Delivered before the symposium on Schizophrenia at the annual meeting of the New York Society of Clinical Psychologists Inc. at the Brooklyn Plaza, Saturday, May 23, 1964 in the afternoon.

Two decades have passed since clinical psychology emerged as a profession in its own right. The first decade was spent in organization, recruitment, development of training programs and in securing financial support. By 1955, the profession, having won its identity, turned more towards transmitting its knowledge and extending its services to the community. Never before had a professional group attained such rapid acceptance. Apparently the field of mental health had been awaiting the development of clinical psychology even as a fond parent awaits a child's first steps or word. Clinical psychologists quickly became an integral part of the health teams in hospitals and clinics which had previously been true only in child guidance work and, for the first time, full-fledged members of departments of psychology.

In the middle 50's, just as clinical psychology settled down, the field of psychopathology and its allied field, the mental health profession suddenly underwent a terrific upheaval. To be sure, this upheaval had been brewing for some time; but the conjunction of drug-therapies, open hospitals, and the culmination of several socio-economic-cultural trends triggered off a revolution, the likes of which had never been experienced before in the field of mental health. Those who bear the steady burden of clinical case loads are perhaps not fully aware of the extent of the revolution that has taken place. My purpose today is to examine the nature and causes of this revolution and to draw its implications for clinical psychology.

The revolution that I refer to was not unlike a political revolution where long simmering forces unleash a popular reaction against the status quo, law and order are overthrown, prison doors behind which the previous regime confined its opponents are thrown open, new power centers emerge, the national treasury is raided and the revolutionaries settle down to become conservatives, eventually to be overthrown in turn.

The revolution in psychopathology has not been so drastic. It occurred quietly, without public furor, but its effects are no less telling. Law and order in psychopathology as represented by the diagnostic and legal procedures surrounding hospitalization, treatment, and release have been radically modified in the area of mental disease. The area of mental retardation was practically eliminated as an independent category in the new nomenclature. Whether these operations were a success is still debatable. Our admission policies have been liberalized with the result that commitment is becoming rarer and voluntary admissions are more common. The hospital doors have been thrown open, the prison aspect of our institutions is gone, release rates have been doubled in the mental diseases, but admission rates have risen in both disorders. What were formerly custodial, locked-door, institutions have been changed not into open-door hospitals,
but revolving door hospitals. Each year about 70-80% of the admissions are released but some 40% are readmitted. The wall between the community and the hospital has been breached; the hospitals are always full but not with the same patients. Clinical psychologists, sociologists, anthropologists, statisticians, biometicians, biochemists, geneticists, pharmacologists, behavioral scientists, and others, hardly heard of in the halls of psychopathology during the 30's are now, if not resident, at least safely inside the door. Funds for research, rather scarce in the 30's, are now, if not ample, at least available from the national treasury. The separation of mind and brain, a firm tenet of the 30's, is no longer regarded as a stumbling block in integrated attacks on mental disorders.

To summarize the results of this revolution briefly, we can say the following: First, responsibility for the mental patient is no longer the psychiatrist's alone. It is shared by the community, the family, and the school and these three social institutions are at present ill-equipped to handle the problem. Second, the detection of the presence of mental disorder is no longer the province of the psychiatrist alone. Psychologists, sociologists, anthropologists, social workers, educators, business and labor leaders, must help in this regard. Third, in dealing with the mentally disordered, we are no longer exclusively concerned with diagnosing their illnesses; we are also concerned with their strengths as well as their weaknesses.

With this brief introduction to the results of this revolution let us turn our attention to its specific elements and to their implications for clinical psychology. What has brought about this revolution? One factor which may account for it in part is the precipitous drop in the birthrate brought on by the 1929 depression, a drop which represents an estimated 10 million children who would normally have been born (Havighurst, R.J. American Higher Education in the 1960's, Ohio State University Press, 1960.) This drop may be likened to a travelling wave propagated in time which produced a trough in the available manpower curve as the depression-born generation moved through life. When this generation reached school age, there was a severe reduction in the number of school admissions; when they reached high school age, a similar reduction there. Fortunately, certain limiting factors prevented this trough from becoming as deep as it might. Medical care succeeded in reducing infant mortality, thus permitting more infants of this less numerous generation to survive. The rate of attendance in high school and college rose, perhaps in the wake of the shortage of students.

