

TERMINAL PROGRESS REPORT  
Michigan State Psychotherapy Project  
(MH-08790)

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TABLE OF CONTENTS

I. Summary of Design and Procedures . . . . . P. 1

II. Findings with Respect to the Original Aims of the Michigan State  
Psychotherapy Project (MH-08790-01A1 and 02) . . . . . P. 16

III. Results Considered Significant . . . . . P. 19

IV. Publications . . . . . P. 24

## I. SUMMARY OF DESIGN AND PROCEDURES

Period: The Michigan State Psychotherapy Project (MH-08790) began in July, 1966 and terminated in May, 1971.

Treatment: In order to evaluate the effectiveness of psychotherapy with schizophrenic patients, 36 patients (from the Detroit Psychiatric Institute) were randomly assigned to three treatment groups (with both experienced and inexperienced therapists in each experimental group):

Group A used a psychoanalytic psychotherapy of an active variety, without medication, stressing oral dynamics and utilizing so-called "direct" interpretations (Karon, 1963, 1964; Karon & Rosberg, 1958; Rosberg & Karon, 1958). In Group A, psychotherapy sessions were held five days a week until discharge (if discharge was in two to eight weeks) and, for the most part, once per week thereafter. Four patients were treated by an experienced therapist (Bertram P. Karon, Ph.D.), while the remaining eight patients were treated by five inexperienced therapists (three graduate students in Clinical Psychology and two Residents in Psychiatry) under his supervision. The number of patients per student therapist varied from one to three.

Group B utilized a psychoanalytic psychotherapy of an "ego-analytic" variety, using medication as an adjunct. Psychotherapy was initiated at three times per week for at least twenty sessions and then reduced in frequency. Eventually all patients were reduced to one session per week. Four patients were treated by an experienced therapist (Thomas Tierney, M.D.), while the remaining eight patients were treated by five inexperienced therapists (two graduate students in Clinical Psychology and three Residents in Psychiatry) under his supervision.

Group C utilized medication plus supportive psychotherapy, that is, treatment as now practiced at a good public institution where the patient/resident ratio is eight to one. This group served as the "Hospital Control" or "comparison" group. If after a few weeks the patients in Group C did not respond to the point of discharge, they were transferred to a state hospital, where medication and supportive therapy were continued with a higher patient/staff ratio (30-50 to one).

The heterogeneity of profession among students and supervisors, in groups A and B, was intended to minimize interprofessional jealousies as a contaminating factor. Individual therapists, in Groups A and B, were allowed flexibility in utilizing additional sessions, while encouraged to minimize them. On the other hand, despite efforts by these therapists to induce patients to continue in out-patient therapy on a regular basis (and despite expense payments of five dollars per session), patients frequently stopped seeing their therapists for weeks, in some cases months, while outside the hospital. Despite the flexibility allowed the individual therapists, the average number of sessions per patient in either Group A or B during the 20 months was 70, well under the 102 sessions included in the original design.

Student therapists were drawn from three sources. The first source were three graduate students in Clinical Psychology at Michigan State University, who had chosen to work with Supervisor A. Their previous clinical experience ranged from none to one year of Practicum. The second source were two graduate students in Clinical Psychology at Wayne State University who were doing their internship at the Institute. They had, of course, completed all Practicum requirements. They were assigned to Supervisor B to balance the inter-professional distribution. The Psychiatric Residents (n=5) were distributed so that at least one Resident from each of the two wards would be in each experimental group. The Residents were asked their preferences, and that Resident

on each ward who showed the strongest preference for working with Supervisor A was assigned to that Supervisor. (Two residents were assigned to Group A and three to B to equalize the number of student therapists, since the number of psychologists had already been determined.) Residents' experience varied from three to 15 months at the beginning of the project.

#### Patient Population and Selection

Thirty-six clearly schizophrenic patients were selected in sets of three and then randomly assigned to treatment groups. The first two patients in each of the two experimental groups were assigned to the supervisors, and the next eight to student therapists, the last two in each group being assigned to the supervisors. A rotation of student therapists was determined by what was most convenient in terms of the student therapists' schedule of training and professional commitments other than the project. Patients were assigned as selected.

