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CLINICAL PSYCHOLOGY IN PAKISTAN*

FARRUKH Z. AHMAD

It is a well known fact that Psychology as an organized field, is a relatively new discipline in even the most advanced countries of the world. But inspite of its young inception, its growth during the past few decades has been phenomenal. We are also aware of the fact that the modern world is heading towards increased specializations in every discipline.

Psychological knowledge is no exception and, as a result of this, the American Psychological Association has 20 divisions of applied Psychology, each representing different interests and skills among Psychologists.

However, no branch of Psychology has enjoyed a more widespread and rapid development than the clinical speciality in the last 30 years. Even, in the underdeveloped country like Pakistan, there is no doubt that, the number of participants interested in the field of clinical Psychology, exceeds all other applied fields. But unfortunately, the discipline has not been able to achieve its proper status due to lack of qualified clinical Psychologists, and other allied facilities.

Before we talk about the scope of clinical Psychology in Pakistan. it will not be out of place to give a brief definition of clinical Psychology.

Clinical Psychology is most popularly defined as an application of Psychological knowledge of human behaviour to the diagnosis and treatment of behaviour pathology. Hence, we can conveniently divide the profession in two aspects of (*a*) Psychodiagnosis (*b*) Psychotherapy.

*This article was read at the Pakistan Psychological Conference held in Lahore in 1978 as a Presidential Address for Clinical Section.

At this juncture the role of clinical Psychologists is usually confused with the role a Psychiatrist. It is necessary to give a conclusive difference, a that the professionals, as well as the public can distinguish the most important difference between the two.

Clinical Psychology is a branch of Psychology, and hence a clinical Psychologist is basically trained in the development and dynamics of behaviour, both normal and abnormal. Then he applies his knowledge of the dynamics of the pathological development of behaviour patterns to the diagnosis and treatment of mentally ill. On the other hand, a psychiatrist is basically a medical man, after completing his medical degree, takes special training in the treatment of mental disorders. In short, we can say that a clinical Psychologist, as a professional person, applies Psychology to medicine and the Psychiatrist applies medicine to Psychology.

We now come to the most vital problem of the qualifications of a clinical Psychologist. It is very adequately defined in the advanced countries, especially U.S.A., where a specific programme of study is approved by the American Psychological Association for the profession of clinical Psychologist. (But unfortunately, in our country, very few people really understand or for that matter even have the knowledge of these essential qualifications. (In Pakistan, we find that most of the socalled clinical Psychologists are practicing only because they are interested in the field of clinical Psychology without being properly trained in this field.) In the light of the above observation it will be of interest to all concerned to know about the prerequisite qualifications of a clinical Psychologist.

To begin with, a clinical Psychologist should have a basic training in the parent field of Psychology and after completing this training) a specialization in the nosological categories, their dynamics, diagonsis and treatment is attained. A minimum degree of Ph.D. in clinical Psychology is normally considered inevitable, in order to practice as a private clinician. Whereas an M.Sc. degree or a Diploma is so given for employment in mental hospitals.

In U.S.A. a Ph.D. in clinical Psychology, gets the following training along with the other standard requirements. A clinical psychologist is

supposed to have an internship in psychodiagnosis and psychotherapy in a recognized hospital or clinic for at least 2 years under supersivion.

A clinicial psychologist also has to go through personal analysis in order to know his own weeknesses and strong points so that during the diagnosis and treatment of a patient, the clinician does not project his own motivations while interpreting patients responses.

I am stressing this point of training, specially because, to the best of my knowledge, many unqualified clinical Psychologists are practicing all over the country. I am sure that you will agree with me that such practice is more harmful to the cause of clinical psychology as a profession instead of being an asset.

In the past years a greater emphasis is given to the theoretical and research aspects of clinical Psychology as well. The clinicians are begining to realize that the adequacy of their practice rests on the validity of their concepts. For the sake of convenience, the psychologists speak of applied work in clinical Psychology, and theoretical work in the field of personality development. But in reality both are in extricably interwoven with each other. Although it is said that one psychologist is doing applied work and another theoritical research, but clinical psychology is concerned with both. It must be thought of as a study of individual cases in the clinic as well as the establishment of principles which allow us to fully understand these cases.

In order to study the etiological and dynamic factors of mental illnesses in Pakistan, we have to conduct detail researches in the field of various factors determining the etiology of mental illness.

It is true that psychoanalytic and sociological theories have pointed out to the family and society as a whole as the most vital factors in the etiology of mental illness. SPIEGEL and BELL (1959) have given a historical background related to the problem of the family as an etiological agent in mental illness. After an extensive review of literature, Spiegel and Bell have pointed out that previous research has focussed on 3 different areas of study : (1) The characteristics of parent child relationships presumed to be productive of

mental illness, (2) The structural aspects of the family, such as order and number and sex of siblings presumed to be correlated with psychopathology and (3) The influence of family's response to genetic and constitutional factors within the child.

A large body of research has investigated the incidence of various structural and situational characteristics in the families of psychiatric patients in western culture i.e. sex, marital status, family system, number of siblings, sibling order and family psychopathology.

BRAND (1965) presented a report of the incidence af psychoneuroses by age, sex, marital status, settlement, community of origin, and years of immigration. A greater incidence of psychoneuroses in females than males was significant.

ODEGARD (1946) conducted a study of a group of 12, 843 Nineteen year old high school graduates in which he followed them for 30—45 years with regard to hospital admission serious mental disorders. The males in his sample had an admission rate somewhat below that of the general population which for males was 22% above the average, an excess of manic-depressive psychoses accounting for the difference.

WITTENBORN AND SMITH (1964) studied a sample of 150 males compared with 135 females patents on age, chronocity and socio-economic status. Factor analysis showed important difference in factor composition, the absence of a factor which was present in the sample and emergence of a new factor in female Wittenborn (1967) in another study confirmed the results and concludes that such a difference reflects a cultural difference in sex roles. The preceeding researches point out the importance of sex in the determination of mental disorders.

Another important factor in the structure of a family is the marital status of an individual. Many researches in the advanced countries have pointed out these differences and their effect on mental disorders.

KNUPFER (1966) interviewed married and never married subjects in a sample of the adult populatian of San Francisco, He found that more single men are maladjusted than single women or married men, thus confirming and enlarging on the results of other studies.

SPIEGEL AND BELL (1964) suggest that sex and marital status are related, so that part of the relationship that is found between marital status and disease proneness may be due to sex difference. These are a number of studies which deal with the relationship of number of siblings order with mental disorders.

SCHOOLER (1961) reported that there is a significantly higher rate of schizophrenia among the last born of 4 or more sibling families.

LUCAS (1962) demonstrated that in 405 schizophrenics, delusions with religious and supernatual content were more frequent in persons of higher social status, and more frequent among single than married person.

Grandiose delusions were more associated with higher social educational backgrounds and with eldest as compared with youngest siblings. Sexual delusions were more common among women than among men.

DELINT (1964) maintains that last borns tend to be alchoholics because parental deprivation is more likely for this group. Spiegel and Bell (1967) have reported a survey of studies, upto 1959 in which it has been made quite clear that family psychopathology does have an effect on the child's mental disorders.

Severe manic-depressives are generated out of severe manic-depression in the family and neuroses is generated by neurotic disposition in the family.

In the light of the above researches and theories the importance of structural and situational factors in the family has became quite evident.

On the other hand, a classic study by DUNHAM (1959) on the demography of mental illness was enhanced by that of Hollingshead and Redlich (1958), who demonstrated that definite associotion exists

between class position and being a psychiatric patient. The lower the class, the greater the proportion of patients in the population. They further demonstrated that there exists a significant association between class status and the proportion of patients who suffer from different types of psychiatric disorders.

HOLLINGSHEAD AND REDLICH (1958) found that a direct relationship appears between class status and the extent of treated neurosis in the population. Examination of psychotic disorders also showed a linkage between class position and the rate of treated cases in the population. The lower the class, the higher was the rate. They also demonstrated that schizophrenia is more prevalent in lower class families and that a definite superego structure and dynamics are more prominent in the lower classes. They point out that 95% of person in state prisons are from classes IV & V. They also mark a greater ego-weakness of class V persons relative to the upper class individuals.

On the other hand, obsessive-compulsive characters are more frequent in the higher classes, and oedipal conflicts appear to be particularly intense in class III. After this a series of studies was conducted by various psychologists and scientists related to socio-economic status and mental disorders. A very comprehensive summation of the available knowledge about society, culture psychopathology is made by LINTON (1959).

As a result of the above mentioned studies it becomes imperative that a cross-cultural investigation be made in Pakistan on the development of mental disorders.

A comprehensive study was made by AHMAD (1968) on 987 cases who came to the clinic over a 4 years period between 1962 to 1965. Only 847 cases eventually were utilized, because cases suffering from organic diseases, character disorders and speech disorders were discarded for the purpose of the study and only psychotic and neurotic patients were taken into consideration.

Case histories of these patients were coded into various categories relating to family characteristics and socio-economic factor.

The results showed that the relation ship of mental disorders and sex, age difference between parents, father's age at birth, sibling order and family psychopathology were statistically significant.

The relationship between mental disorders and parentloss in childhood, marital status, family system, mothers age at birth, children, and family were not statistically significant. The results also showed that there were more female psychotics and parents of psychotics were closer together in age i.e. 1 to 5 years difference, than parents of neurotics who were further apart in age. Father's age at birth was less then 25 years mist frequently for psychotics and more than 25 years, for the neurotic parents. More psychotics came from the elder subjects than any other rank, and the youngest sibling were in turn more neurotics. This study also demonstrated that there was more psychopathology in the psychotics than neurotic patients. These results confirm the findings of researches conducted in advanced countries.

In a sister study by AHMAD (1971) an attempt was made to study the relationship of mental disorders with age, occupation eduation, income level, neighbourhood, and sources of referal in a clinic, in the city of Karachi in Pakistan.

The results showed that there are definite associations between diagnostic categories and income level, neighbourhood, education and occupation. The relationship between mental illness and age was not statistically significant. It was demonstrated that more psychotics came from the lower income level, lower neighbourhood areas, and lower educational und occupational groups. More neurotics come from the higher income level, neighbourhood areas, higher educational and occupational groups. The prevalance of mental illness as a whole was found more in lower income levels, lower neighbourhood areas and lower occupation. But more prevalance was found in educated people.

These studies are more or less confined to the city of Karachi and there is a tremendous scope for scientists to study an appropriate sample from the country of Pakistan.

Initially, an attempt was made to collect the data from all the mental hospitals of Pakistan and students were actually sent to Lahore,

Hyderabad and other places for the same purpose. But unfortunately the entire effort was wasted as there were no proper case histories and diagnosis and at times even the basic information about patients was not available.

It is important that we should improve our case taking technique and diagnostic procedures in all the hospitals, and private psychiatric clinics in order to enable us to do constructive research work in the field of mental health.

An attempt is also being made by Ahmed in study in progress to study the effect of patterns of Child Rearing in Pakistan on mental illness. Data consists of interviews with 500 mothers of confirmed mentally ill persons and mothers of equally matched normal persons. The data is being tabulated. It is hoped that is will help us to understand the dynamics of mental illness in Pakistan.

In his article socio cultural change and and value-conflicts in developing countries, ZAIDI (1969) has studied the dynamics of the present social situation in Pakistan. In the absence of statistical data the author has made these observations about the Pakistan Society. (1) The social change occuring in Pakistan have effected Pakistani values and behaviour adversely. (2) These changes have threatened the mental health of the people. (3) The greater the duration of the transition, the greater will be the social disorganisza-tion and effect on mental health. These areas need scientific and clincal evidence.

Now, we come to the more important question of diagnosis. It is important to emphasize the 3 most vital techdiques of diagnosis of mental illness

(1) Interview

(2) Case history

(3)Diagnosistic Tests

As far as an interview is concerned it is "a face-to-face situation in which clinican studies the overall personality dynamics of the

patient concerned." There it no doubt that this is the most important of all clinical techniques, as it is a source of first hand knowledge about the patient. At the same time we should not disregard the short comings and drawbacks of relying on only an interview technique, with the advancement of science, we know that even in the medical science the clinical investigation has to be supplemented by objective measures. In order to get to the dynamic picture of the patients etiology we have to rely on case history as well.

Case history, as a clinical technique has become a very popular technique to the advancement in psycho-analysis and various other sociological theories. The histories taken from the parents, spouse, sibilings. children and any other available source.

In our culture, specially wehave to be very carefull while taking case history, as due to the inherent inhibition about various factors in our culture, it is extremely difficult to get a reliable case history. The training of the Clinician at this junctnre becomes of prime importance. As a trained inierviewer can to a large extent eradicate the drawbacks of an interview, in the same way a trained clinican can make checks and cross checks in the process of history taking deveice. At times the difficulties are quite genuine as most of our population is uneducated and is not even aware of the actual age of their own children or of themselves. I remember a case where a mother of thirty years old son gave her own age thirty years as well. This of course is no joke.

In the advanced countries the psychodiagnostic tests are used in abundance for the evaluation, assessment and diagnosis of mental illnesses, but unfortunately there are no standardised psychological test in Pakistan.

The fact that the standardisation and the development of entirely new test is time consuming and requires enormous funds and scientific know how, has made it imperative that we make alternative arrangements it research is to continue in this field in an under developed country like Pakistan.

Thus it was decided by Ahmed (1972) to attempt a validation of already existing standardised test in English by the psychologists in advanced countries. An attempt was made to validate Gordon Personal Profile and Gordon Personal Inventory Ahmed (1972) Thematic Appreception Test and make a picture Story Test in the field of personality and EPSAT Ahmad (1975). Otis Quick Scoring Mental ability Test Ahmad (1968) in the field of aptitude and intelligence and general ability tests WAIS and WISC. Ahmed (1966),

I believe that an attempt has also been made to translate and accu-latrize DAT and MMPI, in the applied Psychology Department, University of Punjab. The results of these researches are highly encouraging and are a great help in the clinical parctice today.

After making a suitable and reliable diagnosis, we come to the issue of treatment of the Mental Disorders in Pakistan. Most of the treatment of mental disorders is being done by the psychiatirists in the very few mental hospitals and in their private practice. The mode of treatment is mostly psychotropic drugs and electro-convulisive therapy, There is no emphasis on psychotherapy in any of these establishments in Pakistan. Wherever, there is a psychological unit attached to a psychiatric unit, the psychological nuit is treated mostly as a technical aid to the psychatrists,rather than a therapeutic unit. As a matter of fact, an inherent prejudice exists in the minds of the psychiatrists against psychotherapy.

As psychologists we know and I think the psychatrists should know that if we codsider the etiological factors of mental illness to be psychological then how can we treat them only with drugs and ECTs.

Researches have been made by various piychatrists and psychologists in the advanced countries, emphasizing the importance of psychotherapy in the treatment of mental disorders.

In the light of these researches, an attempt was also made in Pakistan to study the relationship between relapse and the kind of treatment (AHMAD, 1968). The study consisted of 753 patients, out of which 224 showed a relapsed after a few years and 529 showed no

relapse. The type of treatmemt studied were ECT alone, drugs alone, ETC+drugs, and psychotherapy. The greatest number of relapses occured in those who had been given ECT alone. ECT given 10 to 20 times. Next higher number of relapses occured in those patients, who were given psychotherapy alone.

It was found that psychotherapy, alone is most effective because through this the basic cause is found, though it is lengthy, it is much more profitable in the long run.

In an unpublished study on 786 patients (AHMAD) it was found that 670 cases had come for psychotherapy after going from one psychatrist to another and receving a series of drugs and ECT, and ultimately benefited by psychotherapy, alongwith half the quantity of drugs administered to them earlier and by the end of the treatment the drugs were totally withdrawn.

In Pakistan, psychotherapy is a relatively new discipline and mode of treatment, Many people are quite apprehensive and have a lot of reservation s in accepting ~~in accepting~~ that any disease can be cured by merely talking to the patient for 45 minutes in a session. This misconception is also enhanced by the discouraging attitude of psychatrists. ~~I remember~~ once a psychiatrist very proudly told me that "I have never come across psychology as a subject", I don't think there is anything more ironical and paradoxical than this statement. But I am glad that a persistant effort and continuous dedication to the cause of psychotherapy led to a happy change in the opinion of the psychiatrists towards psychotherapy, so much so that many of them have requested ~~me~~ to lend them my books on psychotherapy and even, at times, wanted to attend classes in clinical psychology at the university. The culmination of this change reached its height when we at the university of Karachi trained 2 medical graduates at post-graduate level, who took their regular M.Sc degree in psychology from our university. One of them is a general practitioner in Karachi and occasionally helps me with the treatment of psychotic patients.

It will not be out of place now to define the term "Psychotherapy" as it is confused with psychoanalysis, even by the most learned people in our country. Psychotherapy is defined by various people according to their own theoritical frame-work.

According to WOLBERG (1954) "Psychotherapy is a form of treatment for problems of an emotional nature, in which a trained person, deliberately establishes a professional relationship, with a patient, with the object of removing, modifying existing systems, of mediating disturbed patterns of behaviour and of promoting positive personality growth and development."

This comprehensive defination of psychotherapy given above has many advantages as it encompasses all the possible definations of psychotherapy given under various frame.works.

According to Wolberg (1954) there are 2 varieties of psychotherapy i. e. (1) supportive psychotheray (2) Insight therapy with re-educative goals. and (3) Insight therapy with Re-constructive goals.

(1) SUPPORTIVE THERAPY : In this type of therapy, the objectives are spellcd out to be as strengthing of existing defenses, claboration of new and better mechanisms to maintain control and restoration to an adaptive equilsbrium. The approach which came under the jurisdiction of supportive therapy are (a) guidance (b) environmental manipulation (c) externalization of interests (d) Re-assurance (e) Persuation and coercian (f) emotional catharsis and desensitization (g) prestige suggestion (h) suggestive hypnosis (i) muscular relaxation (j) hydrotherapy (k) drug therapy (l) shock and convulsive therapy (m) inspirational group therapy (n) music therapy.

INSIGHT THERAPY WITH REEDUCATIVE

This therapy works with the objectives of insight into the more consious conflicts, with deliberate efforts at readjustment, goal modification and the living up to existing creative potentialities. The type of therapies which have these goals are : Relationship therapy, attitude therapy, interview psychotherapy, distributive analysis and sythesis (Psycoobiologic therapy,) therapeutic couuseling, case-work therapy, reconditioning reeducative group therapy, semantic therapy.

The objectives of this therapy are, insight into unconcious chofli-cts, with efforts to achive extensive alternations of character stucture. Expansión of personality growth with development of adaptive potentialities.

INSIGHT THERAPY WITH RECONSTRUCTIVE GOALS

The approaches which deal with this therapy are :— Freudian Psychoanalysis, Neo-Freudian Psychoanalysis, Psychoanalytically orientid Psychotherapy. (Adjunctive therapies : hypoanalysis, norco-therapy, playtherapy, Art Therapy, analytic group therapy.

Since in Pakistan, to the best of my knowlege, there are very few people who are tranined in the field of Psychotherapy, it is difficult to go into the specialization of one particular type of Psychotherapy. During my 11 years experience as a Psychotherapist, I feel that I have used to a large extent Psychoanalytically oriented Psychotherapy, with the emphasis on brief Psychoanalysis, advocated by Alexander and French, but of course have been involved in the most eclactic approach thereby have treated the patients by the use of hypnosis in one session as well as, by the use of Psychoanalysis for 5 years. The range is rather extensive, but believe me, it is very fulfilling.

Since I have been working with an American Qualified Psychatrist in the initial 10 years, I had the experience of treating patients both Psychotics and Neurotics, who were given drugs and ECT as well. Even now I am attached honourarily with a private medical clinic in Karachi, where get the medical help in the treatment of Psychotic patients in the form of drugs and ETC, in order to make them amenable to psychotherapeutic session.

It is inexitable that a process like Psychotherapy which mainly involves verbal interactions should have same prerequisite conditions in order to be implemented. Some of them naturally, are the intelligence level, verbal communication and financial level of the patient.

In a short time it is very difficult to do justice to a wide subject of etiology, diognosis and treatment of mental illness in Pakistan, but I am sure that this will provide an impetus to our younger generation to come forward in the field of clinical psychology and rise above only the interest level and dedicate themselves of the cause of growth and development of clinical psychology. I deeply feel about this because atleast 10 of my students have done their Ph D. in clinical Psychology

from U.S.A. and have not come back to Pakistan. Accordingly to them financial gain is more important than a poineer work in an underdeveloped country like Pakistan.

In conslusion I would like to stress that no field can develope in any country without dedicated struggle and sacrifices on the part of the poineers. At this point I will also seek help from the administration of our country that they should make the efforts of the poineers more rewarding both professionally financially. I would also appreciate if the authorities concerned will help in the efforts to arrange Post Graduate Diplomas in Clinical Psychology at the University level; a programme and syllabi of such a Diploma have been already approved by the academic council and Syndicate of the University of Karachi.

An organised plan for a psychological clinic and research centre has also been submitted to the University. The Clinic will be an asset to the profession of Clinical Psycholygy. It will be highly appreciated implementation of this proposal is expedited.

The National Institute of Phychology should give more stress to the training of Clinical Psychology in collaboration with trained personnel from all over Pakistan.

These contributions on the part of the government will enhance the cause of clinical psychology in Pakistan. It will also be appreciated if proper programme about the importance of clinical psychology, psychodynamics and development of abnormal behaviour are emphasised on the mass media i.e. Television and Radio in consultation with The Pakistan Psychological Association.

It is also of vital importance that the practice of Clinical Psychology should be given Legal recognition by the authorities. The criteria of such a Licence to practice should be established in consultation with the Pakistan Psychological Association.

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9

INHIBITIVE EFFECTS OF A DELAY IN POST-SESSION FEEDING OF RATS AND THREE DETERMINANTS THEREOF

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Researchers have focussed their attention on the reinforcement variables within an experimental situation, but the reinforcement value of the feeding given after an experimental session has been only vaguely recognized. Some investigators have been fortunate in practicing adequate controls over the post-session feeding, but more out of their sense for tradition and in an attempt to maintain the customs of laboratories within which they were trained, rather than out of a clear realization or systematic understanding of the variable involed. In fact, a study of the post-session feeding and its significance seems to be virtually nonexistent in the available literature.

Akhter & Bond (1968) showed that an immediate feeding given after conditioning session induced a progressive increase in operant rates, while a 1/2 hr delay in feeding caused a systematic decrease in response rates. In the aforementioned study, rats ware given daily feedings immediately after experimental sessions for 30 days, after which point delayed feeding was introduced. However, a delayed feeding introduced after only 10-day sessions with immeate feedings (Akhtar & Ahsan, 1970) or even earlier (Akhtar, 1970) failed to produce a decrement in response rates, presumably because the extent of experience with immediate feedings in the last two studies was insufficient a variable to be verified in the present investigation.

Three major variables were investigated in the present study as determiners of the inhibitive effect exerted by a detention treatment, detention was effected for $\frac{1}{2}$ hr before daily feedings and thus implemented a $\frac{1}{2}$ hr delay in post-session feeding The first manipulation

consisted in varying the point in the series of experiences with immediate feedings, at which delayed feedings were introduced. This manipulation promised to replicate and reconcile the earlier findings as well as it was considered to have significance within the incentive frustration hypothesis (Amsel, 1967). Assuming that a *post-session feeding given immediately developes a rg-sg like mechanism* and a *delay in feeding results in frustration*. it would follow that the more extensive the experience with immediate feedings to build up a stronger anticipation (rg-sg), the more frustrative would be the detention treatment. Relevant to this theoretical thinking was also the second manipulation, that involved extensiveness of detention. The prediction was that the higher the number of days for which detention treatment is continued, the greater would be the inhibitive effect since conditioning of rf-sf would be stronger.

Lastly, the nature of the detention situation was investigated for both its practical and theoretical significance. Different cages associated with feedings for two lengths of time were differentially used for post-session (a) feeding and (b) confinement. The prediction in both cases was : the stronger the conditioning of feeding with a feeding cage from which the was barred by detention in a neutral cage or with a feeding cage in which the S was detained, the more frustrative would be the detention experience.

Experiment 1*

Design and Subjects

Three groups of 12 rats each (N=36) were detained at different points-either after a 9, 18, or 27-day period of immediate feeding. Each of the three groups as subdivided into 2 further groups : either *home* cages were used for *feeding* (HF) or 'other' cages were used for feeding (OF). This resulted in a 3 × 2 factorial design which was further combined with a third dimension of repeated measures obtained on days of detention, as detention treatment was continued

*Incomplete data from Experiment I (involving about half of the comprisons) where partially presented at the meetings of the 79th annual convention of the American Psychological Association. 1971.

for 10 days Besides the 3 × 2 major groups as mentioned above two more groups with 6 rats in each were added to result in a total N of 48. The first six groups received feedings either in home cages (HF) or in other cages (OF), but before feedings they all were treated by detention in *neutral* (N) cages. In the additional variation, the two groups similarly received post-detention feeding in home cages or other cages (HF or OF), but instead of being detained in neutral cages they were detained in the feeding cages where they had been customarily fed. These two groups may be designated as HD--HF (home cage detention and home cage feeding) and were started with the detention treatment after 27 days of immediate feedings and thus were comparable to N27-HF and N27-OF respectively i.e, N27 groups detained in neutral cages.

All 48 rats were male and of an appr ximate age of 90 days at the beginning of the experiment. These rats were bred in the college colony where the temperature and humidity were carefully con. trolled. At the age of 40 days, these animals were transferred from plastic breeding cages to the wire-mesh cages were their homes until the experiment was completed. These home cages weare 17 × 24 × 17 cm and were shelved in a rack as 6 × 5 (6 in raw with 5 rows). Neutral cages were made of 17 × 22 × 15 cm plywood.

Feeding. Purina chow was available in the home cages ad libitum until an age of 90 days when a deprivation regimen was instituted and rate were given only a measured amount of wet mesh (prepared from ground purina chow) determined for each rat in order to maintain him at 80% of his body weight. Dishes containing wet were lift in the home cages until the next day. The HF subjects continued to receive feedings of wet mesh in home cages while the OF subjects were at this point transferred to 'other' cages for feedings and were returned to home cages at the completion of feeding (within ½ hr). These 'other' cages were identical to the home cages in dimension, wire meshing, etc., but were shelved at a different location in the rack Four cages shelved at a medium height in the rack and and adjoining each other served as 'other' cages for feedtng the OF group This differential feeding was carried out until

the end of the experiment, which lasted for nearly a 2-mo period. Association of feeding with 'other' cages was presumed to be lower in OF-by 50 days, as OF started feedings in these cages at an age of 90 days in contrast to HF which started feeding in home cages at the age of 40 days.

Procedure. Approximately one month was taken for adaptation procedures, preliminary training and training, after which test sessions were run for a little longer than a month. Two Skinner boxes isolated in sound proof chambers and automated for programming were used and were located in the animal colony at 15-20 feet distance from the rack containing the wire mesh cages. During the early period, Ss were handled extensively, adapted to a deprivation schedule and learned to press the lever 20 times in a session. Training sessions were run for 7 days with the daily series of trials in which 5 trials were shocked and nonrewarded in a fixed manner (FR 4 schedule) while the remaining 15 trials were rewarded by a standard pellet of 045 g food-manufactured by Noyes Company. The intensity of shock was 0.25 ma and the duration was 0,25 (see Akhtar, 1967, for details). Test session were carried out under punishment-extinction, during which every press was shocked and nonrewarded and time taken for 20 presses was recorded ; during these test sessions the inhibitory treatment with detention was introduced.

Detention At the end of each session, an immediate feeding was given to all rats throughout the experiment until a point of test sessions which was specified by the experimental design. At the end of either Day 9, 13, or 27 of test sessions, defferent groups were detained for $\frac{1}{2}$ hr in *neutral* cages before they were allowed their daily feedings and were designated respectively as N9, N18 and N27 (each inclusive of 2 feeding conditions : OF and HF). In contrast to neutral cages used for the N groups. were the wire-mesh cages used for detention in HD-HF and OD-OF. Detention in the latter 2 groups was introduced at the end of Day 27 of test sessions. The treatment with detention in all the groups lasted for 10 days, at the end of which immediate feeding was reinstated

Data for the N9 and N18 groups were collected for a total of 30 days, while the 27-Day groups were run until Day 37 of the test.

RESULTS

Rate for performance computed per minute is shown in Figure 1 for all Ss for the first 9 days of test sessions, since a differential treatment was begun only after 9 days. Daily rates showed a consi stent decline for the first few days, after which an increased variability characterized the performance of various rats. A 3-days unit was, therefore, considered a more stable measure to indicate an averaged effect. Median rates for 3-day blocks are represented in Figure 2.

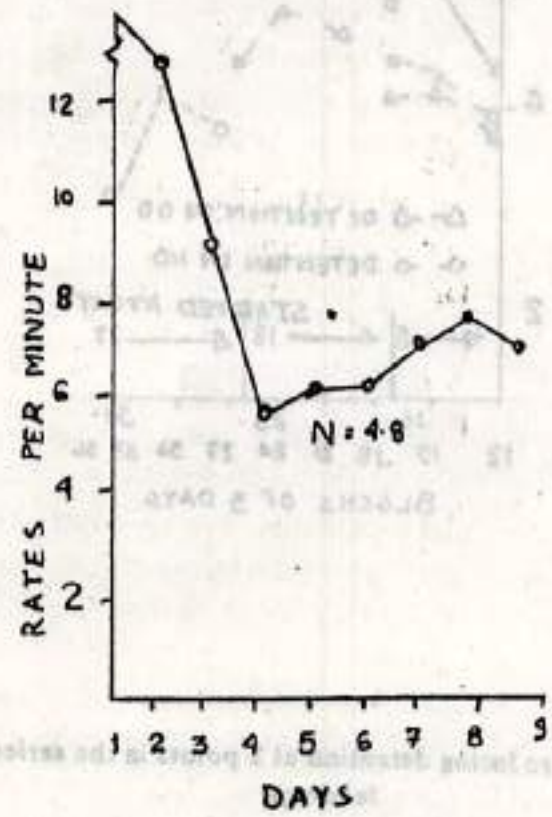

Fig. 1. Test performance under punisement-extinction.

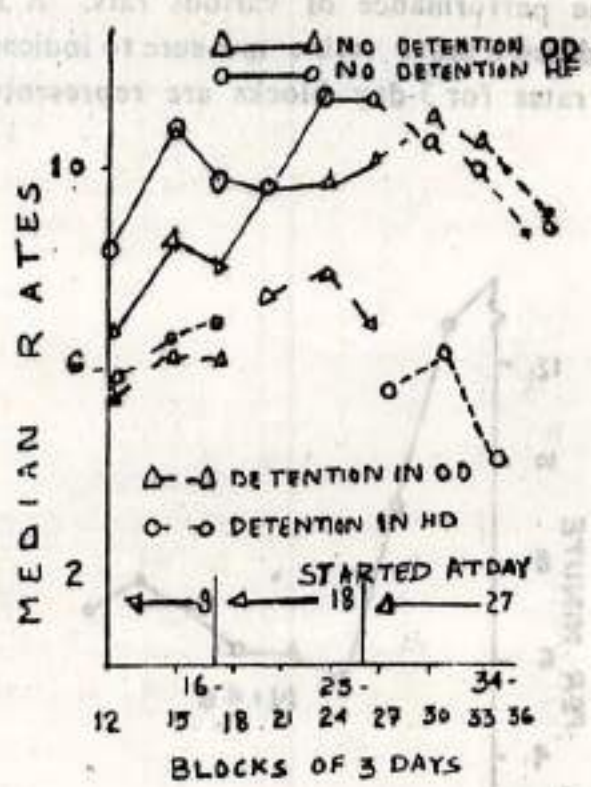

Fig. 2. Effects of introducing detention at 3 points in the series of immediate feedings.

Improvement. Performance curves of the undetained groups show a gradual increase which attained significance for some comparisons. For instance, in comparison to Days 10-12, performance was higher during Days 13-15 in 9 out of 12 Ss in each of the three undetained groups-excepting the N9 group, with a $p<.07$ for one group and a $p<.01$ for two groups combined and so on. Generally, however, the incremental effect was slow to appear in each group and slow to disappear. In N27 : OD-OF, despite the fact that detention was started after Day 27, performance during Days 28-30 and Days 31-33 was persistently higher in relation to Days 25-27 (predetention block) at a $p<.05$. In general HF showed more improvement than OF as shown significantly ($<.05$) by the relative performance of N 18 during Days 16 18 in relation to Days 7-9 and by the relative performance of N 27 during Days 22-24 in relation to Days 16-18.

Inhibition

In order to evaluate the effects of detention which was introduced at different points in the series, a general measure of relative performance was derived as follows :

$$\text{Percentage Rate} \frac{\text{Median Rate during detention block 1, 2, or 3)}}{\text{Median Rate during the last block of predetention}} \times 100$$

Percentage Rates for the 3 N groups were analyzed by a 3-way ANOVA : N (9, 18, 27), F (HF vs OF) and B (3 Blocks), Only the main effect of Blocks ($<.005$) and the triple interaction in N, F, B ($>.05$) were found of interest. A 2-way ANOVA was run on separate blocks. For Block 3, the feeding effect was found significant ($<.05$). Individual comparisons were further analyzed in the light of a priori hypotheses.

A performance *decrement* in the detained group was evaluated by a within-S comparison. No decrement was found in N-18 a significant (<05) decrement was shown for Block 3 only by the HF subjects. In N-27, a significant (<03) decrement was shown by the HF subjects during Block 2 and Block 3; but by thelast Block 3, OF also exhibited a marked decrement A between-S comparison revealed similar conclusions. The decrement in N 18-HF was evaluated

significant (<.05 for Block 2 and Block 3) in comparison to N 27-HF which were undetained during the comparable period.

Strength of feeding anticipation. Even though the variable, length of experience with immediate feeding was not indicated as a main effect, yet it was demonstrated as the triple interaction. Individual comparisons showed N 18-HF to be slower than N 9-HF (<.02) for Block 3 of detention; N 27-OF was similarly found to be slower than N 18-OF (<.04) for Block 3 of detention.

Feeding In a 2 way ANOVA run on each individual block, the feeding condition reached significance for Block 3 (<.05). HF showed a higher decrement than OF. The ND-HF Ss in both N 27 and N-18 revealed a lower percentage rate than that in ND-OF during Block 2 (<.02); the comparison between HF and OF was significant during Block 3 for N 18 (<.01)

Figure 3.

Detention box The decrement produced by detention in neutral cage was smaller than that produced by detention in 'other' feeding cage (p ND-OF>OD-OF<.05) during Block 2 or that produced by detention in home cage (p ND-HF>HD-HF<.05) during Block 1. Similarly OF-OF was faster than that in DH-HF for Block 2,

Recovery from detention. The N 9 group was run further for Days 19-30 and the N 18 group was run for Days 29-30 following the removal of a 10-day detention in each group. It was observed that 2-3 days allowed for recovery were inadequate to dissipate the effect of detention. During the first block immediately following removal of detention, the performance in N 18 and N 9 was significantly lower than the performance for the preceeding block-shown in within S comparisons as well as in between-S comparisons using the performance of N 27 for a comparable period. The recovery effect appeared in N 9, however, in the form of an increased performance during the second Block which was further enhanced (<.05) during Block 3 by within S comparison (i.e. $\frac{25\text{-}27)}{19\text{-}21}$ or in comparison to the performance of N 27.

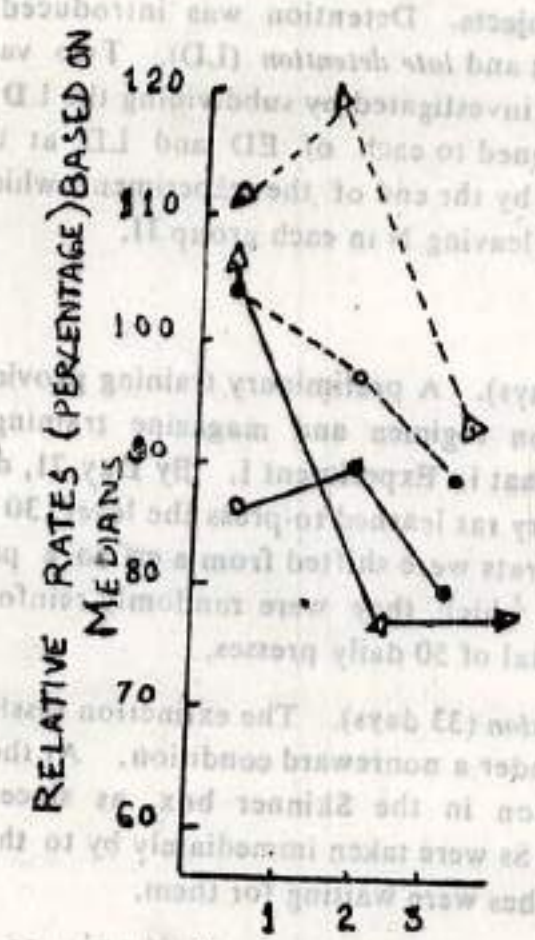

Fig. 3. Detention in neutral cage (ND) vs detention in home cage (HD) or 'other' food associated cage (OD)

Experiment II

The role of postsession feeding was amply substantiated and the three manipulations proved effective in the test sessions that were conducted in Experiment I under consisttnt *punishment*-extinction. In order to extend the generality of findings, similar manipulations were made in Experiment II under simple extinction.

Design and Subjects. Detention was introduced at two levels: *early detention* (ED) and *late detention* (LD). Two variations of the detention box were investigated by subdividing the LD group. Twelve male rats were assigned to each of ED and LD at the beginning of the experiment but by the end of the experiment which lasted for 3 months 2 rats died leaving N in each group II.

Procedure.

Training (30 days). A preliminary training providing for adaptation to a deprivation regimen and magazine training was given in a manner similar to that in Experiment I. By Day 21, most of the rats, and by Day 24 every rat learned to press the lever 30 times. During the last 6 days, all rats were shifted from a crf to a partial reinforcement of VR5 in which they were randomly reinforced only for 10 presses out of a total of 50 daily presses.

Extinction Session (33 days). The extinction session consisted of 30 presses made under a nonreward condition. At the completion of the extinction session in the Skinner box, as since the begining of magazine training, Ss were taken immediately by to their home cages where the food dishes were waiting for them.

Early Detention (15 days). At the end of Day 33, subjects in the ED group were taken to their home cages but feeding was delayed for ½ hour. The ED group was treated with detention for 15 days during which the LD group continued to receive immediate feeding.

Late Detention (15 days). At the end of Day 48, detention was carried out in LD for 15 days, at which time an immediate feeding was reinstated in ED. Half on the Ss in LD (i.e. 6) were in their *home*

cages (HD) were feeding was received after ½ hr detention in the same manner as was true of ED. The other half of the Ss (i.e. 5), were *detained* in *'other'* cages (OD) for ½ hr at the end of which they were transferred to their home cages for feeding. The nature of 'other' cages was the same as described in experiment I; that is they were identical to home cages in wire meshing, dimensions, etc., but they were shelved in a different rack facing, and were located at levels higher than, their home cages. Unlike Experiment I, the OD-HF group was fed in home cages and did not receive feeding in other cages at this point or earlier. This promised to provide a comparison between OD-HF and HD-HF in a simpler manner so that a difference between them could be attributed to the difference in the detention cage alone; in contrast, was the comparison between OD-OF and HD-HF as in Experiment I where detention not only was carried out in two different cages but the feeding following a ½ hr detention was also given in the two different cages, and thus produced a certain degree of ambiguity in interpreting the differences in their performance.

RESULTS

Increment. By Day 5-7 various rats had reached the lowest point of their extinction performance; afterwards they began to improve slowly. In relation to Day 6, the performance for Day II was higher in 18 and lower in 6 rats ($p<.01$). The performance for Day 31-33 the last block before detention in ED, was higher in 16 and lower in 7 rats (of ED and LD combined) in comparison to the performance for earlier blocks, e.g. Day 12-14 ($p<,05$).

Using performance for Day 31-35 as a baseline, LD can be seen in Figure 4 as showing a steady rise over 5 blocks of no detention. For most of the blocks, 9 out of a total of 12 rats showed increment ($<.07$) similar to Experiment I; for Block 3, however, 10 Ss improved ($p<.05$).

Decrement. Within-S comparisons showed that detention of 11 subjects in ED results in decreased performance in 6 Ss during Block 1 and 2, in 7 Ss during Block 3, in 9 Ss ($p<.03$) during Block 4 and

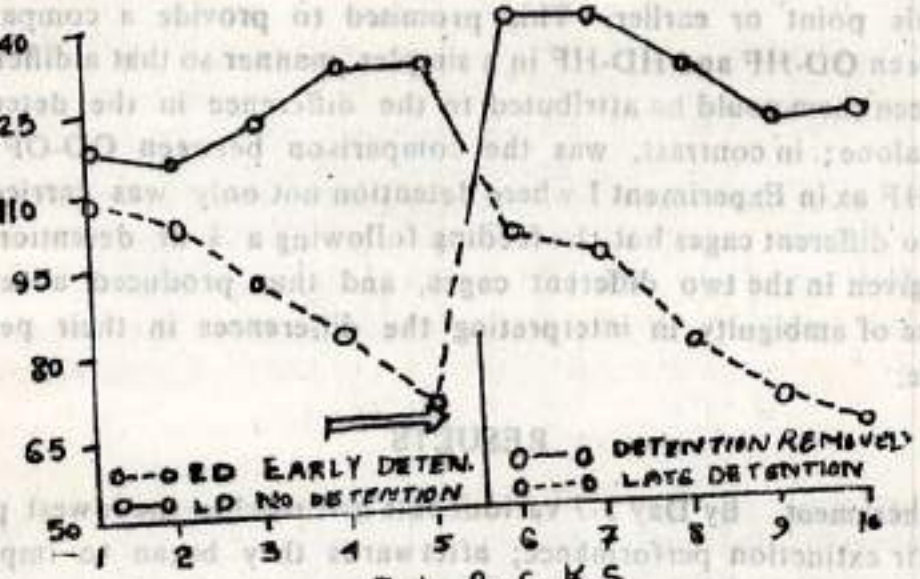

FIG. 4. DETENTION EFFECT UNDER SIMPLE EXTINCTION

in 10 subjects (<.006) during Block 5. Similarly with 11 rats in LD, performance decreased in 6 rats during Block 1 and 2, in 10 rats during Block 3 (<.006) and in all 11 rats during Block 4 and 5 (<.003).

A between S comparison of the detained performance in ED with the undetained performance in LD over 5 blocks was made with ANOVA. The group effect ($p<.05$) and its interaction ($p<.001$) with Blocks was significant. Frequency of animals showing a decrease in ED was contrasted with the control performance of LD by a x^2 test showing the difference at $p<.06$ for Block 3, $p<.03$ for Block 4 and $p<.01$ for Block 5. Similarly the U tests of relative rates showed ED to be lower than LD for Block 3 ($p<.05$, Block 4 (<.02) and Block 5 (<.001).

The detention performance of LD was compared to the undetained performance of ED for Block 5—since the exaggerated increase shown in ED by the removal of detention had subsided by Block 5. During Block 5, the performance of all 11 rats in LD had decreased in contrast to only 5 rats out of 11 in ED; the difference being significant ($p<.005$).

Strength of feeding anticipation. The decrement rates of ED for its 5 block detention were compared with the relative rates of LD for its respective 5 blocks of detention. Only the main effect of Blocks was significant (<.0001) The 6 subjects in LD were compareable to the ED group because of their detention in home cages. The U test showed a higher decrement in LD than that in ED for Block 1 ($p<4$), Block 2 (<5), Block 3 (<.05), Block 4 (<.01) and for Block 5 (<07).

Detention box. In general the home cage detention was more decremental than *the other cage detention*..

A within S evaluation showed the decrement effect to be significant in all of the 6 rats of HD-HF by Block 3, while it appeared in all as the 5 subjects of OD-HF by Block 4. The decrement rate in HD-HF was more than that in OD-HF for Block 3 (<.08), Block 4 (<.004) and for Block 5 (<08). Over the first 2 blocks, differences were negligible. For the first Block, however, OD-HF showed more decrement than

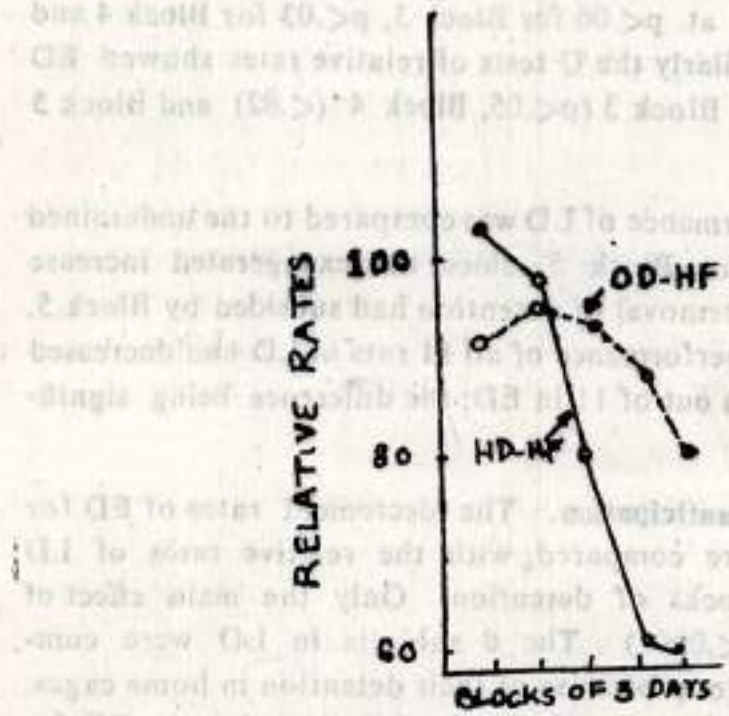

Fig. 5. Detention in home cage vs other cage under the extinction condition.