The effect of this travelling wave on our economy, health, education and manpower still remains to be traced. It is clear that the shortage in teachers, for example, cannot be blamed on the profession's lack of appeal alone. It takes 20 years to raise a teacher; the population explosion of the 40's changed a shortage into a national emergency.

Despite this manpower shortage, there has been no shortage of mental patients, especially of schizophrenics. In fact, there has been an increase in admission rates for the functional disorders. How do we explain the increase in first admissions while the reservoir from which they are drawn was depleted? It is indeed a tough nut for the statisticians to crack.
I would like to offer one possible explanation, namely, changes in attitude, or increase in tolerance towards mental illness. If admissions increase despite the lowering of the reservoir from which they are drawn, it becomes necessary to inquire whether a new type of patient is being admitted. It is well known that only about 50 percent of schizophrenics are hospitalized at any one time; the other half, though ill, maintains itself in the community for a longer or a shorter period. What would happen if, suddenly, the number of hospital beds were doubled? The experiences of European countries like Norway indicate that the patient population would soon be doubled also. When there are not enough beds to admit all who need care, only the severe cases are admitted. However, when there are not enough severe cases demanding admission, milder cases take their place. But milder cases also return sooner to the community. This produces a chain-reaction, bringing in more mild cases and releasing them more rapidly. However, when the new crop of babies, born in the 40's arrives at the age when hospitalization is possible, we may be inundated with a new wave of patients unless we have in the meantime, developed adequate methods of care and prevention. This, at any rate, is the picture for the mental diseases.

For the mental deficiencies which draw their patients largely from childhood, the corresponding trough, originally propagated in the 30's, has already passed. However, as the result of the tremendous rise in the birthrate in the middle 40's, our facilities for caring for the mentally retarded children, who appeared shortly thereafter, suddenly became inadequate. In the meantime, parents of less severely retarded children had also become sensitized to the possibilities of treatment, and came for help. This, at least in part, is the explanation for our present astonishment as to where all of these children who need care come from. Another factor is the reduction of infant mortality and the prolongation of life. Some children who in former years would have succumbed in infancy or in childhood now survive as mentally defective or emotionally handicapped children and adults.

Increased tolerance of the mentally handicapped has been a remarkable development. The impact that the organization of parents of retarded children has had in the improvement of care is one of the most striking phenomena of our day. The fact that the parents of the most severely retarded are quite often found among our most advanced, most productive, and most talented and farsighted citizens has helped to prevent the stigma of mental illness from attaching itself to mental defects. The random nature of much of severe retardation, attested to by many surveys, has made this possible.

For the mentally ill, the greatest factor in bringing about a freer release policy lies with the new means of adjustment by the family and society to the released patient. Formerly, any erratic behavior was taken as a symptom, or as a warning of worse things to come -- that the psychosis was returning or that the deficiency was aggravated and the patient would have to go back to the hospital. Today we are beginning to view slight aberrations as personality quirks, harmless in nature, to be adjusted to, not looked upon with concern. We have known for a long time that remitted patients are more law-abiding, less aggressive (by and large), and not nearly as likely to get into mischief as the rest of the population. At the same time we have also known that they often exhibit transitory behavior which we tend to classify as compulsive, senseless or wasteful, paranoid, depressive, querulous, etc. As long as we regard these quirks as
idiosyncrasies, and not as harbingers of full-blown episodes to come, we can live with them. The patient, too, can accept them as slight lapses. Suppose he reacts compulsively, with much wasted effort in performing a given task -- the anxiety that this occasions in his family can be contained. The first shock at the appearance of such senseless behavior may jolt the family or the classroom but the alternative of returning the patient to the hospital is no solution. The increased load which the presence of ex-patients places on school and family has to be examined and dealt with wisely. Proper training for teacher and parent in dealing with such contingencies are necessary. I wish we knew how to cope with this problem, for it seems certain to become more important in time.