Since it had been our intention to obtain clearly schizophrenic patients, without organic pathology, without previous hospitalization, and of acute onset, more adequate case histories and more thorough medical examinations than were usual were obtained before selection. Our emphasis on the patient being clearly schizophrenic, however, led us to select the more severely impaired. Moreover, approximately two-thirds of the patients who are seen in the emergency room who appear schizophrenic are treated with tranquilizers and released without hospitalization at all. Of those hospitalized, roughly two-thirds are discharged within two weeks. The more accurate information required from the social history and the additional medical examinations generally took two weeks to obtain. In order to get a firm and unbiased base line from which to start, diagnostic examinations after selection were scheduled with

diagnostic personnel who were not part of the ward staff. This ordinarily took one to two additional weeks. In general, if potential project patients were ready to leave the hospital before information on them was complete, they were discharged with the extensive evaluations being discontinued; of course, when this occurred, the patient was no longer considered for the project. Thus, the patients were inadvertently selected on resistance to treatment as well as severity of symptoms, and few, if any, of the patients were truly acute.

Moreover, the patients were primarily poor, inner-city, and Negro. They tended not to trust authorities, particularly white authorities. Information is to be divulged to authorities only if it cannot be used to punish the informant or his friends. They do not expect help simply for being emotionally ill; they are hospitalized primarily because they have disturbed or frightened someone else. Bizarre behavior and emotional suffering are accepted by the patients and their environment as part of a painful world rather than as illness to be alleviated. Independent of this project, Dunham (1965) examined the clinical records of a random sample of schizophrenic patients from the Detroit area, and found the average time gap between the onset of the blatant symptoms and the first presentation for treatment was 34.5 months! Hence, the patients tend to have been ill (by middle class standards) for a long time before hospitalization.

Despite our attempts at getting more adequate case histories, the patients had as much as six weeks of previous hospitalization which, generally, neither the patient nor the relatives had revealed. The patients reasoned (correctly) that a previous history of hospitalization leads to worse treatment not only by hospitals, but by employers, social agencies, and people in general. The difficulty of specifying the "real" characteristics of a schizophrenic population

in any experimental investigation and the inadequacies of our own selection would not have been obvious, even to us, if it had not been for the intense and continuous effort throughout the project to make the medical and case histories of our patients more and more accurate.

Despite the attempt at careful medical screening, medical problems were not ruled out. Four dramatic instances occurred. Two patients died of embolisms (both diagnosed as catatonic). The first of these died before therapy had begun, so that a new patient was selected, and the set of three patients re-randomized. The other patient lapsed into silence and died after therapy began. She was not replaced for two reasons: a new patient would not have been randomly assigned, and the student therapist who had tried to treat her was so traumatized by the death that he refused to treat another psychotic patient. Additional information on this last patient (which had been suppressed by patient and family) was that she was a long standing drug addict, that she had been hospitalized as well as jailed for several years, and she had undergone a long course of ECT. Any one of these factors, if known at the time of selection, would have made her ineligible for the project.

Another patient (treated by the experienced therapist in Group A), despite being cleared by Neurology initially, manifested a gait impairment which did not improve with psychotherapy, despite improvement in her other (psychological) symptoms. As motor symptoms became more clear, the diagnosis was changed to Multiple Sclerosis (as well as schizophrenia). Still another patient (in Group A, treated by an inexperienced therapist) whose social history stated "No history of drug addiction", after he reported hallucinations of threatening vividly colored animals, was found to have sniffed glue and to have taken nutmeg, Seconal, and Dexedrine for years in dosages sufficiently high to make brain damage very probable. Two EEGs and psychological testing were equivocal. The patient was deleted from analyses.

One more patient was deleted from data analyses at 20 months because of staff interference in his treatment. (Assignment of the patient to a resident who encouraged the patient not to cooperate with the project therapist, without informing the project therapist.) Inclusion of this patient would not significantly alter the findings.

A distribution of the final samples by age, sex, race, education and initial vocabulary IQ is shown in Table 1.

#### Therapist Variables:

In line with Bergin's (1966) conclusion that the experience level of the therapist is a critical factor in his effectiveness, each experimental group was composed of both experienced and inexperienced therapists. Thus, each experimental group was examined as two groups: an experienced therapist utilizing that group's technique and several inexperienced therapists utilizing that technique.