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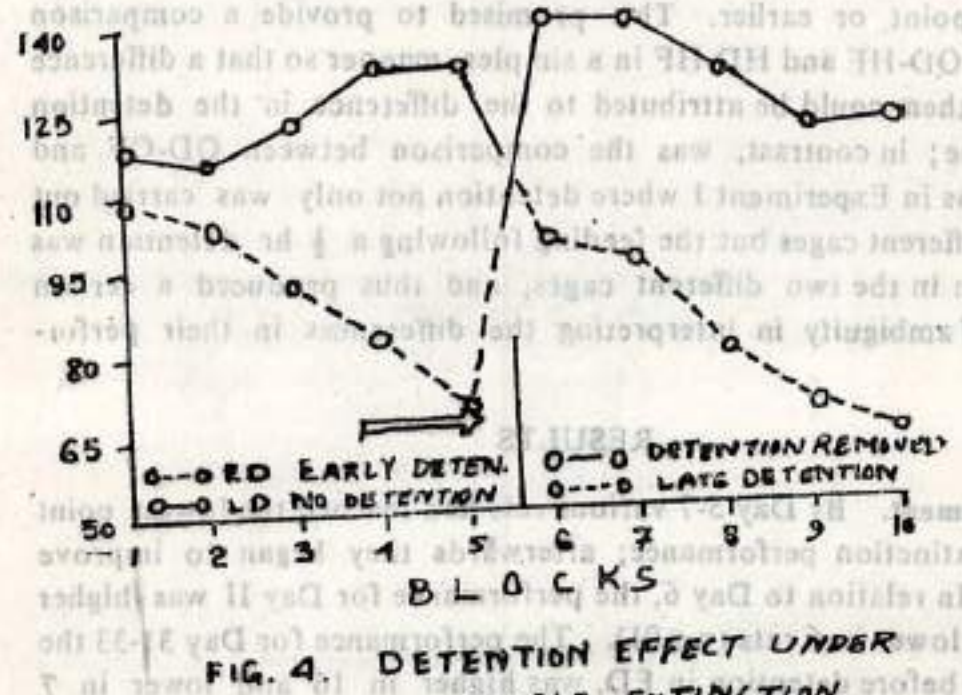

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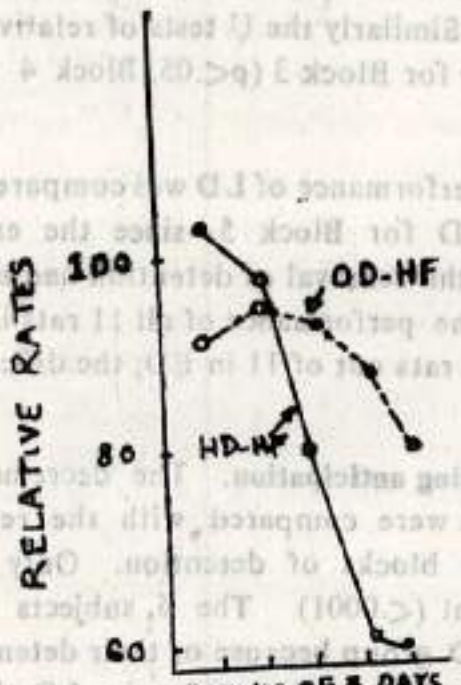

Fig. 5. Detention in home cage vs other cage under the extinction condition.

HD-HF (< 2), which was in part a reflection of the difference during the preceeding and the predetention Block (Day 46-48); during this Block OD-HF was slower than HD-HF (<.2). In part, however, the decrement may have been somewhat higher in OD-HF over the first day (p OD-HF<HD-HF<.08) and the second day (<.08), presumably because of the strangeness of 'other' cage.

Recovery from detention. In relation to the performance during the last block of detention, removal of detention in ED resulted in an immediate increase (see Figure 4). The relative performance attained its highest peak over the first block (<.01); later, the recovery performance gradually declined, p< 02 for Block 2 and p<.05 for Block 3: over the last 2 blocks, the recovery effect had dissipated and the performance was not different from the performance over the last block of detention.

DISCUSSION

Findings with consistent punishment agreed with those under simple extinction in showing effectiveness of each of the three variables manipulated. In both situations an immediate feeding given after the sessions induced a progressive increment in operant rates. However, reinstatement of immediate feeding after a 15-day detention, produced response recovery rapidly under simple extinction but slowly under punishment-extinction. It is presumed that recovery was rapid under punishment too except it took longer to counter act the stronger inhibitive effects of shocks resulting only gradually in a heightened performance.

The manipulation of the length of experience with immediate feeding, conceptualized to produce a differential strength of anticipation (rg:sg), was sufficiently borne out as affective in the two experiments. Data from Experiment I, however, indicated the complexity in the variable and its interaction with other variables in effecting a decrement by detention via the frustrative mechanism (rf-sf) The N9 group did not show any decremental effect, presumably because a 9-days experience with immediate feeding during the test was insufficients to develop a tangible amount of rg sg. The HF Ss in N18 did show a within S decremental effect as well as a higher decremental rate in comparison to N9-as the OF Ss in N27 did in comparison to

N18. This would tend to define a minimal experience with immediate feeding to be judged as sufficient equal to that for 18 days. A failure to find the decremental effect in earlier studies (Akhtar 1970 & Ahsan 1970) is easily understood in view of the fact that strength of feeding anticipation in both studies was much lesser than that acquired over 18 days.

Data on the Blocks effect or the significance of the length of experience with delayed feeding are consonant with the frustration or any other hypothesis that posits the occurence of a decremental effect as a kind of inhibitive *conditioning* taking place gradually over trials. The two variation of the detention situation, however, provide particularly interesting evidence for the frustration hypothesis. The fact that a diminished performance in rats who were barred of food by detention in neutral cages for 30 minutes, can be visualized as a kind of temporal diserimination. But the findings of differential decrement rates in Ss who were barred of home cage feeding in contrast to those who were barred of other cage feeding by detention for the same length of time seem to go beyond temporal discrimination and would call for certain additional kinds of discrimination or additional assumptions. On the basis of differential strength of feeding conditioning (rg-sg) with the two types of cages, the frustration hypothesis can handle the above findings. Also, findings of higher decremental rates produced by detention in home cage vs detention in other cage-to be further contrasted with detention in neutral cage, are consonant with the notion of frustration. However, notions such as of conditioned stimuli and of chained responses would predict a lower decremental rate when detention is in the feeding cages—which contain conditioned stimuli; in comparison to neutral cages-

One other notion may be of some possible use in understanding certain findings. According to this way of thinking, the present findings may possibly be considered as a result of chaining and the feeding would then be considered as an adventitious reinforcer that ensued at somewhat a fixed interval of time which elapsed in transporting rats from the conditioning box to the home cage. Ferster (1953) has demonstrated the capability of chaining even with an adventitious reinforcer. Some further experiments (Herrnstein, 1966;

Edwards, Peek & Wolf, 1970), however, would suggest capability of of a noncontingent reinforcer to be highly limited in as much these experiments demonstrated that a shift to noncontingency in reinforcements led to a deceleration until the rate of barpresses reached a zero level of extinction. The converse of the findings of deceleration is present demonstrated of an effective noncontingent reinforcer which led the extinquishing response to a progressive increase to a surprising height. Thus even if one adopts the notion of chaining, the uniqueness of the present findings should be pointed out in all due modesty.

Regardless of the way one conceptualizes, the present findings do warrant one firm conclusion: under certain circumstances, the post-session feeding acts like a regular reinforcer—identified by its incremental function in conditioning and its decremental function in extinction sessions. Firmness of this conclusion rests on at least 5 replications successfully made under punishment-extinction (3 independent samples in the present study and 2 in Akhtar & Bond, 1968) and 2 replications made under simple extinction; under both conditions, the incremental as well as the decremental effect were confirmed. The conclusion that feeding can act like a regular reinforcer is further supported by the sensitivity of the feeding and the detention situation to the variations similar to the manipulations in a regular reinforcer. An acceptance of this conclusion, however, would have important theoretical and methodological implications. Of theoretical significance is the suggestion that conditioning can take place to stimuli outside of the conditioning box and the experimental space needs to be extended beyond the confines of the conditioning box. What the defining features or boundary lines of this extended space would be is a question to be answered only by future experiments.

The present research does suggest clearly the complex nature of the post-session feeding. The study showed that the effect was not obtained under certain circumstances e.g, in N-9. The reason why the effect did not appear in N 9 may have been an insufficiency in the rg-sg, as mentioned earlier, or a possibility that the performance function associated with particular test days was different in N-9. The per-performance curve in N-9 had begun to recover from the decline at

the time of introduction of detention and may have compounded the reasons for not showing decrement. Regardless of the precise reasons, the demonstration of the failure of the effect in N 9 is to be considered of positive significance. It replicated and reconciled the earlier findings and thus defined reliably some of the limits on the introduction of detention. It was shown that detention at a given point in the series was not decremental while dentention at other points was decremental. Similarly the relative nature of the detention effect was shown with respect to the other variations in the feeding and confinement situation. The present study serves a useful function not only in alerting to the need of a methodological control but in giving an inkling into the complexity of the phenomena. Beside the three variations studied, what many other dimensions we need to understand before we can implement a sound methodology, remains only for future experimentation to show.

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A STUDY OF ACHIEVEMENT TESTS AND OTHER PSYCHOLOGICAL TESTS

Z. A. ANSARI

Validity has been one of the neglected problems of achievement . While there has been a considerable amount of research on the bility of examinations, particularly the essay-type examinations nore fundamental questions of validity have not been investigated ny considerable extent It is only during the recent years that the lem has attracted serious attention from psychologists and educa-sts. The developments in the concept of processapproach to ent validation has been one of the main factors responsible for ıpsurge of interest in this problem. At the same time the grcwing gnition of the multifacet nature of human abilities has been another ır development whose relevance to thewhole educational proress particularly achievement testing is beginning to get its due gnition.

II

One of the most definitive attempts to develop a list of educa- l objeetives during the recent years has been made by Bloom iis associates in the form of *The Taxonomy of Educational Objec-* : *Handbook I : Cognitive Domain*, published in 1956. The *nomy* is a classification of educational objectives in terms of six r categories : Knowledge, Comprehension, Application, Analy-ynthesis and Evaluation. Each of these categories has sub-cate-s and these sub-categories have further divisions and divisions. mportant thing about this classification is that the categories are rchical and cumulative : each category includes all those below adda something of its own. Knowledge is the lowest category,

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his artiJle is an abs ract of the thesis submitted to the University of Glasgo for the degree of Ph. D.

and the highest is Evaluation. The classification proposed by Bloom has been used in a number of investigations to determine what achievement tests are measuring.

III

Another recent development that has influenced the field of educational measurement, is the realization that human abilites, even in the limited setting of educational measurement, are quite varied. The most important development it this respect has been the work of Guilford and his associates. Guilford has distinguished between two types of productions divergent and convergent. The tests of divergent production—also called creativity tests—have been contrasted with the convergent production tests—the category in which most of the usual tests of intelligence would fall.

The relationship between academic achievement and intelligence has been extensively studied. More recently a number of investigations have been carried out to see if there is any relationship between academic achievement and creativity. The results of these investigations are conflicting and contradictory. One possible reason of these conflicting findings appears to be the fact that in these studies the nature of achievement tests has not been taken into account.

The present work consists of two inter-related parts. In *Part A*, the achievement tests being given to the students of M.A./B.Sc. Ordinary Class were evaluated for their validity in terms of educational objectives. In *Part B*, tests of intelligence and creativity were given to a sample of students and the marks obtained by them on achievement tests as a whole, and on achievement tests of various cognitive objectives were correlated with the tests of intelligence and creativity.

IV

In *Part A*, two separate studies were conducted in which a number of raters classified a large number of items in terms of the categories of the *Toxonomy*. In the first study, 107 items of various types (multiple-choice, completion, essay-type), were rated by four

raters, indepenently, using one or two categories of the *Taxonomy*. In the second study 222 items were analysed but only two raters were used. In both these studies the raters showed a high degree of agreement in classifying the items. The results also showed that while the objective-type (multiple-choice and completion) items by and large measured cognitive objectives of lower level (Knowledge and Comprehension); the essay-type item covered a broader range of objectives including the higher congnitive objectives (like that of Application, Analysis, Synthesis and Evaluation).

On the basis of this analysis a profile of achievement tests was constructed. It was found that the M.A./B.Sc. Ordinary objectives like Knowledge and Comprehension (69%). Even the Higher Ordinary examinations had 44% questions from these categories, while 56% questions were from the rest four higher cognitive categories of Application, Analysis, Synthesis and Evaluation.

V

In *Part B* of the present work, the relationship between achievement, intelligence and creativity was investigated. A sample of 65 students of M.A./B.Sc. Ordinary and Higher Ordinary Psychology were given AH5 Test of Intelligence (Verbal part) and 12 items of Wallach-Kogan Creativity Test. The achievement tests were classified into two major groups: those measuring the Lower Cognitive Objective (Knowledge and Comprehension) and those measuring the Higher Cognitive Objectives (Application, Analysis, Synthesis and Evaluation)

The inter-correlations of the tests showed that creativity and intelligence are unrelated to each other. It was also found that while the test of intelligence has a small correlation with achievement tests of both the Higher and the Lower categories, the creativity tests were unrelated with the achievement tests measuring the Lower Cognitive Objectives but were significantly related to achievement tests measuring the Higher Cognitive Objectives. This indicated that the relationshsp between creativity and academic achievement depends on the nature of achievement tests. If the achievement tests are such

that they measure only lower level cognitive objectives, as the teacher-made objective-type tests were found to be, then there will be no relationship between creativity and achievement. On the other hand, if the achievement tests cover higher congnitive objectives then there will be a positive relationship between achievement and creativity.

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LABOUR WELFARE : A PSYCHOLOGICAL APPROACH

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Industrial development is very essential for the economic progress and prosperity of a country. The country which is most modern and prosperous in this era of science and technology is the one which is industrially advanced.

The industrialization of Pakistan is very essential because it would increase per capita income on the one hand and provide employment to her fast rising population on the other. As Pakistan is densely populated and the pressure on the land is extremely high, it is very essential to provide a large section of population a progressively productive employment in various industries.

The importance of land, labour, capital and organisation as the basic factors of production is quite obvious and can never be questioned. But of these factors labour plays the most significant and superb role in industrial civilisation. Workers are the back-bone of industry and they serve as the pivot round which the very wheels of industry revolve.

It is very much advisable on the part of the management to enter into the domain of co-operation where workers are fully prepared to accord an enthusiastic and affectionate welcome. Whatever the country has achieved till recently in various spheres and what it aspires to achieve in the near as well as distant future rests entirely on the harmonious and cordial relationship between labour and management. Joint effort has always the upper hand over single effort.

As Pakistan is just on the threshold of industrial development it is more than necessary that the labour-management relations

should ever remain concordant. On the one hand, the labour must prove their worth for what they are paid in the form of financial and non-financial incentives while on the other the management must do all to ameliorate the conditions of the working class. The employers must take into cognizance the basic fact that what they are dealing with is human material—body and blood, mind and soul and not simply machines. Hence they should be prepared to provide them all facilities, comforts and conveniences.

It is easy to buy a man's time, it is also feasible to purchase a man's physical presence at a given place but it is very difficult, nay impossible, to obtain enthusiasm, confidence, initiative and loyalty. One should develop the knack to earn these things. If we care to have a bird's eye view of Time and Motion studies we find ourselves in a quandary. It is true that where the workers started doing their work according to certain basic principles as laid down by Taylor, Gilbreth and their associates (Gilmer, 1961) the production showed an upward trend. But this hope was soon shattered when it was felt that greater efficiency did not always yield good results. A classic experiment was carried out by Mayo (Brown, 1954) at the Hawthorne Works of the General Electric Company in Chicago. This study has given ample demonstration of the fact that production in an industrial sector is not simply a function of proper illumination, suitable atmospheric temperature, sufficient rest pauses, optimum hours of work and superincentive wage plans but also a factor of employee's attitudes, kabour-management relationship, supervisory role and leadership and many other things. It is Mayo, the pioneer of Hawthorne studies who highlighted the simple truth that efficiency and productivity very much hinge on good human relations.

Quality-product can be turned out only in an atmosphere of democratic leadership in industry. Where there is an autocratic form of management there are resentment, frustration, grumbling and murmuring. As such the main task of the management is to create a very healthy and congenial atmosphere so that efficiency could be achieved in the desired direction. A happy atmosphere cannot be created in the vacuum. It is an absolute necessity that an urge of

good will and a feeling of give and take must be nourished. The workers should be given, in addition to their fixed weekly or monthly salary, other facilities, comforts and conveniences. In short, every kind and sympathetic attention should be paid towards the welfare of the working class which is a keynote to industrial peace and prosperity.

Welfare is nothing more than a desirable state of individual or a group. It may be defined as 'an attitude, concept and programme of voluntary activities by employers, state or other agencies concerning industrial workers and their families for their economic and social, physical and mental, moral and material, spiritual and intellectual, educational and cultural well-being, growth and development, according to at least, what is laid down by law'.

Labour welfare schemes are, strictly speaking, nonvoluntary. They are implemented not because they are desired by the management but because the employers are compelled by Government laws, labour unions and other social agencies. Provision of welfare activities is compulsory under law these days. But welfare work should be done voluntarily by the employers to establish, within the existing industrial system, working and sometimes living and cultural conditions beyond what is required by law and customs of the country.

Implementation of welfare activities in any industrial plant is the result of the interaction of many factors such as Government Acts, the requirements of the situation, the reaction of the employees and the ability of the employer to bear the cost of welfare schemes. It is often argued that welfare activities are implemented to pacify the dissatisfied workers. Very often the relation between the employee and the employer is strained and not harmonious. Workers feel that they are being exploited, their grievances are neglected, ignored and that they work hard for the profit of the management. In this way there is always the deeprooted dissatisfaction in the mind of the workers. Thus the management in order to appease the agitation has to provide conditions within their play for the comforts and safety of the workers.

Welfare schemes include measures for the welfare of the workers inside the factory or place of work and outside the factory. Though it differs from country to country and from industry to industry yet, in general, it includes such measures as good physical environment, sanitary and washing facilities, canteens where workers are supplied meal with moderate charge, rest and recreational facilities, educational and medical facilities, arrangement for travel to and from work place and for the accommodation of workers employed at a distance from their homes, co-operative stores where all necessary commodities are sold at a moderate rate, and many other things.

From the imperative point of view every worker should be provided with well-ventilated rooms because shelter from sun and rain is one of the primary needs of a man. Apart from giving protection from the inclemencies of weather the house serves as a focus of social life. The fact is that haphazard and rapid growth of industrial centres and consequent rapid rise in industrial population represents a difficult housing problem before the country. There are two special aspects peculiar to industrial housing—the individual worker who pays the rent and the difficulty of finding suitable lands near the place of work. If the houses are built at a great distance from the working place where land is easily available certain difficulties such as provision of cheap transport arises.

Yet another important point which requires due consideration is the economic betterment of the workers. Measures for such betterment include security in service, fixation of minimum wage for each job, provision of old age pension or contributory provident fund, health insurance, profit-sharing or declaration of bonus and adequate compensation for the disability caused by accident and also caused by death undue. Security in service plays a vital role in attracting the workers in a particular plant.

In one investigation by Blum and Russ (1942) there was the large measure of agreement on one point that the workers, irrespective of sex, believed security in service to be more important a factor than a good pay. In Pakistan Ahmad (1977) designed similar experiment yielding similar results. Out of so many conclusions drawn from

Mayo's researches citation of one will not be, I think, out of place. 'The need for recognition, security, and sense of belonging is more important in determining worker's morale and productivity than the physical conditions under which he works'. The appointment as well as discharge or dismissal of worker should be governed by rules and regulations. In the matter of appointment or dismissal the whims, likes and dislikes, prejudice and similar other factors must, in no case, be allowed to operate.

Now, fixation of minimum wages for different employments is essential. Fixation of minimum wages are based on three principles:-

(i) It should be the living wage, i.e. a wage on which it is possible for a workman and his family to live fairly.

(ii) It should be the fair wage, i.e. equal to that received by the workers performing work of equal skill, difficulty and risk.

(iii) It should be within the capacity of industry to pay.

The last point defeats the whole purpose.

Fixation of minimum wages for different employments goes to a great extent in assuring happiness and comfort to the worker besides granting some of the amenities of life. But it does not enable the worker to store something against the rainy day, against the misfortune of life. For future security and sustenance of life provision of pension or contributory provident fund is a must.

All such schemes are implemented as the result of several motives. There is, in the first place, the Government laws which are responsible for welfare schemes. But schemes which are not governed by such laws are probably introduced with the following motives :—

(i) Humanitarian : of course, it is a rare motive. In these days of materialism, lust for power and wealth, nobody seems to take care of humanity. This is all the more pronounced in the industrial sphere. Still there are certain employers who are social-minded and feel the need for doing something towards the welfare of the workers.

(ii) Economic Aim : The introduction of welfare activities inside the factory like optimum temperature, proper illumination and ventilation and provision for the elimination of dust increase the efficiency of the workers and thereby their production with the result that there is lower cost of production and greater economic profit to the employers. In fact they get many times more than what they actually spend for providing those facilities to the workers.

(iii) Advertisements : This motive is intended to attract high rate worker. Every industrial plant has got its own welfare department headed by a labour welfare officer whose job is nothing but to give a wide variety of publicity of the labour welfare activities so that skilled workers from outside may feel attracted to join the firm.

(iv) To evade payment of income tax : More often than not the employers try to evade payment of actual income tax by taking refuge behind such enlightened words as Labour Welfare Activities, Health and Recreational Facilities, etc.

The Government from time to time has more actively stepped in for improving the lot of workers working in industry and elsewhere. The Revised Labour Policy laid much stress on sound and healthy relationship between the labour and the management which is a prerequisite of industrial peace and essential for economic progress. The primary aim of the Revised Labour Policy was to ensure industrial peace with a view to stepping up production, commensurate with a fair deal to labour and without denying the workers and the employers their rights as enshrined in the International Labour Organisation Conventions. The employers and the employed are now free enough to settle their own disputes through such constitutional measures as negotiations, mediations and adjudications. A simple and effective procedure for settlement of grievances of individual workers has been prescribed. A large number of labour courts have been set up for this purpose. Also, new laws have been enacted in pursuance of the Revised Labour Policy which

represent a fundamental conceptual change at policy making level and which does not only guarantee rights to the working class but also guarantee self-respect to honest and hard working elements.

One of the most important factors that gives a bitter touch to [illegible]ourages a wide gulf in the relationship belween labour and [illegible]agement is the lack of responsible leadership amongst the workers. A particular industrial leader may be very efficient in the technical sense but if he is inefficient in his dealings with human materials, he is a menace and a threatening danger to the well-being of the industry, both in the material and the psychological aspects. Such a man, if he so wishes, may create trouble and give rise to low production, increased absenteeism and labour turnover, neurosis and sickness. Actually, he is the mastermind behind frustration, aggression, strikes and lockouts. There is no denying the fact that proper selection of leaders in industry and elsewhere is one of the greatest problems facing us today. Trade unionism in Pakistan is still in its infancy and that is why it is all the more necessary to impart necessary education to the lakhs of illiterate teeming masses in industry so that leadership can be created out of the rank and file of the workers. Proper guidance in this connection should be given to the workers through various labour welfare centres and those interested in trade unionism should be povided knowledge in trade union methods and techniques through relevant institutes.

In a developing country like ours where we are to deal mostly with illiterate and ill-educated group of workers, success can best be assured by taking advantage of Audio-visual Aids. A large number of documentary films should be produced on industrial welfare and industrial relations.

In short, many steps have been taken by the Government to promote harmonious relationship between labour and management. Many schemes have been implemented and many more are on the verge of implementation. As Pakistan is just on the threshold of industrial development it is all the more necessary to do something for the betterment of the workers and their families. Unless and until facilities in various spheres are provided to them the output, both

in terms of quality and quantity, will deteriorate ; dissatisfaction and discontent will be rampant ; wastage of energy and materials will show an upward trend ; onset of fatigue will be quicker ; number of accidents will increase ; strikes and sabotage will take place and in some cases even lock-out may occur. The manager of any industrial concern should keep one point always in mind that welfare is an excellent thing only when it is viewed and perceived in its reasonable and right perspective. It becomes unreasonable and ineffective when it is done for some ulterior motives and used specifically as an incentive. Those who use welfare schemes specifically as an incentive will be shocked to learn of the sad state of affairs prevailing in the aforesaid Hawthorne Plant at the time of experiments being carried out there. There was a great deal of grumbling, murmuring dissatisfaction and discontent amongst the 30,000 employees of of the firm even though the company was providing pension, sickness benefit and numerous recreational and other facilities. High wages and bonus plans are a little consolation to the workers if someone in a job which is considered to have lower status than their own is better rewarded.

Welfare should not be taken primarily as something to goad workers and increase production rather it should be better conceived as a social ect. It is just possible that the workers may feel attracted and join the firm but, rest assured, they will neither stick to the present position nor exert more effort for it unless they find other satisfactions. Of the various traits the need of the individual for status and function is the most significant one, and if this need remains unfulfilled and unsatisfied there is nothing left to compensate for it. Loss of status throws one into abyss of oblivion and this social is lation may lead to neurosis. The workers are always guided by an inner urge 'to find an environment where he can take root, where he belongs and has a function ; where he sees the purpose of his work and feels important in achieving it'.

What I mean to say is that the concept of perverted welfare should be buried long before it is firmly rooted in industrial concern or any other organisation so that a vast sea of human population could be

saved from exploitation. There is not much point in doing the right thing for the wrong reason. It would be an unwise step if one is attempting to satisfy the needs of the workers with what are merely 'adjuncts to happiness' while ignoring their more basic and fundamental needs. Welfare should, in no case, be conceived as a side-issue in industries rather it should be taken as one of its main functions.

I will be failing in my duty if I leave the thread right now and here. I deem it necessary to clarify my position for certain misconceptions which might have been taking shape in the minds of the readers regarding the merits of such welfare activities already mentioned. It should be very clear to the readers that I am not actually pleading for bad working conditions nor am I undermining, in any way, the importance of other facilities, conveniences and comforts given to the workers inside and outside the working place. But I am definitely not in favour of such facilities and welfare schemes which are perverted in nature and which have some ulterior motives behind. Good physical or material environment is utterly futile if psychological environment is not healthy. It's not what you do, it's the way that you do it.

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PAKISTAN JOURNAL OF PSYCHOLOGY

(An International Journal of Psychology)

Pakistan Journal of Psychology encourages scientific originality and creativity in the field of Psychology. It carries experimental, clinical, and theoretical articles, social surveys, comments and special reviews of psychological researches. A section on comprehensive book-reviews is specially provided. Authors are generally expected to relate their analyses, as far as possible, to the socio-culture context of Pakistan in particular and of developing countries in general.

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The boys in the English medium schools also appear to have had more freedom in this choice of their future vocation and consequently 87% of them are not willing to change even if given free choice. On the other hand 39% of the boys in the Urdu medium are willing to change their future preferences if given a free choice. The girls in both media (64%) will not like to change their future plans even if given a choice. However, 79% and 55% boys in English and Urdu media respectively indicated that they have not had any basis to make a change in their plans during the past one year. The girls (64%) in both media indicate the same situation during the past one year.

Since the stereotype about the division of labour between the sexes still persists, it was felt that there may be differences in the perception of boys and girls as to the best professson each group would choose. Tables 7 and 8 show the differential perceptions.

In table 7, the respondents of both sexes indicate their views on the best profession for boys. The responses not only indicate a perceptual difference between boys and girls, but also point out differential choices between English and Urdu medium pupils. To the English medium boys, the best professions for boys are business, medical and engineering in that order, whereas for boys in the Urdu medium, these are engineering, medical and college teaching. The girls have their own views in that the English medium girls consider engineering, business and medical in that order, whereas girls in the Urdu medium indicate medical, engineering and college teaching in that order as the best profession for boys. One can see a difference in perception more between English and Urdu school pupils than between the sexes. To the English medium pupils college teaching does not seem to be an attractive professional choice since it is neither socially prestigeous nor very lucrative in material terms. Medical and Engineering professions have both prestige and money in the current social scale of values.

Table 8 represents responses relating to the best profession for girls. Both boys and girls in English medium consider school teaching as the best profession. The respondents from Urdu medium consider medical profession as the best for girls and school teaching as the second best. There is almost a consensus, except for priority on school teaching and medical profession for girls. The difference in ranking of these two vocations may reflect the present economic standing of the families of Fnglish and Urdu medium pupils, since for Urdu medium pupils economic advancement provided by medical profession may be more important.

the school subjects which are relevant to their chosen profession. We find no evidence of any enthusiastic interest in mathematics for boys and biology for girls, the two school subjects most relevent for engineering and medical careers. To this extent, this assumption does reflect the current situation and the survey results points in the expected direction. However, the assumption needs further testing more specifically.

The third and fourth assumptions about the significant role played by parents and other elders in determining the vocational choices of their children are generally supported by the results of the survey. The assumption was made on the basis of the existing pattern of our family life where the father in particular is not only an authoritarian decisionmaker, but also serves as the model for the children to follow. The more successful a father, the greater will be his impact on his family both as a model and a decision-maker. The results justify these assumptions to a large extent.

(*b*) Hypotheses suggested by the survey

The results clearly point out that there is likely to be a significant difference between the pupils of English and Urdu schools in the choice of their future vocation. Further reserch on these lines should use a more systematically drawn sample of students from the two types of schools.

It may also be worth while investigating the relationship between the vocational preference of the pupils and the aspirations of their parents for their sons and daughters. A longitudinal follow-up study of the pupils on their later job performances may provide very useful guidelines for national education policy as well as man-power planning for national development.

Variables like parents, education, their socio-economic level and size of the family of the pupils seem quite critical in the determination of the vocational preferences of school students. A study of these variables relating them to the future aspirations of both boys and girls in secondary schools should be rewarding.

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SOME EXPERIENCES WITH PICKFORD PROJECTIVE PICTURES

14-S Gulberg Lahore

Q M. ASLAM

Let me begin by confessing that my clinical experience is frightfully limited. My life interest has been teaching psychology and philosophy. However soon after retiring from teaching I found myself handling young people with mental problems, teen-agers who had not finished their school or college, also clerks, salesmen, etc , I approached my task with no solid conviction or affiliation of any kind except because of a general respect for Freud, and all that has closely followed upon his discoveries, respect also for testing devices which psychology has developed during my life-time, and whieh continue to grow in theoritical dimensions as well as their practical applications. But I could not bring myself to use psycho-analytical methods. This, for want both of competence and full conviction. However, problems have come to my notice and I have tried to handle them in ways which seemed acceptable to me and to the situations from which they arose.

I

I propose to notice two problems which remained with me long enough to deserve such notice. Others disappeared after weeks of encounter, helped or not, I do not, know. Perhaps yes, for I heard no more of them from any quarter.

One of the two is a boy, a bright and cheerful infant who began to show difficulties with his school work and with his parents as he grew up. The difficulties became so compelling that the parents decided to send him to a boarding school. A first major trauma-a convulsion took place at the time of form-filling. It took place in school where mother was called from home. Consultation with family physician led to no referal or plan of treatment. A serious enough view was not taken of what had happened. The boy went up for tests and interview by the school which accepted him without reservation On the eve of his departure for the school, however, the boy.

then 12½ showed another major attack which startled the parents in fact the whole family. Consultaion this time with a neuro-specialist resulted in a pronouncement of diagnosis, a reassurance as to the good results which could be expected from pills and precautions prescribed. Let me say that the use of pills continues until today when the boy is 19½ and has been free from attacks for the last four years. Earlier the attacks followed one after another, four or five taking place in a matter of two weeks or so. At about 14½ the boy came to my notice. Just before this, the family-father, mother, and three children, the patient being the eldest, had returned from a posting abroad of a duration just under one year. During the stay abroad the patient's difficulties with the family had been at their worst. Threatening not to take his pills or doing worse, and generally disobeying even without the father detracting anything from his visible forward treatment.

I am reminded here that before the family went abroad I sent the boy to a colleague well-versed in psycho-analytical therapy. The patient showed strong resistance despite which two or three sittings were held. My colleague pronounced him a case of hysterical or conversion epilepsy. On the family returing from abroad, the attacks continued. Hope of a cure alternated with fear that it was not yet in sight. Admitted to my care, I decided to put the patient through exercises like free associations, sentence completion, etc., and than through the Pickford (1963) Projective Pictures which depict a serics of 120 life situations. The series takes about three weeks to go through. In the course of the exercise the clinician asks no questions, makes no comments, lets the patient think or rethink his past or present situations, experiences by himself. These pictures were repeated at the patients request three times. His last attack took place when he was 15½ and this remains the last to this day. The patient now 19½ has been completely free since. He talks about past mistakes and misjudgements, shows restraint in many things in which before he did not do so, enjoys car driving without speeding, has friends whom he esteems, and who esteem him. He enjoys college but shuns reading for examination managing to score marks with a literally minium of reading of larning up. He reads books of

his own choice though; also combines responsible part-time evening work with his college. This work involves receiving and holding large amounts of cash, dealing with visitors, answering phone calls, officiating at concerts, social gatherings etc., Patient says he is 60% cured and would like to repeat Pickord Pictures now and then. He has no difficulty with the family. Only he must have his own way in most things. He plans sometimes ahead of times but seems amenable to advice from some relations, friends, and even strangers who impress him

Nobody can say-and I certainly do not say that the improvement is due to the pictures. For the pills are there all the time. Only the fact remains that pills and the pictures have been in use Simultaneously.

II

The other case is that of a boy now 20-21 whose schooling had to terminate years ago for want of progress of extreme slowness in both work and play. There are no specific emotional difficulties. Only a vicious circle of reduced school-work followed by reduced self-confidence followed by reduced sociability and back again. This boy kept visiting me regularly for over a year. He also was put through the usual mental and personality exercises. Incidentally he seemed not so bad at Koh's blocks Last of all he was put through the Pickford Pictures to which he took readily, repeating the set three times Not all people with emotional difficulties take to these exercise so easily. The patient has an unfortunate background of a broken home. Yet he takes to the exercis_s without resistance, only preferring one to the other. He takes great interest in drawing with poster-colours, some-times from a copy, often from imagination. He wants to repeat free-associations and the Pickford Cards.

While with me he visited regularly a private coach for school subjects. He made some progress, but not much to speak of, because of which the arrangements had to terminate.

On the emotional and personality side, there was visible improvement. The autism with which he came to me disappeared. Increasing

feeling of security made for happiness, for free talk for welcome curiosity about things and persons around. No speed or sharpness of behaviour, however. But no decline either in cleanliness of appearance or in keeping appointments, though all this was combined with slowness of memory and slowness of perception, judgement and logical reasoning.

Will this boy be able, say with prolonged psychotherapy, ever to do and learn things now in his 20's which he was not able to when he was in his teen years? It is difficult to say, though the emotional improvement gives some hope.

The patient is without any commitment now with psychotherapy, though he likes to come back and continue with it. To let him do this will not hurt or harm him, it may even help, relying on the inner urge for health and happiness given to all men. The situation, however, is that psychotherapy consisting of Pickford cards, free-associations, and drawing-has done some good, but not enough. If-as it seems-psychotherapy cannot do more, can some other therapy ? Can chemo-therapy, for instance, succeed where psycho-therapy has not succeeded beyond a point ? Inventing moderately challenging occupations is something-one could like to try. These if invented may be pursued at home or at special institutions. But these will have to be created. The boys mother who lives with him and her two other children, is optimistic. A definite change is to be observed, according to her, in his social conduct and personal accountability. The boy's own wish to be better is in itself a step to progress. The boy's coach worked enthusiastically for a year or so. The boy himself attended regualarly. But his own profile of interests with a large content of art, scholastic interests were practically nonexistent. Gradually, serious effort to teach had to be relaxed. But thanks to the mother he lives happily and harmlessly with his family. One wishes more were possible especially because more still seems possible.

III

I do not want to build very much on these experiences, interesting though they seem to me. But having had much to do with the train-

ing of youth, and having been concerned with human problems in their social contexts, if only for academic purpose, I like to hazard some conclusion or opinions These, let me briefly set forth :

(i) Firstly, it seems to me that where Psycho-genetic history is present, it should be treated as a sure indicator for psychotherapy, whatever the physical diagnosis or physical treatment may be.

(ii) Secondly, as prevention is better than cure, and as child-parent relations are often at the bottom of emotional difficulties, a programme of parent education should be treated as a must and instituted with the help of mass media.

(iii) Thirdly wherever possible and the least bit desirable, collaboration should be encouraged between psychiatrists with a physical bias and psychologists trained in projective techniques.

(iv) Fourthly, it seems to me that all high-school and early college education should be backed by a system of mental culture, consisting of mental exercises, comparable to the physical PT introduced by educational authorities, some time ago. Attendance at these exercises should be treated almost as a requirement.

(v) Fifthly, every school and college and all large teaching departments in Universities, also all large offices and industrial units should be staffed by clinical psychologists trained to take care of aberrant individuals and to assist in the solution of problems relating to standards, efficiency ond collective morale.

(vi) Sixthly, intellectual leaders, every where should try and instruct the community in differences between a mentally sick society and a mentally healthy society, a mentally sick world and a mentally healthy world.

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PSYCHOSOMATIC DISORDERS AND ANXIETY

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YASMIN NILOFER FAROOQI

A. INTRODUCTION

The psychophysiological disorders, also called psychosomatic illnesses, are physical ailments either of proved psychosomatic origin or with a prominent psychological component. Among the illnesses within this diagnostic grouping are stomach ulcers, migraine headaches and high systolic blood pressure. In their attempts to solve the paradox of psychosomatic disorders, psychologists have found a dynamic role of anxiety in such diseases. According to Alexander (1968) "the repressed infantile conflict are experienced as an anxiety, with the result that patient" regresses" to an immature mode of psychosexual functioning, accompanied by specific physiological concomitants. The crucial psychobiological functioning in all ulcer patients is the frustration and anxiety (external or internal) over passive dependent and love demanding desires".

Mahl (1953), states that virtually every stressor is capable of producing a state of chronic anxiety; if the stressor is strong and the subject vulnerable enough, the physiological correlates of anxiety are identical. Psychophysiological assessment of neurosis has centered on measures and techniques which reflect anxiety level. It has been shown that increased heart rate distinguishes neurotic patients from normal control subjects (Glickstenin et al, 1957). Anxiety neurotics have higher systolic blood pressure than either schizophrenics or normals. (Milliken, 1964). Neurotic patients also show greater GRP responsivity than normal subjects under stress conditions (Lader, 1967). Other physiological measures including stomach activity (Malmo, 1966) likewise differentiate neurotics from normals. It seems correct to conclude that psychophysiological assessment of neurotic behaviour provides more "direct" measurement of neurotic anxiety.

Table 3 : Showing Male Female Differences on Anxiety level

	N	Mean	SD	SED_x	t
Females	50	36.38	9.639	1.9755	2.632
Males	50	31.18	9.916		

df 98 P .01

Table 3 : indicates that females are more prone to anxiety as compared to the males.

Both tables 2 and 3 indicates that females are more anxious; therefore, they showed greater tendency for psychosomatic disorders.

D. DISCUSSION

Examining the results on table 1, clearly indicates a definite relationsphip between pschosomatic disorders and anxiety. The results also reveal that "High-Anxiety-Group" suffer from psychosomatic disorders more frequently than" Low-Anxiety group". Further analysis of tables 2 and 3 indicates that females tend to be more anxiety-ridden and, therefore, more prone to psychosomatic disorders as compared to males.

In the present "age of anxiety" and under the pressures of modern civilization there has been a sharp increase in the psychosomatic disorders. The victims of such problems keep on receiving medical treatment exclusively but they themselves, and their physicians give up all hopes of "complete cure" of somatic symptoms because such symptoms are psychological in nature. A vicious circle sets in; the psychic-conflicts which cause the somatic ailments, are enhanced due to anxiety over failure to get rid of physiological disorders, and consequently such free-floating anxiety makes the ailments all the more severe and permanant.

Ever since Freud brought the neurotic disorders under the psychoanalytic umbrella, the hallmark of neuroses has been anxiety.

Anxiety is the chief characteristic of neuroses. It may be felt and expressed directly, or it may be controlled unconsciously and automatically by conversion, displacement or other psychological mechanisms. Psychosomatic disorder can be considered the sympotoms produced by such mechanisms through which the patient desires relief from anxiety. Freefloating anxiety is a central problem in psychological theory and practice with important implications for guidance experts, personnel managers, clinicians and psychiatrists. For anxiety is not something a few sick people suffer from, degrees of anxiety run through the entire population, effecting real-life adjustment and affiecting real-life adjustment and efficiency, just as surely outside the walls of an institution as within.

According to the results on table I it is obvious that there is a significant relationship between anxiety and psychosomatic disorders. It therefore follows that effective treatment of such disorders must include psychotherapy or behaviour therapy along with drugs.

Table 2 and 3 indicate that females in "Greater-anxiety group show greater tendency to psychosomatic disorders. Such research results can be used to thrash out causal factors underlying psychosomatic disorder and be beneficial for effective treatment of such disorders.

Now the question arises as to why females-being more anxiety ridden-show more proneness to psychosomatic disorders This might be due to the fact that female with psychosomatic disorders often receive a great deal of sympathy which compensates for their very real pain and suffering or is it because, they feel that they do not have adequate physical protection and hence are more vulnerable to attack from without. Another causal factor can be that females encounter more prolonged exposure to stressful situations due to role conflict in the present "age of women's liberation." Further probing may reveal insightful results related to this problem.

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ATTITUDES OF UNIVERSITY STUDENTS TOWARDS MARRIAGE ROLES IN PAKISTAN

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Family pattern in western countries as well as in some eastern countries has noticeably changed from male dominance to equalitarianism (Arkoff, 1963; Gardiner 1968, Guskin 1964, Kalish etal 1966, Thap 1968.) This change in the family pattern is ascribed to the economic, social and psychological stresses resulting from technological advances and acculturation. Experimental data on the family pattern in Pakistan is rather rare. Traditionally, the Pakistani families are supposed to be male dominated but the present picture is not very clear. During last thirty years Pakistan has under gone tremendous socio-economic changes. Rapid industrialization, transition from agrarian to agro-industrial occupations, migration from rural to urban areas, factors which are considered to be most potent in social change, must have affected the family structure in Pakistan. Moreover, the development of female education and absorption of women in various jobs out side the home has not only paved the way for female emanciption, but has also necessitated the adjustment of role structure in the family. Further the swift expansion of the mass media of communication has also brought the people of Pakistan in close intellectual and ideological contact with the western countries and has opened the way for acculturation and attitudinal change.

In view of the above circumstances, it may be expected that Pakistani families especially the younger generation is now not adhering strictly to the male dominant values and is shifting gradually towards equalitarianism in marriage roles. It may also be expected that the University students by virtue of education and acculturation are more prone to change of old and acceptance of new values, and such change will be reflected in their choice of future roles.

This study was therefore designed, (*a*) to determine the attitudes of Sindhi University students towards "male dominance" and equalitarianism" in marriage roles and to compare the attitudes of male and female students. (*b*) to investigate the effect of economic status and acculturation on the attitude of the students.

Subject: The subjects were selected randomly from the post graduate classes of each department of Sind University and final year of the affiliated medical and engineering colleges. 150 Muslim students (100 male and 50 female) were finally selected, for the purposes of the study. The mean age for the male was 22 6 and for the female 21 8. The sampie represented the province of Sind and came from hetrogenous groups like Sindhi, Baluchi, Punjabi and Pathans residing in Sind province. Their families were engaged in agriculture, business, civil service or independent profession. In the sample 40 male and 20 female students belonged to the upper income group while 60 male 40 females fell in the middle income group. Only 3 female students came from rural area, while half of the male sample (50) came from the rural area.

Material: (*a*) Marriage role attitude was measured by a scale developed by Jacobson (1950). The scale consisted of 28 items, each of which was answered on a five point scale-strongly agree, agree undecided, disagree strongly disagree. The scores were so arranged that a high score indicated equalitarian and a low score, male dominant attitude was described as one in which the husband was the bread earner and the boss, controled the family purpose, and made decisions, while the wife was dependent on the husband, had to accept his decisions and her main job was to look after the house. The equalitarian attitude on the other hand was one in which there was a joint venture and the wife was also free to pursure activities outside the house.

Two items of the above scale were slightly modified to make the meaning clear to the sample viz "The husband should wear the pants" was changed to "The husband should be the master in the house."

Similarly "if the husband is running around with another woman, his wife should put up with it until he comes to his sense "was reworded to read" if the husband is running after another woman his wife should be patient till he comes to his senses."

(*b*) The information about the sample was gained through a personal date sheet which the student had to fill before he responded on the attitude scale. The personal data sheet sought information about the student's sex, age, education, institution, home urban/rural permanent address father's profession, annual family income.

Treatment of data and results:

In order to determine the direction of the attitude of the sample the mean score of their responses on the items of the scale was calculated. The mean and the standard deviation for the male and female sample was computed seperately so that the difference in the attitudes of the two sexes could also be determined t test was also applied to determine the level of difference. The result is presented in table-1.

TABLE 1

Mean scores achieved by male and female sample on Marriage role attitude

Sample	N	M	SD	t	df	P
Male	100	82.26	31.39	4.19	148	< 001
Female	50	99.82	25.19			

An item wise analysis to find out the areas in which the male and female differed significantly gave the following results. The scores and analysis is given in table II.

prerogative to make decision. A large number of male sample agreed that educated wife could take up a job and could earn even more than the husband but she should quit even a much needed job if the husband desired. Majority of the female sample on the contarary believed in the democratic relationship between husband and wife. They wanted to be fully informed of all the matters relating to the family and considerad decision making as a joint venture. They also wanted freedom to spend the house hold money, and their salaries (if they were working).

Strong disagreement was also found on the question of fidelity in marriage. Significantly more male thought that it was not always necessary to be faithful to the wife and that the wife should be patient if the husband was running after some women. The female sample strongly believed in marital fidelity both for women as well as for men Considerable majority of male students wanted to spend their liesure time more with friends outside the home, the female students on the other hand stressed more on family togetherness.

Sharing responsibility in the house was the only area where the male and female seemed to agree. Both ths groups agreed that the housband should help the wife in looking after the children. Conformity on this item between the two groups was perhaps the outcome of the changing social circumstances. The joint family is giving way to one unit family, scarcity of servants and economic conditions make it essential that the husband also share the household duties. If this is the case then we can except more equalitarian marriage role attitude particularly on the part of the middle income group which bears the effect of economic strains more. Zaidi's study (1971) on working women in Pakistan also indicates economic stress as a potent factor in bringing out a change in the attitude of the spouses towards role of working women in the family. In this study also the effect of economic condition on the marriage role attitude was quite apparent. The upper income group male when compared with middle income group male appeard to be more male dominant than his middle class counter-part. Similarly, the upper class female was found to be less

equalitarian than the middle income female. Thus findings of this study also support the view that economic conditions do affect the marital attitude.

In our study our next assumption was that the rural sample being relatively less affected by social change and acculturation would strongly adhere traditional values, and its attitude towards marriage role would be comparatively more male dominant than that of its urban counterpart. No significant difference was however, found in the marriage role attitude of the rural and urban samples, both showed strong male dominant attitude However, no comparison could be drawn for female as out of 50 female only 3 came from the rural areas.

In conclusion it can be said that equalitarian attitude towards marital roles is strongly dominant in female Pakistanis than is the male who still appear to be male dominated in their attitude. The middle income group male however, appears to be less male domiant in his attitude, than his upper income group counterpart. Similarly difference in the attitude of upper income group and middle income group and middle income group females is also quite apparent, the middle income group female being more equalitarian in her attitude than of the upper class; and that the urban youth is as male dominated a his rural counter part.

However, it has been noted by another investigators, Jacobsons (1950) scale measures preference towards marriage and not actual behaviour. Whether these preferences have become internalized and have changed the basic value structure, or are transient and will fade as these students enter the married life is difficult to predict on the basis of this study alone.

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OVER-INCLUSIVE THINKING AND RETARDATION IN SCHIZOPHRENIA

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INTRODUCTION

Over inclusive thinking is considered as an important factor contributing to thought disorder found in schizophrenic patients. Diffcrent theories of thought disorder suggest that it is essentially due to some abnormality in concept formation.

Goldstien (46) argued that schizophrenic patients are 'Concrete', *i. e.* they are unable to perform inductive reasoning due to their in ability to make abstract generalizations. Later researches showed that schizophrenics can produce as many generalizations as normals, but they tend to make unusual generalizations.

Benjamin (1946). Becker (1956) have shown that schizophrenics 'concreteness' can be measured by means of proverbs tests. These patients gave concrete interpretations to the proverbs. It was suggested by these authors that 'concreteness' in proverbs test was not due to inability to generalize, but posslbly due to their tendency to interpret the instruetions peculiarly.