Other causes underlying the drop in our resident hospital population are the cessation of certain trends in population factors which tended to increase hospitalization rates in the past (Pugh, T.F. and MacMahon, B. Epidemiologic findings in U.S. Mental Hospital Data. Little Brown & Co., 1962.) Immigration, industrialization, and urbanization have together been responsible for a great share of the upward trend of hospitalization in the past. Their influences are now on the decline, causing a reduction in the increase of the resident patient population which characterized our country up to the middle 50's. Another such contributing factor was the excessive number of socially marginal men who were forced into the hospital during the depression. This cohort is fast dying out and is not being replaced. The biggest change, however, is in release policies. Up to the 40's, only two-thirds of the patient population was released. Now two thirds are released. Even though many relapse, hospital census have dropped. Instead of caring for the patients in the hospital, we now care for them in the community. With this revolution have come certain changes in the nature of the patient population. Most of the earmarks of the continuous custodial care - waxy flexibility, mutism, echolalia, echoprosopia, etc., have practically disappeared.

Despite the high level of optimism that now exists in the field of mental health, certain dangers must be kept in mind. First, the implications of the gradual decline in our resident hospital population have to be examined more carefully. As a result of improved release policies, we now have twice as many former mental patients returning to the community in all walks of life as we had in the last decade. There are twice as many ex-schizophrenics returned to care for their children, twice as many ex-schizophrenics returned to executive jobs, and the practice of law, medicine, psychology, psychiatry, teaching, etc. Two decades ago we would have been horrified to see these individuals return to professions involving interpersonal relationships of such high order. Today, we regard this with equanimity. But should we? Only prognostic studies which indicate which of the former patients are likely to make good, can suggest an answer, and such studies are very few in number. Already data are beginning to show the possibly dysgenic effect of the returned patient. The fertility of families with one or two schizophrenic parents is on the increase.

Thus far we have dealt with population parameters and with the revolution in attitude towards mental illness and its management. We shall now turn our attention to research. In order to discuss adequately the current revolution in research it is necessary to make use of scientific models through which progress in science is usually described. Unfortunately, time will not permit such an excursion. All I can do is enumerate for you the scientific models which have been proposed for explaining the aetiology of mental disorders, especially schizophrenia. These are: (1) social-cultural, (2) developmental, (3) learning theory, (4) genetic, (5) internal environment, and (6) brain function. (These have been discussed in a recent paper published by McGill University and if time permits we can go into this matter during the question period.) (Zubin, J. Behavioral Concomitants of the Mental Disorders - a Biometric View - in Wigdor, B.T. Ed. Recent Advances in the Study of Behavior Change, McGill University Press, 1964.)

The revolution in research and in management has not yet affected the entire scope of clinical psychology, but it has influenced diagnoses and evaluation of therapy. One school of psychopathologists has cavalierly dismissed diagnosis by declaring mental disorder a myth or a unitary condition resulting from coping with life incompetently. Some psychopathologists who still consider mental disorders as real have begun a revision of the methods now used for diagnosis and evaluation of therapy. In the wake of the epidemiological studies that blossomed forth in the last decade, it has become quite clear that our knowledge of psychopathology is limited to a small section of the population of the mentally ill. Most of our techniques for diagnoses have been developed for middle class or upper class patients. We have now gone as far as we can in providing these social classes with assessment techniques suited to their needs and with therapies suited to their tastes. It is tragic that we are entirely unequipped to deal with the fifth of the nation caught in the throes of poverty. It is easy enough to develop specific techniques suitable for each social class and ethnic grouping, it is true -- but how are we going to establish comparative norms? We must proceed along two lines. First, we must develop and explore culture-dependent techniques such as interviewing, observational techniques, various testing procedures which will provide norms for the various groups and detect deviants from these norms. Secondly, we must provide some culture-free or culture-fair techniques. In a recent paper I had made the suggestion that, for the latter, the answer may lie with the response of the subject which occurs during the first second following stimulation. This first phase of response may occur so fast that cultural-social factors may not be able to make themselves felt. The startle pattern, for example, (Landis, C., and Hunt, W.A. The Startle Pattern. Farrar and Rinehart Inc., 1939.) occurs in the first 300 milliseconds following a pistol shot. This initial phase is universal. At the end of this initial phase, culture takes over. The policeman may draw his gun, the New Yorker dodge into the subway, and the farmer take to the woods; but the startle pattern itself is the same for everyone. If we could find such universal behavior which is at the same time differential with regard to psychopathology, our search would succeed. The usefulness of such techniques in cross-cultural and international studies is, of course, obvious. Unfortunately, only a small portion of patients -- some types of epileptics -- deviate from the norm with regard to the startle pattern. There are however, other techniques in the first 1,000 millisecond range which are quite promising. Among them are certain aspects of reaction time, two-pulse thresholds, and pupillo-