On the basis of the clinical study of parents of schizophrenics, the concept of "Pathogenesis" has been defined by Karon (Meyer & Karon, 1967) as the unconscious utilization of dependent individuals to meet one's own needs, irrespective of the cost to the dependent individual, and a TAT measure derived. This measure of Pathogenesis has been found to differentiate mothers of schizophrenics from mothers of normals (Meyer & Karon, 1967; Mitchell, 1968), child-abusive mothers from non-abusive mothers (Melnick & Hurley, 1969) and to differentiate mothers and fathers of schizophrenics, delinquents, and normals (Mitchell, 1969). It had been postulated that "Pathogenic" therapists should be less helpful.

Before treatment began, each therapist took a TAT. The stories were taperecorded and later transcribed by a secretary, typing one story per page

Table 1  
PATIENT CHARACTERISTICS

Characteristic	Group A (n=9)	Group B (n=12)	Group C (n=12)
<b>Sex</b>			
Male	3	7	5
Female	6	5	7
<b>Race</b>			
Negro	8	7	9
White	1	5	3
<b>Education</b>			
1-5	1	0	0
5-9	2	3	2
High School, Incomplete	3	5	5
High School, Complete	3	3	4
University, Incomplete	0	1	1
<b>Age</b>			
16-17	1	1	1
18-22	1	3	6
23-28	4	3	2
29-35	2	3	1
36-44	1	2	1
45-49	0	0	1
<b>IQ (Thorndike-Gallup)</b>			
-80	3	6	2
80-90	4	2	6
90-110	2	4	4
110-120	0	0	0
120+	0	0	0
<b>Previous Hospitalization (as known at end of project)</b>			
None	5	10	7
0-14 days	1	1	2
15-28 days	2	1	1
29-42 days	0	0	2
43+days	1	0	0

(without indication of which therapist's story it was, except for coding on the back of the page) and randomized, before they were scored for "Pathogenesis" by two raters unfamiliar with the therapists. The correlation between the two judge's ratings was .91. The two ratings for each therapist were averaged, and the average "Pathogenesis" score was used to order the therapists on the Pathogenic-Benign dimension. The scores ranged from .00 to .82, with a mean of .47. The product moment correlations were calculated between therapist pathogenesis and the corrected patient six month scores. For therapists who treated more than one patient, the average of his patients was used.

#### Outcome Measures:

All patients were examined before treatment began, after six months, twelve months, and twenty months of treatment by personnel not connected with the ward who did not know to which treatment group the patients belonged. Hospitalization data were also gathered 24 months after the termination of the treatment phase of the project. Patients were randomly scheduled for evaluations to help maintain the "blindness" of the evaluations. Each examination included a battery of intellectual tests, Rorschach, TAT, and a Clinical Status Interview (CSI). The intellectual tests used were the Thorndike-Gallup Vocabulary Test (TGV), the Porteus Maze (PM), Wechsler Adult Intelligence Scale (WAIS), and the Drasgow-Feldman Visual-Verbal Test (VVT). For any given test, the same examiner examined all patients during any one evaluation period.

The TGV is a twenty item multiple-choice vocabulary test, which has been found to correlate highly with full-scale Wechsler and Stanford-Binet scores (Miner, 1957) but which is easier than the longer tests for a patient to take.

It should be least affected by pathology, aside from test-taking set. Since the same form was used to all administrations, practice effects might be expected.

The PM (Porteus, 1959) measures a function best described as "foresight" or "planfulness" (or its absence, since Porteus makes the point that below-normal variation is meaningful, but that above-normal variation is trivial in meaning). The PM has three alternate forms (the Vineland series, the Extension series, and the Supplement series). The Vineland series was used initially, the Extension series was used for the six month retest, the Supplement for twelve months, and the Vineland again at 20 months.

The WAIS measures a variety of intellectual functions as well as test-taking set. It has a good parallel form in the Wechsler-Bellevue II (WB II). The WAIS was used for the pre-treatment and 12 month evaluations and the WB II for the six month and 20 month evaluations.