Cameron (1951) maintained that schizophrenic's concepts are over generalized. Schizophrenics are unable to preserve conceptual boundaries and incorporate into their concept elements, some of them personal, which are distantly related to the concept, but not easentially a part of it. This abnormality has been termed as 'over-inclusion'. This incorporation of irrelevant ideas makes thinking more abstract and less precise.

Cameron's theory of over-inclulusion as an important factor of schizophrenic thought disorder received strong support from the experiments carried out.

Babcock (1941) abvanced a different explanation for schizophrenic thought disorder. She argued that thought disorder results mainly from gross retardation of intelluctual speed. This slowess even explains their social isolation resulting from inability to engage in normal conversation. She maintains that generalized retardation is more marked in chronic schizophrenic as compared to acute schizophrenics.

In more recent works Over-Inclusion has been attributed to 'attention defect'. Schn'ednam (1948) attributed over inclusive thinking to the inability to restrict their attention to the required task. Schizophrenics are unable to ignore the stimuli irrelevant to the task at hand. Payne, Mutassek and George (1959) regarded overinclusive thinking primarily due to attention defect : some breakdown in the 'hypothetical' filter mechanism, which normally screens internal and external stimuli which are irrelevant to the task at hand, to allow the efficient processing of incoming information.

Payne and Friedlander incorporated these aspects of over-inclusive thinking in their research. They employed Object Classification Test (and Bonjamin Proverb Test in their) study on comparative groups of normals, depressives and acute schizophrenics. Results showed that acute schizophrenics wre significanty more over-inclusive than all the other groups.

Our present research is based on Payne and Friedlander's research on Over-Inclusive thinking.

The purpose of our present research is to :

1. Study over-inclusive thinkIng comparatively in different groups of patents.
2. To see the sensitivity of these tests in clearly differentiating the categories of patients, as this test is being employed for the first time on our patients.

Our Hypothesis are :—

I. Over-Inclusive thinking is a characteristic of Schizophrenic patients which is not found in neurotics and normals.

II. Retardation is shared by all the paychotics and separates them from normals and neurotics.

III. Retardation is more marked in schizophrenia who are not over inclusive.

METHOD

This research was carried out at the Deptt, of Neuro-Psychiatry, J.P.M.C.

The criteria for selection of the subjects were as follows : Age range : 17-45 years.

Educational Level : Matric and above (this was due to the absense of any test to evaluate their premorbid intellectual function-ing).

The following four groups of subjects were used in the present study.

Description of Groups:

a. *Normals* : The present sample consisted of 20 normals ages ranging from 17-41 mean age being 23.5 years; as a group they had wide range of education and occupation.

b. *Neurotics* : It consisted of 18pts mixed neurotics (anxicty state, depression, phobic anxiety, somatic delusions etc.) age range 18-45 and mean age 29.0 with wide range of education and occupation All of them were recent referrals to the hospital,

c. *Acute Schizophrenics* : (With or without delusions) The group consisted of 13pts. age range 17-44 mean age being 26.5 as a group they had a wide range of education and occupations. The patients were closely matched regarding :

1. Their recent episode, admitted in the hospital following their first attack.

Table No. 2

Proverbs Tass.

	M	t	df	P
Normals (N-20)	2.81			
		.37	36	N.S
Neurotics (N-18)	3.00			
Normals (N-20)	2 81			
		1.87	31	N.S
Acute Schi. (N-13)	3.38			
Normal (N-20)	2.81			
		2.68	36	.005
Chron. Schi. (N-18)	3.80			
Neurotics (N-18)	2.81			
		1.67	34	N.S
Chron. Schi. (N-18)	3.80			

Table No. 3

Measures of Retardation

	M	t	df	P
Normals (N-20)	2.43			
		.725	36	N.S
Neurotics (N-18)	3.13			
Normal (N-13)	2.43			
		3.06	31	.001
Acute Schi. (N-13)	3.96			
Normals (N-20)	3.43			
		3.05	36	.001
Chron. Schi. (N-18)	3.50			

DISCUSSION

A combined over inclusive score cannot be given in this research, as in other simillar studies. Our patient's performance on two separate tests of over inclusion has been quite different. Probable reasons for this will be discussed later.

Object Classifications Test discriminated significantly between normals and schizophrtnics, both acute and chronic. Schizophrenics

had significantly higher mean scores than normals; acute schizophrenies having the highest mean score followed by chronic schizophrenics and neururotics.

On Benjamin Proverbs Test however chronic schizophronies obtained significantly higher over inclusion scores than compared to normals; but there was no significant difference in the means of normal and acute schizophrenics as expected. There was no significant difference in the means of normals and neurotics.

On composite retardation measures the mean scores for both chronic and acute schizephrenic group were significantly higher than normals showing retardation of functions. The mean difference in acute is greater than ehronic. This finding is reverse of the results obtained in similiar studies; where acute schizophrenics as a group show less retardation on these test than chronic schizophrenics. Neurotics doing better than schizophrenics group on these test as well Our neurotic group consisted of dysthymics who tend to obtain comparatively higher score on test of motor function.

Analysing the unexpected performance of our acute Schizophrenics group on Benjamin Proverbs Test and test of retardation certain important factors come to our mind whicn requires futher verification ;

Firstly, our acute group consisted of very disturbed patients, iu fact more violent and aggressive, hence very different from those tested by people elsewhere.

Secondly, the important point is that most of them (acute schizophrenics group) were heavily sedated, without which they were unmanagable and uncooperative.

Results on Benjamin Test and Retardation Tests are affected by these two conditions.

In our present study it was not possible to explore our second hypothesis because of the drop outs in the psychotic depressive group.

However, these issues need to be explored through further research.

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PSYCHOLOGY IN PAKISTAN

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It is unfortunate that we in Pakistan are still groping in the dark, whereas the importance of Psychology in every programme of development, in every area of research and profession are not only widely accepted but also widely implemented in the advanced countries. The fact that there is hardly any question about the role of Psychology in the national development in the developed countries, should automatically make it imperative for the Pakistani nation to adhere to already accepted discipline of Psychology, as the most important agent in the development of the national character, and development in an under-developing country like Pakistan.

A nation must have a goal or a defined ideology to follow. In order to implement this goal and ideology one must follow the basic principles and methodology laid down by Psychology as a discipline of the study of human behavior. It is generally agreed that no planning devoid of human perspective can bring about real development. It may be possible to legislate a certain pattern of economic and social change, but unless the people or the beneficiaries accept the change, it remains an imposition. Therefore, it is imperative that an attempt should be made to study the process of acceptance and adop- before this change is introduced. Since the change is desired in behavior and dynamics of human beings, such an effort will definitely involve a communication strategy based on Psychological and social dynamics. As only that change will be acceptable which has the acceptance of social and psychological innovation. NIEHOFF & ANDERSON (1964) conclude that when a felt need and a strong practical benefit exist alongwith the willing cooperation of the

*This article was read at the Pakistan Psychological Conference held in Karachi in 1979 as a Presidential Address.

recipients, the conditions inhibitory to change are likely to be effectively counter balanced". If these conditions are not present the change does not succeed even if initially accepted, because of novelty and reward motivation.

SCHRAMM (1967) pleads the case of psychology for national development by emphasizing that a great amount of experimental and theoretical knowledge is now available to help in planning the engineering of change. Researches like creditability of communications and messages, the selective behaviour, cognitive balance and dissonance are all related to attitude change and the function of opinion leaders and inovations in the adoption of new practices.

Evcn most sophisticated lay man in Pakistan thinks that psychology as a discipline has been imported from the Western ideologies and thus cannot be implemented for the Muslim and Eastern Pakistani culture, but in our zeal we forget the basic contributions made by Muslim scholars in Arab countries in the field of Psychology. As a matter of fact it is the European authors who have failed to acknowledge the contributions of the Muslims, partly because of their ignorance and partly because they did not want to recognize the pioneering work done by the Muslims, in this modern and scientific discipline.

I would like to point out the pioneering work of IBNE-SINA in his book called "AL-QANOON", in which he very exhaustively covers many psychological principles covering the dynamics of personality and etiology of mental illness.

IBNE-KHULDOON in his book "AL:MUQADDIMAH" made most valuable contributions, in which he has touched the topics of personal adjustment, social adjustment, group psychology and social psychology to mention few of his contributions.

IBNE-RUSHD and AL-RAZI deserve no introduction as they have pointed out many original ideas in their writings about psychological principles. Hence the impression, that psychology being a foreign discipline cannot be adopted in Pakistan effectively is not applicable, firstly, because of the mere reason that psychology is the

in cases where the school authorities find that the child is having problems in adjusting to the studies and general atmospher of the school, then the counselling centre takes over and solves the problems by contacting the parents showing them the techniques to deal with the children in order to make them effective members of the society.

The psycho-analytic and sociological theories have pointed out to the family and society as a whole as the most vital factors in the etiology of mental illness and also in the development of the healthy personality.

Unfortunately in our country very few studies have been made, but an attempt has been made to conduct cross cultural investigation on the development of mental disorders as a result of family and society disturbances in Pakistan. A comprehensive study was conducted by AHMAD (1961) on 987 cases who came to the clinic over a 4 years period between 1962 to 1965. Only 847 cases eventually were utilized, because cases suffering from organic diseases, character disorders and speech disorders were discarded for the purpose of the study and only psychotic and neurotic patients were taken into consideration.

Case histories of these patients were coded into various categories relating to family characteristics and socio-economic factor.

The results showed that the relationship of mental disorders and sex, age difference between parents, father's age at birth, sibling order and family psychopathology were statistically significant.

The relationship between mental disorders and parental loss in childhood, marital status, family system, mothers age as birth, children and family were not statistically significant. The results also showed that there were more female psychotics and parents of psychotics were

study of human behavior and the moment we begin to study the behavior of Pakistan nation we begin to deal with a Pakistan individuals the subject matter of psychology. Therefore when the subject matter of a science is the study of a Pakistan Muslim, then the importance and inevitable cognition of the Muslim culture of Pakistan cannot possibly be ignored since the knowledge and understanding of a specific culture are of vital importance due to basic differences in the ideologies and life style of every culture therefore we need cross cultural researches and practical knowhow of a specific culture at the time of evaluation, assessment and investigation of a personality of an individual, as well as in the planning of developmental programme in the specific culture of Pakistan.

This is absolutely imperative as psychology only provides us with the methodology and we can use it is a tool to achieve a goal which is related to our own culture, our own religion and our own national character. Therefore we need researches suitable and valid for our country.

Unfortunately there is a dearth of psychological researches in Pakistan and therefore it is vitally important that we make research cells which study the existing patterns of our society and then devise certain principles based on such researches in order to bring about the desired change in the present society. There is no doubt that we do have a very sound basis for Pakistani nation. The ideology on which the very existence of Pakistan rests is the main guide line for the building up of national character of Pakistan. Nobody to day is going to deny the importance of Islam as a religion, as a guideline of Pakistani national character, as it has become the national stereotype of Pakistan. Since a national stereotype is the mental picture of a group, therefore, whenever we talk of a Pakistani we automatically think of strict adherence to the tenets of Islam by that individual.

In order to inculcate this national character in the common man, one cannot even think of its effective implementation without the help of an expert psychologist. As the achievement of this goal can be attained only through the scientific measures, adopted by the experts in the various fields of psychology.

psychopathology in the psychotics that neurotic patients. These results confirm the findings of researches conducted in advanced countries.

In a sister study by AHMAD (1971) an attempt was made to study the relationship of mental disorders with age, occupation education, income level, neighbourhood and sources of referral in a clinic, in the city of Karachi in Pakistan.

The results showed that there are definite associations between diagnostic categories and income level, neighbourhood, education and occupation. The relationship between mental illness and age was not statistically significant. It was demonstrated that more psychotic came from the lower income level, lower neighbourhood areas, and lower educational and occupational groups. More neurotics came from the higher income level, neighbourhood areas, higher educational and occupational groups. The prevalence of mental illness as a whole was found more in lower income levels, lower neighbourhood areas and lower occupation. But more prevalence was found in educated people.

These studies are more or less confined to the city of Karachi and there is a tremendous scope for scientists to study an appropriate sample from the country of Pakistan.

Give our educational system is based on the results achieved from the researches made in Pakistan on the patterns of child rearing and their effect on the development of personality, then there is very little likelihood of getting astray from our national goal, and there is every possibility of creating conducive environment for the development of a healthy personality.

Since we cannot depend on the researches conducted in the advance countries on the patterns of child rearing as they are not valid for our culture and our religious values, therefore an attempt has been made to study the patterns of child rearing in Pakistan in order to assess the effect of various psychological factors and principles on the upbringing of Pakistani children.

In order to find out the specific patterns of child rearing in Pakistan, which produce mental illness in Pakistani people a detailed study was conducted by AHMAD (unpublished).

500 patients were selected and their mother's were interviewed through a standardized questionnaire regarding the child rearing patterns. Then 500 matched normals were also selected and then mothers were interviewed. The results reveal interesting finding to mention a few :—

1. *Children, who were trained by punishment developed mental illness more than children who were trained by reward technique of discipline.*
2. *Children, who were ignored by their mothers developed more mental illness than the one's who were looked after by the mothers.*
3. *Children. whose father's paid more attention were more normal than children whose fathers stayed away from home the whole day.*
4. *Children who lived in joint family systems suffered from less mental illness.*
5. *Children, who were given religious training with love and affect)on showed little tendency towards mental conflict and mental disorders.*

In order to assess the intelligence, aptitude interest and personality of the child, a well standardized test is needed. As every test has be valid, reliable and standardized for a specific culture. The fact that the standardization and the development of mental tests is time consuming and requires enormous funds and scientific knowhow; it is imperative for us to include a "Test construction institution for this purpose in the educational programme, but since this cannot be achieved overnight it was decided by AHMAD (1972) to attempt a validation of an already existing standardized test in English by psychologists in advance countries. An attempt was made to validate "Gordon Personal Profile" and Gorden Personal Inventory" (AHMAD

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1972). "Thematic Apperception Test" and "Make-a-Picture-Story Test" in the field of personality and "Engineering Physical Science Aptitude Test" (AHMAD 1975), "OTIS QUICK Scoring Mental Ability Test" AHMAD 1968, Wechsler Adult Intelligence Scale" and Wechsler Intelligence Scale for Children "AHMAD 1966. in the field of aptitude and intelligence and general ability test. I believe that an attempt has been made to translate and acculturize "Differential Aptitude Test" in the Applied Psychology Department, University of the Punjab and Minnesota Multiphasic Personality Inventory (MMPI) has been translated and acculturized by MIRZA in Lahore. The results of these refearches are highly encouraging and a great help in the field of counselling, vocational guidance and clinical psychology.

But these individual efforts you will agree with me are not the real answers. In the planning of the education policy expert psychologists along with the educationists should be consulted in order to first plan the future goals of the education policy and then devise the methodology for their implementation.

The school vocational guidance and counsealling center alongwith other child guidance clinics should be emphasized and it will be desirable that they should work in coordination with each other.

At this stage it is important that every student should be guided in vocations professions and other technical programme according to his or her aptitude, ability, intelligence, interest and personality qualities.

Higher education should not be considered a right of every student but should only be given to the students on merit i.e. not just their scholastic achievement but also the aptitude, and dediction to that particular area of study.

In case such a programme is successfully implemented it will be a greate asset to Pakistan's economy, scientific programme and other developmental programme in general.

During our experience with school education we came to the problem of handicapped, mentally retarded and emotionally disturbed

children. The psychologists should be trained to establish separate schools and arrange for the healthy development, both mental and physical of such children so that they can develop their utmost capac:ty and lead a constructive life in the society, The parents of such children should be given specific guidance, firstly in accepting their handicap and secondly in promoting their interests as healthy useful citizens of Pakistan.

PSHCHOLOGY IN ORGANIZATION AND INDUSTRY

The next most important application of psychology is the vital application in the organizational behavior and industrial social psychologists in the past have ignored the formal organization as a unit, where psychology can be usefully implemented.

LINDZEY (1954) in his book "Handbood of Social Psychology", writes on small groups, mass media, industrial social psychology with only passing reference to organization leadership and voting behavior. There is no comparable chapter on formal organization, which has become of vital importance in Pakistan as a social and industrial unit. MARCH & SIMON (1958) have written a very comprehensive book on "Organization" as a unit and described the utility of psychology as a discipline and as a profession in the development and maintenance of and organization. Since then industrial psychology has emphaized because of 5 basic limitations:

1. *The motivational assumption underlying the theory are incomplete and consequently inaccurate.*
2. *There is little appreciation of the role of intra organizational conflict of interests in defining limits of organizational behavior.*
3. *The constraints placed on human beings by his limitation as a complex information proceesing system are given iittle consideration.*
4. *Little attention is given to the role of cognition in task identification and classification as well as in decision.*
5. *The phenomenon of programme elaboration receives little emphasis.*

In order to eradicate these fundamental limitations, it is important that we include psychologists, who are experts in research methodology and who can give theoretical knowledge to overcome these difficulties,

The most important element in the progress of any organization in the realization of individual goals and particularly the phenomena of identification. As humans, in contrast to machines, evaluate their own positions in relation to the value of others and come to accept other goals as their own. They also have prior structure of preferences, a personality on the basis of which they make decisions while operating in the organization. Thus individual goals are not only given for the organization but can be varied, both through reeruitment procedure and through organizational practices.

There are four principles available targets for identifiation :

1. *Organizations external to the local organization i.e. extra organizational identification.*
2. *The local organization itself (organizational identification).*
3. *The work activities involved in the job (task identification).*
4. *Subgroups within the local organization. (Sub-group identification).*

In order to achieve these targets of identifications in an effective manner there are various psychological principles which can be applicable and helpful,

Another most important area where the psychological servicer are indispensable is conflict in organizations. Conflict in organization is defined as a "breakdown in the standard mechanisms of decision making so that an individual or a group experiences difficulty in selecting an action alternative" Thus, conflict really occurs where an individual or group experiences decisions problem.

We can identify 3 main classes of conflict phenomena :

1. *Inaividual conflict : conflict in individual decision-making.*

2. *Organizational conflicts individual or group conflict within an organization.*

3. *Inter-organizational conflicts; between organization or groups,*

If we see and try to understand as to under :—

(a) *What conditions does the conflict arise?*

(b) *What are the reactions of the individuals and organizrtions to conflict ?*

(c) *What is the outcome of conflict? particularly in the bargaining situation. Then with the help of a psychologist, we will be able to surmount the basic difficulties by finding out these factors which are effecting uncertainly and unacceptability in the organization.*

The psychologist will have to create a motivation in the individuals to feel the relative importance of goals and to change the organizational reaction. We know that the organization reacts normally in four ways to the organizational conflict :

1. *Problem solving.*
2. *Persuasion.*
3. *Bargaining and*
4. *Politics.*

It is here that the psychologist must exercise and create rationality in the reaction of organizations. There are many ways in which a psychological service can help in reducing the organizational conflicts, in case these steps are followed to the latter :

1. *Every individual who it is employed in an organization must go through a proper selection programme which will involve the following investigations;—*

(a) *The intelligence level of an individual.*

(b) *Aptitude of an individual and*

(c) *Personality/assessment.*

treatment of behavior pathology. Hence we can conveniently divide the profession in two aspects :

(*a*) *Psychodiagnosis*

(*b*) *Psychotherapy*.

At this juncture the role of clinical psychologist is usually confused with the role of a Psychiatrist. It is necessary to give a conclusive difference, so that the professionals as well as the lay public can distinguish the most important difference between them. Clinical Psychology is a branch of psychology hence a clinical psychologist is basically trained in the development and dynamics of both normal and abnormal behaviour. Then he applies this knowledge to the pathalogical development of behavior pattern to the diagnosis and treatment of mentally ill on the other hand a psychiatrist is basically a medical man. In short we can say that clinical psychologist as a professional person applies psychology to medicine and a psychiatrist applies medicines to psychology.

In the past years a greater emphasis is given to the theoretical and research aspects of clinical psychology as well. The clinicians are beginning to realise that the adequacy of their practice rests on the validity of their concepts. For the sake of convenience, the psychologists speak of applies work in clinical psychology and theoretical work in the field of personality development. But in reality both are inextricably interwoven with each other. Although it is said that one psychologist is doing applies work and another theoretical research. But clinical psychology is concerned with both. It must be thought of as a study of individual cases in the clinic as well as the establishment of principles whieh allowances to fully understand these cases.

In order to study etiological and dynamic factors of mental illnesses in Pakistan we have to conduct detailed researches in determining various etiological factors of mental illness. A detailed survey of such researches is given by AHMAD (1979).

In clinical psychology. three fundamental techniques are used for diagnosis and treatment of nosological categories and mental disorders. In our culture we have to be very careful in the implementation of

these techniques as they have to be geared to the goals and national characteristics which are predominant in lhe Pakistani culture.

In the advanced countries there are many types of psychotherapies which have been evolved to cater for the specific needs of their culture i.e. psychoanalysis, learning psychotherapy, client centered therapy, behaviour therapy etc.

But in order to implement them in Pakistan we have to constantly keep in mind the tenets of Pakistani culture so that all the psychotherapies are conducted under the frame work of Pakistani culture.

Wolberg 1954 says that "psychotherapy is a form of treatment for problems of emotional nature, in which a trained person deliberately establishes a professional relationship, with a patient with the object of removing, modifying existing symptoms, of mediating disturbed patterns of behaviour and of promoting positive personality growth and development"

The idea is that due to environmental circumstances a patient learns unhealthy patterns of behaviour and during psychotherapy he is made to unlearn these faulty patterns of behaviour and relearn the healthy patterns of behaviour and make mentally healthy adjustment to life.

Therefore, every culture will apply the basis principles of psychotherapy according to the needs and value systems of a specific culture. A psychotherapeutic solution which is valid in U.S.A. or any other western culture may not be effective and valid in Pakistan. Hence I remember as a student in U.S.A. that every time a new technique of psychotherapy was mentioned, I had to request my teachers to explain various was in which that particular technique may be applied to our Pakistan culture. I remember that once CHARLES BELL, introduced his technique of family therapy where he advocated that an entire family should sit together in a group with one psychotherapist in order to resolve the conflicts. This of course, is an impossibility in a Pakistani culture, as our family units and value systems do not permit free discourse of problems before even the adult members of the family, leave alone the children.

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NONVERBAL CHANNEL MODALITY, PRIOR COMMUNICATOR TRUSTWORTHINESS AND THE DETECTION OF DECEPTION

It now appears safe to conclude that persons utilizing information present in nonverbal communication behaviors are able to determine above chance levels when others are communicating deceitfully (Ekman & Friesen, 1969; 1974; Krauss, Geller, & Olson, 1976; Krautt, 1976; Mehrabian, 1971; 1972). Little consensus exists among researchers, however, as to which particular nonverbal behaviors are most highly correlated with instances of deception. Ekman and Eriesen (1969; 1974) have collected evidence which favours the importance of movements which stem from the body extremities of communicators (e.g., toe, foot, and leg movements, etc.). Contrary to Ekman and Eriesen's results. Mehrabian (1971) found that greater rates of foot movement were associated with truthfully communicated messages rather than deceitfully communicated message. The most recent and consistent finding suggests that paralinguistic variations alone may provide the most efficacious index of deceitfulness. Many unpublished studies have found that exposure to only the vocal intonation channel of a communicator results in a higher rate of deceit detection than does exposure to the visual channel alone, or to the audio and visual channels in combination (Krauss, Geller, & Olson, 1976; Krautt, 1976; Mowen & Linder, 1975).

Krauss *et al* (1976) have advanced three alternative hypotheses to account for this latter result. The first is called the information overload hypothesis. This hypothesis suggests that in vis a vis interaction contexts, a decoder/interactant is exposed to more nonverbal stimuli than he or she can reasonably process. In attempting to

integrate and process the cues to deception potentially present in any nonverbal channel, the person's rate of deceit detection drops significantly.

The second hypothesis of Krauss *et al* (1976) suggests that visual channel information, because of its high monitorability, is controlled quite easily by encoders. As a result, the presence of these cues contributes to a decrement in detection rates through a process analogous to that of information overload. Finally, their third hypothesis, the interaction hyphothesis, suggests that in naturalistic interaction settings, the facts that a potential deceiver can monitor his or her audience contributes to the perpetuation of a successful deception attempt.

One purpose of the present research is to attempt to separate these competing hypotheses by eliminating the possible influence of Krauss *et al's* second and third hypotheses. The influence of these alternatives is predicated upon the presence of two "live" interactants within a social interaction. In the present experiments the uncontrolled variation contributed by a second "live" interactant was eliminated through the use of trained actresses. In Experiment I subjects were exposed to the audio reports of an actress concerning the state of a playing card drawn within the context of a two-person game. In Experiment II subjects were exposed to the same reports, only both audio and visual nonverbal communication channels were made available to subjects. In each experiment half of the subjects received only messages communicated with a truthful nonverbal intention. A second group of subjects in both experiments received reports in which *both* truthful and deceitful intentions were portrayed nonverbally.

Consistent with the ihformation overload hypothesis, it was anticipated that subjects would be most successfull in detecting and responding to deception when only the audio channel was available (Experiment I), as opposed to when both audio and visual nonverbal ehannels were available to subiects (Experiment II).

A second purpose of the present experiments was to improve upon the low "external validity" (Campbell & Stanley, 1963) which plagues much

prior research examining the noverbal detection of deception. Most studies, up to the present, simply recruit subjects to the laboratory, instruct them that they are to attempt to detect a communicator's instances of deception. and finally, a videotaped communicator is "turned on" for subjects to monitor. Note that such a scenario differs markedly from "real-world" occurrences of interpersonal deception. In real-life persons are seldom informed that they are about to be deceived. As a result, it is not known if the rates of detection obtained in prior experiments actually reflects those characterizing real-life settings. Similarly. there are usually positive incentives available in real-world deception contexts for the correct detection of deception. For instanee, determining that an automobiie was not "driven only on Sundays by a spinster 'shool marm', typically will save a potential purchaser much money and aggravation. An additional departure from real-world instances of deception has been researchers' predominant concern with misrepresentations of affect rather than misrepresentations of fact. There is good reason to believe that misrepresentations of affect occur relatively infrequently in social interaction, as opposed to misrepresentations of fact (Shippee, In Press).

The present experiments attempted to redress many of these issues pertaining to external validity by employing a two-person gaming task (Benton, Gelber, Kelley, & Liebling, 1969) as an interaction medium for the introduction of deceitful and truthful messages. One advantage of a gaming context is that communications can be introduced "quasi-naturalistically" without prewarning snbjects as to the possible occurrence of deception. Also, "built-in" to a gaming task are implicit incentives for the correct detection of deception. In addition. penalties may be extracted from subjects for incorrect decisions. Finally, along with providing an ego-involving task, the present context allows for the examination of factual misrepresentations (statements concerning the color of a card), rather than the purely affective forms of misrepresentation heavily researched by earlier investigators.

A final component of naturalistic deception contexts which has elicited little attention from reserchers has been the influence of interpersonal context variables. Manytimes in the real-world persons

(truthful) report of the cards color, or the sender may deceive the recipient by giving an inaccurate (deceitful) report. In the latter instance the sender stands to gain additional resources if he or she is successfully able to deceive the recipient (reporting the card as black when the card is actually red). Correct detection of the deception on the part of the recipient, however, benefits the recipient and penalizes the sender. On the other hand, an incorrect judgment by the recipient results in a loss to the recipient and a gain for the sender.

For any given trial, then, the sender and the recipient each have two options. The sender may either accurately or inaccurately report the color of the card. The recipient, in turn, may either accept or "O.K." the sender's message or the recipient may "doubt" the message. If the recipient accepts the message, the trial is completed and the outcomes are determined by the report of the sender, When the recipient exercises the second option and doubts the sender; the recipient obtains direct knowledge of the cards color, and hence, can infer the truthfulness of the sender. For the present experiments a confederate always played the role of the sender.

Stimulus Materials

The method of preparing the stimulus material for Experiment 1 was based on that developed by Dorris, Shippee, and Kahn (1974). Two actresses were initially introduced to the mechanics of the gaming task. During this initial session the actresses were requested to vary their vocal intonation cues while saying the word "black", so as to communicate a truthful or a deceitful intention to an imagined female game participant. They were also instructed to say the word "red" using their vocal intonation to connote truthfulness. No attempt was made to standardize delivery style, except to eliminate deliveries which seemed overly contrived.

Following several practice sessions during which the actresses replicated their earlier messages, a final taperecording of each actress was made. These final recordings contained several messages of each type in a random sequence. The tapes were presented to 32 female subjects who were asked to imagine themselves participating in the

gaming task described earlier. Following the presentation of each message segment, subjecls indicated on a nine-point seale whether the communication they heard was deceitful (1=deceitful) or truthful (9=truthful).

On the basis of subjects' judgments, one actress was chosen and a total of nine word messages were selected from her tape. Four red messages were selected, all spoken with a truthful vocal intonation. Five black messages, two communicated with a deceitful vocal intonation and three communicated with e truthful intonation, were also selected. The combined means and standard deviations for each message type were (M—8.72, $SD = .63$) for the red communications, ($M = 6.45$, $SD = 2\ 36$) for the truthful black commuuications, and $M = 3.15$, $SD = 1\ 07$) for the deceitful black communications. A one-way, repeated measures analysis of var[i]ance was performed on these means and yielded a significant difference between the communications, $F\ (2,69) = 60.72$, $p<.001$. *Post-hoc* analyses (Newman-Keuls) indicated all of the means to be different from one another at the .01 probability level.

Using the final ninc message segments, two final experimental tapes were constructed. Both tapes had the same proportion of black to red messages, 12 blacks and 4 reds for each 2 tape. A standard sequence of messages was used for both tapes. The only difference between the tapes was that on the truthful tape messages in positions 3, 6s 7, 10, 13, and 16 were truthful, while on the deceitful tape the messages in these same positions were communicated deceitfully.

Procedure

The experimenter and a confederate were always present in the experimental room before the subject arrived. The confederate was seated at a desk on one side of a brown paper partition and to the left of the experimenter. The experimenter was seated at a desk in front of the partition and was in full view of the subject and the confederate throughout the entire instruction period. When the subject arrived, she was seated at a desk located on the right hand side of the partition

For the *trustworthy condition*, subjects exclusively received feedback which indicated that the confederate was always telling the truth about the state of the playing card. This information was relayed to subjects by the card described above which indicated that the recipient had lost 5 cents on that trial.

For the *untrustworthy condition*, subject, received feedback which indicated that the confederate was always lying about the state of the card. This informatson was also on a card and indicated that the recipient had earned 5 cents on that trial.

In the *no information canditian*, subjects received no feedback following a doubted trial. Subjects were told that the results of any doubted trial would be revealed to them at the conclusion of the experiment.

Following the completion of 16 trials, the subject and the confederate were given a questionnaire to complete. This questionnaire served as a manipulation check for the preinformation manipulation. Subjects were asked to estimate the number of times during game one that their opponent had deceived them concerning the color of the card. Several other iteme concerning the gaming task were included as "filler" items.

When the experimenter received the completed questionnaires he introduced the second portion of the task. Subjects were informed that rather than passing notes, during the final portion of the task they would make their decisions by listening to tape-recorded messages made by the sender. The experimenter went on to say that because he was short of subjects for that particular condition, he had decided to have both persons temporarily play the role of the sender and make a tape-recording. The subject and the confederate were told that when their tape-recordings were completed, each of them would then return to the role of the recipient and make their decision while listening to their partner's tape.

The experimenter then led the subject to an adjacent room where he explained to the subject how to make the taperecording. Subjects

were instructed to choose 16 playing cards and to communicate to their opponent the color of the cards. Subjects were also told that they could communicate any color they wished to their partner, whether it was the truth or not. Finally, the subject was requested to open the door to her room when she was finished.

When the subject opened the door, the experimenter requested that the subject wait a few minutes until the confederate has supposedly finished taping her messages. Subsequently, the experimenter returned to the subject's room carrying an audio-tape. The experimenter then replaced the subject's tape with either the tape which was uniformly truthful (the *truthful condition*), or the tape which contained both truthful and deceitful messages on it (the *deceitful condition*). When the tape was ready to be played the experimenter reemphasized that the subject was now going to return to the role of the recipient. The experimenter went on to briefly review the payoff outcomes. When the subject had finished listening to the tape and making her decisions the experimenter administered a qnestionnaire which probed for suspicion. When the subject returned the questionnaire she was paid, debriefed, and committed to secrecy.

RESULTS

Manipulation Check

Immediately after the first set of card-passing trials, subjects were asked to estimate how many deceitful messages were related to them by their opponent during game one. A 2 x 3 analysis of variance yielded the expected main effect for the trustworthiness manipulation, $F(2, 66) = 130.67$, $p < .001$. A series of planned comparisons indicated that untrustworthy condition subjects ($M = 6.04$) believed that they had been deceived more frequently than no information condition subjects ($M = 3.71$), $F(1, 66) = 19.04$, $p<.001$. Also, subjects confronting the trustworthy opponent believed that they had received fewer mistruths ($M = 1.38$) than no information subjects. $F(1.66) = 19.04$, $p<.001$. No additional significant effects emerged from this analysis.

RESULT AND DISCUSSION

Manipulation Check

As in Experiment I, subjects were asked to estimate the number of times their opponents had deceived them concerning the color of the cards during game one. Similar to the results in Experiment I, an interpersonal information main effect emerged for these estimates, $F(2, 72) = 112.19$, $p \leq 001$, all of the means falling in the predicted direction.

Doubting Behavior On The Second Trial Block

Table 2 shows the mean number of doubts subjects made during game two, Experiment II.

Totally consistent with the information overload hypothesis, subjects who viewed the deceitful tape exhibited no more doubting behavior than did subjects exposed to the uniformly truthful tape, $F(1, 72) = ,35$, *NS*. This result contrasts that obtained in Experiment I where subjects were able to detect and successfully respond to instances of deception when only audio cues were available to them.

A second hypothesis receiving confirmation in Experiment I suggested that more doubting would emanate from subjects who believed themselves to be playing against an untrustworthy opponent, as compared to an opponent about whom they had no information. The least amount of doubting was expected from subjects who received trustworthy interpersonal information. An initial analysis of the mean doubting rates for Experimeut II indicated a significant main effect for the interpersonal information manipulation, $F(2, 72) = 8.04$, $p \leq 001$. Subjects receiving untrustworthy information doubted more than did subjects who received no information or trustworthy information. Application of the Newman-Keuls test indicated, however, that although untrustworthy condition subjects differed from subjects receiving no information $p \leq 01$), and also differed from subjects in the trustworthy conditions ($p \leq .01$), the latter two groups did not differ significantly from one another.

Finally, similar to the results obtained in Experiment I, there was no communication x interpersonal information interaction effect ($F < 1$).

GENERAL DISCUSSION

The results of the present experiments indicated that persons were most accurate in responding to nonverbally communicated deception when only paralinguistic nonverbal communication cues were available for subjects to monitor (Experiment I). In contrast, when subjects were allowed to monitor two nonverbal communication channels simultaneously (audio and visual), subjects were apparently unable to successfully discriminate instances of deception from instances of truthfulness.

This pattern of results seems especially supportive of a "strict" information overload hypothesis as proposed by Krauss, Geller, and Olson (1976). Recall that this hypothesis states that when subjects attempt to monitor two nonverbal channels simultaneously, the large amount of perceptual information emanating from each channel precludes adequate integration of the total array of nonverbal stimuli. As a result of this perceptual "overload" the accurate detection of deception decreases substantially.

Added confidence for the information overload hypothesis as the most suitable explanation for our results stems from the methodological design of the present experiments. The use of trained actresses allowed us to systematically control for the influence of Krauss *et al's* two competing hypotheses presented earlier (the self-monitoring hypothesis and the interaction hypothesis). The influence of these alternative hypotheses was suggested to be contingent upon the presence of a "live" encoder within a social interaction context. The ability of an encoder to ; 1) accurately self-monitor his or her nonverbal communication behaviors (Snyder, 1974), and 2) make appropriate adjustments in these behaviors to successfully perpetuate deception in the presence of an audience (see also Snyder, 1974), were deemed to be necessary conditions by Krauss *et al* (1976) for the influence of

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The results of the present experiments indicated that persons were most accurate in responding to nonverbally communicated deception when only paralinguistic nonverbal communication cues were available for subjects to monitor (Experiment I). In contrast, when subjects were allowed to monitor two nonverbal communication channels simultaneously (audio and visual), subjects were apparently unable to successfully discriminate instances of deception from instances of truthfulness.

This pattern of results seems especially supportive of a "strict" information overload hypothesis as proposed by Krauss, Geller, and Olson (1976). Recall that this hypothesis states that when subjects attempt to monitor two nonverbal channels simultaneously, the large amount of perceptual information emanating from each channel precludes adequate integration of the total array of nonverbal stimuli. As a result of this perceptual "overload" the accurate detection of deception decreases substantially.

Added confidence for the information overload hypothesis as the most suitable explanation for our results stems from the methodological design of the present experiments. The use of trained actresses allowed us to systematically control for the influence of Krauss *et al's* two competing hypotheses presented earlier (the self-monitoring hypothesis and the interaction hypothesis). The influence of these alternative hypotheses was suggested to be contingent upon the presence of a "live" encoder within a social interaction context. The ability of an encoder to ; 1) accurately self-monitor his or her nonverbal communication behaviors (Snyder, 1974), and 2) make appropriate adjustments in these behaviors to successfully perpetuate deception in the presence of an audience (see also Snyder, 1974), were deemed to be necessary conditions by Krauss *et al* (1976) for the influence of

we further speculated that the presence of paralinguistic cues alone may not have allowed subjects to "tap" additional attention resources for use in detecting the actresses' deception. It was further suggested that perhaps the proportion of attention which is typically devoted to either an audio channel or a visual channel is static, relative to the level of attention devoted to the other channel. That is, if increased attention is to be "paid" to either nonverbal channel, an equivalent increase in attention must also be devoted to the second channel, It was believed that the conditions necessary for such a simultaneous increase in attention to noverbal information might be met in Experiment II where both nonverbal channels were presented to subjects.

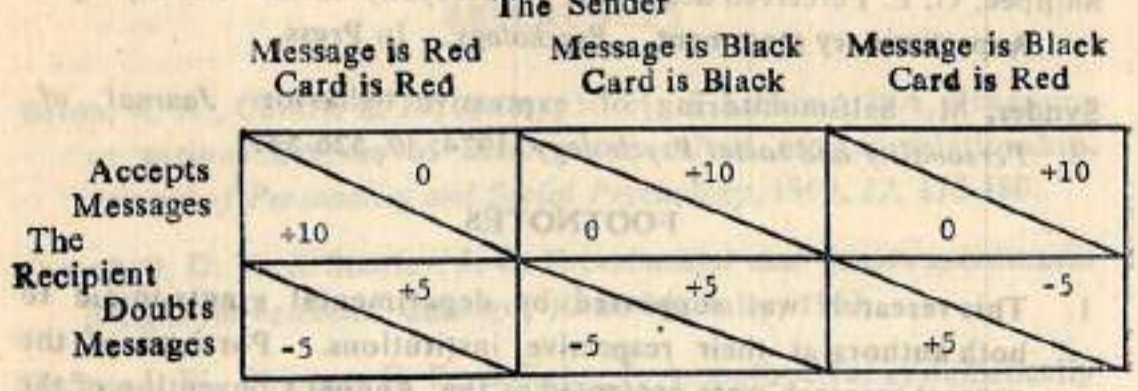
The results of Expertment II did not support these notions concerning a possible attentional mediator. Regardless of the number of channels available, information concerning the trustworthiness of a communicator did not differentially effect persons' suspicious responses to the deceitful vs. the truthful communications. Rather than enhancing decoders' abilities to detect deception when it was present, the introduction of information regarding an opponent's trustworthiness appeared to detract from subjects' abilities to *discriminate* truthful messages from deceitful messages. More specifically, when uniformly truthful communications were presented to subjects, the introduction of untrustworthy information concerning the communicator caused these subjects to "doubt', as frequently as subjects exposed to a message sequence where deceitful communications were present. It may be that after receiving dispositional information about the communicator, our subjects may have begun to "see" instances of deception which were really not reflective of true deception.

This outcome has attached to it an implicit warning in terms of interpreting the results of earlier studies on the nonverbal detection of deception. When an investigator instructs subjects that deception is possibly forth coming from a communicator, subjects moy begin to misinterpret even innocuous cues indicative of other states of the communicator as being, instead, instances of deception. In the language of signal detection analysis, prewarning subjects as to deception

may dramatically inflate the rate of "false alarms" in the detection of deception. This possibility behooves researchers to contemplate a switch towards more naturalistic paradigms when examining the nonverbal correlates of deception. One alternative, as employed here, is a gaming context where opportunities for deception are "builtin" to the task. A second possibility may be the use of a court room analogue where subjects as members of a "mock" jury could judge the truthfulness of either naturally occurring or intentionally portrayed instances of deception. This type of context would also allow for the exploration of misrepresentations of fact (employed here), as well as misrepresentations of effect, all within the same experimental design. Such a direct comparison of subjects' abilities to detect either of these types of deception is sorely needed.

Finally, one limitation of the present research, which is at the same time one of its advantages in terms of hypothesis testing, was the use of trained actresses in generating truthful and deceitful message stimuli. The point to be emphasized is that these types of presentations may exagerate naturally occurring cues of deceitfulness, hence making the results obtained here limited to similar types ef contexts. Although our results are similar to those obtained by other researchers examining naturally occurring deception cues (Krauss, Geller, & Olson, 1976; Mowen & Linder, 1975), the issue of generalizability with results obtained with contrived messages (Dorris, Shippee, & Kahn, 1974) still remains an empirical question,

An additional objective of future research should be to determine the relationship between interpersonal-contextual information and the perception of nonverbal communications of deceitfulness. The topic assumes great importance, if one considers the magnitude and frequency of deception in love affairs, marriages, psychotherapeutic settings, aud courtroom settings. With respect to the latter setting where imprisonment and individual freedom is contingent upon others' perceptions of the truthfulness of witnesses' testimonies, the need for additional research becomes painfully apparent.



Notes :- Payoffs are in cents.

Figure 1. Payoffs to the recipient (bottom of diagonal) and to the sender (top of diagonal) for each of six possible outcomes.

Table 1

Mean Number of Doubts During Game Two : Experiment I

Type of Communication	Type of Interpersonal Information		
	Trustworthy	No Information	Untrustworthy
Truthful	2.42	4.08	6.42
Truthful and Deceitful	4.08	5.33	6.67

Table 2

Mean Number of Doubts During Game Two : Experiment II

Type of Communication	Type of Interpersonal Information		
	Trustworthy	No Information	Untrustworthy
Truthful	5.00	5.15	8.38
Truthful and Deceitful	5.45	6.15	8.00

ABSTRACT

Seversl recent experiments concerned with the nonverbal detection of deception have found that persons detect deception at higher levels when only paralinguistic communication cues are available for monitoring. Krauss, Geller, & Olson (1976) have accoun ed for this unintuitive finding by suggesting that persons who are exposed to two nonverbal communication channels (audio and visual), simultaneously, may suffer from "information overload". Two experiments were designed to test this hypothesis, while at the same time controlling for two competing alternative explanations for the information overload hypothesis. The results strongly supported the information overload hypothesis. Subjects exposed to only the paralinguistic cues of a communtcator engaging in deception exhibited more effective rates of deceit detection than did subjects exposed to both audio ond visua· nonverbal channels. The present experiments were also designed to examine the influence of interpersonal-contextual information on the perception of nonverbal communications of deceitfulness. It was anticipated that the influence of interpersonal information concerning a communicator's trustworthiness may operate through an attention mediator, It was proposed that subjecls would be able tc detect deception more effectively if they received information which indicated that a communicator had a past history of untrustworthiness. The results of both Experiment I and II did not support this hypothesis, nor the notion of an attention mediator. The implications of the information overload hypothesis for the nonverbal detection of deception literature and the danger of "prewarning" subjects as to the possible occurrence of deceit in detec.ion of deception experiments were discussed.

pigeon chamber of standard dimensions. Higher levels of responding were obtained in their final experiments than in an initial experiment which employed a lower level of chamber illumination, but an otherwise similar procedure.

Thus it seems that increased levels of illumination lead to higher rates of auto shaped key pecking and produce more sign-tracking than goal-tracking. However, there does not appear to be any direct evidence supportihg this claim and, in view of its relevance to the discrepancies in the results of Alam (1979), an experiment was designed to examine the effect of general illumination.

In the present study in addition to two different levels of chamber illumination, a third group was given autoshaping in a dark chamber. This new condition was introduced in view of the results obtained by Wasserman (1973), who found that no key pecking occurs if pigeons are trained in the dark. If sign-tracking and level of illumination are directly related, then a failure to obtain key pecking in a dark chamber would be expected. However, this does not exclude the possibility of getting goal-directed behaviour, although such responses were not systematically recorded by Wasserman. This could have been simply due to the fact that this study was conducted in a conventional pigeon chamber that was not appropriate for recording goal directed activity. Therefore in the present experiment a longbox was used, in which both sign-tracking and goal-tracking can be systematically recorded.

B. METHODS

Subjects: Twelve naive homing pigeons, bred in the laboratory of Experimental Psychology, University of Sussex, were employed as subjects. These birds were maintained at 80% of their weights throughout the experiment.

Apparatus : Two identical boxes illustrated in Figure I were used.

Each box measured 90x40 CM and was 40 CM high. The side wall was painted black and contained a translucent response key of 2 CM diameter. This key was 25 CM above the steel mesh floor and could be transilluminated by three 24V, 2.87 bulbs mounted at the

back of the disc. The food hopper was located on the wall opposite to the one with the keylight. The magazine aperture measured 7.5x7 5 CM

The houselight or H/L, was located on the ceiling of the long boxes and consisted of a centrally located plexiglass panel measuring 13.5x55.5 CM, above which were mounted two 24CV, 60W striplights in a line along the middle of the chamber. Tne luminance of the houselight was adjustable. Except for the floor, ceiling and the black wall cn which the keylight was located, the rest of the longbox was flat grey.

The floor of each box was made of steel mesh, and was divided into three equal portions, measuring 30x45 CM, the section near the tray (tray pad) and the one near the key (key pad) were supported by microswitches. The middle section was fixed to the floor. All three sections were made of steel mesh. The houselight was not used for one group of pigeons, in the second group the luminance of the houselight was approximately 17 cd/m^2 , andin the third group the houselight was used at full intensity with a luminance of 2,000 cd/m^2 .

Procedure: The experiment was conducted in three phases: magazine training, autoshaping and autoshaping with the houselight conditions changed. For one group (the No H/L, group) autoshaping was first carried out without a houselight. In the second group a dim houselight was employed initially (Dim H/L.) in the third group a very bright houselight was used in the first phase (Bright H/L). The houselight codditions were the same in each group during the three magazine training and for the first sixteen autoshaping sessions. One extinction session was also given, before a final phase of eight sessions in which the houselight conditions were changed. The Dim H/L and the No. H/L groups were switched to the bright houselight condition, while the Bright H/L subjects were changed to the dim houselight condition.