ography.
Other evidence for the importance of psychophysiological indicators in diagnosis comes from the use of derivatives of the interview method -- self-reporting personality inventories such as the Cornell Medical Index (Personal communication from Dr. Alexander Leighton.) The items dealing with self-reports of ideation and mental content are not nearly as reliable as the items dealing with self-report of internal psychophysiological and somatic events (heart palpitations, sweating feet etc.). It is not clear whether neurotics are more sensitive to normal physiological body events, actually experience deviant bodily events, or have their body events exacerbated by the normal feedback to which the bodily events give rise. Only careful psychophysiological measurements can cast light on this question.

In addition to the problem of assessment of the mentally ill there is the problem of assessment of mental retardation. In this field one of the chief problems is that of distinguishing the congenital mental deficiencies from socially induced mental retardation and from the mental disorders. For this purpose, psychological assessment is indispensable. We have gone as far as we can with the global intelligence tests and with paper and pencil techniques. To assess the capacities as well as the shortcomings of the mental defective, new approaches are now required. Binet, Goddard and Terman did a tremendous service to the feebleminded by providing the mental age scale, but their followers did a tremendous disservice by throwing out those psychophysical and experimental techniques which though measuring individual difference, did not correlate with the central intelligence factor. Physiological, sensory, perceptual, psychomotor, as well as specific conceptual techniques are needed to assess the abilities and disabilities of the patient. Focused-interview techniques are needed to evaluate his personality. With the use of these techniques, better classification, better prognosis, and treatment more suitable to the individual case will be forthcoming for the wide variety of the mental deficiencies.

At the present time, intelligence tests, standardized as they are on normal populations, give a clear picture of the defects of the patient, i.e., of the low altitude of his general intelligence, but give no idea of the breadth of his specific abilities. Furthermore, as Dr. Helen Schucman has shown, the initial test is hardly as good an indicator of future development as is the change from initial to retest. The old dictum that mental deficiency was incurable may still hold true in some instances. But as long as there is life, there is hope of learning, and while the patient may not learn as much as a normal, what he does learn may prove quite useful to him and to society, and sometimes, surprises do occur.

One of the big surprises has been the gradual disappearance of many mentally defective children in follow-up studies. Apparently, the peak for discovery and institutionalization for mental deficiency is age 14, when the school closes in on the slow learners and finds them defective. After adolescence many of them can no longer be found in institutions or in treatment. Since there is no evidence for higher mortality, perhaps, slow as they are, many of them finally "learn" -- for even an IQ of 50 can theoretically attain a mental age of 10, at the chronological age of 20. This may happen more often than we now suspect.

Another problem is how much the recognition of mental deficiency rests upon the social-cultural standards. Perhaps the greatest difference in this respect arises between European and American practice, the Europeans being able to retain more of their feebbleminded in the community. Thus, the Netherlands, with a
population no smaller than New York State, has an institutionalization rate only 1/3rd as high, and Amsterdam, a rate only 1/10th as high as New York City. How the criteria for determining mental deficiency depend on the social milieu is most strikingly expressed by Böök, (Böök, Jan. A.: Genetic Etiology in Mental Illness, the Milbank Memorial Fund Quarterly, 1960, 22, 193-212) in the following terms: "Just where, on the slope of the (normal) curve, pleasant physiological stupidity changes into social or medical problematics is a matter of conjecture. More important than such conjectures is the fact that the malignancy of inferior intelligence is a function of technical and social developments and public tolerance."

Recent evidence of the uselessness of our current techniques when applied to underprivileged children comes from the work of Vera P. John, ("The intellectual development of slum children: some preliminary findings;") American Journal of Orthopsychiatry, Vol. 23, 1963, pp. 813-822.) For a long time we had accepted concrete behavior in sorting tests as an indication of schizophrenia in non-organic cases. Vera John has suggested that this so-called "concreteness" is a function of social deprivation rather than of schizophrenia, and all the work on concrete vs. abstract behavior will have to be repeated with suitable socioeconomic and cultural controls.