The VVT (Feldman & Drasgow, 1951) is a concept-formation task in the Hanfmann, Kasanin, Vigotsky, Goldstein, Cameron tradition, but one which yields a quantitative score. It is reported to be uncorrelated with IQ in normal subjects, but specifically vulnerable to the schizophrenic thought disorders. According to Drasgow & Feldman, there is no overlap in scores between normals and hospitalized schizophrenics. Because of the length of the test (42 items), it was divided into two alternate forms--odd numbered items being used for the pre-test and 12 month evaluations, even numbered items being used for the six month and 20 month evaluations. (Because analysis of covariance procedures were to be used in the data analysis, strictly parallel forms of the test, in the statistical sense, were not necessary.)

The Clinical Status Interview (CSI), given by an experienced diagnostic Psychiatrist (L. Berman, M.D.), were recorded on tape, edited for clues to type of treatment or therapist, and then scored "blindly" by two graduate students in Clinical Psychology for degree of emotional health. Tapes of "control" patients were also edited as a means of preserving "blindness" during the rating procedure.

Both the interviewing Psychiatrist and the judges were given the following factors as those to be taken into account: (1) ability to take care of self, (2) ability to work, (3) sexual adjustment, (4) social adjustment-relationship with friends, (5) absence of hallucinations, bizarre delusions, gross distortion of reality, (6) degree of freedom from anxiety and depression, (7) amount of affect, (8) variety and spontaneity of affect, (9) satisfaction with life and with self, (10) achievement of capabilities, and (11) benign rather than malignant effect on others.

The Rorschach, given by an experienced diagnostic psychologist, were recorded by hand and later typed before being scored for degree of mental health. TAT protocols, administered by an experienced psychologist, were recorded on tape and later transcribed before scoring. Two other graduate students in Clinical Psychology served as the judges in rating the projectives for mental health.

In addition to the criteria used by the judges rating the CSI, the projective raters were given the following additional factors to be taken into account: (1) length of protocol, (2) amount, intensity, and variety of affect, (3) variety of material, absence of stereotypy, (4) presence of benign fantasies; nurturant parent figures, (5) confidence, (6) reality-testing, and (7) direct representation of problems. The raters were told not to use

"lack of repression" or "free id material" as an indication of either health or pathology, inasmuch as it has differing significance in the context of different treatments.

As an anchoring point, raters of either CSI or projective tests were instructed to read, "Winn, a Happy Man", a unique case history, complete with projective protocols, of an unusually healthy man occurring in nature, that is, without psychotherapy (Wessman & Ricks, 1966).

Ratings were made using a new scaling method. This scaling procedure yields ratio scale measurements of overall "emotional health". These ratings were found to be internally consistent, reliable between raters, and to have concurrent and predictive validity. The procedures and these findings are described by Karon and O'Grady (1970).

#### Procedures for Locating Patients and Gaining Their Cooperation:

In order to minimize drop-outs from therapy, the experimental patients received expense payments (\$5.00) for getting to and from the hospital for their out-patient therapy hour. In a few cases the patients refused payment, because they felt it was inappropriate. In others, it is clear that the patient would not be able to come to their therapy hours without such payments. With lower socio-economic level patients, the car-fare and other expenses are an appreciable factor which would tend to lead patients to drop out. Moreover, for the six, twelve, and twenty month evaluations (which take one whole day of interviewing and testing), both experimental and control patients received expense payments (\$15.00) for getting to and from the hospital. This helped to eliminate drop-out problems and increased cooperation. With some patients, it was necessary to pay as much as \$30.00 for their cooperation in the evaluation.

Persistent and persuasive, but not high-powered or threatening, approaches to the patients and their families were required to obtain their cooperation. In one instance, a patient moved to Los Angeles, where he was eventually located. Luckily, he moved back to Detroit before the final evaluation was due. Another patient moved to Cleveland, and, when located, felt it was "too inconvenient" to return to Detroit for testing, but readily agreed to open his home to the testers for the evening, if they cared to drive to Cleveland and evaluate him there. This, of course, was done. Still another patient had "left town" with no address known to anyone. He was wanted by the Detroit police in connection with an arrest for breaking and entering during the Detroit riot of 1967. When his family became sufficiently confident to trust the project personnel, and they were assured that the police would not be informed, the patient appeared and was evaluated.

