age | IQ |
|---|---|---|---|---|
| 1 | Hebephrenic | 1943 | 43 | 97 |
| 2 | Paranoid | 1947 | 35 | 83 |
| 3 | Paranoid | 1947 | 37 | 96 |
| 4 | Simple | 1944 | 40 | 85 |
| 5 | Simple | 1949 | 32 | 92 |
| 6 | Paranoid | 1945 | 45 | 99 |
| 7 | Simple | 1945 | 39 | 89 |
| 8 | Paranoid | 1950 | 35 | 96 |
| 9 | Hebephrenic | 1945 | 45 | 99 |
| 10 | Mixed | 1950 | 38 | 102 |
| 11 | Paranoid | 1948 | 36 | 83 |
| 12 | Simple | 1946 | 33 | 86 |
| 13 | Paranoid | 1946 | 30 | 132 |
| 14 | Catatonic | 1948 | 46 | 93 |
| 15 | Paranoid | 1947 | 48 | 87 |
| 16 | Simple | 1947 | 39 | 89 |
| 17 | Paranoid | 1948 | 38 | 96 |
| 18 | Paranoid | 1943 | 43 | 91 |
| 19 | Catatonic | 1950 | 31 | 106 |
| 20 | Paranoid | 1949 | 41 | 91 |
| 21 | Hebephrenic | 1949 | 33 | 119 |
| 22 | Paranoid | 1949 | 32 | 92 |
| 23 | Paranoid | 1948 | 44 | 97 |
| 24 | Paranoid | 1950 | 41 | 91 |
| 25 | Paranoid | 1947 | 50 | 101 |
| 26 | Hebephrenic | 1944 | 31 | 99 |

Table X.-

Raw Scores for Difference between the Drawings of a Line and the Average Difference between the Drawings of a Man for Group B (N=26).

| | Line Differences | | | Average Man Differences | | |
|---|---|---|---|---|---|---|
| | 1-2 | 2-3 | 1-3 | 1-2 | 2-3 | 1-3 |
| 1 | 75 | 100 | 100 | 64 | 68 | 64 |
| 2 | 75 | 75 | 75 | 35 | 41 | 32 |
| 3 | 50 | 75 | 75 | 83 | 36 | 83 |
| 4 | 50 | 75 | 75 | 0 | 18 | 18 |
| 5 | 75 | 100 | 100 | 71 | 84 | 84 |
| 6 | 25 | 100 | 100 | 78 | 88 | 86 |
| 7 | 100 | 100 | 25 | 84 | 88 | 92 |
| 8 | 50 | 100 | 100 | 50 | 90 | 85 |
| 9 | 75 | 75 | 50 | 38 | 50 | 56 |
| 10 | 50 | 100 | 100 | 40 | 43 | 43 |
| 11 | 25 | 25 | 0 | 82 | 82 | 75 |
| 12 | 75 | 100 | 100 | 48 | 72 | 74 |
| 13 | 75 | 75 | 75 | 56 | 96 | 96 |
| 14 | 25 | 25 | 25 | 56 | 91 | 89 |
| 15 | 25 | 25 | 25 | 72 | 69 | 44 |
| 16 | 75 | 100 | 100 | 32 | 86 | 86 |
| 17 | 50 | 75 | 50 | 32 | 39 | 37 |
| 18 | 50 | 75 | 75 | 36 | 62 | 72 |
| 19 | 100 | 100 | 100 | 66 | 80 | 78 |
| 20 | 75 | 100 | 100 | 26 | 78 | 80 |
| 21 | 75 | 75 | 75 | 5 | 5 | 5 |
| 22 | 25 | 50 | 50 | 82 | 76 | 80 |
| 23 | 75 | 100 | 100 | 62 | 76 | 76 |
| 24 | 100 | 75 | 100 | 6 | 33 | 33 |
| 25 | 75 | 75 | 75 | 76 | 85 | 76 |
| 26 | 75 | 100 | 100 | 13 | 27 | 29 |

Appendix 6

ABSTRACT OF

The Reality of Psychological Distance in Chronic Schizophrenics[1]

This study investigated the theoretical question of the reality of the chronic schizophrenic's psychological distance. The hypothesis was that the psychological distance is not real, but is rather the patient's way of defending himself against the outside world and other people. It was felt that these patients were engageable and would express this through their ability to produce change. Engageability may vary on different levels and under varied stimulation.

Fifty-two male schizophrenics, age 30 to 50, with six to thirteen years of hospital residence were the subjects of the study. They were divided into two groups of twenty-six patients each. The groups were not significantly different from each other in age, intelligence, diagnostic subgroupings, or length of residence in the hospital. They were also not significantly different in their spontaneous ability to produce change on a superficial task.

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1 Gloria M. McDowell, Ph.D. thesis presented to the School of Psychology of the University of Ottawa, Ontario, November 1957, vii-98p.

Three drawings of a straight line were used to assess engageability on a superficial level; three drawings of a man, to assess it on a deeper level; and the Wechsler Block Design subtest. to establish the intellectual cut-off point of IQ 80. Group A was given praise between the second and third drawings of both tasks; group B received no comment. The change made between drawings one and two reflected the spontaneous change the patients could make by themselves while the change between drawings two and three reflected that made in response to the examiner's request to do so. Throughout, any change was considered a change. The writer was interested in the ability to change in itself, not the size or direction of the change.

Comparisons were then made between the mean changes between the groups, between the tasks, and some that overlapped groups and tasks. The "t" test was used to determine whether any of the differences between these mean changes was significant at the .01 level.

Both groups were able to produce significant changes thus indicating their engageability and showing that the psychological distance they manifest is not real. Engageability was expressed somewhat more freely on the superficial level than onothe more emotionally involved one. Rather than being an added incentive, praise was a hindrance to the expression of engageability, especially on the emotionally involved level.