One of the most frequent requests made of the diagnostician is to determine whether there is any organic involvement in the clinical picture presented by the patient. This will loom larger in time, especially if we begin to deal adequately with the 1/5th of the nation in the poverty pockets. First of all, toxemias of pregnancy and other untoward gestation events which often lead to organically based congenital conditions are much more frequent in the low socioeconomic level. Secondly, brain injuries and other organic accidents are also more prevalent in this group. How to distinguish between psychogenic and organic in a milieu where social-cultural forces occlude the picture is a tremendous challenge for the clinician.

With regard to therapy, only those psychotherapists who are unashamedly mystical or sentimental will deny the need for evaluating psychotherapy. The failures of therapy are well known to the clinical community in America, but an unequivocal conclusion that therapy is valueless is far from demonstrated. There is a great difference between recognizing the problems of validating psychotherapeutic outcome and insisting that there is now sufficient evidence to establish the null hypothesis. There is a tendency current in some quarters to give up evaluating therapy and to resort instead to analyzing the process itself. This escape into process will never substitute for actual evaluation. No amount of investigation of "the therapeutic process" is going to give us the answer as to whether psychotherapy was worthwhile in the first place.

Some of the problems in evaluating outcome of psychotherapy are shared with clinical research in general, while others are unique to psychotherapy. The adequacy of controls is a universal problem. The ideal situation of matched identical twins for treatment and non-treatment groupings is no more available to pharmacologists than to psychotherapists. Many workers agree, however, that by using age of onset, duration of disease, sex, and diagnosis as the minimum essentials for comparability of two patients, a workable control situation can be established. Obviously the first 3 parameters are as available for the evaluation of psychotherapy as for that of any other treatment, but it is the last, i.e., diagnosis, that raises particular methodological problems.
As long as the essential nature and cause of mental disease are unknown, and there continues to be disagreement among qualified persons concerning the broadest designations of mental disease, diagnosis will be imperfect and unreliable. But disputes about diagnosis can be circumvented for the purpose of a particular research project by a rigorous definition of terms or by the application of clearly outlined symptom complexes for matching of patients.


At the present time these tools are being evaluated according to two criteria: 1) severity of illness, and 2) prognosis under specified treatment, such as psychoanalysis, behavior therapy or no therapy. It is clear that if we can specify both of these criteria and standardize our instruments against them, we can arrive at a much better basis for evaluating outcomes. Two individuals with similar prognoses should have similar outcomes under two equivalent therapies or different outcomes under non-equivalent ones.

An interesting conflict often arises in the mind of the clinician in prognostic studies. When the prognosis is very poor, the clinician usually redoubles his efforts under the assumption that the case he is treating has the 1 in 1,000 chance of making a recovery. This leads in some situations to undue self-adulation in success and to breast-beating in failure. In others, the failures are soon forgotten and only the successes are remembered. By providing prognostic baselines in a regular manner, the attention of the research clinician can be focused on those with good prognosis who failed and those with poor prognosis who succeeded, while the good as well as the poor prognoses which were borne out by experience can be laid aside. Surprising failures and unexpected successes can do more in furthering our understanding and improving our prognoses than can expected successes or expected failures.

The problems of control are serious, but not necessarily insuperable. It is evident that there is no uniformity among mental health workers with respect to usage of such terms as "cured," "recovered," or "improved." But this problem is not unique to psychiatry. These terms are, after all, in the vocabulary of acute diseases like appendicitis or strangulated hernia, and are as imprecise in chronic conditions such as tuberculosis or cancer as they are in schizophrenia. Tubercle bacilli may be eradicated from the sputum and symptoms may disappear, but if the over-all life expectancy has been shortened, can the patient really be called
"cured?" In cancer therapy it is customary to refer to five or ten year "cures;" the arbitrariness of such terms to an individual patient do not compromise their use in evaluating treatments for cancer. It is clear that explicit and precise criteria for outcome are necessary in any satisfactory clinical evaluation. Freyhan's concept of "target symptom," which the therapy specifically attempts to reduce or eliminate, is an example of the type of precision that can be introduced.

The evaluation of specific goals of therapy need not depend on ratings alone. Techniques for measuring changes in such specific characteristics as flatness of affect, disordered thinking, level of retardation in depression, anxiety, etc., are either already available or are in the process of development. Thus, Salzinger, (Salzinger, K., Portnoy, Stephanie, and Feldman, R. Verbal behavior in schizophrenics and some comments toward a theory of schizophrenia. In P.H. Hoch and J. Zubin (Eds.) Psychopathology of Schizophrenia, New York: Grune & Stratton, in press.) has developed objective measures of self-referred affect through the use of reinforcement techniques, Payne, (Payne, R.W. The measurement and significance of overinclusive thinking and retardation in schizophrenic patients. In P.H. Hoch and J. Zubin (Eds.) Psychopathology of Schizophrenia, New York: Grune & Stratton, in press.) has developed objective measures of thought disturbance in his tests of overinclusive thinking, and similar techniques for other target symptoms are in the making.