The project personnel were helpful people, and many of the patients, including both experimental and controls, made use of them to contact welfare agencies, or to obtain referral to treatment agencies. Such services, performed for humanitarian motives, nonetheless, helped dispell the feeling research subjects are apt to have that they are objects being manipulated against their will and against their best interests.

A common fear, which constantly had to be dispelled, was that if the patient cooperated with the project and allowed himself to be evaluated, he would be re-hospitalized against his own will. This fear had to be dealt with in both word and action repeatedly. It will be recalled that most of these patients, like most inner city emergency room psychiatric referrals, were originally hospitalized against their will.

### Statistical Analysis:

Comparisons were made between all patients receiving psychoanalytic therapy (Groups A and B combined) vs. the Controls because of the small sample size. In addition, five group analysis (controls, A experienced, A inexperienced, B experienced, B inexperienced) were carried out to make more specific conclusions about differential procedures, use of medication, and level of experience possible. Finally, differences among individual inexperienced therapists within Groups A and B were examined, both quantitatively and qualitatively.

The data were analyzed by analyses of covariance in order to correct for pre-treatment differences between subgroups by using initial score as a covariate (i.e., holding initial score constant). In order to have initial scores on all patients, patients who could not or would not take the tests initially were given a chance score (four out of twenty items) on the TGV, placed at the midpoint of the interval from zero to the lowest attainable score on the Porteus Maze, were given a scale score of zero for each Wechsler subtest which they did not take, and a maximum error score, 42, on the VVT. The Wechslers were not pro-rated, since they were being used not as a measure of general intelligence, but of intellectual impairment due to psychosis. A total sum of scaled scores of zero (zero on all subtests) was then given an IQ by extending the Wechsler transformation equation (or tables, which are equivalent) in the manual. In each case, this resulted in an IQ of 34.

On the TGV, only two patients received chance scores initially, one in Group A and one in Group B. Both were treated by student therapists. On the PM, there were four such patients initially, two in Group A and two in Group B. All four were treated by students. On the WAIS initially, there

were seven: Group A, three (two treated by students); Group B, three (all treated by students); Group C, one. On the VVT initially, there were six: Group A, two (treated by students); Group B, three (treated by students); Group C, one.

The appropriateness of the somewhat arbitrarily assigned scores was examined statistically by introducing a dichotomous variable, take vs. not take initially, into the regression equation for the analyses of covariance of the findings of each of the evaluations. If the regression coefficient of the dichotomous variable was statistically significant, then the regression coefficient was used to correct the predicted scores. This was necessary only for the WAIS.

Before computing the analysis of covariance for each measure, the following possible contaminating factors were examined and taken into account if the partial regression coefficients were significantly related to the outcome score: take vs. not take <sup>or not</sup> test initially, age, sex, education, race, marital status, previous hospitalization, social class, religion, initial vocabulary (TGV) score, initial PM score, initial VVT score, initial WAIS score, initial CSI rating, initial Rorschach rating, and initial TAT rating. In other words, each of these variables might possibly be related to change in test score. If this were so, and if the samples were not identical on the variable, then that variable might give rise to spurious findings.

Therefore, using a computer, for each outcome measure the effects of all of these covariates (possible contaminating factors) were examined simultaneously. Most of these covariates had no statistically significant effect. The covariate having the least effect was deleted first. More precisely, the partial correlations of all these covariates with that particular outcome score were initially examined simultaneously within groups and therapists.

The least statistically significant covariate was then deleted, and the partial correlations recomputed. Variables were removed one at a time, because the deletion of one variable might increase the significance of one of the remaining variables. Covariates other than initial score on that outcome measure were thus eliminated one at a time until all remaining covariates were significant at the five percent level.

In addition, in view of the well known instability of regression coefficients, even when determined from relatively large samples (and the present samples were necessarily small), it was found necessary to place a further restriction of meaningfulness on the regression coefficients. If a measure of initial sickness was, according to the partial correlation, correlated negatively rather than positively with later illness, and if the first order correlation was positive, the negative partial correlation was considered dubious and rounded to zero. The partial regressions were then recomputed for the remaining significant covariates.