For the purpose of magazine training, each bird was placed in the experimental chamber with their respective H/L condition. The food tray was permanently raised, after the birds had been observed to eat,

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EFFECT OF UPWARD SOCIAL MOBILITY ON ATTITUDE AND VALUE-ORIENTATION CHANGE AMONG BLACKS

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ABSTRACT

Sociologists, social workers, and others interested in the social movements of peoples up and down the social stratification scale have often mentioned the changes in attitudes, value-orientions, and resulting behavioral differentiation between individuals BEFORE they move as well as AFTER. Knowledge of social mobility suggests that people who really do move upward on the social ladder change their attitudes and values from these associated with a lower stratum to those associated with the higher, achieved stratum. The present paper reports an attempt to: (1) determine the attitudes and values of lower-class blacks BEFORE their upward vertical move on the stratification structure; (2) determine the attitudes and values of the same subjects AFTER their assumed movement, and (3) determine the similarities and/or differences between attitudes and value-orientations of middle-class blacks and middle-class whites. Results indicated that the black attitudes and value-orientations did change when the individuals moved upward on the stratification structure. They also suggest the strong similarities between middle-class black and white attitudes and values.

INTRODUCTION

In all societies, most of the adult members agree on the moral standards and beliefs. There is an ordering of assessment of value-orientations as well as standards of action or behavior as a result of this agreement. The general acceptance of society, of this value and normative structure, although sometimes vague and inarticulate, constitutes the normative consensus for that particular social group.

Within smaller, subcultural groups within the larger society their are certain modifications and changes in the values and norms which seem most functional and pragmatic for each sub-group. Warner, Meeker, and Eells (1949) have found that such differences are among

METHOD

Subjects — One-hundred twenty-nine blacks from Blackstone, Illinois[1], and one-hundred seventy-one blacks from Bronzeburg, Illinois[2] Two-hundred sixty-three of the subjects (87%) were female.

Materials — An interview guide containing three, specific, open-ended questions, as well as probe questions for clarification and exemplification.

One question was "What were some of the attitudes and values you had when you were young?" Specifically, "what kinds of things did you think about as a child." This question was used to try to find out if the subject did have lower-class attitudes and values in early life. The criteria for judgment were the assumed lower-class black values of excitement, disdain for work, aggression, and fate.

The second question was "What are some of the attitudes and values you now hold?" Specifically, "what kinds of things do you now think about?" This question and the probes were designed to try to tap a change of attitude and value-orientation in line with changing social status. Care was taken at the interview to record only the value changes resulting from upward vertical mobility and NOT those resulting from maturation.

A third question was "what kinds of things do you value for your children." Specifically, "what kinds of attitudes and values do you want your children to have?" Designed to gather still more information on the assumed middle-class value-orientations of the subjects. Their responses were assumed to suggest either a stronger middle-class bent, or a regression to the lower-class black stratum.

Procedure :

Of major concern to the research was the attempt to find any changes in attitude and value-orientations of lower-class blacks who had supposedly been upwardly vertically mobile. Both Blackstone, Illinois and Bronzeburg, Illinois residents, for the most part fall into the classification of blacks who have moved from the lower into the middle-class.

Both of these names are psuedonyms :
1Blackstone is Phoenix, Illinois; 2 Bronzeburg is Kingston Green.

According to the I.S C. rating of Warner, Meeker, and Eells (1949), the majority of the persons living in the two communities would rate a score of from about 40 to 50 - within the lower-middle class range.

Blackstone, Illinois is located southwest of Chicago and it is one of several suburban areas that is predominantly black. The population estimate for 1966 was 5,400. Ninety-two per cent of the population was black, and by the time the 1970 census is taken, at least ninety-eight per cent of the persons will be black (deVise, 1967).

Homes in blackstone are generally in excellent condition. The average value of the homes is about $15,000. and the median family income is $6,820 Occupations for the males range in the skilled, trade, semi-professional, and professional levels.

Bronzeburg, Illinois is also located southwest of Chicago. It is a subdivision within a large community. There is about a 50-50 split in black-white population. For the study, only the black individuals were selected.

Homes, in excellent condition, range in price from $20,550 to $23,850, depending on size, location, and style. Median family income is above that of Blackstone, and there are more persons engaged in semi-professional and professional occupations as well.

Because of the data on the two communities, both Blackstone and Bronzeburg were assumed to be locations of predominantly middle-class persons. It was assumed, however, that at least some of the inhabitants had gone through the process of upward vertical social mobility, and, if questioned, would have vestiges of attitudes and value-orientations of a lower-class.

Two-hundred homes were selected in each of the communities under study It was decided to interview either a male or female in each home regarding his or her attitudes and values. Interviews lasted from about 10 to 30 minutes, depending on the interest, preciseness of answer, number of probe questions needed, etc., in the association between the interviewer and interviewee.

CONCLUSIONS AND DISCUSSION

Work as a means of activity, as well as means to obtaining money was desired by 55% (165) of the respondents for their children. Of the 165, there were 43 (26%) who believed that they would also desire the mate of the youngster to work. Work brought money; money brought power; power brought respect and prestige, and the latter were frequently noted by the subjects.

Answers to both questions two and three suggest the strong similarities between the black and white middle-class values. They also suggest the change in attitude and value-orientations of the assumed lower-class black as a result of upward vertical mobility.

In considering the responses of the subjects to the first and second questions of the interview guide, the following conclusions might be drawn:

1. The blacks in this study did seem to have the criteria, in early life, which can be associated with lower-class. Emphases on excitement, disdain for work, aggression, and fate appear to be related to the black lower-class value-orientations.

Excitement received the greatest number of responses. This might be due to the need for recognition among peers, adults, and the general society. Responses from the interviews also suggested that such excitement could arise from the need to be continually stimulated in an environmental condition which lacked stimulatory cues. Kicks and thrills might provide stimuli necessary for self-motivation.

2. Disdain for work received the least number of answers. When this criterion was mentioned, the "disdain" was said to have resulted more from the types of jobs offerred the person, the low rate of pay, the unpleasant tasks, the unpleasant working conditions, and the like. Respondents, especially the males, mentioned that when one has to face adverse working conditions with relatively little compensation, there develops a "natural disdain" for work.

Aggression was stated as being related to expectations of roles among peers. Displays of bravery and fearlessness, whether or not

within a socially acceptable sphere of action, seemed to be associated with the male black role-playing behaviour, Not to be aggressive would have meant to be deviant.

An element of fate occupied the black value-orientations and attitudes, and this might have been expected considering the sometimes deviant actions of the subjects. Whenever a law-abiding behaviour was violated, the element of luck or fate might keep one from being caught. Fate was also a rationalization technique for subduing strong negativistic feelings toward one's lot or toward society, especially white society, for adversive living and working conditions. If one has little control over one's life, then such conditions might be better tolerated.

2. At present, the subjects did hold attitudes and values which can be associated with the middle-class. Concentration on material comforts, success, equality and democracy, and activity or work appear to be associated with the black middle-class value-orientations.

Material comfort was stressed by many of the respondents who felt they had the "right" to live as they wished. This "right" meant that they might purchase such objects as television sets, cars, homes, and the like. Some of the respondents suggested that material comforts also included such things as world travel and acquisition of "cultural objects," such as antique vases, art objects, and relics of value.

Success was a quality assumed to be associated with money and social power. Money was seen as not so much of a long range proposition. but rather as a means for immediate gratification and social power. Many respondents stressed the acquisition of valued goods as symbols of success.

Interwoven within the framework of many interviews was the idea of equality. Equality NOT as being equal to the white society, but equality as having the same or similar opportunities and/or advantages. In accordance with the ideas of Frazer (1957) the subjects suggested that they are not trying to "copy" the white man's world. All they

questions might be the possible directions future studies in this areas could take.

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EFFECT OF PHYSICAL PRESENCE OF PERSONS OF VARYING FAMILIARITY ON THE SPEED OF VERBAL LEARNING

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NAZRE KHALIQUE

ABSTRACT

In an attempt to determine experimentally the differential effects of the physical presence of people varying in terms of familiarity on the speed of verbal learning, a group of eleven students of final year was separately asked to learn a verbal task both in solitude and in presence of six different groups of their fellow students ranging from final year to subsidiary class. It was found that physical presence of persons of varying familiarity has varying interfering effect on the speed of verbal learning.

INTRODUCTION

Researches on social influence on verbal learning do not clearly specify the type of individuals acting as audiences or spectators before the subject engaged in learning a verbal task. Although Khalique (1979) has attempted to study the nature of influence in terms of similarity-dissimilarity dimension of personality of spectators it is not a complete answer to the question; what type of person is being perceived as a source of interference to the subject engaged in learning a verbal task.

Some thing more important than similarity-dissimilarity is the closeness-distance dimension. Researches have shown that people develop intimacy with those who live nearest to them (Caplow and Forman 1950, Festinger, et al 1950, Heider 1958, Newcomb 1956, 1961) and find attraction in those whom they often see (Freedman, et al 1967, Saegert, et al 1973), to the extent that the nearer they are the better chance they have of being selected as marriage partners (Bossard 1932, Davie and Reeves 1939).

The influence of propinquity is not limited to people of a residential area only. It is true in case of academic institutions also where students come from different corners of the city. The more the students see each other the more intimate they are (Byrne and Buehler

2. Learning in presence of others :

After a few minutes of light conversation with the subject A experimenter started giving her the above instructions to learn a list of nonsense syllables by the serial method of reproduction up to a criterion of an errorless trial as fast as is practically possible. Just at the time the experimenter started exposing the list, the confederates entered into the room and executed the instructions given to them. In this way, subject A and other subjects learned the list of 10 nonsense syllables separately before six different groups of spectators. The number of trials taken by each student in learning the verbal task was recorded.

RESULTS AND DISCUSSION

The number of trials taken by the eleven girls to learn seven equal lists of nonsense syllables in lonely situation and in presence of confederates of varying familiarity was subjected both to parametric and nonparametric statistical analyses.

Table 1. *Analysis of Variance.*

Source of Variation	SS	df	MS	F	*p*
Between columns	131.402	6	21.90	17.819	.01
Between rows	87.506	10	8.75	7.119	.01
Residual	73.794	60	1.229		
Total	292.702	76			

Table 2. *Analysis of Variance by Ranks.*

N	X_r^2	df	*p*
11	30.604	6	01

Tables 1 and 2 show that there is an overall difference in average speed (average trials) of learning taking place in solitude and in

presence of six groups of confederates. Both F and X_r^2 suggest that the overall difference in average speed is significant (p. 01). It may be inferred, here, that difference in learning speed is conditioned by the nature of situation in which one learns a task. Although the significance of the row means is not the point of interest here, it may simply mean that subjects show significant difference in their mean performance.

Table 3 *t and Wilcoxon (W) tests of the Difference between Means for Correlated Gro ps.*

Situation	Mean	t	df	p	W	N	p
Lonely situation Conf. of final year	6.818 10.727	6.410	10	.01	0	10	.01
Conf. of final year Conf. of third year	10.727 9.818	2.292	10	.05	6	9	.05
Conf of third year Conf. of previous year	9.818 8.909	2.886	10	.02	2.5	8	.03
Conf. of previous year Conf. of second year	8.909 8.09	2.516	10	.05	0	6	.05
Conf. of second year Conf. of first year	8.09 8.181	0 152	10	Insig	30	11	Insig
Conf· of first year Conf of subsidiary class	8.181 7.09	2.292	10	.05	4	8	.05

Table 3 shows that learning speed in presence of confederates of final year class or of any other class is less than the speed taken in isolation. This may simply be attributed to the interfering effect of the presence of confederates of final year or of any other class i.e., to the interfering effect of the presence of people in general at the time of learning a verbal task.

Secondly, learning speed of subjects (students of final year) gradually improves before the presence of confederates of decreasing familiarity (students of final year, third year, previous year, second year, first year and subsidiary class). This gradual improvement may be attributed to subjects' perception of the presence of their fellow

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BIRTH ORDER AND FIELD DEPENDENCE

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AFZAL IMAM

ABSTRACT

An experiment was performed to investigate the effects of three birth order categories on the extent of field-dependence. The field-dependent-independent mode of response was measured by the Rod-and-Frame Test (RFT). A total of 72 University students participated in this experiment. Contrary to expectations, no significant relationship was found between birth-order and field-dependence.

INTRODUCTION

A fundamental fact of life is that all of us depend on others. The degree to which we depend on others is determined by multiple factors. One of such variables is the birth order of a person in the family. Of course, birth order, in itself, is not very important. What is of crucial importance is the distinctive child rearing practices that accompany one's ordinal position in the family.

During the first few years of life parents play an important role in the psychological development of the child. Later on, interactions with peers and siblings become critical factors in shaping his personality. A number of admirable studies on the possible relationship of birth order to personality have been reported in the literature (Altus, 1966; Helmreich and Collins, 1967; Janis, *et al.*, 1969; Nisbett and Schachter, 1966, and Warren, 1966).

Research findings suggest that first-born children are more likely to suffer from anxiety, withdrawal and over-sensitiveness. Also, they are more likely to be dependent on others in time of stress. Further, first-born and only-children are subjected to more restrictions than are later-born children. In a longitudinal study of children Kagan and Moss (1962) showed that internal restriction in the first years of life led to high conformity and low dominance in the older child.

Several studies have been conducted to find out the relationship between birth-order and dependency (Schachter, 1959). It has been

observed that the general behavioural attitude of the parents towards the first child is more extreme and more inconsistent—factors which lead to the development of dependency. In an ingenious study Hilton (1967) used three groups of only-children, first-borns, and later-borns. All of them came from the four-year age groups. No difference in dependency was observed between the first-borns and the only children. Again, the only-children and the first borns taken together were found to be more dependent than later-born children. In another study Culver and Dunham (1969) administered four tests of spatial-perceptual ability including the Rod-and Frame Test to a large number of student nurses and failed to find a significant relationship between birth order (or family size) and scores. Similarly, Simon and Wilde (1971) conducted experiments on first-born and later-born undergraduates. Contrary to their predictions no differences were found. But there are a few studies which have shown a positive relationship between birth order and dependency. Kinsolving and Bone (1971) investigated the effects of birth order and sex on field-dependency as measured by the Rod-and Frame Test. Results showed a significant interaetion between birth and sex. Reighard and Johnson (1973) also showed significant sex and birth order effects. Males were found to be less field-dependent than females. Also, first-borns were less field-dependent than both only-children and later-borns.

Thus, we find that whilst there are a few admirable studies a good deal of confusion exists concerning the exact relationship between birth order and field-dependency. Some authors have shown shat there is a definite relationship between the two whereas others suggest that there is no such relationship. Some support it and at the same time others reject it. The present investigations are meant to clarify certain points with regard to the contradictory findings. Of course, studies on children and psychiatric patients reported in the literature may not always be applicable to normal, healthy adults. Moreover, since the socio-cultural backgrounds tend to bear a very significant impact on the behaviour of individuals it may not always be feasible to generalize the findings of one culture to another. Here, in Pakistan, the pattern of child-rearing practices is slightly different from the child-rearing treatment of the developed countries.

In Pakistan the eldest child is usually born when the father is under 25 years of age Naturally, parents under 25 years of age are not mature enough to rear a child. Moreover, when the parents are so young most of the children are taken care of by the grand parents who are over protective. The child receives a good deal of attention until the second child is born. The advent of the new baby produces insecure feelings in the child because the second-born now becomes the centre of attention. Thus, the first child due to such experiences are apt to be more dependent upon others.

The only-child is the most protected child. He remains throughout the centre of attention of the parents and grand parents. Out of sheer love and affection every thing is done for him. He is not bothered to take initiative. Every body is there to help him with the result that he turns into a field-dependent personality. Finally, since youngest children appear to be highly striving (Kawin, 1934 ; Roberts, 1938) and more defiant (Cobb, 1943) they are expected to be more field-independent than both only-children and the first-borns.

In short, the present study is an attempt to demonstrate the trend of relationship between birth order and field-dependency in Pakistani culture.

METHOD

Subjects :

Seventy two University students constituted the sample. There were twenty four subjects in each birth order category—only, first-borns and the last-borns. All the subjects (majority of them were females) were volunteers who agreed to donate half an hour to this study.

Apparatus :

Rod-and-Frame Test (RFT) : This is a test of field-dependence. It consists of a luminous rod and frame housed in a dark box. Both the rod and frame can be rotated independently and the angle of their rotations can be read immediately on a scale provided on the outside of the box. At the beginning of each trial both rod and frame are presented in tilted positions. The subject is required to bring the

TABLE 2

Mean scores on RFT by Birth Order.

Groups	*N*	*Mean scores*
Only child	24	6.56
First-born	24	11.06
Last-born	24	11.29

TABLE 3

Summary: Analysis of variance of RFT scores for three birth order categories.

Source of variation.	*df*	*Sum of squares*	*Mean Square*	*F*	*Level of Significance*
Between groups	2	341.30	170.65	1.87	Not Significant
Within groups	69	6302.02	91.33		
Total	71	6643.32			

DISCUSSION

Performance on the tests of field-dependence has been extensively studied in relation to a variety of psychological variables (Witkin, *et al.* 1954, 1962; Imam, 1973, 1975, 1978). The idea behind this study was to investigate whether there is a significant relationship between birth order and field-dependent modes of response as measured by the Rod-and-Frame Test. The result is very surprising. Contrary to expectations, the data did not reveal any significant relationshlp between birth order and field-dependence. Not only that, what is most surprising is that the only-children proved themselves, on average, to be more field-independent than both the first-borns and the last-borns. Virtually, there was no difference between the first-borns and the last-borns. The present result is in contradiction to previous findings (Kinsolving and Bone, 1971 ; Reighard and Johnson, 1973). Of course, this result is supported by the findings of Culver

and Dunham (1969) and Simon and Wilde (1971). They also failed to find a significant relationship between birth order and field-dependence.

Now, the question arises as to why a significant relationship did not emerge in our study as well as in the studies of Culver and Dunham (1969) and Simon and Wilde (1971) when other investigators already referred to have found a significant relationship between birth order and field dependence. It is just possible that the subject population—University students—would be characterized by different adult interaction patterns than the subjects in other studies. Since Imam (1973) did not find a significant relationship between RFT scores and intelligence scores, the present results cannot be attributed simply to mutual correlations with intelligence. Albeit, grouping men and women in the same experimental sample might have masked the birth order differences in field-dependence. In fact, Kinsolving and Bone (1971) have suggested the inadvisability of combining both sexes when analysing the effects of birth order. Even though the number of male students were small in all the three categories, it would have been advisable to consider separately the male and female results. It is not always wise to assume that sex differences are unimportant. Initially we intended to include subjects of the same sex only. However, this was not practicable since it would have rendered the selection of the sample extremely difficult. Also, in the present study it was not checked whether a particular subject belonged to the Urdu Medium group or the English Medium group. This is important because Imam (1975) noticed a significant difference between Urdu Medium and English Medium University students on level of dependency. There is yet another important point which should have been taken into consideration. It was never enquired if the subjects' parents were alive. If not, since how long they were without parents. Again, it was not known if they had step mother and the kind of treatment meted out to them. These factors and many others may prove pertinent in the study of birth order and field-dependence.

To conclude, our results alongwith the results of other investigators cited above suggest that the ordinal position of birth does not interact with field-dependence in any well defined way.

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RELATIONSHIP OF ACHIEVEMENT MOTIVATION AND ATTITUDE TOWARDS EDUCATION WITH AGE, INCOME AND YAERS OF SCHOOLING IN RURAL WOMEN

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ABSTRACT

Eighty women belonging to rural areas asound Islamabad were given Story-Completion Test of Achievement Motivation and Scales for attitude towards male and female education. Information regarding age' educatton and Income was also obtained from the respondents. The results show that the level of education is significantly related with achievement motivation. Achievement motivation was found to significantly related with a positive attitude towards female education. Age and income were found to be negatively related with ochievement motivation and attitude towards education.

A number of studies have beeu conducted on the various factors involved in the origin and development of Achievement motivation, and the consequent changes within the individual (for summaries, see for instance, Heckhausen, 1967, Byrne, 1974).

The present study was designed to focus on a problem rather specific to the developing countries: the problem of illiteracy, low motivation level and attitude towards education. In a Pakistani study (Hasan, 1978) it was found that the educated group in the rural areas has somewhat more positive attitude towards female educational level. The general assumption of the present study is that in a society like Pakistan which has a high rate of illiteracy, education would lead to enhancement of achievement motivation and a more favourable attitude towards education.

TABLE

Intercorrelation between various variables (n=80)

	b	c	d	e	f
a. age	—.698**	—.269**	—.074	—.082	.000
b. Education		.255**	.452**	.306**	—.358
c. Ach. Motivation			.204*	.194	—.161
d. Attitude towards female education				.412**	—.810**
e. Attitude towards male education					—.102
f. Income					

*$p < .05$, **$p < .01$

The results show that achievement motivation is significantly related with years of schooling, which means that the women who received more education are higher in achievement motivation. Achievement motivation is also significantly related with a positive attitude towards female education. Its relationship with attitude towards male education is positive but barely falls short of significance level. Attitude towards female education is also significantly related with attitude towards male education. Thus all the three hypotheses were confirmed.

The table also shows that age is negatively related with years of schooling which means that the older women received less education as compared with the younger women. Correlation between age and Achievement Motivation is again negative and significant, indicating that younger women are more achievement oriented.

Income is significantly related with only two variables. education of women and attitude towards female education. In both the cases the correlations are quite high and negative, showing that among the rural women, there is considerable opposition to education, paricularly female education, in high income groups.

CONCLUSIONS

The major finding of this study is the relationship between education and achievement motivation. All the subjects were adults and achievement motivation. All the subjects were adults and their schooling had ceased decade ago. Yet this exposure to education exercised important influence on their motivation level and their attitude towards education of children. This finding is similar to one in which it was found that formers who had received some education were more favourably disposed towards new ideas regarding forestry as compared to these who had received no education at all. (Khattak, Moghni & Ansari 1979). These studies highlight the importance of education as a source of change within the individual and the society.

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CONCLUSIONS

The major problem of this study is the relationship between cultural and environmental motivation. All the samples were males and their ages were between 18 and 25 years. Yet this exposure to education seemed important influence on their motivation level and their attitudes towards education of children. This problem is similar to one in which I was trying to find out whether the people's perception of their environment was the same as that of the researcher or not. (Kariuki, 1978). These studies emphasize the importance of the researcher to have more knowledge about the people's culture and environment before he or she undertakes to do research in the area.

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ROLE AND STATUS OF WOMEN IN PAKISTAN AN EMPIRICAL RESEARCH REVIEW

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Recently the writer had a chance to attend an international seminar on Status of woman and Law in Philliphine. Thirteen Asian Countries starting from Pakistan and Sri Lanka to Philliphines. representing East and East Asian countries participated in the moot. As the seminar was organized by three different organisation of open lawers of Phillipine, their main concern was to point out any inequalities in the legal status of woman or the existence of any discriminatory laws about woman in these countries.

The delegates from Asian countries were unanimous in pointing out that although there were no laws which were discriminatory towards women, it was the awareness of these laws which was lacking amongst the women of these countries. The traditions and the customs in Asian are so rigid that they do not allow a woman to seek justice even when law in on her side. This was a conscience raising experience in which report after report was unfolding the phenomena of injustices and superession.

There are some historical factors which are commou in the Asian countries. For instance most of these counrries starting from Pakistan all the way up to Malaysia, Indonasia and Philliphine have agriculture based economies. Secondly these are the countries which have the legacy of very old cultures like Chinese and Hinduism. These are the culture in which polygamy is allowed and the status of women, traditionally has been very low. There is no need to repeat the stories of binding the feets of Chinese women and the burning alive of the wife alongwith the body of his dead husband in the Hindu Clture in the past. These customs have been stopped by law the spirit still prevails. Similarly Islam which is relatively new in Asia as compared to Chinese and Hinduism, also allows polygamy

and although it claims to give equal status to women in many areas, in actual practice has absorbed lot of cultural norms of Hinduism and Budhism, prevailing in this region.

The third common factor in all these countries with the exception of Thailand is that all have been colonies of Western Nations. This besides economies had colonies of Western Nations. This besides economies had cultural implications also.

Last but not the least, all these countries have missed industrial revolution and from a Feudal system are trying to step directly into post-industrial society with the result that most of these countries have become strange combination of radically different levels of development found in different parts of these country. One can go to Nepal, Korea, Indonesia or Pakistan and see people living in stone ages as well as in the most modern comforts within a stone's throw.

In this larger perspective let us move to Pakistan a very young nationa (Independence granted in 1947) in the old region of the world. It is unique in the sense that it is the only country which came into existence on the name of religion. After twenty four years of existence in 1971 due to the Indian armed intervention the country was divided into two parts and many belived that it was an end to the two nation theory but the East Pakistan which denounced its religious affiliation in favour of regional allience, has emerged not as a secular state but again a muslim country namely Bangla Desh.

Pakistan is predominently Muslim About 90% of its population belongs to Sunni Sect of Islam, The minorities include christians, Hindu, Parsi and Budhist etc, However it has great variety of customs and mores due to mass scale migration af muslims from different parts of India in 1947., and later in 1971 at the time of War between India and Pakistan, which resulted in separating the the two parts of Pakistan and mass migration of people from East Pakistan to West Pakistan. The mentioning of over a million Afghan refugees which we have received since last six months in the name of Islam most of whom are not likely to go back due to simple reason that life is a little easier in Pakistan than Afghanistan, is also not out out of place due to likely cultural impact in our Northern areas. All these

various groups of people have added a lot of hererogeneity in traditions and customs but the similarities are also worth mentioning. The indo-Pak subcontinent is part of greater Asian region and has shared thousands of years of living together. A heritage which can not be denied or modified drastically even for a relion like Islam which has been in the subcontinent since a very long time.

The second common thread running through all parts of Pakistan and its people is Islamic cultures. No matter which part of the country you go to or what language you speak you can find people praying at the same time, greating each other in the same way and offering hospitality if one needs it. Way and offering hospitality if one needs it. Why is it then that woman in Pakistan have not received all the rights which are given to them in Islam and way one finds inequalities which are legacies of older culture ? I am not going to deal with these questions as these will be dealt by some one else but will limit my remarks to status and role of women in present day Pakistan.

Before proceeding any further it will be better to define the terms, role and status. The sociologists explain the terms status and role as complementary concepts; together they porrrey the interrelationship between the social structure and the individual. Each of these terms, however expresses this relationship from a different perspective. Status defines the individuals place in the social structure; role emphaslzes the way in which the individual deals with the demands inherent in a particular social position. Role can be defined as the expected behaviour associated with a particular social position; the set of activities and function expected from a person in a particular social position or as "the expected pattern of behaviour associated with a particular social position". However, for the purpose of the present article the role refers to role expeceations from women in different socio-economic situations. As role is very closely related with the status of person in a society. it will be necessary to give a brief review of the literature relating to women in Pakistan. It is hoped that the render will appreciate the fact that the terms role, status and position, even society and culture are relative terms and can serve only as reference point in time and events due to a continuous process of change.

As research in social sciences is not very popular in Pakistan, the research about women is almost non existant. With very few exceptions of surveys, autobiographies and literary works one has to depend very heavily on the soft data.

In order to have an insight into women situation in Pakistan, one need to know about the demographic facts of Pakistani society. According to our last national censns taken in 1972 the population of Pakistan is about seventy million and women comprizes about 40% of the total population. Although the health standards have improved a great deal and the dealth rate during the ceild birth has decreased drastically yet the ratio between men and women is still not equal. This is especially true in the rural areas. Another demographic fact is the survival after the age fifty and above. Contrary to Western society one find in the census report that men out number women in the age group fifty and it is very conspicous at the age sixty and above.

Literacy is another area which is worth noting in regard to status of women. Unfortunately like other developing countries women in Pakistan also are not in a very good position. The general rate of literacy is very low and it is still lower for women. The rate of population growth is out pacing the rate of providing education to our children, with the result that although the number of educated men and women has incread in the last ten years, the ratio of literate population has decreased.

Figure I: *Percentages of Illitaates amongst Rural and Urban Male and Female Population of Age 10 years and above.*

Census Year		Total	Male	Female
*1961	Urban	67.6	65.6	70.3
**1972	,,	73.3	62.2	86.1
1961	Rural	73.9	72.3	75.7
1972	,,	80.8	69.8	94.0

*1961 Census Report of Pakistan.
**1972 Census Report of Pakistan.

Figure I has the comparative data and literacy for male and female population for the census period of 1961 and 1972 (The national census could not get completed in 1971 due to Indo-Pakistan war). The data shows an over all daterioration in literacy between the two census period. However the literacy ratio did not decrease in male population end showed an increase of 3%. It is the female sector which was the main loser. The literacy rate of urban women showed a decrease of 14% and of rural women decrease of about 18%. Soma major reforms in education policy have been brought about since the last census report including decrease of budget allocation to the education sector. However it is not likely to have very dramatic improvements in female literacy.

Figure II: *Primary School attendance in Pakistan Rural villages with school by sex class level. and Province, 1976 (Percentages).*

	NWFP	Baluch-istan	Punjab	Sind	Islamabad	All Pakistan
			BOYS			
Class I	89	60	71	81	87	78
II	45	25	57	52	49	46
III	48	18	53	45	44	42
IV	22	15	46	40	39	32
V	23	14	41	33	34	29
All Total Classes.	25.4	26.4	53	52.2	50.6	45.4
			GIRLS			
Class I	34	37	70	40	75	51
II	16	10	43	24	42	27
III	12	8	38	21	28	21
IV	11	4	25	15	16	14
V	6	4	20	10	13	10
Total Classes	15 8	12.6	39 2	22	34.8	24.6
			BOYS AND GIRLS			
Class I	61.5	48.5	70.5	60.5	81 0	64 4
II	30.5	17 5	50 0	38.0	45 5	36.3
III	30.0	13 0	45 5	33.0	36.0	31.5
IV	16.5	9 5	35.5	27.5	27 5	23.3
V	14 5	9 0	30 5	21.5	23 5	9.8
Total Classes	131.0	19.5	46.4	36.1	42.7	35.1

The data in Figure II refers to school attendance in primar schools of Pakistan. Please note the drop out rate both for boys and girls at each class level. The gils who get enrolled in class one are much less than the boys and their drop out rate is much higher. It will not be out of place to mentjon here that education upto primary school is free but it is not compulsory, due to simple reason that we still do not have enough schools for all the children. Our present education policy stares that Pakistan will achieve the target of 100% enrolment of primary age boys by the year 1982 and for girls by the yaar 1985. At present we have about 80% of our school age children in school. The ratio of girls and boys to the primary grades is rougly 1 : 3 and at high schools it is 1 : 4.

The third aspect of looking at the status of a person is to know his or her economic status and there are a lot of misgiving about Pakistani women in the western countries. A typical view is that being a Muslim: Pakistani womcn wear a vail, do not participate in any income generating activity and generally are a drag on economy. Hanna Papnick in her paper talks about Purdah as a highly specialized sex role devision, in which men and women do not invade each others sphere of influence. Although I agree with her basic premise regarding pnrdah, I would like to pout out Hanna's failure in recognizing the fact that purdha is prevalent in a very very small fraction of traditional middleclass and even amongst them is changing its shape. The great majority i.e. 74% of our population lives in the villages and they do not observe purdah and women work in the fields. Similarly womeu belonging to lower and upper classes as well as emancipated women of middle class do not observe purdha in the sense of wearing a veil and staying in seclusion.

The labour force participation of Pakistani women is much lower as compared to the devoloped countries. According ta a study carried out by Khalida Shah on Man Power policy and women participation she quoted thot as compared to U.S.S.R. the U.S.A. and Japan, it is found that while the percentage in these countties is 48.27 and 38 8 percent respectively, the figure for Pakistan is only 9.6 percent. However, this data not take into account the amount of work a woman puts intn the family and household choresawhich due to primitive condition require long hours of hard labour for simple task like cooking, washing etc.

Figure III: *Distribution of Population and Labour Forces into Employed and Unr Employed by Sex and Area 1979.*

Million

	Pakistan			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
(1) Population	77.76	41,09	36.77	19.77	10.44	9.33	58.09	30.65	27.44
(2) Civilian Labour Forces.	22.96	21.36	1.60	5.20	4.98	0.22	17.76	16.38	1.38
(1) Employed.	22.57	20 99	1 58	5.05	4.84	0.21	17.52	16.15	1.37
(2) Unemployed.	0.39	0 37	0.02	0.15	0.14	0 01	0.24	0.23	0 01
(3) Not in Civilian Labour Forces.	54.90	19.73	35.17	14,57	5.46	9.11	40.33	40.33	26.06

Source: Estimates of Planning Division, Government of Pakistan.

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Source: Estimates of Planning Division, Government of Pakistan.

Data in Figure III deals with women participation in income generating activities. Again the women participotion in civil jobs is very litile, Majority works either in the family enterprise or they are employed in private industry, farms or skilled jobs in the city. The percentage of women in blue colour job is very small that is less than two percent. The Attitude Study by Iftikhar N. Hassan 3 points out the attitude change which are taking place in the rural areas of Pakistan. One important and unexpected finding is that of the attitude of rural men towards women warning money. It revealed that all men belonging to villages are generally considered very orthodox, fair that woman should earn money. Although they still were not willing to let their women take up a job outside their home and felt that they should do embroidery, knitting, sewing etc. to make money still it is a radical change from their fathers time who would die rather than have their wives earn money to support the family. It should be added here that the rural women work in the fields alongwith men and participate in other income generating activities like taking eare of the cattle etc. but as it is a family enterprise and not a paid labour, it is not counted as a job income generating activity.

A fourth erea worth considering while studying status of women her legal status in the society. It is true that constitutional and legal right can not do much if the general public does not have awareness of these rights or is not willing to accept it and that is what one finds in case of women. The customery laws are more binding on the members of community than legal laws, and there are very few who take advantage of legal justice.

The muslim women qowever, took active part in 1935 (during the British Rule) in dissolving the Muslim women till that time were denied of inheritance and right to warry and divorce by the customary laws prevelant in the rural areas. The muslim woman in the leadership of Begum Shah Nawaz in the pre-Pakistan era suceeeded in gaining their legal rights to property and the right to get a divorce and marry, given to them by Islam as daughter, sister, wife and mother. Salma A. Ahmad while discussing the status of women in Pakistan feels that legal status is very crucial in letermining the position of a

person. She has judged the status of womeu on the following criteria :—

(1) Status and legal rights as conferred by the Islamic Law.
(2) Rights and responsibilities conferred by the construction and Law of Pakistan,
(3) Siatus confeired by custom and tradition.

While reviewing three indicators of status, it is pointed out that the laws of inheritance discriminate against women although women are often called upon to shoulder as much responsibility today as men with regards to family matters and dependents. Similarly there is disparity in the law for divorce between man and women. A man can pronounce divorce three times and may get rid of his wife where as a woman can get a divorce only through a court decree which generally ligers on for years.

However the author points out that most of these legal and constitution provision are for a very very small minority of education and urban women. The majority of women are ignorant and illiterate. "She knows not her own rights and even if she does, she has few means of obtaining legal justice or asserting her rights".

The Muslim family law of 1961 restored quite a jew rights of women. Similarly 1972 constitution of Pakistan has many safe-guards for women and has granted then equal rights ue article 34 & 35 ensuring equality of opportunity and elimination of discrimination on the basis of sex.

A close study of women situation in Pakistan does not present vbright picture; yet it does indidicate long and persistant struggle of muslim women for their legimate rights. It is almost heroic to get recognition of their rights when viewed in the context of their ignorance and unpreparedness to fight with overwhelmingly dominent male sect.

One privilege which women in Pakistan have got without much struggle is equality of pay with men weich still is not true in many developed countries. The second big achievement has been promulgation of family laws which has put restriction on men for marrying more than one wife without sufficient reasons. The family laws were promulgated in Ayub era in 1961 end later on became a part of

Pakistan constitution of 1972 under the article 34 and 35. Thus ensuring the equal rights of women as regards inheritance of property and rights to marry or divorce according to Islamic law. However the author of the article, a women lawyer points out that although the legal rights have been granted a large majority of women are unable to take advantage it is due to lack of information and traditions, Similarly in area of women employment it is found that out of women of working age only 9.6% women actually do work, This work participation ratio is very low as compared to other countries. Moreover a great majority of working women that is 70% of them are employed as unskilled labourer in the rural areas. The rest of them work as house maids, cooks or sweeperesses etc. in the cities. A very small fraction of working women is employed as teachers in schools and colleges and as doctors and nurses in the medical profession. The rest are working her their labour still needs to be recognised by the society.

The role has been defined in the introductory remark as the pattern of behaviour associated with partical social status. A simple method of determining the role of women is to know what is the expected behaviour by the society from the women of status and age. As rural women comprise bulk of the women population it will not be out of place to quote a 4 study of rural population in which women work asked to tell their daily chores from the time they get up in the morning till sun down. Theıstratification was done on economic cum socal and vocational grouping existing in a typical village. In all, very village population was divided np into seven strata and a proportionate semple was taken. From the small strata of land lords and the relatively educated section of service group three subjects each were taken. The next strata was Zamindars or self cultivating land owners, and tenants who cultivate others land on share basis, seven subjects each ot these two groups were taken. From the rest of the four strata that is Farm labourers. Artisan and shopkeepers, five subjects were taken from each were taken. In all thirty five subjects were taken from each village and eight villages from Punjab and four villages each from the rest of the thıee provinces of Pakistan, Sind, N.W.F.F. and Baluchistan comprized sujects of the study.

Figure IV. *Showing Average Time of Work in Minutes for Women as a whole and on the basis of their Occupations Group Membership. Number of Women=850*

S. No.	Category	Average for all occupation.	Zamidar		Khud Kasht Zamindar		Mazarah		Khet Mazdoor		Dastkar		Dookandar		Service	
		time	Time	X^2	Time	X^2	Time	X^2	Time	X^2	Time	X^2	Time	X^2	Time	X^2
1.	Cooking and Food Preparation.	172	190	N.S.	161	N.S.	170	N.S.	173	N.S.	173	N.S.	172	N.S.	175	N.S.
2.	House cleaning.	80	90	N.S.	74	N.S.	79	N.S.	74	N.S.	82	N.S.	80	N.S.	74	N.S.
3.	Washing Laundry etc.	78	75	N.S.	93	N.S.	77	N.S.	72	N.S.	69	N.S.	84	N.S.	76	N.S.
4.	Taking care of the animals	107	82	N.S.	111	N.S.	92	N.S.	101	N.S.	146	.05	88	N.S.	105	N.S.
5.	Milk Processing.	73	85	N.S.	60	N.S.	72	N.S.	86	N.S.	112	.01	44	.01	66	N.S.
6.	Taking care of the children.	115	120	N.S.	107	N.S.	117	N.S.	131	N.S.	118	N.S.	102	N.S.	90	N.S.
7.	Sewing Embroidery.	159	125	N.S.	146	N.St	134	N.S.	185	N.S.	190	N.S.	177	N.S.	142	N.S.
8.	Working in the fields.	199	180	N.S.	162	N.S.	228	N.S.	218	N.S.	265	.01	110	.01	117	.01
9.	Taking meals to the fields.	114	.000	.001	99	N.S.	86	N.S.	86	.01	420	.01	38	.01	14	.01

The data in figure IV taken from an N.I.F. mongram deals with the daily routine of rural women in Pakistan. In an extensive intervisw, these women were asked detailed questions about their daily chores or what they do from morning till bed time. One of the interesting findings was that women from the rural areas felt that their day is eighteen hours long which did not tally with their their dawn till sun down schedule of life. However, it indicate thar they either do not have on accurate sense of time or their household chores are so hard that time appears to be long. The data in figure three has been presented as it was, nad the time allocated to each actitivities the relative importance of that activity, it also points out the differences in the responsibilities of women of diffreent socio-economic status.

The data indicates that although some of the women in upper strain have helped in the house work, the average time spent in daily activites does not very too much. The last three categories that is Dastkar (artisans) Dookandar (shopkeepers) and service people differ from the rest of the groups on job category 5 8 and 9. This is due to different neture of their husbands frofession and nothing else. The wives of rich landlords whc had maid servants indicated that much time time to supervize these activities. They had no other activities equivaleut of coffee perties which could be reported,

Another study carried out earlier at the National Institute of Psychology by Hassan, et al dealt with the attitudes of rural population towards female education. This study had some questions dealing with women earning money either to taking up a job or doing some other work.

Figure No. V. *Data relating to attitude towards Women working for money by Male and Female Sapai ately. Male : 810 Female : 850.*

	Frequencies.	X^2	Frequenciss.	X^2
1. If your daughter takes up a job in your own village, would it be acceptable to you?	481	28.60	457	5.16

	Frequencies.	X^2	Frequencies	X^2
2. Husbands do not allow their wives to take up a job because the family objects to it.	295	=57.35	307	—62.68
3. People mind if women have to go to some other town for work.	298	—55.10	354	=23.11
4. To do tailoring work for money is considered bad.	743	570.60	761	635.33
5 It is not considered bad if women do sewing or knitting work for money.	622	235 85	424	N.S.
6. The majority of men dislike money earned by women.	329	—.001	410	N.S.

The data in figure five belongs to the national study mentioned above. In this table the responses of men and women have been analysed separately. Women have answered in favour of their daughters taking up a job on questions own and two while men have agreed only if the daughter gets a job in their own village. However on question three and four where the subjects have been given protection of family objecting to the women working for mony, both men and women nave agreed with the proposition which is against women working for money. The next item deals with women making money through traditonally approved activities like sewing, knitting etc. Interestingly enongh women are not sure whether men approve of it or not; whereas men are quite position about it. Similarly the last item dealing with women's earning being undesirable. is denied by majority of men while womcn are not sure absut the feelings of men about their earnings.

It appears from the data that a change is taking place in rural population regarding the role of women in economic contributions towards the family income. However this change is limited to men only. women are still not sure what they should do, It is possible that men are more aware of the economic pressure and want women to share it. Please also note that they still want their women to stay

Presently a number of exploratory studies have been carried out as pilot studies in whice developmental tasks, self concepts, achievement motivation etc have been studied. However, these are only pilot studies and the main study will be completed at the end of 1981. As the role is very closely related to the expected role of an individual in a particular setting it will be useful to look at this preliminary data also.

Pakistani culture has very clear role demercation in everyday life. Therefore, an exploratory study of what is expected from a girl of certain age and urban setting was carried out with a view to study the developmental tasks and social expectations and to see how girls are brought up in our culture to take their place in the adult world. It was hypothesized that most of these cultural values will be internalized by the women themselves and they will perceive them as their expected role. The respondent in this ease were two hundred girls half of whom bslonged to two small villages in the interior of Punjab and the other half to city of Rawalpindi which is a middle sized city. The subjects were selected randomly from middle and high schools and corresponded to ages 13-17 years and later divided for their socio-economic distribution of the sample comformed to the national pattern. The low income category was the largest in the rural sample wehre as the middle income category was the largest to the urban sample which is tn conformity with the national statistics. The subjects were asked to think about the girls of a particular age group and answer ali the questions relating to that age category. The questions were asked about four age group categories, namely five years old, ten years old, fifteen years old and twenty years old. The questiou were framed to find out if any differential treatment was given to the boys or girls in a particular situation. There was no difference in urban and rural respondents regarding developmental tasks of 5 years on items dealing with language and dress indicating that Pakistani culture encourages sex role identity quite early in life. On items dealing with emotional expression and emotional control, there was significant difference amongst urban rural sample. The urban population appears to be less rigid than rural population in their treatment with five years old girls as for as expression of

feelings is concerned. The general trend however was to encourage the girls to become more docile and obedient; even at such a young age as five, they are encourage to have emotional controls. The cultural expectations from 10-15 and 20 years old girls become increasingly uniform amongst urban and rural population i.e. there was no significant difference in the urban and rural sample on increasingly larger number of items dealing with various tasks. By the time the girls were 15 years old the segrgation of the sexes was well established in daily activities and the girls were doing things differently than boys of their age. The differences found amongst urban and rural population in trratmant of the girls also decreased. There was no difference between urban and rural population on seven out of thirteen tasks of 15 year old and with the exception of one task dealing with education the rest had same trend. The role which emerged from this data was of a girl who is obedient, docile and limits her activities to the house hold chores. She is expected to serve the men and play a secondary role. One of the question dealing witn the belief that the girls are less intelligent than boys, was expected only by 32% of city sample and 47% of village girls, indicating the slow change which is emerging in the younger generation. The young women of 20 years are expected to obey their elders in the matter of choice of marriage partners, educational and economic activities and are expected to be prudent in expenditure. They were aware that they are not expected to take up a job even if they want to. The city women expected men to participate in house hold activities and share the rasponsibility of children's up bringing. Their rural sisters, on the other band, expect women to be more responsible for bringing up and training of their children. The role of urban women is less orthodox than the rural women indicating areas of social change in the Pakistani society.

The study indicates that Pakistani culture is quite successful in indoctrination of their women. Whether it is regarding taking the blame of an unhappy warriage or giving up her share in property or feeling herself a burden and a liability on parents. She knows that parents are not happy at the birth of a girl and she should not complain about parents net sending her to school as she is not expected to take up a job. She is taught to be patient, sacrificing, obedient

and ready to take a secondary portion as compared to men. If some think goes wrong with her marriage she is the one who is to be blamed. If any one of her children do not succeeded in life, she is main cause of their failure and in the rare circumstances that she seeks a divorce or receives a divorce her chances of second marriage are very slim because Pakistani culture is very harsh on divorced women.

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OCCUPATIONAL ASPIRATIONS OF HIGH SCHOOL STUDENTS IN PESHAWAR

*Department of Psychology, Peshawar University**

ZAFAR AFAQ ANSARI

ABSTRACT

182 boys and 207 girls of eighth, ninth and tenth classes in four Peshawar schools were asked about their occupational aspirations. In all 21 professions were mentioned, out of which six most preferred ones accounted for 85 percent choices. Boys chose physician as the most preferred occupation followed by Pilot, and Engineer. In case of girls Physician is again the most chosen occupation followed by Teacher, Lawyer and Lecturer. The findings are compared with those of other studies and their implications are discussed.

INTRODUCTION

Studies of occupational aspirations of young people have generally shown an overwhelming preference for occupations of high socio-economic status. When compared with census distribution of occupations, the results show, without exception, that most persons aspire for professional-technical occupations and fewer show preferences for agricultural and domestic occupations, than are proportionately engaged in these occupations (Roe, 1956).

It is partly because of this, that occupational aspirations of adolescents have been considered relatively meaningless by some writers (Super, 1957). They are probably not meaningful in the sense that aspirations at the age of 15 may not in themselves completely determine the actual occupation selected, say, a decade later. However, the aspiration would certainly be one of the many factors that ultimately influence the selection of occupation; the others being ability, aptitude, and educational and vocational opportunities, among others. Therefore, actual embarking upon a profession would involve a series of adjustments which would require lowering of aspiration levels. That this process would entail disillusionments and frustration

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goes without saying. It is for this reason that the study of occupa tional aspirations has a great deal of significance.

Carter's (1940, 1944) theory of vocational choice says that a perso identifies himself with a respected group. In order to be a part of th group he wants to adopt that occupation. Zaidi (1979) has suggeste that a study of occupational choices may be taken as a significant ind of a society's changing socio-economic life. One may add that su an index would indicate the values prevalent in a society at a giv moment.

At present only one large scale survey of occupational preferenc of secondary school pupils in Pakistan is available (Zaidi, 1979). this study 533 boys and 469 girls of Karachi schools were asked abc their vocational preferences. Karachi is the largest and fast growi business and industrial centre in Pakistan. The present investigati was carried out on a similar group but in Peshawar, a traditional a much smaller city situated at the other end of Pakistan.

METHOD

Subjects.

The subjects were 389 students of eight, ninth and tenth clas of four different schools located within Peshawar Tehsil. Out of f schools selected, two were exclusively boys schools (One English a the other Urdu-Medium), and two were girls schools (one English a other Urdu-Medium).