The criteria that have been used by psychiatrists too often cannot yield the objective data required in scientific evaluation. What we need are more definite measures of the improvement in "comfort" of both the patient and his family. Pre- and post-treatment inventory of behavior, as suggested earlier, is one promising maneuver. Further refinement will be necessary to avoid the atomistic and highly selective profiles that such scales currently tend to give. There is, moreover, a growing body of information from a variety of reliable sources that will ultimately contribute to our knowledge of spontaneous improvement rates. Such data will provide a baseline for comparative studies of outcome.

In order to make comparisons between the various types of therapy, I suggested some 15 years ago that a center be established where a standard population of patients might be housed. (Zubin, J.: Design for the Evaluation of Therapy. Chap. 2 in Psychiatric Treatment - Proc. A. Res. in Nerv. and Ment. Dis., 31, pp. 10-15. New York: Williams and Wilkins, 1953.) The standard population would be specified with regard to age, sex, symptoms, duration of disease, age at onset, and other pertinent variables. This population of patients would serve as the proving ground for the relative efficacies of different types of treatment. In psychiatric centers throughout the country, varieties of therapy could be tried out on comparable groups characterized according to the same variables. The outcomes of these therapies could then be evaluated and a definitive statement arrived at as to the efficacy of each treatment.

Thus far, the suggestion for a standard population, made in 1950, has not caught on. Perhaps it is too much to expect physicians to keep patients "on ice" without applying any of the apparently promising current therapies. An alternate suggestion is to establish a Central Assessment Bureau to which patients could be referred before and after therapy for an assessment by the most promising instruments now available. At the present time, the evaluation of outcome is made by those in whom a conflict of interests is, to say the least, most likely to be present -- the patient, his family and the therapist. Such evaluations will no doubt continue to be made, but the provision of a neutral assessment agency, on a confidential basis, could bring about a most salutary influence in the long run. Such an assessment could at first be made on a purely advisory basis. As the agency continues to function over the years, actuarial material could be provided for the probable outcome of a given type of patient under a specified therapy.
While such actuarial tables will never replace clinical judgment, any more than life tables replace the clinician's prognosis for survival of a given case, they would provide guides for choice of therapy and give each therapist a batting average against which to compare his results. Such comparisons are practically impossible now.

One comment may be made here regarding the battle for the possession of the right to practice psychotherapy. Abnormal and clinical psychology has an unhappy history of losing the ground it gains in hard battle by ceding newly won territory to normal psychology once the battle is over. In this way, depersonalization phenomena have led to the self-concept; phantom limb, to body image; registration, to consolidation of memory traces, etc., etc. Psychiatry, too, suffers this fate. Such diseases as epilepsy, general paresis, pelagra with psychosis, phenylpyruvic (or phenylketonuria as it is now called) became part of nonpsychiatric medicine as soon as the etiology of these diseases became known. Only diseases of unknown etiology tend to remain permanently in the psychiatric fold. Thus, the abnormal gets incorporated into normal psychology. This will be the fate of psychotherapy. It will gradually be absorbed into learning theory and developmental theory. In this manner, all the abnormal phenomena which are attributable primarily to learning and development will cease to be regarded as abnormal and will fall into the bailiwick of the educator or remedial therapist. Only the recalcitrant cases and individuals suffering from genetically based or physiologically based conditions will remain in the hands of the psychopathologist. The battle for the possession of psychotherapy will persist only so long as ignorance about the nature of therapy and its efficacy remains. Once this ignorance is dispelled, competition will change into cooperative effort for finding the best way of administering therapy in accordance with, not law or authority, but the patient's best interests.