The use of analysis of covariance with initial scores as the covariate rather than difference scores between test and retest may not be a familiar procedure. While generally the results of the analyses of covariance and of difference scores will be the same, the covariance procedure, first of all, has smaller error variance than difference scores and hence is more sensitive. Secondly, it does not require that groups be matched initially. As Edwards (1954) has pointed out, if two or more groups differ on initial scores, the analysis of difference scores may yield (or not yield) significant findings spuriously, due to regression toward the mean. In this case, while samples A, B, and C were randomized, they were not precisely matched. Moreover, when the supervisor's cases are treated separately the match is even less perfect. Thirdly, the tests do not have to be exactly parallel,

in the statistical sense (i.e., equal mean, variance, and correlation with all criteria). For example, the two forms of the VVT are not exactly parallel. Moreover, the use of a different examiner for the initial testing and later testing is sufficient to make dubious the assumption of parallel tests. Finally, the analysis of covariance allows one to correct for the effects of other covariates besides initial score, if they are meaningfully related to the dependent variable. The analysis of covariance does assume linear regression, and in some situations this may produce more distortion in the analysis than the use of difference scores. However, if the non-linear regression is a well behaved function, the non-linearity can be taken into account.

Results at the end of the psychotherapy phase (20 months) of the project, and hospitalization during the subsequent 24 months are summarized in Tables 2, 3, and 4.

II. FINDINGS WITH RESPECT TO THE ORIGINAL AIMS OF THE  
MICHIGAN STATE PSYCHOTHERAPY PROJECT (MH-08790-01A1 and 02):

1. "Determine whether acute schizophrenic reactions can be rapidly resolved by intensive psychotherapy, in which the therapist plays an active role, arouses intense affects, and handles certain central phantasies in a prescribed non-classical fashion. Rapid as used here implies one month of intensive five day per week psychotherapy. The acute schizophrenic reaction will be said to be resolved when patient's acute symptoms have remitted to the point where he is able to carry on his day-to-day activities without hospitalization while continuing to receive out-patient psychotherapy. If four weeks does not suffice, determine how long it will take, and what are the characteristics of patients who do and do not respond this quickly."

(a) There were few, if any, truly acute patients in the project. However, it was learned how rare acute patients are in a low income inner city hospital.

(b) Psychoanalytic therapy as described was helpful, although not uniquely so, as compared to the other type of psychoanalytic therapy.

(c) Most patients did "resolve" their acute psychotic reactions within four weeks. A tentative conclusion is that eight weeks seems a better decision time; patients who did not resolve gross symptoms in eight weeks required long term (8 months or more) treatment before discharge was possible.

2. "Determine whether such patients, after the resolution of their acute symptoms will continue to adjust and to make progress with once a week psychotherapy."

(a) There is <sup>no</sup> question that patients continued to benefit from once per week psychotherapy.

(b) These patients frequently interrupt treatment and return only when in a crisis. Nonetheless, such sporadic treatment, while not conforming to the original middle class based model of treatment, proved of value to the patients.

3. "Determine whether this form of psychotherapy can be readily taught, that is, whether the student therapists also produce striking therapeutic changes."

(a) Both forms of psychoanalytic therapy can be taught to both Psychiatrists and Clinical Psychologists. However, working psychotherapeutically with schizophrenics is initially traumatic, and the trainees need time to adapt to this type of patients. One year of adequate supervision seems to be sufficient to allow them to function effectively and with minimal discomfort.

(b) Personality characteristics of the student therapists determine the readiness with which they can learn psychoanalytic therapy of either variety. Relevant here is general maturity and attitude toward supervision. Most striking was the way in which the therapist unconsciously utilizes dependent individuals to resolve his own conflicts. ("Pathogenesis", as measured from pre-project TAT's of the therapists.)

(c) Some student therapists (who, incidentally, tend to be mature, take supervision conscientiously, and score low on "Pathogenesis") were without question able to produce striking therapeutic changes in their patients.

4. "Rigorously examine whether the changes are sufficiently different from those which would occur with routine hospitalization and drug therapy, and whether they are sufficiently different from those which would occur with more conventional psychotherapy combined with medication."