Procedure.

As a part of a larger research project, subjects were asked ab their occupational aspirations. The question put to them (orginall Urdu) was; "What occupation would you like to adopt when grow up".

RESULTS

In all 21 professions were mentioned by our sample. If c those professions which were mentioned by five or more students taken then the figure comes down to 12 professions only. E out of these if the six most chosen professions are taken they acco for the choices of about 85 percent students. The most chosen p fessions by the whole sample are (in order of preference): Physic Pilot, Teacher, Engineer, Army Personnel & Lawyers.

Sex Differences.

There are interesting similiarities and differences among boys and girls. Physician is most favoured occupation in both the sexes. The second most favoured profession in case of boys is that of Pilot, followed by Engineer and Army Personnel; in case of girls, it is Teacher, followed by Lawyer and Lecturer. About equal percentage

Table 1. *Occupational choices of boys and girls from English and Urdu medium schools (percentages)*

Occupation		Eng. Medium		Urdu Medium	
		Boys n=92	Girls n=126	Boys n=90	Girls n=81
Physician	...	54.4	54.8	40.0	49.4
Pilot	...	13.0	2.4	13.3	2.5
Teacher	...	0	8.7	2.2	13.6
Engineer	...	10.9	1.6	11.1	0
Armed Forces	...	11.9	.8	4.4	2.5
Lawyer/Judge	...	3.3	1.6	5.5	9.9
Lecturer	...	0	5.6	0	2.5
Civil/Foreign Service	...	0	4.0	3.3	0
Artist	...	0	4.0	1.1	0
Banker	...	3	0	3.3	2.5
Nurse	...	0	2.4	0	2.5
Businessman	...	0	0	5.6	0
Police	...	2.2	.8	1.1	0
Psychologist	...	1.1	0	0	1.2
Film Producer	...	0	1.6	0	0
Air Hostess	...	0	1.6	0	0
Journalist	...	0	1.6	0	0
Electrician	...	0	0	2.2	0
Clerk	...	0	0	2.2	0
Contractor	...	0	0	1.1	0
Homeo Doctor	...	0	.8	0	0
Don't Know	...	3.3	8.7	3.3	13.6

of boys and girls would like to be Lawyers, Psychologists and Civil Servants. The professions exclusively mentioned by boys include those of Businessmen, Policemen, Electrician and Clerk; while only girls mentioned the professions of Lecturer, Nurse, Film Producer, Air Hostess as their choices. Finally, three times more girls than boys say that they do not know what they are going to do.

Humanities vs. Science Students.

There is a marked difference between the students who have selected Humanities subjects and those who are studying Science subjects. Among the Science groups three professions dominate the

Table 2. *Occupational Choices of boys and girls in Humanities and Science groups.*

Occupation	Humanities		Science	
	Boys n=31	Girls n=81	Boys n=151	Girls n=126
Physician ...	0	3.7	57 0	84.1
Pilot ...	3.2	0	15.2	4.0
Teacher ...	6.4	19.8	0	4.8
Engineer ...	4.2	0	12.6	1.6
Armed Forces ...	19.4	3 7	6 0	0
Lawyer/Judge ...	16.1	7.4	2 0	3.2
Lecturer ...	0	11.1	0	0
Civil Service ...	6.4	4.9	0.7	0.8
Artist ...	3.2	6 2	0	0
Bankers ...	9.7	2 5	0	0
Nurse ...	0	6.2	0	0
Businessman ...	9.7	0	1.3	0
Police ...	6.4	0	0 7	0
Psychologist ...	0	0	0.7	0.8
Film Producer ...	0	2.5	0	0
Air Hostess ...	0	2,5	0	0
Journalist ...	0	2 5	0	0
Electrician ...	6.4	0	0	0
Clerk ...	3.2	0	0.7	0
Contractor ...	0	0	0	0.8
Homeo Doctor ...	0	0	0	0.8
Don't Know ...	6.4	27.0	2.6	

ces. They are the occupations of Physicians, Pilots and Engineers. e three professions taken together account for the aspirations of ercent students. Among the Humanities students there is far ter heterogeneity. The most preferred occupation is Teaching, wed by Law, Armed Forces, Lectureship, Art and Civil Service. ever, these six professions taken together account for only 53 nt students There are far more (about 6 times) among Humani- students who are unsure about their occupational aims than g Science students.

sh Vs Urdu Medium Students.

he major differences among students from English and Urdu im schools are in terms of level of occupations chosen. Low stereotyped occupations like Clerk, Electrician and Contractor, chosen exclusively by Urdu-medium students; while more ourous occupations like Foreign Service, Film Production, alism and that of Air Hostess were chosen exclusively by sh-medium students. Other professions more often chosen by ih-medium students include those of Physician and Artist while medium students have more often chosen Teaching and Law.

DISCUSSION

he present study shows that the high school students, when ng about their future occupation tend to think in terms of very l options. This may partly be due to stereotypes prevalent in ciety regarding the desirability of certain occupations and the prestige and income associated with them. However, it may partly due to lack of proper information about many other sions. Professions like Scientist, Inventor, Musician, Forester all well rewarding but they do not appear in the list of choices. ltural professions are not mentioned at all, although many ts come from rural background. The lack of vocational ation and guidance in schools is probably responsible for it.

e occupations selected by the students are exclusively high conom c status professions. About 88 percent of those who

have indicated a choice, aspire for occupations which will l starting salary falling in the income tax bracket. The present sit is that only about ten percent employed adults in urban area: this level. Thus it is obvious that these aspirations are optimistic.

This undue optimism, as we have already noted, is more o widespread phenomenon which emerges not only in this and (1979) study cited above, but is seen in many studies condu other countries also. There may be numerous reasons for thi one, the wordings of the question put to the students was ab aspirations or ideals Had the question been worded differen example, 'what occupation do you expect to adopt'? the re would probably have been somewhat different, It would be able to assume that in developing these aspirations childı influenced by a number of sources, particularly their parents. parents, particularly those who are living in urban areas, little education themselves, tend to attach a lot of expe from their children's education. They believe that their childı result of obtaining education, would be able to achieve higl economic status, something that they could not do themselves.

The occupational choices of girls deserve special mentio majority of them has preferred Medicine and Teaching as thei occupation. These two professions account for 76 percer choices of girl students. In this respect our findings are very si those reported by Zaidi (1979) for Karachi sample. These t fessions are the stereotyped 'respectable' professions for w Pakistan and both the Pakistani studies show how strong stereotypes are held among the girl students in these two dista of the country.

Comparison of boys preferences in the two cities shows in differences. Most markedly, among Karachi boys there is a pr for Business and related professions (like Accounting and La Engineering at the second place. This is quite understan Karachi is an important business and industrial centre In P

Business comes very low in occupational preferences and Medicine, Flying and Engineering are on the top.

It is quite obvious that the present situation can be much improved by giving occupational information and guidance at school level. This along with development and use of aptitude tests can help the students in making occupational choices at the high school level and avoid many disappointments and disillusionments in later year.

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RELATIONSHIP BETWEEN HYPOCHONDRIASIS AND DEPRESSION AS A FUNCTION OF ECONOMIC CLASS

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ABSTRACT

The commonly observed relationship between Hypochondriasis and Depression may be influenced by the economic class of subjects. The scores of Hypochondriasis and Depression on the MMPI, and economic levels of 60 normal female students were subjected to rank order correlations and coefficient of multiple correlation. Hypochondriasis and Depression were measured by the relevant Scales of the MMPI, and economic levels were established by the reported monthly income of a subject divided by the number of dependents in the family. Significant relation was found to exist between Hypochodriasis and Depression (p= 66). Results also indicate that there is some influence of economic class on the combined scores of Hypochondriasis and Depression (R^2=1.61%). The suppressant variables regarding this relationship, however, need to be probed. No clear evidence is found as to the direction of effect of economic class upon Hypochondriasis and Depression. The need for a more exact method of income assessment is suggested for any future investigation.

INTRODUCTION

Hypochondriasis (HS) is characterised by an abnormal concern about bodily functions (Hathaway & Mckinley, 1954). Individuals with high HS score on the Minnesota Multiphasic Personality Inventory, MMPI (Dahlstrom & Welsh, 1962) frequently complain of pains and disorders that are difficult to identify and for which no clear organic basis can be found. It has also been reported that in most cases hypochondriacs have a long history of exaggeration of physical complaints and of seeking sympathy (Rosen, Fox & Gregory, 1972). Their diseases are not illnesses, rather, these are their dis-ease or lack of ease regarding other life aspects which weaken their resistance. HS may therefore be a result of life conditions that are mostly stressful in nature.

The state of Depression (D) too can follow conditions which th individual finds difficult to cope with. Depression has also bee described as the paralysis of the will (Beck, 1972). Behaviourally it i manifested in loss of interest, reduction in responding, inability i accomplishing tasks pervaded with general dependency.

The depressive comes to believe in his helplessness (Seligma 1973a). Hypochondrical symptoms may lead to such feelings helplessness. They may themselves also result from depression the form of sympathy or attention gaining devices. Though a depre sive is not aware of the use of these devices yet according to Sulliv (1954) he manipulates others. He uses his dependency as a weap in exploiting the responsibility that others may feel towards hi Others are made to feel guilty if they appear indifferent or unconcern towards their problems. Gaining sympathy thus takes the form of demand. For the fulfilment of such a demand what can be a bet defensive operation than HS to make others respond to them? T attention given to individuals showing psychosomatic symptor satisfies their deep down feelings of neglect. Thus there seems to a relationship between HS and D which is the subject of the pres study.

The specific aim of the present study is to see the relationsl betwcen HS and D in accordance with the economic status of subject. In Pakistani society, like many other countries, the yo is exposed to privileges or disadvantages of its class merely because the accident of birth. The present generation in the upper econo class is being brought up with resources as more buying power, c educational facilities, etc, which are independent of the actions struggle of the recipients. A youngster receives such privileges what he is, rather than what he does. Gratuitous rewards and puni ments can be frustrating (Lazarus, 1968). Unconditional rewa may lead to success depression (Seligman, 1973b) because they are contingent upon the individual's behavior. Therefore money tha not earned is also easily spent as the popular maxim says, 'easy co easy go'. Thus it seems plausible to assume that through HS then the doctor's bills, youngsters indirectly lash at the benefits t have not earned.

Behaviour which is followed by positive consequences is reinforced and maintained (Bandura, 1969). HS with related D can also be maintained by the indulgent tolerance shown by others and especially so in the upper economic class. It is assumed that young people in the low economic class are less exposed to such positive consequences of indulgence. Additionally, they struggle more for whatever privileges they enjoy than their well-to-do counterparts.

These observations and findings may lead one to formulate the following specific hypotheses :—

(1) A positive relationship may exist between HS and D as measured by the relevant scales of MMPI. The present study investigated the degree of this relationship on normal female students in the Pakistani society.

(2) The economic class of the subjects may have an effect upon the correlated unit-score of HS and D as measured by the relevant scales of MMPI.

(3) The direction of the effect of economic class on HS and D may be positive. That is, the upper the economic class the higher is the HS and D scores combined.

METHOD

Subjects.

The subjects were 10 females each selected from six economic groups. The range of income levels per month for each group was predetermined. The subject's placement within a particular economic group was determined if she fell within the income range specified. The various economic groups were as follows :

1. The upper-upper group. Subjects belonging to house-holds having a monthly income of Rs 10,000/-.

2. The upper-group Subjects belonging to households having a monthly income of Rs. 5,000/- to Rs. 9,999/-.

3. The upper-middle group. Subjects belonging to house-holds having a monthly income of Rs. 2,000/- to Rs. 4,999/-

4. The middle group. Subjects belonging to house-holds, having a monthly income of Rs. 1000/- to Rs. 1,999/-.

5. The lower-middle group. Subjects belonging to house-holds, having a monthly income of Rs. 500/- to Rs. 999/-.

6. The lower group. Subjects belonging to house-holds having a monthly income of Rs. 499/- or below.

Before the final placement of the subjects in their respective groups a formula was applied. The formula was:--

$$\frac{\text{Reported total income per month}}{\text{Number of dependents in the family}}$$

The rationale for doing so was that it was felt that the standard of living of a family is not wholly dependent on the total income of parents/guardians. It is influenced by the number of non-earning members in the family as well. In other words, the standard of living is affected by the number of dependents on a particular income. Thus the income level obtained for the subjects after the application of the formula was the basis of their placement in different economic groups.

The sample was kept restricted to females because sex variation was not desired. The education range of subjects was from the first year of college to post-graduate classes. The education levels and the age levels of subjects were not specifically controlled because these variables do not seem to be related to the hypotheses of the present research and thus do not form an essential part of it.

Material

All subjects were students with an ability to read, write and understand English. The English version of the MMPI was therefore administered. Two particular scales of HS and D were picked out. It has been seen previously that the selection and separation of certain scales does not affect their validity (Charen, 1954; Anderson, 1948)

The format of the form administered had three main parts. Firstly, there were two questions which were compulsory for all subjects to answer before their responses could be included in the research data. These were (a) what is approximately the monthly income of your parents/guardians? (b) What is the number of non-earning members in your family who are dependent on your parent's/guardian's income? It was emphasized to the subjects that they should give accurate answers to the above questions. Secondly, clear written instructions were given. These were :

> "Read the following statements carefully and decide whether it is true as applied to you or false as applied to you. In front of each statement write your answer, True (T) or False (F) clearly. Do not leave any statement unanswered. Try to give some opinion of yourself in answer to every statement."

Thirdly, the randomly placed statement of the HS and D scales of MPI followed.

Procedure.

Subjects were given the forms to answer. For any questions by subject the relevant part of the instructions was read again to . The subjects were asked to answer the questions independently each other in a quiet room. It took approximately fortyfive minutes each subject to answer the entire form.

RESULTS

The scores of HS and D were converted to their T-scores eqiva- s (Dahlstrom & Welsh, 1962). All statistical analysis were con- ed on these data. Economic class of each subject was also mined by the already given formula.

Spearman's Rank Difference p was tabulated for economic class HS; economic class and D, and HS and D. Table I presents the ix of these correlations respectively. These results indicate there is a significant relationship between HS and D, p=.66; , p<.01). However, it is lacking in ecomomic class and HS; 38; (df 59, p> 05) and economic class and D, p=.117; (df 59, i.)

TABLE I

Rank Difference P for Total Data.

Variables	P
Economic Class & HS	.038
Economic Class & D	.117
HS & D	.661**

N=60

** p<.01

The coefficient of multiple correlation between economic class a HS, D was also tabulated in order to see the nature of relationsh between economic class on the one hand and HS and D combined the other. The tabulated R^2 1.23=.0161. The coefficient of multip determination was found to be 1.61%. There seems reason to suppos therefore, that economic class does affect HS and D scores.

In order to see the affect of each economic class separately on t correlated unit scores of HS and D, a multiple R was tabulated fo given economic class and its relevant combined scores of HS and Table II presents these statistics. The table reveals that for econon group 1, R=.408; group 3, R=.805; group 5, R=.611; and group R=.628. All these are significant at the .01 level.

TABLE II

Coefficient of Multiple R for Each Economic Group.

Economic Groups	R
1	.408**
2	.089
3	.805**
4	.102
5	.611**
6	.628**

N=10

** p<.01

These results seem to partially support the hypotheses of this study.

DISCUSSION

It was hypothesized in the present research that the correlated unit-scores of HS and D as measured by the relevant scales of the MMPI would be influenced by the economic class of a subject. The direction of this effect was predicted to be positive. Thus it was hypothesized that the higher the economic class the higher would be the correlated unit-scores of HS and D. The rationale for such a supposition was that the hypochondriacal and depressive behaviour of subjects of the upper economic level is initiated, reinforced and maintained because of class specific privileges. The social set-up in Pakistan as in many other countries exposes people, particularly youngsters to privileges that they have not earned themselves, and thus predisposes them to what has been termed as, success depression (Seligman, 1973b).

The results indicate support for the first hypothesis of the study. A significant relationship was seen to exist between HS and D in a sample of normal young adult females. This result is in consonance with the current thinking regarding correlation between HS and D. It must, however, be pointed out that the measured HS and D scores largely remained within the range of normal pattern of the MMPI profile.

The major finding that has emerged from this study is the fact that economic class does affect the correlated unit-scores of HS and D ($R^2 = 1.61\%$). The socio-economic status is, therefore, indentified as important variable which may be related to HS and D. This observation may have further implications on the study of HS and D particularly when they are high enough to such a degree as to be regarded as pathological. The magnitude of relationship between economic class and HS and D appears to be a small one. One possible reason for this could be that some hitherto unidentified variables may be suppressing this relationship. These suppressant variables, therefore, need to be identified and probed into.

As the multiple Rs for each economic group indicate, the present study does not conclusively settle the issue raised earlier in the Introduction concerning the direction of effect of economic class on HS and D. Further research may be needed which may involve a process of double-checking, through refined methods, the exact economic class of the subjects. For it seems that the relationship of economic class and HS and D may not be as predicted because of a less than perfect measure of economic class. If a more precise measure of the same is employed, it seems reasonable to believe that the relationship between these variables would be in the predicted direction.

Within the confines of the available tools of measurement, the present study sheds light on the relationship of wealth and mental health. It appears that the area has some potential for the prospective research worker and needs to be explored more thoroughly.

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FAMILY SIZE AND TEMPERAMENT

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ABSTRACT

Often questioned issue, the relationship between temperament and family size was the main objective of the present study. The Thorndike Dimensions of Temperament was administered to a proportional stratified random sample of 49 M.A /M.Sc. students of the Punjab University, Lahore. The use of X^2 ($P<.01$) indicated a significant relationshtp between family size and Placidity, whereas, no such relationship was found on other scales, eg .....Soc, Asc, Che, Acc, T.M. Ref, Imp, Act and Res.

INTRODUCTION

Family is the most significant part of the child's immediate social network. For many years psychoanalysts have stressed the importance of early family experiences and their effects on the child's behaviour and attitudes. In fact, the home is the child's first environment and various home factors e.g. size of family determines parent-child relationship, socio-economic status of family and consequently, the pattern for his attitudes toward people, things and life in general. The family is a complex of interactional systems made up of the different members of the family. The larger the family, the larger the number of interactional networks. Each interactional system has its own unique emotional quality which affects the personality and behaviour of all the members of the family. With the addition of each person to a family or primary group, the number of persons increases in the simplest arithmatical progresson in whole nun bers, and the number of interpersonal relationship within the group

increases in the order of triangular number as suggested by Henry and Warson's (1951) formula of $2n-n-1$. Furthermore, each family group consists of individuals of different ages and of both sexes; and each member has his own interests, needs and aspirations, therefore, each makes different demands on every other family member, This often causes friction and results in an unhealthy emotional climate in the home.

Studies have shown that when mother's demands on the child are different from those made by the father or when the mother and father use conflicting disciplinary techniques, the child is at a loss to know which one he should obey or give his allegiance to.

If he obeys one parent, there will be friction with the other and friction between his parents. Referring to Clark and Sommers (1961) it can be stated that the larger the family, the greater the personality interaction and the greater the chances for friction. But, at the same time, large family provides an opportunity to get along with others and to adopt oneself to the social group. Hurlock (1964) states that a small family is one with two or three children, whereas, a large family consists of six or more children. In small families, usually the activities and the roles of each family member are individualised, there is a democratic organization with cooperation between parents and children. . But, at the same time, there are pressures on the child to live up to parental expectations and the family is under pressure to achieve and get ahead. Discipline of the child is mainly the responsibility of the mother in such situations. A child in a small family is protected and made the center of attention in his early social experiences. He may, thus, get an exaggerated opinion of his own importance in group life. Crises within the small family make a great impact on the child, because, there are so few members to share them.

Dai (1952), Brown Fair (1952), and Shoepe (1953) pointed out that a child in a small family is more likely to be over-protected and hence dependent than a child from a larger family. In a small family, behaviour is strongly and intermittently reinforced as any child is likely to have a greater proportion of his responses attended

to by their parents in the absence of competing stimuli from other siblings. In the larger families, the reinforcement response frequency for any one child may diminish to such an extent that it proves ineffective as a reinforcer for the child's dependency-behaviour. Moreover, in the larger families, with many siblings, the parents will negatively reinforce dependency-behaviour. Thus, children in a larger family have a chance to live relatively independently from adults and thus helps to foster independence and maturity of behaviour. A large family may not provide economic security, but, it does provide the child with five positive conditions :

1. Someone to turn to if he does not get attention and understanding from indifferent parents.
2. better understanding of his problems by siblings than he could get it from his parents.
3. better teaching from sibilings than from parents.
4. little jealousy, because, there is little opportunity for emotional codding.
5. less tendency toward overdependency.

If the financial status of the family is good, many of the adverse effects of the large family on family relationship are minimized, because, children from large families have a chance to live relatively independently from adults and this helps to foster independence and maturity of behaviour. Dai (1952) and Schoepe (1953) believe that inspite of the disadvantages associated with small family, children from small families are generally superior in physical and social adjustment, to the children from very large families. However, Dai (1952) and Baldwin (1958) concluded in the light of their research that a medium-sized family, especially one with three, four or even five children is superior to either the very large or the very small families.

An examination of the relevant literature reveals that little attention has been paid to family size as a variable in the context of studies on birth-order and personality. However, Rosenberg and

Suttonsmith (1963) found that family size was a significant factor in the study of ordinal position and sex role identification. Referring to Farooqi's research (1980) on birth-order and temperament it can be concluded that there does exist some difference in the psychic development of the first-borns as contrasted with that of the later-borns ($P<.01/.05$). In addition, temperamental differences among subjects having different ordinal position seemed to be affected by the size of the family. Of coures, size of family does affect home-setting, methods and the way a child preceives his status and role; and consequently, results in temperamental differences of the children having different ordinal positions. Therefore, the present research primarily focused on the influence of family size on temperament; whereas the influence of the size of family on personality traits of subjects having different ordinal positions will be discused in a separate paper.

The researcher combined Hurlock's (1964) criterion of family-size with the results of a general survey of the average size of Pakistani families (as existed in 1979—1980 P.U.) and thus concluded :—

Small family consisted of 1-3 children.

Medium-sized family consisted of 4-6 children.

Large family consisted of 7 or more children.

METHOD

Sample: The sample consisted of 49 post-graduate students enrolled at Punjab University during 1979-80. The population consisted of 51 females and 29 male students of the Department of Applied Psychology andSociology; therefore, it was necessary to appiy *Proportional Stratified random sampling technique*. Thus, 62% cases from each stratum (Male/Female) produced a sample of 49 consisting of 31 females and 18 males. Major variables controlled were age, education and socio-economic status of the subjects.

Material :

Thorndike Dimensions of Temperament (TDOT) was used. The scores of each individual on each dimension of TDOT were converted into percentiles and interpreted as such:—

(a) A percentile score below 50 indicated negative side of the scale

(b) A percentile score above 50 indicated positive side of the scale.

The ten scales used were :

Positive Side	*Negative Siee*
1. Sociable (Soc)	Solitary
2. Ascendent (Asc)	Withdrawing
3. Cheerful (Che)	Gloomy & Sensitive
4. Placid (Pla)	Irritable
5. Accepting (Acc)	Critical
6. Tough-minded (T.M.)	Tender-minded
7. Reflective (Ref)	Practical
8. Impulsive (Imp)	Planful
9. Active (Act)	Lethargic
10. Responsible (Res)	Casual

RESULTS

The calculated $X^2 = 1.00$ does not reveal any relationship between family size and *Soc.* (Table : 1).

Table : 1. *Showing Relationship between Family-size and Sociability* Size of Family (2 df).

ociability	Small	Medium	Large	Total
ociable	5	11	5	21
olitary	5	11	12	28
otal	10	22	17	49

The calculated $X^2 = 2.78$ does not indicate any significant relattionship between family size and *Asc.* (Table : 2).

Table 2: *Shawing Relationship between Family-size and Ascendence.*
Size of Family

Ascendence	Small	Medium	Large	Total
Ascendent	8	18	9	35
Withdrawing	2	4	8	14
Total	10	22	17	49

The calculated $X^2 = 4.00$ does indicate come relationship between family size and *Che.* (Table ; 3), but it is not so strong ($.10 > P > .20$).

Table : 3 *Showing Relationship between Family-size and Cheerfulness*
Size of Family

Cheerfulness	Small	Medium	Large	Total
Cheerful	7	17	7	31
Gloomy	3	5	10	18
Total	10	22	17	49

The significant $X^2 = 13.55$ indicates a very strong relationship between family size and *Pla* (Table : 4).

Table : 4 *Showing Relationship between Family-size and Placidity*
Size of Family

Plrcidity	Small	Medium	Large	Total
Placid	6	18	3	15
Irritable	4	4	14	34
Total	10	22	17	49

The Table : 5 reveals no significant relationship between family size and *Acc* scale = $X^2 = 3.91$.

Table : 5 *Showing Relationship between Family-size and Accepting*

Accepting	Size of Family Small	Medium	Large	Total
Accepting	7	6	9	22
Critical	3	16	8	27
Total	10	22	17	49

Both the Table : 6 and Table : 7 yield insignicant X^2 value = .79 and $X^2 = 1.58$ and, thus, reveals that family size does not effect *T.M.* and *Ref.*

Table : 6 *Showing Relationship between Family-size and Tough-mindedness.*

Tough-Mindedness	Size of Family Small	Medium	Large	Total
Tough-minded	6	11	6	23
Tender-minded	4	11	11	26
Total	10	22	17	49

Table : 7 *Showing Relationship between Family-size and Reflectiveness*

Reflectiveness	Size of Family Small	Medium	Large	Total
Reflective	6	10	12	28
Practical	4	12	5	21
Total	10	22	17	49

The calculated $X^2 = 4.02$ does not indicate any significant relationship between famialy-size and *Imp.* (Table : 8).

Table : 8 *Showing Relationship between Family-size and Impulsiveness*

Impulsiveness	Size of Family: Samll	Medium	Large	Total
Impulsive	2	2	7	42
Planful	8	20	10	7
Total	10	22	17	49

The calculated X^2 value .27 does not reveal any significant relationship between family size and *Act.* (Table : 9)

Table : 9 *Showing Relationship between Family-size and Activity*

Activity	Size of Family: Small	Medium	Large	Totaj
Active	7	14	9	29
Lathargic	3	8	8	20
Total	10	22	17	49

The calculated $X^2 = 1.09$ does not reveal any significant relationship between family size and *Res.* (Table : 10)

Table : 10 *Showing Relationship between Family-size and Responsibility*

Responsibilty	Size of Family: Small	Medium	Large	Total
Responsible	7	20	15	42
Casual	3	2	2	7
Total	10	22	17	49

DISCUSSION

An examination of the results shown in Table : 4 ($P > 01$) reveals a significant relationship between family size and placidity. No significant relationship was found between family size and other Scales, such as, Soc, Asc, Chee, Acc, T.M, Ref, Imp, Act and Res. Therefore, it can be interpreted :

(a) The medium sized families tended to be more ascendent, cheerful, placid, impulsive, active and responsible than the small and the large families. However, they were found less sociable reflective, tough-minded and accepting on other Scales.

(b) The small sized families were found more tough-minded and accepting than the medium and the large families; whereas, they were found less Sociable than the large families.

(c) The large families tended to be more Sociable, reflective, with-drawing gloomy, irritable, tender-minded and lethargic than the medium/the small families

Refering to Thorndike's interpretation of TDOT, it can be stated that medium sized families were found more well-adjusted in terms of manifest presonality; whereas, the large families tended to be more on the negative side of the scales of TDOT.

Analyzing the research work done by Dai (1952); Brown Fair (1952); and Schoepe (1953) it can be argued that casual, accepting, tough-minded and Solitary temperament of the small families might be the result of overprotection, too much attention and intermittent reinforcement they manage to get due to a small number of interaction; whereas, their higher scores on Chee and Act Scales in comparison with large families might have been caused due to financial security and exaggerated opinion of self induced by the small family. Contrary to it, the large families tend to be more gloomy, irritable, lethargic, thender-minded and withdrawing partly due to fiinancial insecurity and mostly due to lack of attention, lack of reinforcement and multiple interactions, resulting in frictions. Their greater

tendency toward sociability can be attributed to a stronger affiliation need and anxiety caused by lack of attention and understanding from parents. Schachter (1952), also, suggested a relationship between sociability, anxiety and affiliation need, Moreover, their sociable & reflective temperament seems to be the result of a better teaching from siblings than parents and little opportunity for emotional codding from parents.

The present research results support Dai (1952) and Baldwin's (1958) studies which revealed that a medium-sized family is superior in terms of emotional and social adjustment, to either the very large or the very small. The present research results also indicate that the medium size families tend to be superior on the dimensions of Asc, Chee, Imp, Act, Res. & Pla. Moreover, the researcher could not find extreme negative tendencies among the medium families e.g.———— hy-persensitivity, irritability, tender-mindedness, withdrawing and gloomy attitude as it was found more frequently in the large families. It can be argued that superior emotional and social adjustment of the medium-sized families can be attributed to the fact that children in such families are neither overprotected nor deprived of attention and understanding (as it occurs in a smaller/a larger family). Furthermore, in such families, there is a democratic and congenial home atmosphere with economic security, which is conducive to the healthy development of personality.

The research results can be used to analyze and solve the problems related with poor parent-child relationship and sibling friction which can cause emotional, social or personal maladjustment. The results can be applied for family planning programmes to control the problems of rapidly increasing population and to improve the general mental health of the people of Pakistan. If parents understand that neither a very small nor a very large family produces emotionally and socially well-adjusted people than the rift between the anti and pro.family-planning tendencies can be resolved. Consequently, children can be better trained to get along with other siblings. The medium-size family will provide a good model of intra

and inter family relationship which will help the child to make good adjustment in adulthood.

Moreover, urban-rural, literate-illiterate and socio.economic comparison and cross-cultural studies can reveal interesting results related with the influence of family size on temperament, chi'd rearing practices, socio-economic status and types of mental disorders. Of course, this requires more extensive and intensive research work on a larger scale.

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EFFECT OF PHYSICAL PRESENCE OF OTHERS ON THE SPEED OF VERBAL LEARNING OF INTROVERTS AND EXTRAVERTS

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ABSTRACT

In an attempt to determine that it is not the learning of a new task as such which is hampered by the physical presence of others but it is the different personality characteristics of the learners which make or do not make them feel interfered by the presence of others, it was found that the speed of verbal learning of introverts is significantly more hampered by the presence of others than that of extraverts.

INTRODUCTION

For better or for worse it is a hard fact of life that a man has to remain in physical presence of others most of the time. As a result of this inescapable reality, what a man feels, says or does is influenced not only by what others feel, say or do but their sheer presence also affects him. Researches on this inter-individual influence phenomenon have yielded differing results. Zajonc (1965) attempted to clarify this issue in conventional terms of learning and performance. That is, when an individual is engaged in learning a new task the sheer presence of others interferes him and when he is engaged in performing an old task he has already practised he is facilitated by their presence.

It is not learning but the type of learners which determines the inhibiting or facilitating effect of the presence of others. Social facilitation or social interference depends neither upon the new task nor the well-learned task but upon the personality characteristics of the task doer.

The present paper attempts to determine that it is not learning as such which is impaired by the presence of others but the different personality patterns of learners which make or do not make them feel awkward in social situation.

METHOD

Subjects :

40 female students acted as subjects of the experiment.

Confederates :

4 female students of a different faculty acted the role of confederates.

Design :

The experiment was divided into two parts: (1) learning in lonely situation and (2) learning in presence of others.

Material :

(i) Eysenck and Eysenck's EPI (From A, 1964), (ii) 2 lists of nonsense syllables, 10 in each, and (iii) memory-drum.

Procedure :

EPI was administered to a group of 186 female students of 19 to 21 years of age. Their scores on introversion—extraversion dimension of personality ranged from 4 to 19 and lie scores ranged from 1 to 3. Their mean score on introversion—extraversion dimension was 11.55 and SD was 2.898. The upper 20 scorers and lower 20 scorers were arbitrarily singled out with a view to branding them as extraverts and introverts. The mean score and SD of extraverts were 16. 35 and 1 089 and the mean score and SD of introverts were 6,2 and 1.576 and the difference between the two extreme groups was significant (t 23.77,38 df $p \leq .01$) Both groups were put to learning of verbal task in lonely situation and in presence of others.

Before the assignment of task all the students were given the following instructions: All students need not come every day for the experiment in psychology. Student A is to come tomorrow and B is to come day after tomorrow at 9.25 in the morning. In this way all the 40 students were given different dates.

The confederates were asked to act as spectators in an experiment in psychology. They were given the following instructions .

i) to come at 9.30 in the morning with a plea to discuss some thing important with the teacher (experimenter) engaged in talking to his student (subject);

ii) not to leave the room although asked to come after an hour;

iii) to remain standing around the table occupied both by the experimenter and the subject;

iv) to keep themselves engaged in conversation in a low tone;

v) not to talk to the experimenter or the subject; nor watch the subject closely;

vi) finally not to show themselves as keen observers but be their ordinary self without disturbing either the experimenter or the subject.

(1) Learning in lonely situation:

In this situation the student A was given a list of 10 nonsense syllables with the instructions to learn by the serial method of reproduction up to a criterion of an errorless trial as fast as practically possible. The number of trials taken by A and other remaining students (i.e., 20 extraverts and 20 introverts) in learning a verbal task in lonely situation was recorded.

(2) Learning in presence of others:

As soon as the student entered the room she was asked to take her seat. After a few minutes of light conversation she was instructed to memorise a list of 10 nonsense syllables by the serial reproduction method to a criterion of one errorless trial as fast as practically possible. Just at that time the 4 confederates entered into the room and acted the role of spectators as already directed. In this way all the 40 students learned their verbal task in presence of spectators.

The number of trials taken by each student in learning the task was recorded.

RESULTS AND DISCUSSION

The trials taken in learning a verbal task in lonely situation and in presence of passive spectators by both the introverts and extraverts were subjected to t tests of difference between the means for paired and independent samples.

TABLE 1.

t test for the significance of the difference between the average learning trials of introverts in lonely and social situations (N=20).

Sample	Situations	Mean	d	d^2	t	df	p
Introverts	Lonely situation	6.9					
			—42	167	4.611	19	<.01
Introverts	Social situation	9.0					

Table 1 shows that introverts have taken an average of 6.9 trials in learning a verbal task in lonely situation and an average of 9.0 trials in social situation. Introverts' speed of learning in social situation is significantly lower (i.e., greater average trials) than the speed in lonely situation ($p < .01$). The reason for introverts' low speed of learning in social situation may be attributed to social interference caused by the presence of the 4 confederates.

TABLE 2.

t test for the significance of the difference between the average learning trials of extraverts in lonely and social situations (N=20).

Sample	Situation	Mean	d	d^2	t	df	p
Extraverts	Lonely situation	7.0					
			—15	85	1.702	19	>.05
Extraverts	Social situation	7.85					

Table 2 shows that extraverts have taken almost the same average trials (7.0 and 7.85) in learning a verbal task in both lonely

situation and in presence of others. The reason for insignificant increase ($p > .05$) in average learning speed of extraverts in social situation may be either because the presence of others as such is not a strong factor to or the number of 4 confederates present during the learning period is not a sufficient variable to distract the attention of extraverts engaged in learning a task which requires sustained attention. In other words, extraverts appear to work equally good in both the situations.

TABLE 3.

t test for the significance of the difference between the average learning trials of extraverts and introverts in lonely situation (N=20).

Sample	Mean	SD	SEM	SED	t	df	p
Extraverts	7.0	1.685	0.376	0.536	0.186	38	>.05
Introverts	6.9	1.713	0.383				

Table 3 shows that extraverts have taken an average of 7.0 trials and introverts have taken an average of 6.9 trials in learning a verbal task in lonely situation. Extraverts and introverts do not differ at all between themselves in respect of speed of learning in lonely situation ($p > .05$). It may, here, be inferred that lonely situation is equally a congenial situation for both types of learners.

TABLE 4,

t test for the significance of the difference between the average learning trials of extraverts and introverts in social situation (N=20).

Sample	Mean	SD	SEM	SED	t	df	p
Extraverts	7.85	1.424	0 318	0.448	2.566	38	<.02
Introverts	9.0	1.414	0.316				

Table 4 shows that extraverts have taken an average of 7 85 trials and introverts have taken an average of 9.0 trials in learning a

verbal task in presence of others. Extraverts and introverts significantly differ between themselves in respect of speed of learning before others ($p < .02$). It may here be inferred that presence of others is more interfering to introverts than to extraverts.

CONCLUSION

It may be concluded that learning of new task as such is not inhibited by the presence of others. It is personality characteristic(s) of the learners which makes them feel differently in a given social situation. Learners who are introverts differ considerably in respect of their speed of verbal learning in presence of others from those learners who are extraverts. As arousal and susceptibility to conditioning are integral to Eysenck's (1960) personality theory, the supposedly greater arousal of introverts makes them more susceptible to the impact of presence of confederates than to those who are extraverts. In view of learning speed of students of two different personality patterns Zajonc's (1965) clarification does not seem to be effective. All that may be interpreted to mean is that individuals of different personality characteristics react differently in a given situation.

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CRITICAL PERIODS : DEVELOPMENT, SEXUAL DIFFERENTIATION, AND SOCIAL ATTACHMENT

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ABSTRACT

During the critical period of development of the young organism its systems are being prepared for later adult life. Any alteration or interference with the ongoing processes during this sensitive period adversely affects maturation and growth of the young. Among the important hormones, thyroid, the gonadal harmonas and the brain opioid systems affect the physiological, physical and social development. The thyroid is aritical for the development of brain structures, body growth, protein synthesis and other biochemical and neurophysiological changes. Thyroid deficiencies results in abnormal mental and physical growth. Similarly, changes in the gonadal/ovarian harmones alter the sexual differentiation process. Neonatal angrogan treatment leads to masculinization of females whereas neonatal castration alongwith ovarian hormonals treatment lead to feminization on the male young. In the same manner, social development also appears to have a critical period after the passage of which it is difficult to make or break social bonds.

The hormonal states of an organism during the period of early development influence the subsequent adult behaviours. The prenatal and the post-natal hormonal states during the specific periods predispose the organism to respond in a specific manner to stimuli in the environment by altering the neural, physical, physiological and even the neurochemical organization. If, for example the thyroid hormone levels are altered in early life the organism develops with physiological and mental deficits. Similarly, changes in the levels of gonadal hormo affect adult sexual/aggressive behaviours, though not so drastically. Considerable research effort, has been expended to understand the underlying processes and the mechanisms involved in the organization of adult responses.

To clarify the role of early hormonal influences (specifically the thyroid and the steroids), various techniques have been employed to manipulate early hormonal levels. In the case of the thyroid hormones, thyroidectomy with/without thyroid repalcement therapy have been used quite frequently For the gonadal hormones, post-natal castrations/ovariectomies and/or pre/or post puberal hormonal treatment/implants have been quite commonly reported. In some cases, however, prenatal treatments have been given during the gestation period to the mother and since the hormones cross the placantal barrier the effects can readily observed in the post-partum period.

The results of the studies using the many varied techniques mentioned above indicate that there is a sensitive period of development during which the hormones are actively involved in the organization of various systems. However, this critical period varies from species to species. In rats, it is reportedly the first 10 days post-partum. In dogs it is the first seven weeks of life. In some species such as the chicken, the post natal critical period is very short since most of the development takes place in the prenatal period. It is during this critical period that the organism is sensitised to internal and internal stimuli which it will respond to in adulthood. Changes and alterations prior to, or subsequent to, this critical period are ineffective.

The present paper will deal with the role of the thyroid and the gonadal hormones in the critical of development and the effects of changes it the levels of these hormones on adult behaviors. This paper will also focus on Levine's hormonal organization model and Panksepps social attachment model.

THYROID HORMONE

Postnatal development growth and maturation (physical and mental), requires the presence of the thyroid hormone. Thyroid appears to exert its effects on the structure, function, and metabolism in the central nervous system. These effects are restrirted to the period of growth and maturation. Thyroid deficiencies during this period cause severe physical and mental defects such as cretinism

humans. Though thyroid may reportedly be involved in prenatal growth, these effects are minor, (Andersen 1971). Once past the critical period of development changes in the thyroid levels do not cause irreversible damage.

Though, thyroid is important in the growth and maturation of all vertebrates, it is of utmost importance to the amhibians. It plays a different role in the latter system, initiating and sustaining of the metamorphosis of tadpoles into adult frogs. Specifically though, thyroid appears to be critical for the development and growth of brain structures in all organisms. It is important for the body growth, protein syntheis and other biochemical and neurophysiological changes. It indirectly exerts its effects on behaviours such as learning, by way of the above mentioned processes. The role of thyroid in the developing organism are discussed in some detail in the following section.

Thyroid and the Brain structure.

Interest in the role of thyroid in the brain structure stems from the observation that thyroid deficiencies early in life causes mental retardation associated with cretinism, in humans. Research efforts aimed at studying the effects have focused on the species most readily available and which show significant brain development postnatally.

The rat.

There is a rapid growth of structures during the first 2-3 weeks after birth. The neurons increase in size. These is a marked proliferation of axonal and dendritic processes and also axo-dendritic connections. The myeliantion of axons begins around this period. The nerve cell bodies of the increases in the axonal and the dendritic processes appear less densely packed. With the introduction of thyroid, these processes are accelerated (Sokoloff and Roberts 1971 Eayrs 1971) In hypothyroid animals, on the other hand, there is decreased myelination, and the cell sizes are much smaller. Furthermore, there is a

reduction in brain weights as well as brain size especially after the 14th post partum day However, thyroid replacement therapy does reverse the effects i.e., myelination is stimulated and the growth in cell size is returned to normal levels.

According to Bass, Pelton & Young (1977) from the first postnatal day at the fiftieth day in a rats life, four major cortical changes occur.

(i) Between birth and 10 days, extensive proliferation of neuronal processes takes place. If this process is blocked by decreasing thyroid levels then reduction in cell numbers is found in hypothyroid animals, (Balazs 1971).

(ii) Between 15—25 days neuronal differentiation takes place where the smaller cells proliferate and synapses are formed. Accorping to Hamburgh's differentiation hypothesis, thyroxine is needed to push the cells out of the proliferative stage. An optimal amount of thyroxine is needed to turn it off and let differentiaion begin. Excess thyroxin may turn it off too soon, whereas less thyroxin leaves it too long and thus delays the differentiation process.

(iii) Between 10—50 days extensive and continous migration of neuroglial cells to the cerebral cortex takes place.

(iv) Between 20—50 days theolial cells differentiate and form myelin at maximal rate

Thus, it appears that thyroid hormone exerts a potent effect on the postnatal brain development of the rat. Thyroid in excess or deficiency, causes abnormal growth and development of the brain and thereby affecting behaviour.

The amphibian.

Events simillr to the ones taking place in the rat C.N.S. take place in the postnatal period of growth and development in the

amphibians and these changes can be accelerated by thyroxine adminstration, (Pseksty 1971), However, these are not the only changes that take place. Most prominently studied and reported are the effects of the thyroid hormone on the metamorphosis of tadpoles to adult frogs. This is initiate and maintained by thyroid. Metaphorphosis consists of a complex series of events. as it involves the replacement of gills and tails with limbs lungs, etc., (Robinson 1977). In the rats thyroid appears to exert its effects indirectly on the C.N.S. and it's structures, whereas in the amphibians it acts directly on the target tissue in order to initiate metamophosis. In one study reportedly an eye was grafted onto the tadpole tail and the eye remained intact during the metamorphosis process of the tail. It appears that the tissue may have some thyroid sensitive binding sites, as selective pellet implantations affect only the restricted are.

Thus it appears that thyroid deficiencies at the period when all the structural changes are taking place in the central nervous system, can cause severe deficits if not corrected immediately.

Body Weight

Though the effects of thyroidectomy or hypothroidism in the maturing organism are quite severe, they do not appear immediately. In fact, in some cases as in humans the deficiency is discovered too late.

In rats

At birth there is no difference in the physical appearance and body weight of hypothyroid and normal animal. The differences start appearing at day 14 post-partum, are striking at day 21 and become increasingly promtnent between 2-7 weeks of age. As a comparison, between 2-9 weeks of age the thyroid animals gained about 100% of their weight and the normals gained about 600% of their weight, (Mandel, Aunis and Mark 1971). It is during/after this period that the bodily appearances become striking. The bopothyroid animals are smaller in size and are physically stuntee as compared to control (Cramer and Ford 1977, Balazs et al 1971)

These effects are different from those caused by undernutrition Undernutrition causes decrease in the weight in a manner similar to the thyroid deficiencies, but undernutrition affects the central nervous system differently (Legrand, 1971).

Thus it appears that the lack of thyroid blocks growth, maturation and normal development but these effects are apparent only later in development. The mammalion youngs are normal at birth but cease growing a few months afterwards (or a comparable period). However, in amhibians lack of thyroid blocks matemorphosis, but not the growth. A tadpole remains a tadpole, if larger.

Protein Synthesis

The thyroid hormone appears to be involved as a stimulant for some protein synthesis in the brain and the other organs of the body. In the hypothyroid state there is a decrease in the protein synthesis in the important organs such as the liver, heart and the kidney, whereas hyperthyroidism accelerates the processes about 42% more as compared to the normals, (Sokoloff 1977). However, these effects are restricted to the period of maturation and no effects in the increases or decreases are reported after the organism has reached maturation.*

Brain preparations aimed at investigation the effects of the thyroid hormone on protein synthesis appear to have found the possible cause. It is reported that the hormone stimulates protein synthesis in the presence of mitochondria from the immature brain and fails to stimulate the synthesis in the presence of mitochondria from the mature brain. The mitochondria appears to contain a functional site which is the locus of primary action of the thyroid hormone. The mitochondria of the fully developed brain appears to have lost the site sensitive to the thyroid and with it the ability to participate in the initial reaction with the hormones which triggers off the chain of events comprising it's overall physiological action.

Biochemical changes in the Brain

Neonatal hypothyroidism induces changes in the protein synthesis in the vital organs, including the C.N.S. and by way of this induces

changes in the activity of certain enzymes. Changes in enzyme production in some brain areas have been reported after changes in the thyroid state, and these eventually affect the brain neuro transmitter systems.

Achetylcholinesterase and Choline Acetyltransferase.

Valcana, et al (1971) report changes in the Ache and the CHac levels in the cerebellum and the cerebral cortex after neonatal hypothyroid state. They report that,

(i) There is an increase in the activity of Ache around 11-29 days, and CHac around 11-2 days, in the cerebral cortex, indicating formation of cholinergic synapses, in the normal neonate. There is a decrease of Ache and Chac in the cerebral cortex of hypothyroid rats. This may represent decrease in the cholinergic synapses or a depression in the synthesis, therefore decrease in the overall cholinergic levels.

(ii) There is a gradual decrease in the Chac activity indicating the development of non-cholinergic mechanisms in the normal rats. There is an increase in the Chac levels in the hypothyroid animals at day 15 instead of decreases (as in the normal animals), indicating that the maturation of the non-cholinergic mechanism are delayed hypothyroidism.

Murphy and Nagy (1976), substantiate these findings. They report increase in thyroid levels in the neonatal period accelerates the cholinergic mehanism. They induced hyperthyroidism, which accelerates growth during the critical but causes behavioural deficits later in adult life, By giving thyroxine to neonates, they report higher activity levels in the thyroxine treated mice after scopolamine. This suggests that behavioural arousal may be accelerated by thyroxine treatment (i.e. the anti-cholinsrgic machanism are effective). Thus it appears that brain cholinergic machanisms are effected by the presence/absence of thyroid during the critical period of development However this is not the only system affected. It appears that other brain neurochemical systems are also affected by the thyroid hormone.