With regard to mental illness, the big problem is whether we should continue the freer release policy now in vogue. There are already signs that the community will not tolerate indiscriminate release. We need to develop techniques for determining whether and when a patient is ready for release. Only prognostic studies can help us here. We have already found some 150 traits which are predictive of outcome in schizophrenia. (A biometric approach to prognosis in schizophrenia. J. Zubin, S. Sutton, K. Selzinger, Suzanne Selzinger, E. I. Burdock & David Perotz. In r.n. Hoch and J. Zubin (Eds.), Comparative epidemiology in the mental disorders, New York: Grune and Stratton, 1961, Pp. 143-203.) In 80% of these traits, the prediction has remained unchanged since 1900, despite the fact that therapies have changed radically during the last 60 years. Apparently, the traits which the patient possesses at the time he arrives at the hospital are more important than the therapy he receives. In order to develop prognostic procedures, we must investigate the early development, premorbid history, morbid status, and course of illness. One example, of a trait which we have investigated is the pattern of adolescent friendship in schizophrenics.

This aspect of adolescence, as well as the rebellious nature of the adolescent, demanded attention because nearly half of the population is now below 21 years of age. The question has often been raised whether there is more psychopathology in our youth today than was the case in previous generations. Does the teacher of today have to deal with more psychopathology than did his predecessors? It is difficult to answer these questions definitively, but the shrinking role of the family in the upbringing of the young, a generally accepted belief, would lead one to answer them affirmatively. The gradual shift from the extended rural family to the urban-suburban family, another generally accepted belief, may have cast new burdens on the teacher by relegating occupational as well as intellectual training to the school. Until recently the family still retained the task of
inculcating the mores. Recently, however, even this function has been relinquished according to some authorities.

James Coleman (Coleman, James S., The Adolescent Society; The Free Press of Glencoe, 1961.) points out that there is little economic value in the adolescent today, and his social training comes largely from his peer group. As both father and mother vanish into the world of work, adolescents have to develop their own society, and without proper guidance, such societies can often go astray. The house he lives in is no longer a psychological home. It is more like a boarding house. The school is becoming more and more a total institution for the adolescent, using Goffman's term, in which his entire life seems to be centered. Coleman has recently suggested that perhaps the adolescent of the future will perform live apart from his family in special boarding schools, as was the case with the British nobility. The separation between the generations is of such magnitude that adults have to deal with adolescents collectively rather than individually. The added sophistication of modern adolescents, expressing itself in lack of concern for adult authority, impatience with adult control, disdain for adolescents who remain subject to parental authority, smoking, drinking, and sex-play, all add up to a problem with which some agency has to deal. The school is the most likely candidate. In the midst of this turmoil are some adolescents who are not strong enough to find their own bearings and in whom the age-typical conflicts may precipitate illness. How to cope with this situation is one of the issues facing the sentient educator, and it is to him that society is looking for a solution.

**SUMMARY**

One cannot escape the conclusion that, in order to meet the challenges of the current revolution, clinical psychology will have to undergo a considerable revolution of its own. Even though the interest of the clinical psychologist remains anchored in his discipline, he must get a wilder exposure to the entire spectrum of psychopathology if he is to meet future challenges. How to train him to appreciate the entire spectrum -- which ranges from anthropology and sociology and social psychology through physiological, sensory, perceptual, psychomotor and conceptual behavior to genetics, biochemistry and brain function -- remains a problem for our discipline. Since we do not know what direction clinical psychology will take, we must prepare our student for all eventualities. To train individuals who are limited in scope to giving intelligence tests or Rorschachs, or even psychotherapy, is a poor preparation for the next decade. If we do nothing else, we must develop the flexibility which will permit a person to transcend the limitations of his specific education and accept the challenge of the new things that are to come.

A historical review of clinical psychology reveals a vitality which has successfully met the challenges of the past. In each era clinical psychology borrowed concepts from its cognate fields and lent them in return, but it was always in rebellion against the inadequacies that existed. It is interesting to note that even before dementia praecox became known in this country, G. Stanley Hall (1903) quoted in Lewis, N.D.C., History of the Nosology and the Evolution of the Concepts of Schizophrenia in Psychopathology of Schizophrenia, in P.H. Hoch, J. Zubin, (Eds.) New York: Grune & Stratton.) called attention to arrested development in some adolescents and the need to deal with the problem. The revolt against philosophy, led by Wundt, had its counterpart in psychopathology through Kraepelin, who had been dissuaded by Wundt from entering psychology. Instead, Kraepelin introduced Wundt's psychophysical techniques into the clinic to elicit
more objective evidence of behavioral deviation in the mentally ill. He had this to say:

"As soon as our methodology has sufficiently proved itself through experience with healthy individuals, it would be possible to approach the actual ultimate goal of these efforts, the investigation of the sick personality, especially of the inborn pathological disposition. In an investigation of many individuals we will always find some who deviate profoundly from the behavior of the vast majority in one or another aspect. If this deviation appears to be damaging to the mental life, and if it reaches a certain degree -- which admittedly can only be arbitrarily determined -- then we tend to regard it as an illness. Experience teaches us that persons with pathological traits of this kind are, on the whole, in greater danger of a general mental disturbance than those personalities (natures) whose characteristics are in the middle range. We, therefore, have first of all to investigate whether it is possible by means of psychological tests to determine individual deviations, which cannot be recognized by ordinary observation. If that succeeds, we would be in the position, through the quantitative determinations at our disposal, to establish the borderline between health and disease much more precisely and more validly than has been possible so far." (Kraepelin, E. Der psychologische Versuch in der Psychiatrie. Psychol. Arb., 1,77 (1896).

The work of Kraepelin and his followers, inspired by the newly developing experimental physiological psychology, led to the introduction of brass instruments and psychophysical methods into the clinic, but only a small reflection of these experimental advances remained, in such items as weight judgment on the Binet and the vital index used by Spearman for measurement of mental defect. The clinical revolt against psychophysics during the first decade of this century led unfortunately to the temporary elimination of psychophysical measurement from the clinic because the results did not relate to intelligence, which became the preoccupation of clinical psychology of the time. The second decade saw the emergence of group intelligence tests. Factor analysis won its victories from global tests in this decade. But in the thirties, a wider rebellion broke out against the use of intelligence tests (especially the IQ) as the sole basis of assessment, and personality inventories were born. These were soon devalued by the rebellion against psychometric atomism led by Gestaltists; as a result, sorting tests and abstract-concrete approaches, rigidity measures etc., came into favor during the forties. In the fifties projective techniques became the favorites because of disappointment in the clinic with the so-called "non-dynamic" testing field. These too have passed their zenith and now observational techniques in the form of inventories and rating scales hold the limelight. Now there is a revival of interest in physiological, sensory and perceptual techniques and the introduction of sociological and anthropological considerations into the clinic. There is also a desire to improve, if possible, the culture dependent indicators of mental disorder as well as to find new culture-free or culture-fair indicators. With regard to therapy, learning theory has provided new insights and led to the development of behavior therapy.

It is clear that each rebellion has mullified some of the gains of the previous decade, but each rebellion has had its own considerable heuristic value. With a history such as this, clinical psychology, if it continues in this manner, cannot help but have a wide-ranging and flexible future.

It is unfortunate, then, that so many clinical training programs do not foresee the full scope of the discipline and do not fully anticipate the extent of its needs. Too often they limit -- or permit their trainees to limit -- their areas
of training in too narrow a fashion. Among the new areas which is bound to attract attention is the predicament of the poverty-stricken fifth of a nation that is so much in need of help. Our tests, our interviews, our techniques are all standardized on the middle or upper class. Unless clinical psychology takes up the challenge, it will not be doing its job — and it may find others doing it instead. It is true that a large portion of the poverty-stricken population is unable to pay for assessment and therapy, but funds for such efforts are becoming available. It is up to our profession to be in the vanguard in breaking through the barrier that has kept one fifth of the population from educational and occupational opportunities and has thereby increased the hazard of illness. With regard to therapy, medical personnel may have to share the administration of drugs with other specialists: the need is that great. It is quite likely that the drugs needed to control depression or anxiety will eventually be as safe as aspirin. If so, this will mean that sufficient training in and understanding of differential physiological responses to drugs will have to be given to clinical psychologists, for them to be their own masters in this area.

Clinical psychology as a profession, has progressed more rapidly and more successfully than anyone ever expected. But it is high time now that we shake off any complacency and bend all our efforts toward meeting the scientific challenges of the 60's and 70's. In the fast moving pace of these decades, not only will diagnoses change and therapies come and go, but even the mental disorders themselves may change in nature. Preparing students to meet these changes is indeed a challenge, but unless we meet it, our students, inadequately prepared, will leave the field and our future as a profession will become uncertain. The history of clinical psychology leads me to hope that this will not happen.