(a) Both types of psychoanalytic therapy as of 20 months (termination) produced improved functioning as compared to the hospital controls.

(b) The experienced therapists, regardless of their differences in technique and use of medication, tended to produce balanced recovery as measured by a variety of criteria.

(c) Inexperienced psychoanalytic therapists tended to produce asymmetric improvement; if not using medication, there was a gain in the thought disorder but not in length of hospitalization as compared to routine hospital and drug treatment; if using medication, there was a drastic decrease in length of hospitalization but not in the thought disorder as compared to routine procedures. Follow-up hospitalization showed the reverse pattern: initially medicated patients spent as much time in the hospital as did the comparison group, patients receiving psychotherapy without medication spent significantly less time in the hospital. Overall (combining the treatment phase and the subsequent 2 years) both groups spent less time in the hospital than the comparison group.

5. "Explore the qualitative nature of the changes which occur in psychotherapy of this type."

Qualitative exploration of change has not been completed at this time, but the evidence is that the changes are complex and different in different patients. Nonetheless, there is a tendency for patients recovering with medication to have better controls but

less spontaneity, while patients recovering without medication tend to have more impulsivity and fantasy life. In both cases, patients become more realistic. There is a shift among all patients when improving from the affect of "fear-terror" to that of "distress-anguish", which is more manageable. Experienced therapists are better able to reduce "fear-terror" than inexperienced therapists, probably because of the student therapists' own fear of the patients and their dynamics. Amount of conscious anger seems to be correlated with health early in therapy, but not late in therapy. This is consistent with a process of becoming aware of repressed anger, abreaction, and diminution as the patient learns to handle the irritating and frustrating aspects of his life.

6. "Permit the refinement of psychotherapeutic technique and, possibly, further delineation of the nature of schizophrenic pathology as revealed in the psychotherapy situation."

(a) Psychoanalytic therapy of limited time (an average of 70 sessions per year) produces appreciable higher levels of functioning.

(b) Lower class patients can be treated successfully by psychoanalytic therapy.

(c) Intermittent treatment, as demanded by the patient, is helpful to the lower class patient, even though it conflicts with the traditional training of the therapists.

(d) Differences between different reasonable psychoanalytic techniques are not critical in patient change.

(e) The use of medication is apt to foster discharge, but retard the decrease in the thought disorder. The relative importance of these different aspects of improvement is a clinical decision which must be made for a particular patient at a particular time.

(f) Very dramatic techniques do not seem to have any unique merit.

7. "Demonstrate the utility of recently evolved psychological scaling techniques in solving the measurement problem which plagues attempts to evaluate the results of psychotherapy (or other therapies). Through the use of Estavan's technique, blind subjective judgments can be mapped onto a ratio scale so as to permit the use of powerful statistical tools."

The new psychological scaling technique was found to yield ratings which were internally consistent, reliable between raters, and which possessed both concurrent and predictive validity.

## III. Results Considered Significant

1. Psychology is effective with schizophrenic patients. Combining both groups, it decreased the thought disorder, improved overall functioning (as measured by the "blinded" CSI ratings) and decreased hospitalization as compared to the comparison group.
2. The value of psychotherapy becomes more evident the longer one follows the patients. The two year follow-up hospitalization data is even more striking than the short term data.
3. If only inexperienced therapists were used and the project had been terminated after 6 months of treatment, there would not have been any evidence that psychotherapy was helpful. In that first evaluation (6 months), only the patients of experienced therapists tended to show clear evidence of improvement. Only in later evaluations did the patients of student therapists tend to demonstrate the advantage of receiving psychotherapy.
4. The thought disorder seems to be central in the psychopathology. Long term hospitalization is more closely related to change in the thought disorder than to length of initial hospitalization.
5. Additional improvement in the thought disorder beyond that produced by medication is the aspect of psychopathology most affected by psychotherapy. It shows the effect of psychotherapy earliest and most clearly.
6. The use of medication adjunctively makes behavioral control and hence discharges easier to attain for inexperienced therapists, but it slows change in the thought disorder for such therapists.
7. Experience and training in doing PSYCHOTHERAPY WITH SCHIZOPHRENICS is critical; experienced therapists produce balanced improvement, that is, improvement on all criteria. Whether or not medication is used adjunctively does not make much difference. If medication was used adjunctively, it was used to make

easier initial contacts, but the experienced therapist tended to withdraw the medication as rapidly as he felt the patient could tolerate it, depending on the psychotherapy, not the medication as primary therapeutic agent. This was not always the case with his students.