Catecholamines

Changes in the brain catecholamine levels and production have been reported after changes in the thyroid hormone state. Studies using homogenized preparations of specific CA rich brain areas report that;

(i) The Ne content/unit weight are higher in the in the neonatally thyroidectomized rats as compared to the normals

(ii) Labelled NE levels are higher in the 14 day old thyroidectomized rats as compared to the normals rats of that age.

(iii) Absolute amounts of brain NE of the thyroidectomize and normal animals are not significantly different.

Thus it appears that the difference in the brain CA levels is restricted to specific areas and age groups, (Mandel, Aunis & Mark 1971).

From the above studies it can be concluded that the production of specific neurochemicals in the brain is thyroid dependent. Increase in the thyroid levels during that period appears to accelerate the production whereas decrease in the thyroid levels leads to decrease in the synthesis of these enzymes. This reflect/is in line with the overall decreases in protein synthesis after hypothy roidism. Therefore a decrease in the protein synthesis appears to reflect a decrease in the overall functional activity of the C.A.S.

Neurophysiological Changes'

Many changes in the neurophysiological mechanisms are reported to be affected by the thyroid hormone. Nypothyroidism causes a delay in the appearance of reflexes such as the righting and the startle reflex, which are absent at birth but develop in the post natal period. Thyroidectomy at birth can prevent the appearance of these reflexes in some cases. If thyroid replacement therapy is given early enough (i.e. less than 10-24 days), it alleviates the symptoms, (Sckeloff and Roberts 1971). However, if thyroxine treatment is given during early development it acceleretss the development of these reflexes. In rats

a delay in the eyeopening of the thyroidectomized pups have been reported, where as with thyroxine treatment it is accelerated.

Learning

The study of the effects of the thyroid hormone on behaviour have focused primarily on learning. The simple T maze learning and escape response acquisition are the most widely used and reported. Upto 15-18 days of age no differences in the escape response acquisitions of the authyroid and the hypothyroid animals have been found. However at 30 days of age differences are significant. The hypothyroid animals show an increased latency of responses, which is comparable to the behavioural deficits found in the human cretins. Furthermore, permanent learning deficits have been reported after hypothyroidism.

The results of different experiments indicate that ;

(i) Hypothyroid rats unable to acquire the escape response even at 50 days of age.

(ii) In simple T maze experiments, post natally thyrcidectomixed animals exhibit more errors as compared to the normals. Therefore indicating that thyroidectomized animals perform poorly on simple tasks. However, early thyroid replacement therapy is effective in restoring the behaviours of these animals. As reported by Eayrs (1971), these animals do not recover to the normal state, as measured by more sensitive behavioural measures.

(iii) Replacement therapy of neonatally thyroidectomized animals is effective only if induced before the animals are 10 days of age, even then not completely. Therefore, even though it may appear that the demage is reversible, it is not specially if the treatment is introduced after the first 12 days of life, (Eayrs 197'). If howevr, the thyroideotomy is dalayed and performed at 10-25 days after birth then the impairment in learning is less.

(iv) Thyroxine treatment to infant mice has been reported to accelerate motor and memory processes. Murphy & Nogy (1976, a, b, c), in a series of studies report.

(a) The adminstration of thyroxine on postnatal day 1, 2, & 3 leads to an acceleration of the swimming reflex.

(b) Though the thyroxine treated and the normals animals had equivalent scores on T maze learning, the thyroxins treated animals had higher retention scores.

(c) Performance deficits occur in the older thyroxine treated mice (as early as 14 days of age).

Thus, it can be concluded from the above evidence that decrease in the thyroid levels at the critical time lead to behavioural deficits of severe nature in some cases. There are deficits in the basic neurological structure, metabolism, physiology and behaviour. Thyroid replacement therapy is effective in restoring some of these functions, however, thyroid replacemnt is ineffective after the period of growth and maturation is over. Hyperthyoidism, on the other hand, leads to an accelaraion of the above mentioned proccesses, but eventually this results in behaviour defects later on in life, This suggests that the presence of the thyroid hormone in excess interferes with the correct maturation of the thyroid system, eventually causing a defect in the thyroid controlling mechanism, (Eayrs 1971).

It appears that even though the absence of other hormones may be having some effects on the neonates later adult life, none leaves a trail of such severe deficits as the lack of thyroid hormone during the period of critical development.

LEVINE'S MODEL

As finding suggest there are some critical periods in development during which changes/alterations in the ongoing processes lead to alterations in the subsequent adult behaviours., Treatments prior to the onset or subsequent to the end of the period have little or no effect, Speculation on the possible role of hormones in the critical period led Levine to observe that 'hormones in the new born are partially res-

ponsible for the organization of some of the C.N.S. control mechanisms which will control the activation of these hormones in the adult.

According to him the thyroid and the other hormones organize the C N.S. present it at a certain level for particular behaviours in adulthood. Further, the deficiencies resulting from early thyroid administration may be due to the thyroid hormonostat being set at very low levels, so that even small amounts of hormones but down the system. Levine states that similar mechanisms are involved in the godenal system. At the critical period of development the gonadal system organizes and presets the responsitivity of the adult to stimuli. According to him, "the steroids present in the infant determine the sex/aggressive behaviours in the adult". That is, the presence or the absence of certain hormones during the critical period would preset the adult male/female responses. However, after the critical period is over, the gonadal system shuts off only to resume adult functioning when the organism reaches maturity.

Experimental findings suggest that sexual differentiation occurs and is mediated by the C.N.S. and the neonotal administration of one or the other gonadal hormones organizes the base, or in other words presets the response the animal will make as adult, by way of sensitizing the organism to one or the other hormone. Experimental manipulation of the neonatal gonadal state as postnatal administration of androgens to females and neonatal castration of males, substantiate the Levine Model.

In summary, according to Levine the critical period of development is important for later adult behaviours because it is during this period that the foundation for adult behaviours is laid by way of organizing the sensitive neural structures

GONADAL HORMONES & SEXUAL DIFFERENTIATION

In a manner similar to the thyroid hormone, changes in the gonadal hormones at the critical period of development affect subsequent adult behaviours. Research has utilized techniques such as neonatal transplantation of gonadal, implantations of staroids in the

female and the ovarian hormones in the males, castrations, ovariscta-mies, and hormonal treatments.

Neonatal treatment appears to alter the appropriate sexual/ aggressive responses in the adult organism. The developing organism is inherently female but the expression of female behaviours via 'female' neural circuits is inhibited by the testicular hormones in the males. Females given androgen treatment as of adult males treated with astrogen after neonatal castration indicate that there are decreases in male adult behaviours and increases in female behaviours such as lordosis. Understandably research efforts focused on testing the effects of post natal treatment of androgen/ astrogen coupled with castration/ ovariectomy on male/female aggressive and social behaviours as indicative of the effects of these hormones on organizing social behaviours in different species.

Aggressive behaviours.

Different aggression inducing paradigms such as isolation induced aggression in mice, inouse killing in rate, & conspecific aggression in different species have been used to test the effects of neonatal hormonal changes.

Males

Aggressive behaviours in male mice are reported to decrease after post natal castration.

(a) Heilman, Bregmans & Strainer (1977) report that in post-natally castrated males, isolation induced aggression was consiserably reduced as compared to the controls. These mice were however, castrated at 21-22 days of age (they already have the androgan sensitive neural circuits). The isolation effects were tested at differeing time periods and in all cases the non-castrated fought whereas the castrates did not. However, isolation induced aggression was developed in the castrates after the 23 weeks.

(b) Barr, Gibbons & Moyer (1976) report that neonatlly castrated male rats attacked other male conspecifics less then controls, even

after adult androgen treatment. However, if androgen treatment is given immediately after castration, then the attack behaviours are restored to normal levels. Svare and Gandleman (1975) report similar findings with neonatally androgen treated castrates and intact mice. Increases in aggressive behaviours after androgen treatment of neonatal intact males were observed. Further androgen treatment both at the neonatal stage and in adulthood lead to marked increases in aggressive behaviours.

(c) Baenninger (1974) reports that predatory aggression is not observed in rats castrated on Day I post partum. However, androgen treatment in adulthood induced killing in some not all the subjects.

Females

(a) Barr, Gibbos & Moyer (1976) have reported that females given androgen treatment as neomates attack males and other females indiscriminataly, whereas the control males do not respond in the same manner. Similarly, Svere & Gandleman (1975) report that androgen treatment of female mice on days 21-50 led to increased aggressive behaviours as compared to controls. However, the aggression was directed towards the males. More recently Simon and Gandleman (1978) report that immediate postnatal treatment of Testosterone Protionate (TP) or Estradiol Benzoate (EB) led to increases in the aggressive behaviours of female in response to daily adult FB treatments. They report that (i) 29/34 TP treated females fought in response to daily EB treatment. ii) 15/22 neonatally TP exposed and 14/22 neonatally EB exposed fought in response to adult EB exposure. iii) Furthermore, 100% of Day C (after birth) TP treated females fought after EB in adulthood, whereas 75% of Day 6 fought and O% of the day 12 fought.

Thus it appears that before the lapse of a certain postnatal period the neontal system is susceptible to hormonal changes. It indicates that perhaps is the time when the neural organization for future adult responses is taking place. This is futher substantiated by work on neonatal changes and subsequent effects on adult sexual behaviours.

Sexual Behaviours

Most of the date on aggressive behaviour and neonatal hormonal treatments seem to suggest that the postnatal period is the most susceptible. However, some studies on sexual behaviour indicate that sensitization may be taking place in late fetal life.

Clemens, Gladue & Coniglio (1978), report that even close proximity of male litter mates, during uterine development predisposes the female pups to masculinization. This effect is substantiated by the evidence that anti-androgen treatments inhibit any androgen induced changes in behaviour or physiology. Thus, it appears that the presence or or absence of specific hormones both pre/post natally may dispose the organism to certain behaviours.

Males

(a) Hart (1968) reports that naonatal castration leads to incomplete male sexual response in adult rats. However, castration on/later than 12 days does not alter normal sexual behaviour.

(b) Beach, Noble & Orndoff (1969) report that neonatally castrated male rats exhibit female behaviour in response to estrogen and progesterobe in adulthood. The interesting aspect of this study is that these researchers administered TP on Days 1 & 2, 3 & 4, 5 & 6, 9 & 10, 13 & 14, after neonatal castration and adminstered E & P/TE daily to the groups in adulthood. They report that E & P produced female behaviours in the group which was adminstered TF on Days 13 & 14 post castration. Whereas, masculine behaviours were observed after Days 1-9 of TF adminstration.

(c) The male offsrpring of cypretorone (anti-androgen) treated female hamsters exhibit marked female genitalis (Swanson 1971), However, the 'male' hamsters exhibited sexual responsitivity to females

after TP treatment, Surprisingly, male sexual behaviour was also restored after ovarian implants. Female sexual behaviour was exaggerated in the castrated cyperone treated males after E&P treatment, i. e. they exhibit lardotic responses.

Thus it appears that the presence of androgens pre & post natally is important for the expression of male behaviours in adulthood. However, as Swasnson (1971) points out in some species such as rats and hemster androgen is more actively involved in organizing the neural circuits post natally, whereas Golfoot et al point out that in the guinea-pig the presence of androgen prenatally is impotatant for masculine behaviours. However in some species the presence of androgan prepuberally may be important, and prepuberal castration may affect the responsivity at it appears to be the period when the neural circuits sensitive to the steroids 'wake up'. Clegg, Beamer & Beamant (1969) report that pre puberal castrations inhibited sexual behaviours in rems, which was restored by TP treatment.

Female

Neonatal androgen treatment to females alters the adult female behaviours.

(a) Gerall & Kenney (1970) report that TP given to female rats 5 Days post natally led to non ovulation. Even though female sexual ehaviours were observed after EB treament in adulthood.

(b) In guinea-pigs the prenatal period appears to be organizaonal period as reported by Goy, Bridson & Young (1964),. Adminsation of androgen during gestation led to (i) masculinzation of the male pups. ii) Decreases in adult estrus behaviour displays) Increase masculinization of structures.

These effects were irreversible and the maximum effect occuried TP was given at days 30-35 of gestation.

Phoanix, Goy Eerall & Young (1959) also report similar results. ey report that female pups have genitalia similar to intact males. y exhibit liltle or no lordosis even after EB & P. They exhibit male

mounting behaviours, and if TP is adminstered in adulthood they exhibit mounting behaviours similar to the TP treated neonatally castrated males.

(c) Whalen and Etgen (1978) report that neonatal adminstration of EB in hamsters produced masculine behaviours, however it did not effect the lordotic response, which is not in complete agreement with the Swanson (1971) results.

(d) Sachs et al (1973) report that females rats given pre/post natal androgen treatment exhibit male sexual behaviours only if the androgen treatment is repeated in adulthood. Gummow (1975) reports that the females rats exhibit behaviours similar to male castrates if the neonatal androgen is followed by adult EB/TP treatment. Similar results have been reported by Jhonson (1975) in hamsters. He reports that though the neonatally androgenized female may exhibit increased mounting behaviours after treatment with TF/EB, the lordatic response in females decreases only after the EB treatment.

The above evidence points out to the interesting observation that demasculinization/feminization and defeminization macsulinization are not mediated by the same processes. According to Beach (1975) the presence of testosterone in the male at the critical period of critical development leads to the organiztion of neural circuits for male sexual behaviours, whereas the absence of T in the female leads to the decrement in male sexual behaviours, but lets the 'female circuits develop,

So far evidence points out to the role of the hypothalamus in the formation of 'male' of female' circuits- Nadler (1971) reports that females rats neonatally implanted with crypterone in the hypothalamus, specially the ventromadial arcuate area, exhibit a cyclicity in adulthood. Neonatally TP injected females exhibit similar a cyclicity. This indicates that the neural organization during the critical periods maybe taking place in specific brain areas.

PANKSEPP MODEL

The critical period of development as has been said before occurs in almost all species and affects most of the adult behaviors of the

organism. Changes in the hormonal levels during the critical periods lead to alterations in the normal adult behaviours. Similarly there appears to be a critical period of development for formation of social bound and attachments. According to Scott (1962) there is a critical period after which it is difficult to make or break attachments

This period of attachment is quite striking in some species. In some birds, imprinting appears to be the first social bounding. The infant birds get attached to the first moving object in their environment that they see. Similarly, attachment of dogs to humans or their own species can take place only during the critical 6-4 weeks post natally. Thus, it appears that social attachments and forming of social bounds occurs during the critical period of development. though the neurophysiological basis of this attachment is still under speculation.

Recently, Panksepp proposed a model of social attachment involving the endogenous brain opiate system. He bases his model on similarities between social attachments and opiate addiction. According to him, the brain endorphins may be playing an important role in the mediation of social attachments, as indicated by similarities in the agony and the distress displayed by the young when separated from their mother, adult after the death or separation of a loved one and the physical symptoms of withdrawal from narcotics. Further, restoration of the object of attachment, (mother, loved one, opiates) decrease the distress.

Experimental verification of this model has been obtained from work on different speeies. Working on the assumption that there are ommonalities between the biological basis of addiction and social ttachment, so that the distress of separation would be alleviated y adminstration of opiates, Panksepp et al (1978) tested the effects f opiates on 48-50 days old pups (when the separation reactions are eveloped). They found that morphine and oxymorphone, both leviated the distress vocalizations and decreased locomotor activity oth indicative of decreased distress reactions). Similary, Herman Panksepp (1976) found that distress vocalizations are decreased in e guineo-pig pups after morphine, and increased with naloxone

(opiate antagonist). When the mother was present, morphine increased the time spent in isolation and decreased DV to the same levels as in the absence of the mother. Naloxone increased DV vocalizations in both cases.

According to Fanksepp the endogenous opiate system could be the possible physiological mechanism of social attachment because ;

(i) The presence of the object of attachment pobably stimulates the endogenous opiate system leeding to endogenous addiction.

(ii) The absence of the object of attachment leads to decreases in endogenous stimulation thus leading to the withdrawal symptoms observed.

(iii) It has been reported that opiates cause greater analgasia in isolation housed than in group housed animals, indicating a lack of tolerance (Kostowski 1972).

Thus this model seems substantiated by evidence from a variety of species indicating the possibility of an endogenous mechaqism of social attachment involving the brain endorphin system.

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A COMPARATIVE STUDY OF THE PAKISTANI BILINGUAL AND MONOGLOT SCHOOL CHILDREN'S PERFORMANCE IN VERBAL AND NON-VERBAL TESTS

Department of Applied Psychology, University of the Punjab, Lahore.

RAFIA HASAN

ABTSRACT

The aim of the present research was to assess the effects of bilingualism on the performance of Pakistani school girls in tests of verbal intelligence and reasoning. The subjects were 78 bilingual and 78 monoglot school girls aged 10-13. They were chosen from three classes in which the bilinguals had approximately 5, 6, or 7 years experience of English. The two groups were matched for chronological age, sex, school class, non-verbal intelligence and father's occupations. The bilinguals were given tests of verbal intelligence and reasoning in English while the monoglots were given similar tests in Urdu. Results indicated that bilingualism was significantly related to poor performance in verbal intelligence and reasoning. The handicap tended to decrease with increasing length of contact with English at school for verbal intelligence but not for reasoning. Correlations between verbal and non-verbal performance were low but positive and highest amongst bilinguals in the highest class.

INTRODUCTION

A survey of past researches reveals that there is considerable divergence of results and conclusions about the effects of bilingualism on test performance. To a large extent, this lack of agreement arises from the following factors :-

i) Methodological inadquacies in the researches, whereby the results were affected by extraneous influences.

ii) Lack of unanimity in the definition and assessment of bilingualism. An appraisal of the nature of bilingualism in different national and cultural groups suggests that bilingualism is

not of a single kind, uniform in its effects. Variations in social and psychological conditions accompanying bilingualism affect the results. Moreover, the age at which the second language was learned, the method (formal or informal) of its acquisition, difference between the languages known by the bilingual and his attitude towards the second language are all pertinent factors.

iii) Unsuitability of tests. In addition to the inadequate reliability and validity of the assumptions on which the test was based for the original "norm" children were not applicable with equal justice to the bilinguals.

The evidence based on previous research suggests that bilingualism bears no relation to non-verbal intelligence. This is confirmed by American as well as a large number of Welsh researches (Darcy, 1946, 1952, Hoffman, 1934 ; Arsenion, 1937 ; Kittell, 1959 ; Jones 1959). With respect to verbal intelligence tests there have been results suggesting unfavourable effects in an overwhelming number of cases in America, Canada and Britain. Also, bilingualism appears to constitute a handicap in tests of verbal attainment. This includes vocabulary development, reading disability and verbal fluency. However, bilingualism does not appear to bear any appreciable relation to performance in tests of Arithmetic and none to results in test of mechanical Arithmetic (Jones, et al 1957 ; Lewis, 1959). A slight inferiority in Arithmetical problems has been reported (Jones, et al 1957). It appears that the extent of the linguistic handicap decreases progressively with the time spent in learning the second language.

Aim of the Study

The majority of researches have been conducted in Western countries. One of the purposes of the present investigation was to explore the effects of bilingualism in a new context with reference to Urdu English bilingualism in Pakistan. These two languages differ not only in the direction of their scripts but in the cultural connotation of their words.

In contrast to most American researches, where the linguistic differences between bilinguals and monoglots were nearly always interwined with cultural differences, in the present research the two groups belonged to the same culture. As the psycho-social concommitants of bilingualism are different in Pakistan from those in America it was of interest to study its effects in a context where it was still considered a mark of culture and status. Moreover, Pakistani bilingual and monoglot children probably represent a purer form of these linguistic states than those investigated under western conditions.

The specific aim of the research was to attempt to measure, with varying lengths of contact with the second language, the effects of bilingualism on the performance of school girls in tests of verbal intelligence and reasoning.

METHOD

A comparison of test performances of a group of 78 bilingual school girls was made with those of a sample of 78 monoglot school girls matched individually for age, non-verbal intelligence and the occupational and economic level of their fathers. The bilinguals were chosen from a school where the medium of instruction was English and their first language was either Urdu or a local dialect. The monoglots whose first language was Urdu, were drawn from a school where the medium of instruction was also Urdu. Both groups were selected from each school, drawn from three classes representing a 2 year age range in each class as follows :-

Class - VI 10.0 to 11. 11 years

Class - VII 11.0 to 12. 11 years

Class - VIII 12.0 to 13. 11 years

The test used for individual marching of non-verbal intelligence was the Kohs Block Design Test as the reliability and validity of

The analysis of variance was carried out to see if there were significant differences in the two linguistic groups in the three classes and to see if a significant interaction between class and language affected performance of the two groups. Analysis of variance was carried out after equalizing the numbers in classes (Lindquist, 1940)

Table 2

Analysis of variance of mental age scores in C.I.E. Individual Scale of Intelligence of bilinguals and monoglots in three classes

Source	Sum of squares	df	MS	F
Classes	6865.44	2	3432.72	17.57**
Language	11508.48	1	11508.48	58.92**
Interaction (c x l)	1705.68	2	852.84	4.36*
Within sets	26953.40	138	195.31	

** Significant at .01 level
* Significant at .05 level

Table 3

Analysis of variance of C.I.E. Individual Scale of Intelligence I.Qs of bilinguals and monoglots in three classes

Source	Sum of squares	df	MS	F
Classes	2316.00	2	1158	10.06**
Language	4927.68	1	4927.68	42.81**
Interaction	987.12	2	493.56	4.28*
Within Sets	15883.78	138	115.09	

** Significant at .01 level
* Significant at .05 level

The observed values of F clearly indicated highly significant differences between the classes as well as between the linguistic groups. The joint effects of class and language were significant, thereby showing that the magnitude of the differences attributable to language were

significantly affected by increasing class. The direction and size of the individual interaction variances for bilinguals indicated that with increasing class the performance of bilinguals improved both in terms of class mean for both groups as well as the mean for bilinguals in the three classes (Hasan 1964) It was also found through 't' tests that the differences in verbal I.Q and mental age were appreciably reduced with children who had the longest exposure to English at school.

Correlations between matched pairs in each class were calculated for Kohs in order to compare these with correlations for the same groups in verbal mental ages and I.Q.S. (Table 4). While there was a very high correlation between groups in non-verbal intelligence due to matching, the coefficients for the verbal test, through all positive, were very much lower, and significantly so, than those found with Kohs. None of these were significant. This could be construed to have resulted either from the verbal handicap of bilinguals or the initial incomparability of the two groups in special verbal ability

Table 4

Correlation between matched groups of bilinguals and monoglots in Kohs' verbal mental ages and I.Qs. in C.I.E. Individual Scale of Intelligence

	TEST					
	Kohs' (raw scores)		Mental ages C.I.E. Intelligence Scale		I.Q.S. C.I.E. Intelligence Scale	
Class	r	S.E r	r	S.E r	r	S.E r
VI	+ .93	027	+ 16	.19	+ 30	.17
VII	+ .96	.019	+ .24	.21	+ 33	.15
VIII	+ .94	.023	+ 03	.19	+ 03	.19

Reasoning

As given in Table I the performance of the monoglots was superior to that of the bilinguals. The differences were in the same direc-

tion as in the verbal intelligence test. Results of the analysis of variance may be inspected from Table 5.

Table 5

Analysis of variance of Burts' Graded Reasoning Test Scores of bilinguals and monoglots from three classes

Source	Sum of squares	df	MS	F
Classes	224.16	2	112.08	11.39**
Language	110.25	1	110.25	11.20**
Interaction	17.04	2	8.52	.86
Within Sets	1385.36	138	9.84	

** Significant at .01 level

It is clear that both sources of variation, difference in the school class as well as language differences were highly significant but interaction was not. This suggested that the two main effects consistently and independently affected results. Observation of the individual interaction variances showed that in class VI the bilinguals were performing slightly better than that could be expected of their class. In classes VII and VIII, however, their performance fell slightly below expectation. In these two classes the difference between groups were found to be significant at the .05 level ($t = 2.3$ and 2.62 respectively) but no significant difference was found in class VI ($t = .85$). The differences with increasing class were highly significant for both groups, with the exception of those between class VI and VII bilinguals which were insignificant.

An analysis was made to find out ifthe two groups differed in the number of attempts made before arriving at a correct answer. The 't' ratios for the differences between proportions were highly significant for classes VI and VIII, but not for class VII thereby indicative of greater difficulty found by bilinguals in arriving at the correct answer in the former two classes. This suggests that they were hinderd in reasoning, probably as a result of difficulties in comprehension of

the problem, leading to confused thinking, or because of difficulties in clear verbal expression in presenting the answer. The fact that differences were not significant in class VII suggests that probably owing to poor motivation or slightly lower intelligence both groups were equally reluctant to make serious additional attempts leading to a correct solution.

DISCUSSIONS AND CONCLUSION

Results indicate that both in the verbal intelligenee test as well as in the reasoning test the bilinguals scored lower than the monoglots. The evidence supports the general findings of the majority of previous workers (Darcy 1953 ; Jones 1959).

With reference to the second question, namely, the extent to which a verbal handicap persists with varying lengths of exposure to the second language at school the extent of the handicap appears to decrease with increase in school class in the case of verbal intelligence test. These results are in agreement with those of Yoshioko (1929). However, for the verbal reasoning test the language handicap tended to persist with increasing class. The interaction between language and class was not significant and the difference in the number of attempts that were taken to arrive at the correct solution was highly significant in the highest class. Presumably since this test required not only adequate comprehension followed by a group of logical relations between thoughts in addition to adequacy of verbal expression, probably the linguistic handicap was experienced in this test to a greater extent as compared to the verbal intelligence test. However, with the increasing complexity of test items for the higher ages a greater number of relationships needed to be kept in view for purposes of evaluating their feasibilty. Apparently despite an added length of exposure to English the linguistic handicap persisted in the processes required for verbal reasoning.

In the present research it appears that a premature use of English as medium of instruction with children who were not sufficiently familiar with the language was mainly responsible for the linguistic handicap.

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A STUDY OF THE CHARACTERISTICS OF THE EXECUTIVES AND THE MEMBERS OF THE CULTURAL AND SOCIAL SOCIETIES OF THE PUNJAB UNIVERSITY OF THE SESSION 1967 - 1968 *

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NAJMA NAJAM

ABSTRACT

The characteristics of the leaders and followers of Punjab University (session 1967-1968) were investigated in the present study. It was found, as predicted, that the leaders come from a higher socioeconomic background than the non-leaders. The leaders are better than the non-leaders academically only at the high school level, the leaders achieve better grade at higher levels. The leaders and non-leaders are not very different in career aspirations, dominance and sociability.

Increased complexity of relationships in the twentieth century has led to an increased need for the study of effective communication, team work skillful leadership. It is the latter which is the focus of interest of the present investigation. Leadership and leaders are an important area for investigation primarily because the effects of decisions made by a leader are reflected in the behaviours of not just the group members but also the members of other groups. This is examplified by history. Hitler's decisions not only affected the Germans, the Jews and the French, but also ths whole world. In fact, his decisions made in the late 30's and early 40's are still affecting the world politics. Therefore, it can be said that leadership is an important 'happening' for the social scientist.

What is leadership? Leadership can be defined in a nutshell as an influence-a positive influence act by which one member of the group can direct group behaviour. This he does in order to assist the group

* The present report was a part of the Master's Thesis submitted to the University of the Punjab, Lahore, in partial fullfilment for the requirement of Master of Science degree.

members to do what they want to do (Kretch and Crutchfield, 1964). Leadership is the differentiation of power to initiate activity, thereby requiring a heirarchical structure within the group (Hartley and Hartley 1961), Thus, a leader has control over the group actions and this he gains by interacting with the group. As described by Kretch and Crutchfield (1964), the leader is as 'one of us' (indicating affiliation with the members), 'best of us' (no otherlike him) and as 'most of us' (sharing common goals and characteristics).

What are the characteristics which make a leader a leader is a question which has been asked by investigators often in the last 50 years. There appears to enough evidence lo initiate a 'Great Man' theory. According to this theory leaders do have certain characteristics which differentiate than from non-leaders. For instance, the leader has good social adjustment and is able to cope with most problems that the group encounters. Further, the leader has a great deal of positive motivation to work towards group goals at the same time he keeps in tune with his group to pick up cues as to bow the group members think and feel. Investigations have revealed that factors other than the ones mentioned above also contribute to a leader being a leader. Stogdill (1948) reviewed a large number of investigations pertaining to the characteristics of leaders and non-leaders. He found that leaders were more self-confident, persistent, extraverted. dominant. sociable and socially active. Further these leaders were from a higher socioeconomic class than the non-leaders. They can 'afford' to be leaders, better clothes, more money to spend, nicer living conditions and additional social experience (Bass 1960). Additionally, Stogdill (1948) found there were 23 studies which reported leaders to be more intelligent than the non-leaders, 5 studies which indicated no difference Interestingly, no study indicated that leaders were less intelligent than their followers. Wrightsman (1972) states that 'intelligence remains the one characteristic most consistently related to leadership... with very few exceptions successful leaders are superior to non-leaders'. (p.490). However, this discrepancy cannot be too great because then the leader cannot be seen as 'one of us', (Klineberg 1960 & Biddle 1964).

The leader is reported to be more sociable and voluble than the followers. By having this particular trait the leader can verbally take

charge of most situations. Further, a leader may be chosen because of his resourcefulness in seeing new and original possibilities of advancing his group, and his ability to establish friendly relations (diplomatic relations) with other groups, (Goodenough 1930 & Gibb 1947). In a recent study Constantinos and Craik (1980) report similar traits of political leaders of California during 1960-1976. They report that political party leaders had greater self-confidence, were higher achievers and were more dominant. These leaders were low on succorance, self-abasement and deference. The leaders were described as assertive, affiliative, outgoing, persistent, forceful, determined ambitious and opportunistic. Further, they were intelligent and hardworking determined to do well and sueceed - goal centered. They were sure of what they wanted and how to go about getting what they wanted. They were direct and forthright in their behaviour. Thus leaders have good reasons to be leaders. Why do followers follow ? Perhaps because it is easier than leading. However, some followers do work a lot with the leader and for the leader. Perhaps they do so because they have the need to identify with some one strong. Further, the followers may be found in a group because the qualities of the leader are such that their need for friendship and companionship are as satisfied (Rolesnick 1963). It has been suggested that followers follow the leader because of what they see in him (Clifford, et al 1964, Frye, et al 1964). The impression others form of one is determined to a large extent by what they see (Kleinke 1975) and this in turn determine whether they wish to affiliate with one or not (Snyder and Swan 1978.) Among other traits the followers may follow because they have some common interests such as the group goal, or some common characterssics such as intelligence, self-confidence, and efficiency (Kretch, et al 1962, Nelson 1964). Whatever the motive or need of the followers to follow, a leadership act cannnot be complete without their presence. Thus, what the followers want is an important consideration for the leader. This is indicated by the Beckhouse, Tanur, Weler and Weistein's (1975) study. Their findings suggest that leadership is molded by the expectation, perception and behaviours of the leaders and the followers. Leadership is a relationship between people in a certain social situation and the leadership is dependent on the demands of the situation at hand.

Keeping the above in view it was considered appropriate to study the characteristics of the student leaders in the Punjab University. Perhaps the findings would indicate a universality of leadership traits. Initially the aim of the study was to focus specifically on the student leaders. However, during the process of investigation it appeared that a comparison with a small sample of non-leaders would bring out a clearer picture. For this purpose a small sample of non-leaders was included in the study.

The following predictions were made in the light of existing evidence.

i) Leaders come from a higher socio-economic bracket than non-leaders.

ii) Leaders have better educational achievement than non-leaders.

iii) Leaders are more sociable than non-leaders.

iv) Leaders have greater dominance need than non-leaders,

v) The leaders have higher career aspiration than non-leaders.

METHOD

Sample : The sample consisted of members of all the cultural societies of the Punjab University, i) Literary society ii) Debating society iii)Film society iv) Music and Drama society v) Social and Manual society vi) Majlis-e-Khwateen. The total number of leaders was 136. The total number of non-leaders taken from different departments of the Punjab University was 40.

Procedure : A questionnaire was utilized to obtain factual information on the occupation and income of fathers, career aspirations and educational achievement of the students. The students completed the questionnaire at their convenience.

In order to assess the traits of dominance and sociability, Edwards (1954) Personal Preference Schedule (EPPS) was administerd at the convenience of the subjects (since the subjects were busy with classes in the morning, this test was administered in the afternoon in batches of 4-5 students).

The data obtained from the questionnaire were tabulaled and the percentages were worked out for comparison, The EPPS was scored according to the instructions of the EPPS manual.

RESULTS AND DISCUSSION

As given in Table I, the fathers of the leaders fall in the higher income bracket. More fathers of leaders belong to the businessman, land owner and factory owner category as compared to the non-leader. Very few fathers of leaders fall into the low income group such as mechanics, gardeners, supervisors, etc. On the other hand, none of the non-leader's fathers fell in the factory owner catagory. Thus, indicating a difference in the socioeconomic status of the leaders and the non-leaders. The observation is substantiated by the father's income.

Table 1. Percentage of occupations of fathers of leaders and the non-leaders

Occupation of Father	Leaders	Non-leaders
Teaching	4.00	5 00
Police	3 68	2.50
Business	12.23	5.00
Agriculture	7.35	5.00
Civil service	5.14	5 00
Insurance	4.41	10.00
Factory owner	2 86	0.00
Landlord	10 29	2 50
Army	8.08	2.50
Govt. service	10.29	7 50
Banker and shopkeers	5.14	12.50
Private service	4.41	5.00
Engineers	5.14	2,50
Auditors	2.20	2.05
Lawyers	7.30	17.50
Misc. (Mechanics, Gardeners Supervisors)	5.08	15.00
	100.00	100,00

The income of the fathers of the leaders range from Rs, 6000-100 per month, whereas in the non-leaders the range is more restricted (Table 2). A large number of leaders come from the higher socioeconomic bracket whereas very few non-leaders come from the upper and upper-middle classes. Thus, the results do appear to be in line with previous evidence that the higher income group has social advantages to positions of leadership. They can afford to be leaders.

Table 2, The percentages of the income of the fathers of leaders and non-leaders.

Income (Rs per month)	Leaders	Non-leaders
5000-5499	2.20	0.00
4500-4999	2,20	0 00
4000-4499	4 41	0.00
3500-3999	3.68	2.50
3000-3499	5.14	2.50
2500-2999	8 82	2.50
2000-2499	11,96	10.00
1500-1999	8.08	30.00
1000-1499	18.01	15.00
500-999	23.50	22.00
100-499	12 20	15.00
	100.00	100.00

As regards career aspirations, there do not appear to be any difference between the leaders and the non-leaders. Both the leaders and the followers aspire for the civil services more than any other profession, (Table 3). This indicates that though they may be different as far as backgrounds are concerned to start with the leaders and the non-leaders attending the university have specific aims in view and these aims are not much different. However, an interesting point to note is that even though the leaders and the followers may not have any real differences regarding what they want to become when they get out of the university, more leaders than non-leaders are undecided about their future careers. Perhaps their is a greater diversity of

career options open to a student leader/politician, or perhaps the leader may not be looking for a job. His work is already cut out in his father's factory or his father's lands, These are speculations. It would have been interesting to ask the leaders why they were undecided to get to the answer.

Table 3. Percentages of the careers preferred by the leaders and the non-leaders (career aspirations)

Careers	Leaders	Non-leaders
Teaching	16.17	20.00
Civil Service	18.38	25,00
Business	5 88	5.00
Bankers	5.88	7,50
Lawyers	6.61	7.50
Geologist	4.41	12.50
Chemist	4.41	10.00
Social Worker	5.88	0,00
Mathematician	5,14	5.00
Artist	4.46	0.00
Misc.	16.17	5.00
Not decided	6.61	5.00
	100.00	100.00

On educational achievement it was found as predicted that the leaders have higher educational achievement than non-leaders. However, this is restricted only to the matriculation where more leaders than non-leaders have first divisions (and lesser number of third divisions). In the FA/FSc. more leaders have second and third divisions than the non-leaders. The same trend continues at the BA/BSc. level (Table 4) Thus. the leaders seem to be better acedemic achievers at the high school than at the college or the university levels. Perhaps the reason why grades fell could be increased involvement of the leaders in extra-

curricular activities which eventually led to the position they occupied at the time they were included in the sample.

Table 4. The percentages of the educational achievement (divisions) at high school and the college level of leaders and non-leaders.

	Division	Leaders	Non-leaders
Matric	I	54,4	40.0
	II	36.8	47.5
	III	8 8	12.5
FA/FSc.	I	7.4	32.5
	II	51.5	52.5
	III	41 2	15.0
BA/BSc.	I	31.6	40.6
	II	58.1	55.0
	III	10.3	5.0

Contrary to what was predicted, the leaders and the non-leaders more not different from such other on dominance and sociability (Table 5). This seems to be in line with the statement that the leader cannot afford to be different from his followers. However, this appears to be too simplistic an explanation. Perhaps this study was conducted on a Pakistani sample in 1968, when exhibition of assertiveness was not socially acceptable especially among the young. The social scene has changed a lot in the last decade and the leadership on the compuss has changed drastically to say the least. If a study is conducted now. it would probably find a difference between the leaders and the followers on dominance.

Table 5. Mean scores & standard deviations on dominance and affiliation of leaders and non-leaders on EPPS.

	Leaders		Non-leaders	
	Mean	SD	Mean	SD
Affiliation	13 26*	8.70	14.32*	7.00
Dominance	12.80*	6.84	13.40*	4.24

* The difference between means was not significant.

Keeping all the above findings in view it would be interesting to conduct a research on the Punjab University student leadership. The students of today are quite different ftom the students of 1967-68. They have stronger political affiliations, therefore, are more involved in the country's politics. Further, they seem to be surer of what they are and what they want from life.

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Pakistan Journal of Psychology, December, 1981, 12, 23-26

BUREAUCRATIC ORIENTATION AND DEHUMANIZATION

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ABSTRACT

In order to determine whether men with high and low bureaucratic orientations differ in respect of their dehumane attitudes towards men below their status, it was found that the two groups significantly differed and there was a significant positive relationship between the two personality constructs—bureaucratic orientation and dehumanization.

Among a few types of organizational structures, the organizational pyramid-type structure is both practical and prevalent in all cultures. Gordon (1968) describes this type of organizational structure as "bureaucratic*". The significant characteristics of such an organizational structure are that the man at the top (i.e., boss, supervisor, principal or chairman) makes important decisions for men below him, and organizational targets to be achieved by juniors are set by the senior, and juniors, in turn, report their compliance, "where the reliability of behaviour is maintained by directives by rules and regulations and by standard operating procedures" (Gordon 1970), "where individual approach is not tolerated, where there is a lack of interpersonal relationships among workers and also where distance between superior and subordinates is maintained" (Khalique 1975).

The impact of such a working atmosphere on workers has captivated the attention of a good many intellectuals. For example, Merton (1940) held bureaucracy a responsible factor for personality change, Weber (1946) believed that bureaucracy was "partialling out the soul of mankind", Blau and Scott (1962) remarked that ..... "the possibility that free men become mere cogs in the bureaucartic machineries is one of the greatest threats to our liberty", and Khalique (1974) observed that man was becoming "his master's voice".

* The popular and opprobrious use of this term to represent "red-tape" and inefficiency is not intended.

Here, a question arises . do people accepting such a bureaucratic work environment adopt, in turn, a dehumane attitude towards men below their status ?

METHOD

Gordon (1968) developed a work environment preference schedule (WEPS). WEPS is a measure of willingness to subordinate one's self to the stated wishes of the authority, a preference for impersonalized work relationships, a desire for security that the following of rules and standard operating procedures provides and a need for the security provided by organizational identification and conformity to the in-group norm. Khalique constructed a dehumanization questionnaire (DQ) on the basis of Zimbardo and Ruch's (1975) definition of dehumanization. They defined this personality construct as a "psychological erasure or cancellation of human qualities and values of other people". DQ attempts to measure a tendency to ignore human potentialities in people below one's status, a tendency to humiliate them, a tendency to be callous towards them, a tendency to look down upon them, a tendency to treat them as objects rather than as human beings.

Both WEPS and DQ were administered to a group of 92 male students of 20 to 25 years of age. Their scores on WEPS ranged from 9 to 44 and their mean score was 26.184 and SD was 7.985. Their scores on DQ ranged from 4 to 14 and their mean score was 9.489 and SD was 2.931. Their scores on WEPS were split up into two quartiles (Q1 and Q3). Subjects scoring on and below the first quartile (20.72) were branded as individuals with low bureaucratic orientation and they were 24 in number, and subjects scoring on and above the third quartile (31.74) were described as individuals with high bureaucratic orientation and they were 22 in number. The scores of these two groups on DQ were statistically analysed with a view to determining whether individual's level of acceptance of the bureaucratic norm is in consonance with his degree of dehumane attitude towards people below his status.

In summary, the individul who scores high on bureaucratic orientation is inclined to adopt a more callous view of men below his status. As such, there is a significant postive correlation between the two personality constructs. The callous attitude may be explained in terms of reaction of the individual who is dissatisfied with the present state of affairs which does not provide him opportunity for expression of personal feelings and personal approach to a conventional idea or to a stereotyped pattern of doing a thing. Adoption of such an attitude may be helpful in compensating one's feeling of being humiliated by man above his status.

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RESULTS AND DISCUSSION

Table I

t test for the significance of the difference between the average scores of high and low bureaucratically oriented persons on DQ

Sample	N	Mean	SD	SEM	SED	t	df	p
High bureaucratically oriented persons	22	9.727	3 149	0.671				
					0.921	2.735	44	=.01
Low bureaucratically oriented persons	24	7.208	3 092	0.31				

Table I showed that individuals with high bureaucratic orientations significantly adopted a more callous view of people below their status than individuals with low bureaucratic orientation (p= 01) Product moment correlation was also run. The significance of correlation coefficient (r=0.444, N=92) was determined by the application of t and it was found that there was a significantly positive relationship between bureaucratic attitude and dehumane attitude.....the two personality constructs (t=4.700; 90 df, p< 01). One validated the other. Meaning thereby that individuals who emphasized bureaucratic value tended io emphasize dehumane value also. In other words, the more they held bureaucratic value the more they held callous view of men below their status and perceived them not as their fellow beings but as dead objects.

The dehumane attitude of bureaucratically oriented individual got conceptual supports from Gordon's (1960, 1967 & 1968) findings that bureaucratic orientation was negatively associated with values like Personal Independence, Variety Seeking Activities, Achievements. Decisiveness and Benevolence and positively associated with Conformity and Orderliness, and Economic values.

Pakistan Journal of Psychology, December, 1981, 12, 27-36

TOWARD CLIENT SELF-ACTUALIZATION THROUGH INSIGHT-ORIENTED GROUP PSYCHOTHERAPEUTIC PROCESSES

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ABSTRACT

Various studies have been conducted regarding positive and negative aspects of group psychotherapy. The following research was conducted to find out some of the variables associated with insight-oriented group psychotherapeutic processes affecting client self-actualization. The results indicated the six most frequently perceived variables were : information, reality testing, life-adjustment, self-awareness, autonomy and self-acceptance.

Jung (1961) maintained that self-actualization was the culmination of the fullest unity, completeness, wholeness, and harmonious blending of all aspects of man's total personality. It was the ultimate goal toward which people constantly strive for but rarely attain. Goldstein (1939, 1940) considered self-actualization as a master motive toward self-realization for the individual. Through use of this concept, the person becomes more fully developed and more complete. Since people have different innate potentialities that shape their ends and direct the lines of their individual development, as well as different environments and cultures to which they must adjust and from which they must secure the necessary supplies for growth, specific ends toward which people strive for actualization vary from person to person.

Rogers (1951, 1961) conceptualized self-actualization as an innate tendency in man to develop his own constructive capacities and grow in ways that maintain or enhance his total organism. With their attainment, the individual is more psychologically well-adjusted, capable of viewing the world and himself realistically and more

harmonious in relations with others. To Maslow (1968, 1970), self-actualization represents the ultimate in one's psychological strivings. It may best be described as a desire to make the best one can out of oneself by discovering and fulfilling one's own particular innate potentials and capacities.

Insight-oriented group psychotherapy is based on the belief that through intimate sharing of feelings, ideas, and experiences in an atmosphere of mutual respect and understanding, individuals can gain insight into their problems and initiate changes directed toward their solutions (Corsini, 1967; Peretti, 1970). It aids in allowing the people to become more aware of their attitudes, emotions, and particular sensitivities through group interaction, and facilitate their ability to resolve conflicts through logical and rational problem solving (Slavson, 1950; Lazarus, 1968; Hansen, 1978).

Through insight-oriented group psychotherapy, the participants can become more aware of self-conceptions, self-perceptions, and self-understandings (Wolf, 1949; Wolpe, 1969; Yalom, 1975); of specific and general functions in their cognitive processes (Perls, 1969; Fagan and Shepherd, 1970); of ranges of positive and negative aspects of their intra-group communications, including authenticity and honesty in interpersonal relations (Peretti, 1977; Brill, 1978), and they can become more aware of their own individual abilities, capacities, and potentialities by seeing themselves as others see them (Paul, 1966; Brill, 1976; Lembo, 1976). Each of these states of awareness facilitate the individual's insight into potential cognitive and behavioral growth in personal as well as social development leading toward a more complete, global, harmonious blending of personality characteristics (Moreno and Kipper, 1968; Heine, 1971; Lembo, 1976). Moreover, through the development of new self-perceptions, self-understandings, and new cognitions, the person creates a new inner-motivation conducive to present and future personal self-realization and acceptance (Hall and Nordby, 1973; Hansen and Maynard, 1973; Krumboltz and Thoresen, 1976).

The purpose of this study was to try to determine some of the variables associated with insight-oriented group psychotherapeutic

processes affecting client self-actualization. Significant criteria were generated by the subjects during the interview sessions.

METHOD

Subjects : Thirty-three professional psychotherapists, composed of 19 psychiatrists and 14 psychologists, associated with Ridgeway Hospital, Barclay Hospital, and Garfield Park Community Mental Health Center, Chicago, Illinois. Only practitioners utilizing insight-oriented psychotherapeutic techniques, such as psychoanalysis, group client-centered, gestalt, humanistic, and existential approaches were selected as *Ss*. Others using behavioral modification, desensitization, or various conditioning and/or action-oriented procedures were not included.

Materials : An interview guide was constructed and used to try to determine the extent to which the *Ss* perceived certain variables of insight-oriented psychotherapeutic processes affecting client self-actualization. It focused attention on those variables most positive within the therapeutic processes which most likely would facilitate and be associated with the potential of and for self-actualization of clients. Probe questions mere included in the instrument do help insure more definite, specific precise, and useful data. They aided in allowing respondents needed amplifications and clarifications of initial responses.

PROCEDURE

Each *S* was interviewed individually in a private office of the institution at his convenience. Questions were asked each person in the same way. All of the men were volunteers of the research project and were actively interested not only in the nature of the study but in the findings useful in the dynamics of their practice. No time limit was given for the interview session, however, the mean time was about fifty minutes per subject.

RESULTS

Table 1 shows the six most frequently occuring variables regarding insight-oriented psychotherapeutic processes affecting client self-

clarifying viable alternatives toward continued improvement in problem-related areas, particularly those associated with self development.

Reality testing (22.73 %) was the second most frequently stated *S* reply. Themes in this area included the ideas that clients, at least hypothetically in the group processes, had an opportunity to test the realities of alternative modes of cognition and behavior along with adequate considerations of the probabilities of their fruitfulness for growth potential through group feedback in positive as well as negative ways. Through group involvement in the insight-oriented therapeutic processes, the group members could challenge the unrealism of some of the cognitive and behavioral alternatives of each other, and, thereby, increase the range of viable, positive, realistic responses best suited for a particular person's personality and inner world of meanings and understandings.

The group processes, as expressed by the *Ss.* aided in affecting the client's realization of the need to perceive and face reality. It helped him to distinguish between some of his unrealistic wants and demands and those realistic for him, It also facilitated realistic learning to cope with inevitable hurts, disappointments, and frustrations of living, and it facilitated patterning or sequences of growth regardless of such conditions.

Insight-oriented group psychotherapeutic processes espoused life-adjustment as the third most frequently given (21·21) *S* response in the themes of the practitioners. These processes might be concluded to provide the client with direction toward not only self-understanding, but also toward understanding how he relates to others, what he might want out of life, and how his own cognitions and/or behaviors might block or thwart such goals. They tend to have additional advantages in helping clients work through many deep-seated problems and achieve radical changes in their way of life.

A life-support system was advocated by the *Ss.* as part of the group processes. associated with life-adjustment. A client's life-support system was stated as a group of people who were both nourishing and realistic in their relationship to him. They included

a group a people the client could trust and with whom he could have a meaningful relationship. Individuals of this group did not use the client for their own manipulative purposes, and they responded to him in a genuine, warm, caring. and nonpossessive manner. The *Ss* stated that for many individuals involved in therapy, the insight-oriented group became the first life-support system for its members as a relatively organized, stable structure. Group processes were directed toward expanding the number of such systems, over time for the clients, to aid and abet life-adjustment, including psychological well-being and harmonious relations with others.

Ss perceived self-awareness as the fourth most frequently stated variable (12.12%) in their themes. They replied that through the group processes, the client became increasingly aware of his own particular emotions. sensitivities, and proclivities by contrasting his reactions with others in the group to the same set of problems and/or circumstances. Not only did this make the individual more coganizant of his own self-awareness and self-identity, but it also led him to see how his reactions could have either perpetuated increased or decreased difficulties.

Through manifest self-awareness, the client can gain insight into his personal blindspots and limitations which impede and obstruct personal growth. Such insight could lead the client to develop to his own greatest potential, to do things he does best in his own unique manner, and to make his contribution to societal goals-all, of which, are aspects of self-actualization.

The variable of autonomy ranked fifth (10.61) as a characteristic in the affect of insight-oriented psychotherapeutic processes of client self-actualization. Practitioners of the research considered that the processes allowed the client a certain inner freedom. It allowed him to make his own autonomous choice regarding life's alternatives Spontaneity tended to increase with autonomy in feelings and in relationships for the group members.

As the processes of the therapy impinge on the individual, their collective affects tend to lead the client toward growth in several areas.

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Pakistan Journal of Psychology, December 1981, 12, 37 - 42

MALE-FEMALE DIFFERENCES IN ANXIETY

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ABSTRACT

In an attempt to determine sex differences in anxiety, IPAT Anxiety Scale was administered to a random sample of fifty post graduate male students and fifty female students, and it was found that they significantly differed between themselves. Moreover, majority of the female students were more anxiety ridden than male students.

INTRODUCTION

Referring to Maslow and Mittleman (1951) everyone at sometime in his life probably experiences at least a mild, temporary form of traumatic neurosis such as emotional shock or state of anxiety following an automobile accident or some other disaster that brings the person close to the possibility of injury or death. Marks (1954) reported that approximately ninety per cent of the survivors of a tornado disaster in Arkansas were found suffering from acute anxiety symptoms or psychosomatic reactions the day after the disaster, and seventy five percent reported that these symptoms lasted for several days. In fact, anxiety is a normal human experience and very useful one also. The motivational quality of anxiety has been recognised by Freud (1926) and neo-freudians like Fromm, Horney and Sullivan and the phenomenological theorists like Lewin and Rogers and the learning theorists like Dollard and Miller, Mowrer and Skinner.

According to Freud (1926) normal anxiety is always evoked by "real danger," whereas, neurotic anxiety involves incapaeitating intense emotional reactions and defence efforts that are out of proportion to the relatively mild non-existent threat to which the person attributes his distress.

In other words, it is the free-floating anxiety which causes chronic emotional mobilization. and consequently leads to low adaptation energy and neurotic debility which must be considered pathological in nature.

Psychiatrists, clinical psychologists and guidance experts have found that anxiety plays a crucial role in all types of personality maladjustments. Cattell & Rickels (1964) compared a normal control group with a private middle class group of neurotic patients and found that neurotics tended to be significantly more anxious than normals on IPAT Anxiety Scale Questionnaire. Wheeler (1965) tested 481 male and female high school students on IPAT Anxiety Scale and on "Self-Concept Scale" by Mary Engel. Females were found high on anxiety and had less favourable view of themselves. Cattell & Scheier's (1960) research revealed that anxiety did cause conscious suffering and numerous problems related with self, social life, religion, vocational choices adjustments to college campus work, and selection of courses. According to Eiduson (1968) anxiety is more common among young adults and much more among women than men. These findings were further supported by Farooqi (1978).

The present research was carried out of test the hypothesis whether females are more anxiety-ridden than males ?

METHOD

Subjects :

Randomly selected fifty male and fifty female students from the University of the Punjab acted as subjects.

Material :

IPAT Anxiety Scale ; self-Analysis form was administered to detemine anxiety level of the subjects. Three different levels of anxiety were defined as per Cattel & Scheier (1960) :

1. A sten of 1. 2 and 3 indicate *Low Anxiety Level.*
2. A sten of 4, 5 or 6 indicate *Averoge Anxiety. Level*
3. A sten of 7 and above indicate *High Anxiety Level.*

RESULTS AND DISCUSSION

TABLE 1

Table. 1 Male-female differences on anxiety level.

Sex	N	Mean	SD	SED	t	df	p
Females	50	36 38	9 638	1.975	2.63	98	<.01
Males	50	31.18	9.916				

Table 1. shows a significant difference between male and female students in anxiety. Moreover, it indicates that majority of female (66%) tend to fall in high anxiety group as compared to 46% of the male students.

TABLE 2

Table 2. *Percentage of males and females on anxiety level.*

	Low Anxiety		Average Anxiety		High Anxiety	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Males	6	12	21	42	23	46
Femaless	0	0	17	34	33	66

Analysing the results shown in tables 1 & 2, it can be inferred that females are more anxiety-ridden than males. The significant value 2.63 (P-<.01) supports this assumption. Moreover, the average anxiety score (36.38) and percentage of the females in high anxiety group (66 %) was much greater than those of the males.

Now the question arieses : why females tend to be more anxious than males ? Referring to Carson (1969), Cattell & Scheier (1961)

Jenkins (1966, 1968, 1969), Lader & Mathews (1970), Salzman (1968), and Shapiro (1962) it can be argued that high anxiety proneness in females can be due to intra psychic conflict between their various "Subselves" the self they may try to be ; the real self they think they are ; the ideal self they should be or the traditional self they should adhere to. Conflicts among these subselves may make decision difficult and may arise anxiety.

Other plausible reasons can be female's highly responsive attitude to the anticipated dangers induced by overprotective and over restrictive parental attitudes or failure to acquire needed educational, social and vocational competencies or lack of assertiveness or dispositional timidity which acts to magnify their anxiety in relation to inner and outer threats (whether real or anticipatory). Rosi (1964) pointed out that females feel self-esteem and success through the accomplishments of their husbands and children, because, from the very childhood they have been encouraged to depend on others. Murphy (1662) also reveals that females are more suggestible, dependent and senstive than males which make them more vulnerable to anxiety. It's further supported by Leiderman and Shapiro (1963).

In Pakistan females encounter more prolonged exposure to stressful situations due to inferior status aad role conflicts. In our culture a male child is welcomed more warmly than a female child and thus feelings of inferiority, insecurity and inadequacy are instilled in the female class, of course, such psychosocial factors play a crucial role in predisposing females to anxiety. However, present research fails to provide exact answer to the question : why females are more anxiety-ridden ?

Despite the limitations of the present research, it is strongly recommended that, researches must be carried out in this field to find out biological, psychological, interpersonal and socio-cultural factors underlying the male-female differences on anxiety level and for the sake of preventive measures. It's all the more important in present age which demands ' Man power resource" for the progress and development of ou country in all fields of life.

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PSYCHOLOGY, U. S. A., CURRENT TRENDS : IMPLICATIONS FOR THE MUSLIM WORLD

WARIS ISHAQ
DUBAI, U. A. E.

ABSTRACT

Major upheavals in Psychology in the United States are surveyed. Basic principles of Behaviourism are re-stated for an understanding of the polarization between Freudian theory and the radical Behaviourism of early days. Developments within Behaviourism itself are studied. The advent of cognition, the acceptance of the inner man in present-day behaviour therapy, and the fashioning of a Multimodal Behaviour Therapy package by Lazarus which allows for Psychologists from many disciplines to function under an eclectic cognitive-behaviourist umbrella. Finally, implications are discussed for adapting Behaviour Psychology models for clinical use, as well as for Nation-Building, in the World of Islam, a challenge for Muslim Governments and Muslim Psychologists.

Psychology in the United States in teaching, learning and in its clinical and community service aspects has been going through major upheavals during the past few decades.

Besides the growth of a variety of new therapeutic approaches and a shift away from "philosophical foundations" towards down-to-earth practicality (discussed in detail later in this report), the most significant current trend among psychologists is to make therapy more educational in character and to graduate clients, in as short a time as possible, to the point where they can cope with their problems with gradually decreasing professional help. A survey of the research literature (Franks & Wilson, 1977) shows a preponderance of studies focusing on "self-administered" treatment models. This is in keeping with the American creed of self-help, and with the declared goal (shared by psychologists and governmental decision-makers) to move the mental health client population into the fulltime occupation (tax-paying) bracket. During the past three years (even before President

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Raagan's drastic budget-cuts), there has been a nationwide trend, with the full approval of the American Association of Mental Deficiency, to move all but the severely mentally ill out of institutions into group homes as a step towards their ultimately living in private homes. A number of former mental hospital residents (the term, "inmates," is no more in vogue, nor is the term, "insane") with the help of federal, state and nonprofit foundations have moved into the "real world" to be in gainful employment, while still going for periodic individual and or group therapy sessions.

Another interesting development in the United States is the increasing collaborative activity between psychiatrists and psychologists, a trend which has the official blessings of the American Psychological Association and the American Medical Association. This probably has not been diffi ult because American psychiatrists generally offer psychotherapy as a primary function (usually in 50-minute sessions), with medication being secondary and when absolutely necessary. (This author performed his predoctoral internship with a Eugene, Oregon psychologist who was a member of a professional corporation headed by a psychiatrist).

Within psychology the first major upheaval followed the challenge that came to traditional (or psychodynamic) psychology from Behaviourism with its mechanistic explanation of behaviour: it is a function of the manipulation of relevant variables in the environment (Skinner, 1953). Stated within Skinner's Operant Conditioning formula, behavior is controlled by contingencies of reinforcement (Skinner, 1969).

The challenge to traditional psychology lay in the functional explanation of behaviour, and more so in its implicit meaning: Skinner's premise, when applied to Homo Sapiens, left no autonomy to the human mind. If the procedures are systematic and efficient, a behavior *will* (with high probability) be strengthened and maintained. Continuous reinforcement works rapidly, but this schedule demands ongoing reinforcement for an established behaviour not to be extinguished. Intermittent reinforcement, instituted after a behaviour has been established, makes the behaviour highly resistant to extinction.

With Skinner concentrating on the manipulation of variables in the environment of his animal laboratory at Harvard, and his growing number of compatriots and followers replicating the behavior control procedures in studies involving human subjects, the Behaviourist revolution gathered momentum. Ardent Freudians, Jungians and others in the psychodynamic family, in a massive transfer of allegiance, began to swell the Behaviourist legions. For many of us on American campus during the mid-70's Behaviourism attained the status of a Way of Life with its own set of beliefs. In Christian parlance, Skinner was referred to, in half-jest and half-awe, as "the Begotten Son." Men such as Bandura and Ferster were the "Apostles" who had seen the light. Their number grew, and in time, they expanded upon and even refined "the gospel."

At this time of writing (May 1982), at most major U.S. universities, control of psychology department policies is in the hand of Behaviourist majorities in faculty committees. For more than 15 years, the greater number of psychology texts are the products of Behaviourists. The books do not carry the Behaviourist label. The term, "Psychology" has taken on the meaning without the label. In effect, *Behaviourism is Psychology and Psychology is Behaviourism.*

A standard and typical text (e.g., Powers & Osborne, 1972) states the purpose of psychology as being the envolving and implementation of systematic procedures for effecting appropriate changes in human behaviour. The procedures are based on Operant (Skinner, 1953, 1969) and Classical (Pavlov, 1927) Conditioning.

The majority of doctoral dissertations during the past few (more than 10) years is made up of studies with a Behaviourist orientation. This is associated with the preponderance of Behaviourists among psychology Ph.Ds. emerging from U.S. universities every year.

A landmark in the history of Behaviourism is the year 1971: Skinner published his sensational (and "gloves-off") book *Beyond Freedom & Dignity*. Behaviour control and the relative powerlessness of living organisms in the face of behaviour-determining variables were presented as undisputed and existing phenomena. Man was not the possessor of 'Free Will," therefore "Human Dignity" was not an

issue. The book drew fiery invectives from traditional psychologists, but was hailed by Behaviourists as a much-needed clarification and amplification. "Analysis of Behaviour" became a popular course at many universities. Utah State University, within its psychology department, has an "Analysis of Behaviour" doctoral programme.

From campuses and private clinics, Behaviourism (under the names of "Behaviour Training" and "Behaviour therapy") has spread out to mental hospitals and institutions for mentally retarded/developmentally deficient (MR/DD) persons, Through behaviour control procedures it has been possible to make significant reductions in the daily average of hallucinations reported by schizophrenic residents in mental hospitals, to train low mental age retarded persons to perform such complex tasks as making beds, smoothing out the sheet, and tucking in the blanket, etc. (Ishaq, Unpublished MS, 1981). Social learning procedures of behaviour training (Bandura 1969) are being used extensively in mental hospitals and MR/DD training centres. A complex and elaborate programme, devised by Terry Calvert, a psychologist at the Oregon State Hospital in Pendleton, and executed by members of his Behaviour Intervention Team (psyehiatric aides given brief training) was eminently successful in controlling the high-rate self-abuse behaviour of a resident (Terry Calvert, personal communication, 1981).

A significant inroad by Behaviourism has been into the homes of Americans. During 1965—1981, to state one out of several hundred examples the Oregon Research Institute (later functioning under the name of the Oregon Social Learning Group under the direction of two noted psychologists, Gerald R. Patterson and John B. Reid) has been generously funded by the U. S. National Institutes of Mental Health (NIMH) to conduct research and to produce family behaviour training packages. Families were trained to cope with a variety of behaviour problems within their environment (aggression, shoplifting, etc). The Patterson-Reid projects during the past 17 years have produced training models for families as well as for clinicians. This Oregon effort and others in the U.S. have produced a sizeable quantity of easy to read (American Grade VI level) books for parents (e.g., Patterson: *Families* 1971; Patterson & Gullion, *Living with Children*, 1968;

Becker: *Parents are Teachers*, 1971; Miller: *Systematic Parent Training*, 1975). Young Americans begin to have their first contact with Behaviourist (and Social Learning) principles in elementary and secondary schools where "token-reinforcement" programmes are widely used. In most states, teacher-certification programmes include courses dealing with "Behaviour Management" principles and procedures.

The spread of Behaviourism is associated with the financial support it has received from federal and private nonprofit funding agencies.

The Upheaval Within Behaviourism

In the mid-Seventies, many Behaviourists began to re-examine their position vis a vis pure behaviour, human feelings, cognitions, etc. In earlier years during the tussle with their psychodynamic colleagues for ascendancy, Behaviourists had stayed away from anything which even remotely might have mentalistic connotations. But now, Behaviourism was secure in its position at the helm.

In 1977, Franks & Wilson, in their *Annual Review of Behaviour Therapy*, reported that, like the Scarlet Pimpernel "cognition" was in the air, here, there, and everywhere, The advent of cognition had its adherants as well as its opponents in both camps. Staunch Behaviourists feared this was a step backwards. Traditional psychologists suspected that the admission of cognition into the Behaviourist framework was a play to attract psychodynamic psychologists. Franks & Wilson associated themselves with those within the Behaviourist camp who were prepared to accept cognition, provided it was measureable and operationally defineable. Given this requirement, the addition of cognition was considered to be a much-needed broadening of the horizons of Behaviourism, For a great number of former staunch Behaviourists, the new label now is Cognitive Behaviour Psychology, and it is gathering strength. Donald Meichenbaum's dissertation, published under the title, *Cognitive Behaviour Modification*, 1977, has become a pace-setter.

Hitherto, in the heavily corsetted framework of Behaviourism, the focus was on the person's behaviour. In the terminology of Meichen-

baum and other Cognitive-Behaviourists, a person is not only how he behaves but also what he tells himself.

Internal Dialogue is a powerful component of Meichenbaum's medel. Its function, besides contributing to a "heightened awareness or raised conseiousness" (P. 214), enables the person to reason with himself, to cope readily with stress, to make plans, and, what is of considerable importance, to give self-instructions. Meichenbaum compares a high-anxiety speaker and a low-anxiety speaker. Both experienee the audience walking away during the middle of the lecture. The high anxiety speaker tells himself, "I must be boring." The low-anxiety speaker's Internal Dialogue is, "They must have a class to catch. Too bad they have to leave; they will likely miss a good talk." In the strict Behaviourist format the unreinforced speaker's behaviour (of delivering lectures) is likely to be extinguished or weakened. In the Cognitive Behaviour Modification model, we will make a frontal attack on his high anxiety, and train him to change what he says to himself.

The high-anxiety speaker's behaviour of avoiding lecture halls (after the aversive consequation of the audience walking out) may also be treated through Wolpe's (1958) Systematic Desensitization procedures. Meichenbaum favours Goldfried's (1971) "Coping Skills" version of desensitization which has four components: (1) describing the therapeutic rationale for coping skills training: (2) relaxation training as a general coping strategy; (3) the use of multiple theme hierarchies, containing a broad range of anxieties besides the anxiety for which treatment is being given; and (4) self-instruction training along with training to "relax away" anxieties while being aware of them.

In Cognitive Behaviour Therapy, the focus is on behaviours as well as on cognitions (and feelings) Two-pronged interventions are made: to train clients to modify their behaviours, and to train them to change what they may be saying to themselves. Behaviour modification procedures are based on Operant or Classical Conditioning. Procedures for modifying cognitions and feelings are more complex. Most likely, the client will be given training in self-instructional techniques. Meichenbaum & Cameron (1973) made a feasibility study

which included the training of schizophrenics to monitor their own behaviour and thinking, to become sensitive to interpersonal signals indicating whether the schizophrenics were becoming incoherent or getting off-track, and finally to instruct themselves to make the necessary corrections. The schizophrenic patients included both reactive paranoid types and chronic process schizophrenics. They covered a broad range of diagonstic categories. The performance of the cognitively trained schizophrenics was compared with those of "yoked practice controls, who received as much exposure to the practice materials and exposure to nonspecific training aspects." The treatment of the control (or comparison) group was essentially the same as was given to the operantly trained (Social Reinforcement) experimental group in Meichenbaum's 1969 dissertation project. In this 1973 study, the cognitive training associated with significant improvement on all dependent variables except digit recall in the absence of distraction. "A three-week followup revealed that improvements in sick talk during standardized interviews, proverb abstraction, perceptual integration on Holtzman ink blots as assessed by genetic level score, and digit recall under distraction were not only maintained but actually improved relative to yoked (operantly) controls." (Meichenbaum, 1977).

Inevitably, the entry of cognition has opened the door to some other sister disciplines or models on the fringes of Behaviourism, such as Albert Ellis's Rational Emotive Therapy (1962) which Meichenbaum has included in his own behaviour therapy model.

Discontent with the rigidly mechanistic structure of Behaviourism and particularly the exclusion of cognition and affect, had begun earlier than Meichenbaum's ***Cognitive Behaviour Modification.*** In 1971, Arnold A. Lazarus, a prominent authority on behaviour therapy, after advocating a multi-faceted approach for many years, published *Behaviour Therapy and Beyond* in which he called for broadening the scope of the behavioural approach.

In 1976, Lazarus endowed to behaviour therapy a new look which act also involved the salvaging of some concepts that had been junked in the early days of Behaviourism. Cyril M. Franks, in his foreword written for Lazarus's *Multimodal Behaviour Therapy*, wrote:

...Early behaviour therapists had overreacted to Freudian insistence upon the primary nature of mysterious inner forces in the government of man's life and rejected almost anything that went beyond the constraints of basic S-R conditioning. Modern-day behaviour therapy, more secure and sensitive to the evidence, recognizes that the inner man (Homunculus) is significant, but repudiates the mentalistic and superfluous super-structure imposed on its study by Freudian theory. Whether the label be cognitive restructuring, rational therapy, or cognitive behaviour therapy, it comes to pretty much the same thing: contemporary behaviour therapy, with its emphasis upon self-control, and biofeedback, cognition, imagery, and the like, is no longer consonant with the radical behaviourism of an earlier era. What is particularly encouraging about these exciting developments is that they are being accomplished with due regard for those clearly delineated principles of scientific rigor that first led concerned behavioral pioneers to break away from the traditional psychodynamic mold (pp. vii-viii).

Lazarus has devised a seven-pronged therapy package. The seven modalities are:

Behaviour

What is the behaviour of concern? When, how, where does the behaviour occur? By whom? What is its frequency? What is the duration, and what is the intensity of each emission? What are the antecedent behaviours and the consequation behaviours temporally and spatially attached to the target behaviour? What are the "opposites?"—That is, what is the person doing when not emitting the behaviour of concern? This information could be useful in the preparation of an operant conditioning programme in which the opposite, noncompatible behaviours are reinforced.

Affect

What are the client's feelings related to the behaviour? Are the feelings pleasant or unpleasant? Which of the following feelings are present or absent?

Anxiety?

Joy?

Anger?

Depression?

Are there any "hidden" feelings? Any "distorted" feelings?

Sensation

In the prevailing problem condition, what is the status of the client's vision, hearing and senses of taste, touch and smell? Is there a pleasant or an unpleasant sensation attached with any of the five senses? Is there a relationship between any changes in this category and the client's condition reported in the other six modalities?

Is the client aware, unaware or over-aware of pleasant or unpleasant sensations ?

> Some individuals are almost truncated at the sensory level. They seem to be "switched off" below the head. Such people may regard food as simply an antidote to hunger, never appreciating its subtleties of flavour or the nuances of taste. And so it is with all the other senses : the pleasures of a warm bath, a cool breeze, a gentle massage, a vigorous exercise, are all negligible. (p. 35).

Training a client to enjoy and appreciate what s/he sees, hears, touches, tastes, and smells is part of the therapy within this modality with possibly a wide range of effects in the other modalities.

Imagery

There is much flexibility in this category. The choice of imagery which the client is asked to recall may be determined to suit the client's personality and individual needs as well as the psychologist's own preferred approach. For example, in dealing with high rate anxiety reaction, a psychologist intending to use Goldfried's modification (1971) of Wolpe's Systemetic Desensitization (1958) model will need erect multiple hierarchies covering a broad spectrum of anxieties, and may elect to work with the client in putting together a list of pleasant and unpleasant images. Lazarus himself prefers employing the following three images : (1) See yourself in your childhood home, and see

your parents. Tell me where they are in the scene, and what your father is doing. (2) Take a tour from room to room in your childhood home, see the furnishing and get the atmosphere. Do you notice any special odors? (The sensory modality is deliberately introduced into this image.) (3) Picture a specially *safe* place. Any safe place, real or imagined. Picture it vividly, and describe this safe place.

The seven-modality probe is not rigidly ordered in Lazarus's model. The psychologist can begin where s/he pleases. The author prefers to start with the Imagery modality. It allows for beginning the session with brief relaxation procedures : the client is taken through a list of pleasant scenes of his-her choice, is asked to *see* him/herself in the scene, and to feel a surge of relaxation throughout the body and the mind as s/he focuses on the scene. Then s/he is asked to picture specific and other anxiety images, equally vividly, but one by one. After each anxiety image, s/he is switched back to a pleasant image. Thus, anxiety treatment begins during the initial assessment. During treatment-proper, before being switched to a pleasant scene, the client is asked to stay with the anxiety image for a while and see him/herself coping with the feeling of distress. (Meichenbaum, 1977 ; Goldfried 1971).

In Lazarus's experience (and this author's, and no doubt in that of many others too), the imagery probe usually elicits an abundance of associated recollections revealing additional problems which demand clinical intervention and which the client might not have revealed.

Cognition

What are the "shoulds" in the client's repertoire ? These "shoulds" are beliefs which the client holds and which may be part of the problems. A second sub-category consists of the client's perfectionist or high-expectation standards, and his refusal to accept fallibility, A third, highly crucial, sub-category is the attribution by the client of his/her problems to external events, or what is even more critical, the client may consider the problem to stem from a supernatural source. Lazarus & Fay (1975) have listed what they consider to be the 20 most common "mistaken beliefs" which are associated with mental disturbances. Karen Horney (1950) refers to these faulty cognition as *the tyranny of the should*.

Interpersonal

How does the client interact in small and large groups? Within the family, with spouse, parents, siblings ? At work ? With strangers ? In tense or awkward situations ?

For clients who evade questions with a standard "I don't know response, Lazarus suggests a special lead-in technique in which a statement, rather than a question, is addressed to the client. "I suppose you don't know how you reacted when Charlie put you down."

Drugs

This modality extends beyond the lexical meaning of "Drugs" to include information regarding the client's physical appearance, type of clothes, noticeable skin disorders, speech impediments. tics, psychomotor disturbances, signs of intoxication, and drugs (prescribed or illicitly used). *Note* : In countries where high-potency anti-schizophrenia drugs (such as Thorazine, Stelazine and Haldol, etc.) are available without prescription, calling for considerable and sometimes impossible "repair work" by the psyehologist, the obtaining of information under the "Drugs" modality must be deemed the first priority.

Lazarus recommends that information under the seven modalities be quantified whenever possible. No specific guidelines are given in his book. The psychologist using multimodal behaviour therapy procedures is encouraged to devise his own protocol sheets which allow for quantification. This author has been using a 10-point scale for rating the items in the various categories, and a "1-0" (Yes/No) scale for items which call for a ' Present or Absent" check-mark. The 10-point and 1-0 scales facilitate ongoing, session to session, assessment as a part of the therapy process. Information regarding treatment gain, setbacks and no change is shared with the client. Treatment goals are set in collaboration with the client. The following is an example taken from this athor's case notes. Treatment procedures were discussed with the client, after a mutual goal-setting session. The notes were taken during the first assessment interview, and therefore the rating scales are not included.

Behaviour

Overeating; leading to a weight problem. *Treatment* Contingency contracting, (Mahoney & Mahoney. 1976) combined with Clinical Hypnosis.

Affect

Anxiety attacks relating to overweight problem and sex relations with spouse. Also, considerable pleasure in eating rich foods. *Treatment* : (1) Goldfried's 1971 variation of Systematic Desensitization combined with "Coping Skills" training. (2) Clinical Hypnosis for lessening pleasure associated with rich foods.

Sensation

Tension in jaw, neck, lower back, at first during anxiety attacks and later most of the time. *Treatment* : Clinical Hypnosis, intensified to include deep relaxation, with post-hypnotic suggestion to use onset of tension as a cue for differential relaxation.

Imagery

Client was raised in a highly conservative home, was taught that sex with husband had only one purpose : procreation. During intercourse with husband, the client "saw" her mother's face contorted with anger. *Treatment*: (1) A meeting between her and her Church minister who was more liberal than her mother. (2) Implorion, under hypnosis.

Cognition

Feelings of inadequacy as mother and wife, "I am always letting down my family." Guilt when she bought any clothes for herself, "I should not be speeding money on myself." Irrational self-talk *Treatment* : Meichanbaum's (1977) Internal Dialogue, combined with Ellis's Rational Emotive Therapy (1962).

Interpersonal

Timidity, withdrawal and submissiveness. *Treatment*: Assertiveness Training combined with role-playing.

Drugs

Daughter of a former drug addict, she was terrified of medicines. She was peristently avoiding the medication prescribed by her physician for a severe (and possibily fatal, if left untreated) internal disorder, *Treatment*: Contingency contracting in combination with the Premack Principle (1970), She suffered from cigarette-dependency. Her smoking was made contingent on her taking the 6-times daily medication. The cigarette-smoking, a high probability and high-frequency behaviour occurred *after* her tablet-swallowing, a low-probability behaviour. The high-probability behaviour strengthened and maintain the low-probability behaviour, according to the Premack Principle. Her cigarette smoking increased slightly, but the problem with the medication ceased. A note was was made to include excessive cigarette smoking in the Behaviour modality, for treatment, after the completion of the medication course.

A Culture-Relevant Model for Behaviour Therapy in the World of Isiam :

Despite the progress made by Psychology in the United States, it has been plagued by one fault. The majority of treatment models is made up of studies based on experience with Anglo-Saxon client populations, and are used cross-culturally. This was partly in response to a popular myth that the U. S. is a "melting pot" of culture. That is not a dominantly prevailing view in present-day America. Despite President Reagan's slashing of bilingual research programmes there is a growing trend in favour of urging Americans of non-Western origin to retain their cultural heritage. There is a concerted effort toward promoting awareness of the similarities *and* differences between the various cultures. Both Houses of Congress stand committed to the policy of cross-cultural studies being a part of the curriculum in the public school system.

In recent years, psychologists, principally at the East-West Centre of the University of Hawaii, have become actively interested in cross-cultural research, specially in the areas of counseling and clinical psychology. A number of books have been published, covering

Hispanic, Native and Black Americans, Chinese, Japanese, Italians, etc. To-date, no notable work has been produced with relevance to Muslims as a cultural entity.

Principles in Behaviour Psychology, in themselves, are not antithetic, to Muslim culture or to any precepts in Islam. Existing behaviour therapy models with built in assessment and treatment procedures, however, would not be relevant. A typical "Marital Harmony" questionaire has this item, "Did your husband wash the dishes today?" A "no" reponse, fed into the computer, would score minus points for the marriage. Of the many existing models, Lazarus's Multimodal Behaviour Therapy probably would be the most suitable for use with Muslim clients. Behaviour therapy, in its original radical format, had some shortcomings. These have been remedied in Lazarus's model The inclusion of "cognition" and "affect," and the acceptance of the "inner man" or "gatekeeper" (a synonym for "conscience") is more in consonance with Muslim culture and thought.

Principles and procedures in Behaviour Psychology are amenable for application in education, in clinical (consulting room and institutional) settings, and in the area of nation-building which is a high priority goal for young nations recovering from the effects of long periods of colonialism and the dominant presence of foreign cultures. Although Muslims have existed for 14 centuries, the World of Islam for the greater part is made up of young nations in terms of self-rule.

NATION - BUILDING

Self-reliant behaviours, the demonstrable manifestation of solidarity, the willingness and the capacity to *work* shown through specific actions in daily life, overt behaviours which show dedication to national ideals and to the achievement of clearly-stated goals are more important than lip-sympathy to platitudinous concepts. Problems arise when behaviours are prompted by factionalism, and when citizens—be they civil servants or businessmen, academicians or students—act in ways contrary to the national purpose.

A Behaviour Psychology-based nation-building programme would include, among its components, prompt reinforcement for appropriate

behaviours, and prompt aversive consequation for undesired and inappropriate behaviours, through a system built into each of the cells within the environment.

Controls already exist in all societies, but undesired behaviours frequently are able to survive, and desired results (the elimination of such behaviours) are not obtained. This may be because the "controls" are haphazard and nonsystematic. There is aversive consequation (some of the time!) for undesired behaviours, but desired behaviours go unreinforced.

This is illustrated in the case of a child whose behaviourai repertoire includes biting and hitting his younger brother, but only some of the time. Other times, he also plays and laughs in the company of his younger brother. There is prompt aversive consequation for the biting/hitting behaviour, but *only* when the mother sees the behaviour emission. There are times when the behaviour is not aversively consequated. When the child is playing or laughing in the company of his younger behaviour, this appropriate behaviour goes unreinforced, is taken for granted. Most likely, the biting/hitting behaviour will be strengthened and become resistant to extinction, and the appropriate playing/laughing behaviour will be extinguished. What is happening here, in terms of Operant Conditioning (Skinner, 1969), is that the non-administration of aversive consequation *some of the time* is providing reinforcement under the highly powerful intermittent schedule. The playing/laughing behaviour, noncompatible with biting/hitting, is being extinguished as a function of nonreinforcement. The problem does not end here. Noxious behaviours have a tendency to develop in clusters. The child with biting/hitting behaviours is likely to pick up other related aggressive behaviours, and these are likely to generalize to other persons in his environment.

This situation can be extended to individuals and groups in a broader national context in which appropriate behaviours are being extinguished, and inappropriate behaviours are being strengthened and maintained because of vicarious conditioning from the environment and the nonexistence of systematic procedures.

A Behaviour Psychology-based nation-building programme would cover the entire spectrum of social behaviours. A network of inter-

related models would need to be designed in order to strengthen goal-oriented behaviours through procedures which are rich in reinforcers for appropriate and clearly specified behaviours, while containing controls for inappropriate behaviours. Clinical experience with individuals and groups has shown that, in any behaviour change program, specificity is essential ; problems have arisen when goals are not spelled out in behavioural terms, or when they are vague,

Ideally, public servants should *serve* (rather than rule over) the public; teachers should *teach* ; students should *study* , . . . and so on. Task analyses would be necessary for operationally defining terms such as "serve" and for such desired attributes among public servants as being sensitive to people's needs, being courteous and accessible, etc. Such task analyses, in which the various functions are divided into their components, would help in structuring sets of required behaviours across the board, and in the making of schedules for consequations of behaviours (reinforcing or aversive, as the case may be).

EDUCATION

A Behaviour Psychology model aimed at upgrading learning and the motivation to learn would be heavily charged with reinforcement. Learning would be offerred in chunks, regardless of the subject of study, with each chunk, upon satisfactory completion, being reinforced Skinner, *Technology of Teaching*, 1968). As each chunk is reinforced (Operant Conditioning). learning and appropriate related behaviours such as question-asking are strengthened and maintained. The system also developes additional strength because each chunk in the learning process becomes a conditioned stimulus for the next chunk, and so on, to form a continuous Stimulus-Response chain (Classical Conditioning).

Behaviour management principles (in Operant Conditioning, Cognitive Behaviour Modification and Classical Conditioning) contain tools which can be used in coping with such problems as test anxiety, tardiness in completing assignments, truancy, aversion to study in general or to any particular courses of study, school-phobia, etc. "Effective Learning" models exist for students who are having difficulty with learning itself. Behaviour Psychology contains the

techniques for assisting *anyone*, within reason, to become an effective learner, an attentive and industrious student with interest in his courses of study. It is a matter of behavioural-re-engineering in the total environment of the student.

This re-engineering would include the setting up of Counseling and Guidance Centres on campus. Such centres in the United States do not deal only with mental health or vocational choice problems, although they are, without exception, headed by counseling or clinical or educational psychologists. They also offer professionnl help with study-related problems, and maintain close liaison with on-campus Learning Resource Centres which provide help in each of the catalogued courses of study as well as in techniques of study, note-taking, test-taking etc.

There is more, much more, to study than merely reading a book, listening to lectures, and "cramming" for examinations. This is where Behaviour Psychology procedures can facilitate the learning process, through the use of techniques which help in the building of a network of Stimulus-Response chains to make study, and even examinations, pleasureful pursuits. When, for example, a student finds calculus to be aversive, but has positive feelings about history, the psychologist (or behavioural engineer) would structure a home study schedule in which there is half an hour of history after 10 minutes of calculus with mathematics study gradually being increased in time. (Premack Principle and Classical Conditioning).

CLINICAL INSTITUTIONAL SETTINGS

As discussed earlier, Behaviour Psychology (Operant and Classical Conditioning) models are being extensively used in mental hospitals and training centres for mentally retarded/developmentally disabled (MR/DD) persons in the United States. Procedures have been devised for psychological intervention for virtually all mental disorders ranging from neuroses to psychoses. For the greater part, these procedures are culture-free, altough minor variations may need to be made in the choice of reinforcers and stimuli. The author, while serving as Staff Psychologist at a State hospital in Oregon, U. S. A., worked with the nursing staff to establish an association between a rosary

(prayer beeds) and a Catholic (Mexicon) woman's medicine-taking behaviour. The patient drew intrinsic comfort in reciting her prayers on the rosary while taking small sips of the medicine. The intrinsic element was undeniably important, and probably remained a crucial factor, but the rosary also became a conditioned stimulus for her medicine-swallowing behaviour. Her resistance and her vomiting after medication ceased.

The use of Behaviour Psychology models in institutional settings in any country (Muslim or other) would need to be prefaced by some radical changes in attitudes towards persons with mental and/or MR/DD problems, if such changes have already not occurred in deference to scientific, humanistic (and Islamic!) principles.

A mentally disturbed person is NOT insane. A person in the MR/DD category may be deficient in some behaviours, in comparison with the norm, but he is *not* an "imbecile," and *not* an "idiot." (Both labels were in common use in the United States until 30 years ago, but have been abolished among professionals, partly as a result of changes in the thinking of psychologists and hospital administrators and partly in response to campaigning by the American Civil Liberties Union, the MR/DD Patients' Association which functions under the title of "People First" and the Association of Parents of MR/DD Persons).

Some mentally disordered or MR/DD persons at times, and for periods of time, may need to be restrained, but there are limits to restraint permitted in the United States. In varying degrees, most of these patients are trainable. Procedures exist for the training of MR/DD residents in a wide range of independent functioning skills. In fact, federal regulations demand that a resident in any mental or MR/DD institution, unless bed-ridden, must not have more than a specified number of inactive hours in his daily life. He may go to school, have therapy sessions, or hold down a (fully paid) job in any of the institution's many work areas. An MR/DD patient is rarely given any behaviour control drugs unless he also suffers from a medically treatable problem, such as epilepsy. The choice of behaviour control drugs which can be used usually needs the approval of an institutional committee, composed of physicians, psychiatrists and

psychologists. All treatment plans, incorporating medication, psychotherapy, behaviour training, etc., must be approved for *each* patient by an Inter-Diciplinary Team made up of the ward's physician, nursing supervisor, psychiatrist, psychologist, dietician, etc. By law, each patient's case needs to be reviewed by the Inter-Disciplinary Team every six months. No one can be put away and forgotten.

Every hospital for mentally disturbed and MR/DD persons must pass periodic (at least once a year) reviews by federally appointed committees, for renewal of licencing. MR/DD hospitals, in many States, face a 3-6 monthly review by a Governor's Committee, made up of representatives of the MR/DD Patients Association ("People First"), the Parents of MR/DD Persons' Association, and the Deparment of Mental Health. The Committee reviews the case of each patient. Each patient is seen or interviewed. Inter-Disciplinary Team members are interrogated. If "proper cause" (usually severe to profound retardation) is not shown, the Governor's Committee has the power to order the discharge of the patient.

Behaviour Psychology procedures are also used for training the staff, at all levels. Training is given in techniques for handling patients who are aggressive. But there is immediately aversive consequation (immediate dismissal) for any staff member guilty of "patient abuse." This includes pushing a patient aside, even if the patient comes in to attack a staff member. Locking up a patient or secluding him is frowned upon. This is in keeping with current Behaviour Psychology thinking on the subject of punishment entailed in prolonged "time out."

In summary, in order to pave the way for putting Behaviour Psychology models into operation at institutions for mentally disturbed and MR/DD persons, the necessary initial steps would be :

(a) change in the attitudes of decision-makers and staff members towards mental disorders and MR/DD conditions ;

(b) environmental re-engineering within the institutions to remove the "mad house" and "caged animal" semblance;

(c) re-training of all staff members, including psychologists, physicians, psychiatrists, nurses, aides, ward attendants, etc., in the light of the revised attitudes ; and

(d) controls on the administration of behaviour control drugs, many of which have harmful after-effects. and a re-examination of the use of electro-convulsive (electro-shock) therapy in the light of recent scientific investigations in Europe and the United States. According to Bryan Kolb and Ian Q. Whishaw (1980), "... uniliteral ECT (electro-convulsive therapy) on the left might preferentially disturb verbal mediated memory; whereas unilateral ECT on the right might preferentially disturb nonverbal memory. Indeed, there is preliminary evidence these expectations might be correct. Most of the claims made about the therapeutic powers of remain unproven. In view of recent unpublished studies by ECT Corkin showing that prolonged repitition of ECT has a very detrimental effect on general neuropsychological functioning, one wonders whether the risk is worth it." (p. 333).

This humanization of mentally disturbed and MR/DD persons in institutions would be in keeping with the spirit of Islam,

The developing of Behaviour Psychology-based programmes (for use in clinical, educational and nation-building areas) with specific relevance to the Muslims' culture. traditions, beliefs and value systems is a challenge for Psychologists in the world of Islams and for policy-makers in the young Muslim States.

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TEST DEVELOPMENT FOR VOCATIONAL COUNSELING IN PAKISTAN: PROBLEMS AND ISSUES.

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There is increasing acceptability among educated circles worldwide and Pakistan for the helpful role of counseling psychologist in the area of educational and vocational planning, and problem solving in the field of interpersonal and intrapersonal relations. Test development programmes are being demanded and initiated increasing attention is being given to tests of Achievement, Aptitude, Intelligence and Personality, Vocational interest inventories and other psychometric instruments.

Today in Pakistan more than ever, counseling and guidance is included as an eclective field at the master's level in Education and in some Psychology departments. Psychological testing and educational measurements, have long been components of master's degree programmes in Psychology and Education.

Many federal educational policies laid stress on vocational counseling programmes based on ability and personality measures. During the seventies, a full-fledged sector dealing with counseling and testing was established in the curriculum wing of the Ministry of Education. It existed there for a number of years under various names. In the mid-seventies, large amounts of money were invested in this sector. Ambitious test construction programmes for counseling were initiated. Psychologists, educationists, educational administrators and others became involved in these projects.

However, not a single test construction project reported to date has gone beyond the level of item writing, intuitive adaptation or translation of imported tests or, at the most, development of some local norms.

The Education Ministry's National Education Policy and its implementation programme (1976) contains a full chapter on Counseling & Placement Services. This programme emphasizes the development and use of psychological tests, and assigns this responsibility to psychologists.

This paper addresses itself to practical problems of establishing test development programmes for vocational counseling. Based on theoretical knowledge and awareness of the major role for which tests have been recognized in the services of counseling worldwide, an attempt will be made to identify some practical problems and issues in evolving a systematic approach for the establishment of programmes for test development for vocational counseling in Pakistan. Some strategies and considerations for dealing with such issues and problems will be suggested for the consideration of this forum : the experts and those in the authority.

Problems and Issues :

Major issues regarding test construction pertain to such as the following questions : how may fragmented efforts in test construction be coordinated ? Who should assume the leadership role? Which tests should get priority? How to go about test development?

Need for Consolidation of National Efforts

The need for tests and their importance can not be denied. Indeed tests are not available in Pakistan for any effective use. All kinds of tests are wanted. There seems to be a tendency to attempt to develop tests in all dimensions. This has resulted in a great variety and a large number of half-baked tests, none of which is of real use.

In some cases, more than one institution or groups are working on the adaptation and/or development of the same imported test without any cooperation or coordination between them and with no knowledge of what others are doing. There is, of course, nothing unethical about it. However, in view of our limited financial and manpower resources, a systematic approach is recommended to give direction and utility to fragmented efforts. All the work done so far at personal, institutional, provincial, federal or local levels should be consolidated

at the National level. National priorities should be determined. Then, a workable phased programme for test construction may be chalked out in accordance with national priorities.

Need for an Institution to Assume the Leadership Role :

The need for a national institution for test development and research is strongly felt. It would plan, initiate, coordinate, supervise and support test development programmes. Such an institution should be able to provide the professional and theoretical leadership required for determining national priorities, as well as development and implementation of phased out programmes for test development. This institution should also be able to assist provincial test development organizations and assume the responsibility of training key personnel from all over the country in theory and practice of test construction and their use, as well as in evaluation and research techniques and, of course, also in counseling.

This institution should be able to initiate, coordinate and carry out special research projects and should be capable for handling statistical activities required by test development programmes. To be able to meet the needs of the country, this institution would in fact require the availability of a sufficient number of highly qualified personnel and an adequate number of research staff to assist them, and access to a computer system and other necessary equipment.

This poses a choice between building a separate test development unit or strengthening an existing institution to assume a national leadership role in test development and research. Because of limited national resources, it does not seem practical or advantageous to start a new unit. However, this option may be kept open for the future.

At present, there are two organs of the Ministry of Education which are engaged in activities related to test development at the national level. They are the curriculum wing and the National institute of Psychology (N I P). The Curriculum Wing enjoys the authority and control over other institutions which would facilitate coordination. The N I P with its academic rather than bureaucratic set-up, seems less subject to abrupt transfers and shows the potential

of providing academic leadership more consistently. Apparantly the NIP seems a better choice. But to add to its effectiveness, it is suggested that the Federal Ministry of Education delegates some of its authority and power to the National Institute of Psychology.

The institution responsibile for coordination must, on a priority basis, carry out surveys to find out the basic facts regarding the followings :-

a. Trained personnel available in Pakistan, their location, and the nature of their present work.

b. Institutions engaged in test construction and or/use.

c. The nature and number of test construction and related projects undertaken by these institutions.

d. Accomplishments of each project reflecting on the data available and steps finalized in test construction.

e. What more is required to develop each test into a usable instrument ?

Determining Priorities :

Determination of priorities is recognized as an equally important step towards the coordination of national efforts. In determining national priorities for test construction in Pakistan. we can benefit from the theoretical model in which Cronbach (1955) suggested that :-

> The value of test information should be judged by how much it can improve decision over the best possible decisions made without the test, rather than how much better test decisions are than chance decisions (p. 31).

Decision theory recommends that use even of imperfect tests of important objectives that one has to measure than to use highly valid tests that merely supplement non-test data. It may imply that, for instance, an empirically derived interest inventory that would provide information of which predictions regarding job-satisfaction could be based may be preferred to ability measures which would only supplement information already available from other sources such as school performance and academic record.

Another consideration on which determination of priorities may be based is the decision regarding the more serious type of error. The error which must be avoided even at the risk of the other error. In other words, relative importance of the two major objectives of vocational counseling may be determined, The basic question raised here is whether the counseling policies are for manpower utilization or for individual development. For a psychologist, this question is, to a great extent, answered by the setting, his job to help the counselee to make realistic vocational plans for good vocational adjustment. Naturally emphasis of this programme would be on individual development. In a placement or employment agency, or in an industry, the counseling psychologist's job is to make the best institutional decisions regarding selection and placement of personnel. Working with the Government for planning manpower utilization, his major concern is the smooth functioning of economy through effective use of manpower. There he is faced with problems such as supply and demand vis-a-vis personnel problems, for example, unemployment of many, on the one hand, and non-availability of trained personnel for various jobs on the other.