8. Pathogenesis (the degree to which the therapist unconsciously makes use of dependent people to solve his own conflicts, as measured by pre-project TAT's, blindly scored) was strongly related to therapist effectiveness. (Measured by actual patient change measures.) This is perhaps the most striking therapist variable so far described; moreover, it is theoretically meaningful. Impressionistically, general maturity and attitude toward supervision were also related to effectiveness.

9. Psychoanalytic psychotherapy effective with poor and/or Black patients. Despite pessimistic statements which are sometimes made about the unsuitability of psychoanalytic psychotherapy for such patients, they clearly benefited. Moreover, this occurred even though the therapists were white and the Detroit riot occurred in the middle of the project. However, both supervisors had more knowledge than is usual among professionals about the characteristics of poor people and of Black people and of the difficulties in treating such people.

10. Knowledge of the characteristics and difficulties in treatment of people of the social class and ethnic sub-culture of the patients is at least as relevant as knowledge of the psychopathology per se. For example, lower class people are unsophisticated about psychotherapy and need to be informed as to what the process is all about. They are easily intimidated by professionals and are apt to feel that they are at fault if they cannot understand the therapist or if they are misunderstood. The therapist must actively attempt to decrease their intimidation and help them to feel free to question and disagree. In short, it is up to the therapist to deal with the impediments to communication and the therapeutic process characteristic of such patients.

11. Therapists for poor people need to be willing to see the patients on a crisis intervention or repeated intermittent crisis intervention basis. Frequently the patient will only accept help on this basis, but such patients benefitted out of proportion to the time spent with them. Important is their feeling that help is and will be available at a particular setting when needed.

12. The scaling procedure yielded quantitative measures of clinical judgement from the Clinical Status Interview, the Rorschach, and the TAT, which were internally consistent, reliable between raters, and concurrently and predictively valid for each of these clinical procedures separately. It is important to note that the raters were trained in the clinical procedure they were using. In diagnosis, as in therapy, relevant training and experience is critical. It was also possible to demonstrate validity for the Rorschach by a matching procedure, without using the scaling technique. That, when properly investigated, these clinical tools really are valid is a finding of obvious importance.

13. Differences in technique among experienced psychoanalytic therapists may not be critical in effectiveness; nonetheless, certain fundamental assumptions about the roles of emotion, conflicts, defenses, childhood, etc., seem essential.

14. Professional discipline (psychiatrist vs. psychologist) and sex of therapist do not seem to be important in determining effectiveness; relevant training and experience was important, of course.

15. Institutional "resistance" in the form of staff projections and acting out are to be expected when such a research program is instituted, because it is felt to threaten the security and predictability of established procedures and the status and security derived from one's ability to carry out established procedures.

Table 2

AVERAGE HOSPITALIZATION AND CORRECTED HOSPITALIZATION,  
INTELLECTUAL TESTS SCORES, PROJECTIVE RATINGS,  
AND CLINICAL STATUS INTERVIEW RATINGS  
(20 MONTH DATA)

	n	Raw Days Hosp	Corrected Days Hosp	CSI	VVT (errors)	WAIS	PM	TGV	TAT	ROR
Control	12 <sup>a</sup>	113.5	146.4	.89	17.5	89.1	10.8	7.9	.98	1.02
Experi- mental	21	78.4 p<.05	71.8 p<.03	1.00 p<.02	12.9 p<.005	97.4 p<.005	12.9 p<.05	9.0 p=.07	1.02 ns	1.03 ns

<sup>a</sup>For CSI only, n=10.

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#### IV. PUBLICATIONS

##### A. Published Articles

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for the Feldman-Drasgow Visual-Verbal Test.

15. Karon, B.P., & VandenBos, G.R. Medication and/or psychotherapy  
with schizophrenics: which part of the elephant have you  
touched?