In regard to the determining of national policies Super's (1974) observation seems quite relevant.

> Where policies are formulated in an environment of economic and politics pressures greater emphasis is given to directing and training manpower to meet these economic and social needs. On the other hand, in a politically peaceful and economically affluent environment the policies tend to emphasize the importance of self fulfilment, social welfare and personal happiness (p. 71).

This question, however, can not be answered categorically on an either-or basis. The relative importance of the two needs to be determined to give direction to the national policies.

Where all types of tests are needed any way, as is the case in Pakistan, the amount and nature of work done already on a test may be used as a criterion for assigning priority to a given test in the phased out programme.

It is proposed that in assigning priority to a test its importance be determined with reference to its utility as subserviant to :

i. National policies, and

ii. Whether it provides information obtainable from existing sources or makes available new information not derivable from other sources. Indeed, preference may be given to the latter.

iii. As a practical solution, it is recommended that, other things being equal, a test on which much work has been done already must have preference over others in the earlier phases, so that it becomes usable with minimum expenditure in time, effort and money.

Consideration with Regards to Test Development :

In the absence of relevant tests, we are forced with a choice either to adapt tests used effectively elsewhere or to develop our own tests from scratch.

It is suggested that the pros and cons of both approaches be considered with reference to specific tests and objectives. As a rule of thumb, other considerations permitting adaptions of tests established elsewhere may be preferred to facilitate cross-cultural research. Another apparent benefit of this approach would be that such tests inherit a long history and meaning which may be ascribed to them in a different culture after relatively fewer efforts while new tests would require years of research to reach the same level. However, a word of caution seems necessary here. At no cost and in no case cultural relevance and local meaning of a test may be neglected or undermined.

Another point that needs to be emphasized here is that, whether original test is developed or an imported test is translated and/or adapted, whether test construction be a government responsibility or a private enterprise, whether a psychologist or an educationist undertakes this responsibility, test construction must be taken seriously. In agreement with Kerlinger (Kerlinger 1976, Page 510) it is meant to emphasize that test construction is a long and arduous task. There

are no short cuts. It must be realized that a poorly constructed instrument may do more harm than good by leading the consumer to erroneous conclusions. It must, therefore, be considered mandatory for all test construction activity to follow certain well recognized procedures and to be governed by accepted psychometric criteria.

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DIAGNOSIS AND TREATMENT OF PSYCHOTIC CHILDREN

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ABSTRACT

A method for the diagnosis and treatment of childhood psychosis is described. Review of twenty children diagnosed autistic, schizophrenic or borderline psychotic indicated that their key symptoms were social isolation, ego deficits and explosive outbursts. The treatment developed for these children focuses on the amelioration of these symptoms. It appeared to be effective and applicable to other settings, such as clinics in developing nations and America's "inner cities."

INTRODUCTION

Despite the wealth of literature available on the topic, the diagnosis and treatment of psychotic children can be a difficult task. They often present a confusing array of symptoms, respond idiosyncratically to traditional methods of treatment and can be a disruptive force in a family or ward. Over a period of eight years, more than 100 psychotic children were seen at a public mental health clinic. These children received either outpatient therapy or were treated in a day hospital. This paper describes the method of diagnosis and treatment developed for these children.

Twenty cases described below, were selected for review. They met the selection criterion : that is, independent diagnoses and full treatment information was available in each case.

Subjects

Demographic and Family Information : Of the 20 cases, 15 were male and 5 were female. Seventeen children were black and three were

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white, The average age at the beginning of treatment was 8 years, with a range from 4 to 14 years. All subjects were from low-middle to low income families with 60% of the families receiving public assistance. Only six subjects were living with both natural parents. Eight were from single parent families. The remainder were living with step-parents or other relatives. The majority were middle " children, but the sample also included "only", "eldest", and "youngest" children. In these characteristics the subjects did not vary significantly from the general population served by the clinic.

Parental Characteristics and Attitudes : The parents displayed a wide variety of child-rearing attitudes and personality characteristics. The majority had no history of psychiatric disturbance, appeared warm and loving toward their children, and, in some cases, could be considered excellent parents. The subject's siblings in these families were normal. In eight of the families, however, the history included desertion, child abuse, psychiatric hospitalizations and/or substance abuse by one or both of the parents. Their appeared to be no correlation between the psychopathology of the parents and the severity of the child's disorder. (For example, two of the autistic subjects came from "excellent" families and had siblings who appeared above average in intellectual and emotional development) The array of family styles and histories was not significantly different from that seen in the general clinic population. This is consistent with other studies of background of psychotic children. (Wolff and Mannis, 1971 ; Schriebman and Kogel, 1975 ; McAdoo and DeMyer, 1978).

Testing Results : All subjects received physical, psychological, and neurological examinations. The average full scale WISC IQ was 87, with a range from 39 to 113. Four subjects were untestable. With the exception of a speech, nineteen of the twenty subjects had normal physical and developmental history. One was epileptic, four showed diffuse mildly abnormal EEG's and all others had no positive neurological signs.

Previous Evaluations : All subjects were evaluated by other professionals before they were seen at the clinic. Six of them were diagnosed

as autistic, seven as schizophrenic, and seven as borderline psychotic. None had received any prior treatment.

Method of Diagnosis

In general the subjects diagnosed as psychotic did not differ in any significant way from the general clinic population with respect to family background, parental characteristics, neurological signs and developmental history. Differences were in their behaviour, both as reported by parents and teachers, and as observed in the initial interviews. Close attention to behaviour, rather than history, appeared to be the key to accurate diagnoses in these cases.

At first the presenting problems of the subjects appeared varied: "refuses to do his schoolwork," "twiddles his thumbs in class," "masturbates in public," "is not talking at age four," "castrated a cat," "expelled from first grade at subject four times," "has severe nightmares," "tells lies." "disrupts class," "fire-setter," "bright, but doesn't finish school work," etc. Close scrutiny of subject behaviours and adult reports showed three key symptom clusters or behaviour throughout the sample : isolation, ego deficits and explosive outbursts. It was found that these three sets of symptoms could be used in the absence of other data to accurately diagnose a child as psychotic. These cardinal signs of psychosis in children (isolation, ego deficits and explosive outbursts) are detailed below.

Isolation :

One of the most striking aspects of the psychotic subjects was their isolation. Isolation, defined here as the inability to establish and maintain the same number and degree of relationships as other children of the same age, always appeared as part of the history and interview observations of the child.

The withdrawal of these subjects was striking in the initial interview. They would hide under the desk, refuse to speak, curl up on the floor when approached or obsessively engage in one activity to the exclusion of everything else. In every way possible they avoided any relationship with the interviewer. This was more apparent in the

autistic subject, but even the borderline psychotic would avoid physical contact as would respond to simple questions with incorrect or irrelevant answers.

Although this behaviour appeared negativistic, the predominant affect displayed by these subjects was fear. For them the potential relationship seemed fraught with dangers. If the interviewer pressed, or attempted to come closer, the subject would sometimes strike out. (This anger could be a fear-aroused attempt to create distance.)

In the family and classroom, the subjects were variously described as follows: "in their own world," "sits staring at the wall," "out of contact at times," "acts as though he doesn't hear." Their parents said the children played by themselves for long periods, usually with one type of toy or had an obsessive interest in some topic: trucks, classical music, drawing etc. They were close to only one person in the family, if that, and did not interact with siblings or classmates. The relationship to one "special" person, if it existed, was intense. This person was the only one to whom the subject would talk or to whom he would respond with compliance. The subject was jealous of this person's relationship with other family members. The subject's behaviour would deteriorate in the absence of this special person.

Peer relationships were non-existent. Interaction consisted primarily of teasing and conflict. When asked to name a single friend, these subjects could not, and sometimes did not even seem to, understand the concept. In the classroom and in the neighborhood, these subjects failed to win the affection and sometimes the attention of both peers and adults. The degree of isolation and withdrawal varied according to the degree of disturbance, "Autistic aloneness" is a term frequently used (Kanner, 1943); but even the borderline psychotic children possessed the ability to block out human relationships for periods of time and for certain purposes

The isolation of these subjects resembled that of babies and toddlers: they could "attach!" to only a very limited number of people, form an intense relationship with only one person and were essentially

passive though demanding in that relationship. They showed little object constancy. Relationships existed only when you were present. If you left, it seemed as if they believed you would not return. Rules as imposed by you operated only when you were present ; out of sight, out of mind" was the level on which the subjects seemed to operate. Although these subjects were physically (and sometimes even intellectually) well-developed, their emotional level was somewhere between the ages of one month and four year. Isolation was a pervasive problem, and thus is considered a cardinal sign of a psychotic disorder.

Ego Deficits :

A second key symptom of the psychotic subjects was "ego deficits" or disordered thought processes, i.e., difficulties in reasoning. judgement, abstraction, etc. This symptom required careful observation for its detection ; parents did not complain "my child has ego deficits." However, in the initial interview, many parents did report minor but annoying problems "telling lies for no reason," telling "wild stories," "acting like they don't have any sense," etc. The incidents as related were often trivial, but parents showed concern. Teachers noted that the subject did or said "strange things." It was difficult for the teacher to pinpoint or define what was wrong that the subject did, but he or she was upset by the behaviour. The parent or teacher although often unable to articulate the reasons for concern, was responding to the subject's "disordered thinking."

In the initial interview the subject's disordered thinking could be seen in his strange responses. For example when one subject was asked. "How tall are you?" he replied, "53 inches in length." Another, when asked about school concerns, answered, "12+12=24." Another described his father as, "James Wilson, my mother's husband." One asked the author, "Do you fight children, Dr. Todd?" One said he had two sisters, one 13 years old, the other 3,000 years old. Phrasing, unusual word usuage, repetitive questioning or loose associations suggested gaps in the subjects, thinking processes- Although all subjects who sounded ' strange" were not psychotic, all the psychotic

ones sounded strange. What is common in all of these answers is that these subjects' perception of and response to the world was different from that of other children. The subjects seemed to lack certain knowledge that other children of their age had acquired. These lacks may be called "ego deficits"

Perhaps the most basic of these ego deficits was a lack of understanding of their own body, or in Bettelheim's (1967) terms, the "absence of I." Depending on the seriousness of the disorder, the psychotic subject did not recognize his body as himself, did not believe that his body was an integral unit, or was unable to distinguish between himself and another person. Some subjects were not able to distinguish between animate and inanimate objects, between dead and alive, or to empathize in the most basic fashion, i.e., that if you hit someone, he will experience pain.

During an interview the subjects were seen to use the therapist's hand to perform a task as though it was a tool, to wipe their nose on another child's sleeve, to hit themselves when clearly angry and someone else, to become confused as to whether they were punching a doll or themselves, to react as though they had been rebuked when someone else was chastised, to block the interviewer from leaving the room, and yelling, "Let me out of here," to question whether their arms or legs would fall off, to worry that their heart would leap out of their body, etc One autistic subject was fascinated with shiny objects and would try to remove people's fingernails Human figure drawings were grossly distorted; parts of the body could not be identified and often there was no recoguition of the self in a mirror.

A lack of understanding of their own bodies was associated with confusion about what is dead or alive and what it animate or inanimate. Some subjects had "seen" dead relatives, wanted to move into the cemetery, claimed to have been dead, etc. They also worried that they had "killed" dolls when they broke them. They claimed clocks were alive because they moved, or attributed hostile motives to inanimate objects.

The inability to differentiate between fantasy and reality was also common among these subjects. They claimed to have seen vampires, space men, giant live hearts; figures from fairy tales and devils of all shapes, sizes and colors According to them they had starred in movies and T.V. Dreams, movies, TV and wishes were all related as true events.

Subjects, even with a normal or above average IQ, were severely limited in their ability to correctly interpert slang and metaphor. They frequently misunderstood or failed to figure out comparison concepts: Growth, time, space, etc , were difficult for them to grasp. Many 10-to-12 year olds could not tell time or understand directions such as North and South.

They could not understand conditional statements or contingent demands (e.g., "if you do your homework, you can have a dessert.")

These ego deficits have been labled "primary process thinking" by Freud (1900) and others but are also similar to the level of conceptual development seen in the very young child. (Piaget, 1955, 1965). It appears that cognitively as well as emotionally, psychotic children function far below their intellectual and chronological age level.

The Explosive Outburst :

The third cardinal sign of psychosis seen in the subjects was their explosive outbursts. At these times they were described by parents and teachers as "uncontrollable," "extremely violent," "completely unmanageable." The episodes were dramatic: The child started throwing chairs." " . ." . It took three adults to control him." "She tore up the room." But these episodes were in contrast to the child's social-isolate (quiet, withdrawn, in own world etc.). Observers remarked that there frequently was no apparent cause for these outbursts, and there was little or no warning that the subject was going to have an outburst. Afterwards, the subject often denied responsibility for the out burst or gave a trivial or vague reason: "He was teasing me," "He made a face at me." etc. Generally the outbursts, as described by parents and teachers were

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extreme, unpredictable and not ameliorated by standard child management techniques.

These outbursts most appropriately may be described as psychotic panics They appear to stem in part from a grossly distorted understanding of the world. Ego deficits made these subjects vulnerable to a variety of fears not experienced by other children, as explained in psychoanalytic theory. A completely innocuous situation would trigger one of these fears, leading to panic. For example one subject who believed that physical contact equalled destruction "exploded" when he was touched during a game.

The impulse-control of these subjects, at best, was variable. Observations suggested that because of their ego deficits, particularly the lack of the concept of future, the subjects were prone to immediate expression of their impulses in many areas. Thus, they had a difficult time with delayed rewards and mediated responses. They wanted to eat,sleep, urinate and deficate "right now" and in the most direct fashion because they did not understand concepts such as "later" and "in the appropriate place." Similarly, they often were unable to evaluate correctly the degree of imagined threat in a situation and would lash out in response to minor insults as though their life were threatened.

The psychotic subject's panic sometimes took the form of a homicidal attack on another child or adult. Parents did not usually report this directlv as part of the presenting problem. However, carefull exploration by the interviewer of certain types of events revealed it. Close questioning about the det[a]ils of a serious fight, fire-setting, or "accident"in which someone was injured suggested intent to injure on the subject's part. One psychotic subject was described as a fire setter The fires he set were quite different than those of other fire-setters. He started a fire under his baby sister's crib while the baby was in it. He also lit a fire under the sofa while his grandmother was asleep on it. Thirteen of the 20 psychotic subjects showed this symptom. They attempted to stab, hang, drown, burn, poison, or choke other children or adults All were under the age of 14 when these events occurred. Parents and teachers usually were

either unaware or they overlooked, denied, or distorted the incidents' It was difficult for them to believe that "a little child would do this." If an adult had omitted the same act, homicidal nature would have been recognized.

The psychotic subject showed little or no anxiety and remorse about such an attack. His explanation, if given at all, was, "I had to." Considering his emotional and cognitive level, it was easy to see why he considered such an act necessary. These acts were usually precipitated by the child's jealousy of the "special,' person's relationship with another child or adult. The homicidal attack was the psychotic subject, attempt to remove a rival. Any consequences of the acts. even if understood, seemed immaterial as compared with the possible loss of the "special" person's love. In these acts, all psychotic symptoms were displayed : isolation and concomittant dependence on the special person, disordered thinking and lack of empathy. weak impulse control, and explosive outbursts. Although the homicidal attack did not appear in every psychotic subject's behaviour, the three cardinal symptoms (isolation, ego deficits and explosive outbursts) made this a possibility in throughout the sample.

Autism vs. schizophrenia vs. borderline psychotic conditions :

The three key behaviour patterns of isolation, ego deficits and explosive outbursts appeared in every case of psychosis, whether the subjects were labled autistic, schizophrenic, or borderline. These labels served primarily to describe the *severity*. and *pervasivenees* of the symptoms. There did not appear to be a *qualitative* difference in the symptoms of the autistic, the schizophrenic. and the borderline psychotic subjects.

Initially it was found that the three key symptoms (isolation, ego deficits and explosive outbursts) were seen in subjects independently diagnosed as psychotic. The presence of this symptom triad was then used in later cases as the criterion for the diagnosis of psychosis. It was found that these three symptoms could be detected by any careful observer, regardless of the observer's theoretical background or experience. This was an efficient and effective form of

diagnosis, as it did not require elaborate tests, expensive equipment or special professional consultations, The identification of isolation ege deficits and explosive outbursts also led to the development of a relatively effective form of treatment for the psychotic child.

Treatment Procedures

The following principles and guidelines were given to therapists during training sessions : With the first psychotic children seen at the clinic, traditional psychotherapeutic methods were used with little or no impact. Interpretations and discussion were impossible with autistic children and nearly so even with the borderline psychotic children. Medications such as Mellaril and Thorazine also had a limited impact. (In the twenty cases noted above, medication was tried with all 20 subjects but had a positive response in only four of them.) Over a two-year period the following treatment, based on the key symptoms of the psychotic child, was developed.

Initial Stages :

Isolation. the most basic, pervasive and debilitating symptom of the psychotic child was made the prime target of treatment. As so many therapy texts have stated, the child must be first approached at the level he or she is at. For the psychotic child, this means the *emotional* level at which he or she is functioning,

The therapist's first goal is to establish himself as a "special person" for the child. The approach can take many forms, but must be uniformly and clearly positive. Parallel play or giving a favorite food may reach the autistic child. For the schizophrenic child, affectionate physical play (hugging, tossing, patting, playing peek-a-boo or other toddler games) is often effective, The borderline psychotic child will often welcome interest in his favorite compulsive activity and will allow the therapist to draw or play with them on this level. Verbal communication is usually limited to praise, soothing remarks and, with older children, discussion of an obsessive interest. This type of work must usually be repeated for many sessions before the confidence of the child is achieved,

As the therapist begins to be a "special person" to the child, this relationship can be fostered by also being a "good mother" to the child. The alert therapist may bring the child a favorite toy, brush her hair, accompany him on the first day of school, etc, At this stage the relationship usually takes on an intense, dramatic quality. The child appears demanding of the therapist's time and person and wants him or her to be "all things." He is easily frustrated and often furious at the termination of a therapy hour, intensely jealous of other clients, and terrified by a short vacation by the therapist. Because of the child's limited object constancy, the child believes that the therapist will not return once he/she has left. It is thus important that the therapist demonstrate to the child that a *relationship* exists whether they are apart or together and that this relationship will continue. Separation pains can be eased by the use of communication and transitional objects. For example, many of the psychotic children seen at the clinic were given a small object and were told, "This can remind you of me when I am not with you. When you are frightened that I am not coming back, hold on to this and remember I said that I will see you on Tuesday." Older children were encouraged to write letters, draw pictures, work on a mutual project, etc., in the therapist's absence. Very concrete methods of telling time were used to assure the children that there would be another session on the scheduled day. A particularly creative approach used by one therapist was to give the child a jar of small pebbles telling him to remove one each morning and saying, "When the jar is empty we will meet again." For the older borderline children, a formal appointment card for their next session would often reassure them that the therapist really meant to return.

Consistent behaviour within the therapy session also appears to foster the relationship with these children. Frequently every session will follow a ritualistic pattern set by the child and the therapist must conform to this pattern.

Limit setting, particularly around the length of the session and impulse control must be very firmly but positively used. Protection forms an important part of this initial work with the psychotic child.

The child must see the therapist as a person who protects him not only from a hostile envi,onment but *primarily* from his own aggressive and destructive impulses. If the child threatens to harm himself or others, he must be told clearly. "I will not let you hurt yourself or anyone else."

In the early stages, treatment may be prematurely terminated because of the family's inability to handle the explosive outbursts of the child, (For example the child is removed from an out patient or day hospital setting and sent to a locked psychiatric facility because of the destructiveness of his outbursts) Even highly trained psychiatric staff in a day hospital sometimes have difficulty with this aspect of the child's disorder. (See Berlin, 1973 and Torisky, 1978 for dramatic accounts of these types of problems). Thus, limiting the impact, if not the frequency of explosive outbursts by the child is a critical part of treatment in the early stages.

When the psychotic child has an outbursts, the "special person" as and few other people as possible must intervene. Additional adults will only further frighten the child who is able to handle a very limited number of relationships at the best of times. Physical restraint or use of seclusion must be avoided if at all possible. Both are usually misunderstood by the child and serve only to heighten his fears. Discussions, promises and threats are useless during the child's panic ; the child understands no more than a toddler does during a temper tantrum. The "special person" must assume an omnipotent role and assure the child that he will contain the child's impulses and will let no harm come to the child. (e g., "I will not let your arms fall off," in the case of a child who has this delusion ; and, "I will not let you hurt anyone" for most psychotic children.) These statements must be repeated over and over again and demonstrated if necessary.

Once the acute panic subsides, the therapist must "summon the ego," i. e,. encourage recovery of appropriate behaviour in the simplest terms possible. For example commands such as, ",Stand up," "Lift your head." "Tuck in your shirt," etc. help the child regain awareness of the body and exert conscious control over it.

The entire focus of the intervention with a psychotic child in a panic is to reverse the regression that has taken place, Catharsis, which can be effective with neurotic children, must not be encouraged. The child should not be encouraged to scream, throw himself on the ground or be destructive, but should be given assistance in regaining ego and super ego controls.

Through the initial stages of treatment, the major themes of the therapist are affection and protection. By persistence and consistency, the therapist attempts to demonstrate to the child that relationships with people are not dangerous or ephemeral. He or she also tries to show the child that he is neither as vulnerable nor as omnipotent as the child believes himself to be. This stage of the work, the most critical one, may take many sessions and weeks or months to complete.

Middle Stages :

When a strong relationship with the therapist has been established, work on the second major symptom, the ego deficits, can begin. Once the therapist is important to the child, he will begin to accept the therapist's statements as fact. Demonstrations of what is "real" and what is "not real" begin to have some impact. Assurance that a doll was not alive and demonstration that it could be fixed when broken helped one psychotic child to learn the basic distinction between animate and inanimate. With schizophrenic children concerns about body integrity were reduced through mirror play, touch-name-and-draw activities, and body oriented games. Demonstration of the meaning of If-Then statements, concepts of time, reality vs. fantasy, etc, must be repeated over and over. The therapist functions as an educator to the child at this time and, like a good teacher, must be continually alert to any mood or experience which allows clarification of the destorted thinking pattern. The specific assumption that the therapist teaches the child depends on the child's own idiosyncratic pattern of ego deficits.

One of the most striking aspects of this part of the work is how often what the therapist says is accepted by the child as literal truth,

with no doubts, questions, or qualifiers. The therapist may repeat the same information many times with no impact; then one day it will be totally accepted and acted on. There are momentary regressions, but the information has been incorporated. It is not, however, been well assimilated and is applied often only in those specific circumstances to which the therapist applied it. It isnot generalized, and often stands in contradiction to other beliefs the child holds. This, of course illustrates that the child's basic cognitive style has not changed— his thinking is still very "primitive," The introduction of this type of of information, however, makes the child's world a less frightening and confusing place.

As the child's fears are reduced through clarification and incorporation of information the explosive outbursts or panics also diminish to some extent. Understanding the child's ego deficits also allows the therapist to identify potential "trigger" situations—i e. what is likely to provoke an outburst. At this intermediate stage of therapy, knowledge of the trigger situations can be used to reduce their number by changing the environment. When this is not feasible, the therapist can alert family and staff as to when panics will occur and advise them what to do and say to the child when they do occur. Common trigger situations at this point in therapy are separation from the therapist and attention by the therapist to another child. The staff, family and therapist must be very alert to the appearance of jealousy in the child in order to prevent or avert a homicidal attack on another child. The jealousy can not be avoided ; but the impact can be reduced with interpretations such as, "When I meet with another child, this does *not* mean I don't like you. I like you just as much. I can like two people very much. People can like more than one person." However in cases where a serious homicidal attempt is made, additional interpretations are necessary. The therapist must make two things very clear to the child ; that injury to another person will not *increase* the therapist's attention to the psychotic child, but will indeed *jeopardize* it ; and that if somebody is injured or killed, this is *permanent and irreversible*. These two issues must be repeatedly explained to the child in the way most appropriate to his cognitive and emotional deve-

lopment. This may include concrete discussion of consequences such as jail or hospitalization or loss of the love of the therapist or others.

The middle stages of treatment are characterized by the use of the relationship to clarify the child's distorted thinking patterns. Again the work is often very slow and repetitive. It is in this stage, however, that the progress made by the child begins to be apparent to his family and others and thus the therapist is encouraged to continue,

Final Stages :

In the later stages of therapy, the basic work done earlier is ext tended and refined. The child is encouraged to verbalize and apply the abstract concepts learned earlier. Finer nuances and wider applications of these concepts are taught. Less concrete and more abstract means of teaching are used.

Explosive outbursts can often be avoided altogether by teaching the child to recognize and anticipate trigger situations by assessing his own feeling state. Alternatives to exploding can be taught and even practised *a priori*. When the occassional explosion does occur, it can be reviewed and further clarifications made.

The final success of the therapy with psychotic children rests on the therapist's ability ro encourage continued growth in the area of relationships, The therapist can not be content to have the child hug him instead of running away. He must now ask the child to speak to and to hug other people. The borderline psychotic then must be encouraged to develop heterosexual relationships once friendships with the same sex are established. These children are, as noted above, essentially passive ; and usually are content to remain at the level of relationships on how to be a friend, what friends do together, what to say to the teacher, for example, are useful and sometimes necessary for the child to be able to form new attachments successfully.

The relationship with the therapist now becomes the safe harbor from which the child ventures forth into more stormy waters. It is also the primary reinforcer for the development of other relationships. Explicit praise and the therapist's obvious pleasure will not only

encourage the child to form new relationships but also will forestall the child's fantasy that the therapist will be jealous of his new friendships.

This phase of the therapy is in some ways the most difficult for the therapist. The initial work is so taxing and yet so rewarding if successful that it is tempting to allow the child to remain dependent on the therapist. The therapist must also be sensitive to how much the child can handle. It is painful to watch the awkward and sometimes disastrous first attempts at friendship ; the impulse to rescue the borderline or schizophrenic child can be very strong. The therapist, however, must be the safe harbor but not the protecting fleet. Finally, the therapy can be considered successfully concluded when the child prefers the companionship of his peers to that of the therapist,

Involvement of the Family :

Work with the family during the entire course of treatment proceeds in a fashion parallel to that of therapy sessions. Within the limits of their capacities, the parents can be taught how to establish a relationship with the psychotic child, how to set limits, to contain explosions, clarify distorted thinking patterns. help the child form new relationships, etc. The degree to which this can be accomplished will vary. Successful work with the families is not, however, critical to the progress of the child, In four of the twenty cases noted above the psychopathology of the parents was so severe that only minimal contact was made with them. Generally it appears that healthy involvement of the child's family facilitates progress but the absence of the family does not block it.

Results

The treatment described above was used with all of the 20 cases. Some progress was apparent in every case. All autistic subjects developed some speech and self-help skills. Two did not progress beyond this level and were admitted to residential programs at the end of their treatment at the clinic. The four other autistic subjects made gains socially and academically sufficient for their being enrolled

and remaining in public school classes. Two of these subjects, at the end of treatment, were similar in behaviour to the schizophrenic children at the start of treatment. The other two had progressed to the level of borderline psychosis with respect to behaviour.

The majority of the schizophrenic subjects made gains. All but one entered and remained in public school programms, made some friends, rarely engaged in explosive outbursts and ceased to be of "major concern" to their families. One child went into another day hospital program, but was considered to be much improved. They appeared similar to borderline children.

The borderline psychotic subjects showed lasting progress, associated with the treatment. All were enrolled in regular public school classes. Four of them proved to be "excellent" pupils. They were able to make friends and the explosive outbursts disappeared completely. To their teachers and peers they appeared normal.

Follow-up on the subjects' progress over time has not been possible in all cases, However, contact has been made with 11 of the 20 cases, one year or more after treatment termination. All have maintained their initial gains.

Though no formal study has been done of the other psychotic children seen at the clinic, the methods of treatment described above were widely used with these children.

Discussion

The diagnosis and treatment of psychotic children as described above is not unique in any of its elements. It appears to be an effective and useful approach to the problems of these severely disturbed children, diagnostic approach and the method of treatment were taught to therapists with minimal professional training. The method depends primarily on observational skills, sensitivity and patience of the therapist. Therefore the therapist's minimal professional training did not block subject's progress. In area where there are many disturred children and limited professional resources, such as in developing countries and American "inner cities," this approach to diagnosis and treatment could be useful,

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AUDIENCE EFFECT AND COACTION EFFECT ON THE SPEED OF VOCABULARY WRITING

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ABSTRACT

In an attempt to make a comparative study of English vocabulary writing speed before passive audience and coacting audience, it was found that speed of English vocabulary writing of female students was better in coaction situation than before passive audience.

Although an individual engaged in a task is not all the time conscious of the influence of the physical presence of his fellow beings, his behaviour changes as a result of being present with them. Not only the sheer physical presence, the psychological presence of others also affects his behaviour (Khalique 1982).

Allport (1920) conducted the first laboratory experiment on interindividual influence and found facilitating effect of the physical presence of individuals acting as passive spectators on an individual occupied with a verbal task. He obtained a clear facilitation effect and termed it as social facilitation. Since then it applies to both effects: facilitating effect and interfering effect. The facilitating effects of the physical presence of others have been recorded in situation where an individual is engaged in a well-mastered task before others (Triplett 1897, Allport 1920 & 1924, Travis 1925, Dashiell 1930), and interfering effect has been found in situation where an individual is engaged in an new task before others (Husband 1931, Pessin & Husband 1933, Pessin 1933, Innes & Sambrooks 1969, Fouts & Jordon 1973),

Two hypotheses have been advanced in order to explain the human behaviour in presence of other human beings. Zajonc's (1965) arousal hypothesis states that the sheer physical presence of fellow beings increases the level of drive in the task doer, consequently, his performance of well-mastered responses is facilitated and acquisition

of new responses is impaired by their presence. Cottrell's (1968) evaluation apprehension hypothesis states that an individual does his task better because he has apprehension over being evaluated by others present around him. A third explanation is in way. Khalique (1981) reported "social facilitation or social interference depends neither upon the new task nor the well-learned task but upon the personality characteristics of the task doer".

For convenience of understanding and conducting researches Zajonc (1965) has classified the literature on social facilitation into two categories: (i) audience effects—which refer to the study of behaviour occurring in the physical presence of passive audience, and, (ii) coaction effects—which refer to the study of behaviour occurring in the physical presence of fellow beings who are also engaged in the same activity.

The present research attempts to make a comparative study of the influence of persons passively present at the time an individual is writing words and the influence of the same persons actively engaged in the task (the individual is also performing) on the speed of vocabulary writing of the individual.

METHOD

Subjects :

Ninety six postgraduate female students served as subjects. They were English medium students right from kindergarten school to college level.

Confederates :

Three postgraduate female students of a different faculty performed the role of confedrates.

Design :

The experiment was divided into three sessions :

(i) Writing English words alone (ii) writing English words in presence of confederates, and (iii) writing English words along with confederates. Randomized group design was adopted.

Material :

Paper, pencil and stopwatch.

Procedure :

1. Writing alone.

The thirty two students randomly booked for the first part o the experiment were assembled and asked to participate in an experiment in psychology. Each of them was also asked to indicate their convenient dates and time and to come accordingly.

As the subject X (first subject of the first group) arrived at the scheduled date and time, the experimenter greeted her and asked her to take her seat. After a few minutes of light conversation so as to make her comfortable and ready for the experiment the experimenter asked her to write as many English words correctly as she could possibly write within a period of five minutes. The number of words correctly written by X and other subjects separately was recorded.

2. Writing in presence of confederates.

A day before the commencement of the second part of the experiment, confederates were given the following instructions :

(i) to turn up punctually (according to the schedule of each subject) with a plea to discuss some thing important with teacher (experimenter) engaged in talking to his student (subject) ;

(ii) not to leave the room although asked to come after an hour.

(iii) to remain standing around the table occupied both by the experimenter and the subject ;

(iv) to keep themselves engaged in conversation in a low tone ;

(v) not to talk to the experimenter or the subject nor watch the subject closely ;

(vi) finally, not to show themselves as keen observers but be their ordinary self without disturbing either the experimenter or the subject.

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(iv) to keep themselves engaged in conversation in a low tone ;

(v) not to talk to the experimenter or the subject nor watch the subject closely ;

(vi) finally, not to show themselves as keen observers but be their ordinary self without disturbing either the experimenter or the subject.

Just at the time the experimenter was giving instructions to the subject P (first subject of the second group) to write correctly as many English words as practically possible within five minutes, the confederates entered into the room and executed the instructions given to them. In this way, subject P and other subjects performed the verbal task separately in presence of an audience. The individual number of words written correctly by each subject was recorded.

3, Writing along with confederates :

A day before the third session the confederates were asked not to act as passive spectators now but to work with the subjects, that is to write English words as many as they could within five minutes creating a normal group work situation i.e., neither remaining silent throughout nor talking too much during the work period, They were allowed to talk a little among themselves in a low tone as well as to the subject so that she (subject) may feel herself friendly to you ; she may feel herself a part of the group work situation. They were not allowed to disturb her nor even watch her performance.

As the subject Z (first subject of the third group) entered into the laboratory and made herself prepared to take the experiment, she was told that some subjects also wanted to take the experiment. With this information to her, confederates were called in and they were asked to share her table. The three confederates and one subject were seated on a square-shaped table so that they could be in full view of each other. The subject and confederates were instructed to write as many English words as they could write correctly within a period of five minutes time. The number of words correctly written by the subject Z in full view of confederates was recorded. Likewise, the performance of the other subjects was also recorded.

RESULTS AND DISCUSSION

The number of words correctly written by three independent groups, each consisting of thirty two subjects, in three situations ; lonely situation, in presence of confederates acting as passive spectators, and, in presence of the same confederates doing the same nature of work the subject was doing, was subjected to analysis of variance.

Table 1. *Analysis of Variance.*

Source of Variation	SS	df	MS	F	*p*
Between groups	1828.583	2	914.291	9.846	$\leqslant .01$
Within groups	8635.157	93	92.851		
Total	10463.740	95			

Table 1 showed that the observed F value 9.846 at 2/93 df was significant beyond one per cent level. Meaning thereby, there was overall difference in average speed of vocabulary writing i.e., in average number of words correctly written in solitude, in presence of confederates acting as passive audienee and along with the confederates doing the same task in close vicinity of each other. Significant difference in average speed of vocabulary writing could be attributed to differential effects of situations in which subjects wrote and not to random sampling from populations with a common population mean. In other words, differences in average speed of vocabulary writing of the three groups under three conditions were indicative of real differences.

Since F was significant, Tukey's (1949) procedure for comparing the individual means was adopted. To this effect, average speed of vocabulary writing alone, before a passive audience and coacting audience were arranged in order of magnitude (Table 2).

Table 2. *Average vocabulary writing speed in order of magnitude.*

	Passive audience	Solitude	Coacting audience
$\bar{X}$	84.031	89.593	94.718

Tukey's method of testing the significance of the gap between the means indicated that the average speed of vocabulary writing in presence of passive audience (84.031) was significantly less ($p=.05$) than the average speed in lonely situation (89.593). Significantly less speed of writing words correctly might be because the audience passively present at the time of writing was perceived as a source of interference by the subjects engaged in writing words.

Average speed in coaction situation (94.718) was, naturally, significantly greater ($p<.01$) than the average speed in a situation characterized by the presence of passive audience (84.031). Significantly greater speed in coaction as compared to speed before a passive audience might be because subjects asked to do a task in a situation where their fellow students had also been asked to do the same task in close vicinity of each other had developed a spirit of competition.

Average vocabulary writing speed in lonely situation (89.593) was significantly less ($p=.05$) than that in coaction situation (94.718). Here, also, significantly greater average number of correctly written words might be attributed to the spirit of competition the subjects might have developed in a coaction situation.

CONCLUSION

The findings led to conclude that (i) subject's speed of writing English words correctly lowered down before the audience as compared to speed in solitude, (ii) speed enhanced when the subject was put to a task along with his fellow beings as compared to speed both alone and before the audience. and (iii) speed before audience was less than the speed in coaction situation. In other words, audience effect might be described as interfering and coaction effect as stimulating to the task doer.

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APPROACHES TO PLAY THERAPY

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ABSTRACT

The contributions of Piaget, Freud, Erikson, Singer, Klein, Axline and others towards the understanding of children's play were reviewed and it was concluded that play therapy was an effective form of intervention with children.

All children take pleasure in play such as in laughing and making jokes, in making a toy or breaking a toy, in giving it to a friend or in knocking the friend down. Although such activities seemingly appear to be meaningless and nonprofitable, they are not so. They are meaningful and profitable to the development of personality. They are diagnostic and therapeutic as well. It is this significance of play which led the towary scholars to think over it. Following are a few views about play.

Play as the "Expression of Fantasies, Anxieties and Defenses"

For the Freudian psychoanalysts play is the stage upon which intrapsychic dramas are displayed, the "expression of fantasies, anxieties and defenses" (Klein, 1955, p. 235). Why is this the case? Let us look at what Freud and his disciples have said about play.

In psychoanalytic theory, an experience generates a certain amount of psychic energy: this forms the basis of memory and its associated emotions. If an experience is very powerful for the person, there is "excess psychic energy" and he continues to re-experience the event because all of the psychic energy of anxiety is not assimilated into a stable memory pattern. In adults, the re-experiencing takes the form of dreams and is most frequently seen in cases of traumatic war neuroses. The person is compelled to re-experience the traumatic material because of the excess psychic energy. However, in this

reliving, there is also an attempt by the person to *master* the experience. In dreams or fantasy there is the possibility of a different outcome to the event, a different role for the dreamer to play that was not possible in reality. Thus, the person is said to be attempting to master the experience by moving from a *passive to an active* role or state in relation to the anxiety-producing event. In psychoanalytic theory this is known as the *repetition compulsion*. (Freud, 1967).

In children, the operation of the repetition compulsion, i.e., the expression of excess energy and the attempt at mastery, is seen in play. However, for children, this is a *normal function* for many experiences will be very powerful for a developing organism, and indeed, play is critical for the child to be able to master life's events. (Walder, 1933).

The English school of psychoanalysts, particularly Klein (1955) extended this view of play. For them, play also provides an opportunity for the child to sublimate his impulses through symbolic use of the toys. He can transfer wishes, fears and anxieties onto the toys and express impulses that would be unacceptable or dangerous in reality. For example, the child may break a doll representing a resented baby brother without fear of the punishment or guilt that would occur if any similar action occurred in real life. Thus, play can afford a "great deal of relief" for a child by allowing for the expression of dangerous impulses through harmless channels. (Klein, 1955, p. 230). The psychoanalysts also see all play as creative because

> "a child is actively constituting his individualized, more or less unique, life space by imposing forms. meaning and significance on a situation and relating himself to those self-imposed meanings in his idiosyncratic way " (Frank, 1968 p. 435).

Play is perhaps one of the most creative activities available to humans, for in it, the child is bound by no external rules or conventions, and little by the limitations of the medium used. Freud notes that "the creative processes of adults grew out of childhood fantasies" (1962) and some psychoanalytic writers see a direct correspondence between

the sympolic use of toys and free association (Klein, 1955) and play and art (Kris, 1964).

Thus, for the psychoanalysts, play is a very rich and expressive aspect of the child's behaviour, and to paraphrase Freud, the royal road to the unconscious. However, for them, play is a reflection of the child's distant and immediate past and though necessary, does not provide preparation for the future. This aspect of play, that of practice of necessary skills has been throughly explored by one of the most eminent child psychologists, Piaget and his followers.

"Ludic Symbolism"

For Piaget, (1962) the critical aspect of play is it's make believe quality, which he termed "ludic symbolism", or the ability to use objects as symbols for other absent objects or persons. It is because of its symbolic function that play is so important in cognitive development. According to Piaget, make believe play represents the child's movement from sensory motor activity to ideational activity, from attempts at mastery through simple imitation of the environment or *accomodation* to mastery through *assimilation* where aspects of the environment are molded or altered by the child. In Piaget's view of children, all cognitive development consists of combinations of assimilation and accomodation but it is from the latter that the richness of the human personality evolves. Thus, symbolic or make believe play is critical.

Piaget also recognizes other forms of play and classifies play into three categories, pratice play, symbolic play and games with rules. Each contributes to the child's overall development.

From the earliest months, a baby plays "imitative functional games", where he imitates what he sees without understanding or changing it and derives pleasures from the mere exercise of his hands, feet, etc. As a child matures, ritual games appear where actions are repeated over and over again because of the sense of mastery they afford the child. These activities are all considered *practise play* by Piaget and allow the child to improve his sensory and motor skills.

Towards the second year, a more complex form of imitation, symbolic imitation appears. In this, the child begins to use something other than his body to imitate the original object. This is the beginning of the use of toys, and the introduction of a new element, that of make believe. Symbolic game or play that distorts reality and implies representation of an absent object occupies a major period of the child's world from ages 2 to 5 years. The child rehearses life experience and tests reality in a variety of ways, If he has experienced or witnessed an unpleasant or frightening experience, he may engage in "compensatory play", an idea very similar to that of Freud's "attempt at mastery" wherein he is able to disassociate the unpleasant act from its context and assimilate it into his behavior. Thus in *symbolic play*, the child ls freed from the confines of reality and learns to exercise his imaginative and creative skills.

The third type of play, *games with rules* begins at about age four, according to Piaget, and remains with person his whole life. Games with rules involve competition and a code of mutually agreed upon behavior. They are, of course ways of learning the social order and practicing social skills.

Thus, for Piaget, the child's play is a reflection of his stage in cognitive development and also a necessary and critical aspect of learning and development.

"The Small Managable World of Toys"

In a parallel development, the ego-analysts like Piaget, have, proposed that play provides great learning opportunities for the child, and is particularly necessary for the healthy development of the ego. While not abandoning the Freudian notion of play as an expression of conscious and unconscious conflicts, the ego analysts, notably Erikson (1950) sees play as the means by which the ego may master various areas of life. It is

> "the microsphere, i.e., the small manageable world of toy, the harbour which a child establishes to return to when he needs to overhaul his emotions." (Erikson 1950, p, 152).

in his world of toys, the child is the master, not the victim. More importantly in play, the child is practising a critical human skill, that of creating model situations and mastering reality by experiment and planning (Erikson, 1950).

Playing as a way of learning to cope with reality is not the only ego function exercised in play, according to the ego analyst (Frank 1968) Another is the distinction between the self and other, the "me" and "not me," the establishment of ego boundaries. In play, the child can assume different roles, "lose" himself in fantasy and then "regain" his sense of self. He can express his private thoughts without fear of censure and he can "be's whatever he wishes. According to both the ego analysts and also social psychologists such as Mead (1934), the child's sense of himself as an individual is strenghtened through such play.

The social aspect of play has also been examined by the ego analysts and in this their observations are very similar to that of Piaget: that the games of school age children provide them with endless opportunities for practising and refining inter-personal patterns of cooperation, competition, dependence, independence, etc. The social context of play is also seen in the make believe roles adopted by children in their play, the identification with models valued by the child e.g. "Momma" or valued by the culture e.g. "Superman", a footbal star, an astronaut, etc. (Whiting, 1960). Thus, for the ego analysts, play has both an intra-and inter-psyche significance.

The "Play way" Theory of Education

Piaget and Erikson's work on play has stimulated new interest in play, imagination and creativity and their relationship to personality development and culture. One of the most exciting developments in this area has been the experimental investigation of the impact of play on cognitive development by Jerome Singer and his colleagues (1973). In a series of well designed experiments, they have demonstrated that the ability to make believe and daydream is a cognitive skill which allows people to be more flexible in problem solving, to delay gratification, to concentrate and to develop empathy. Exploring another

aspect of how play might enhance personality development Redl (1958), Menuchen (1966) and others have shown that the exercise of games demanding a variety of self controls shows improvement in social behaviour. Sutton-Smith (1967) also found that when a child imaginatively plays with objects, he discovers more uses for them and has a greater repetoire of behavior responses to any given situation. Sutton-Smith then speculates that this then is the basis for his and other's findings that the "playful" child generally demonstrates more adaptive behavior.

Singer and associates (1973) have also examined differences in "playfulness" between children. They have found that a child's ability to fantasize and make believe is greatly influenced by the acceptance of imaginative play by adults and/or the presence of a creative adult model. (Note the similarities with Bandura's findings on aggression). This not only supports Piaget's and others view of play as a critical aspect of personality development but suggests that it is a learned aspect, one highly influenced by the environment.

Piaget's notion of play as learning has long been a part of the the "Play Way" theory of education and has recently been revived by modern educationists interested in game simulation such as Bruner. Experiments in this area indicate that greater learning takes place when materials are presented in game form as compared with traditional methods such as a workbooks (Hunphrey, 1966). Bruner theorizes that this occurs because

> "a game attitude has the effect of denaturing or delibidinizing problem solving activity so that it is less interfered with by a sense of the consequences of success and failure." (1962, p. 21).

Play can be painless form of learning, not only for personality skills and attributes but for formal academic materials as well.

Cultural anthropologists such as Anderson and Moore (1960) have also been interested in play as *cultural* teaching devises, the means by which valued skills and attitudes are handed down from generation to generation. Roberts, *et al* (1959) examined this assumption in detail and found that games of physical skill taught self reliance, games

of strategy taught social roles and game of chance, responsibility and achievement. They then looked at the relationship between culture and games and found that the presence or absence of certain types of games in a culture was related to social variables.

Play is also an attempt to transform and master reality, an opportunity to practice skills, a painless way of learning. It is this aspect of play upon which we capitalize in attempting to help the troubled child in play therapy. Let us now examine these tasks, diagnosis through play and play therapy.

DIAGNOSIS AND TREATMENT THROUGH PLAY

Getting Ready: Some Practical Considerations

When starting to work with children and adolescents, it is in some way like working in a foreign country. The culture is different, the language is different, even the dress may be different. To be successful, a child therapist must learn the culture of children. There are many ways to do this; perhaps the most effective is for the therapist to reevoke his/her own childhood, feelings and thoughts, favorite games and greatest fears. Being in touch with one's own history is a first step towards understanding children: familiarizing one's self with the activities, and fashions of today's children is the second. This is best accomplished by simply engaging in children's activities, i.e. watching VCR programs that are popular with children, visiting popular gathering spots for adolescents, reading comic books or watching movies popular with children and teens. These activities will not only provide insight into the interests of children but also will allow a "common" language between therapist and child and more accurate interpretation of some of the child's make believe play.

When preparing a setting for play therapy, the keynote should be that there is a minimum of distractions *for the therapist*, thus allowing him or her to concentrate on the activity and interaction with the child. If the therapist is dressed comfortably, in a room with a minimum of "adult-do not touch" objects and has toys that are inexpensive and replaceable, he or she will be able more easily to maintain a positive and therapeutic atmosphere and to attend fully to the

child and his needs rather than be concerned about potential demage to clothes, equipment or toys.

The number and type of toys to be used in part reflect the theoretical orientation of the therapist, ranging from the very few suggested by Freud (1946) to the wide variety recommended by Moustakas (1953). A list of these used by the present writer appears at the end of this article. The guiding principle in toy selection should be that they appear to facilitate the goals of the therapy and with sufficient imagination, almost any kind of material will do this. (See for example, Durfee's (1948) article on use of office equipment in play therapy).

Once the "culture is learned", the room is set and the toys are selected, what happens? How is play therapy unique and special: How can a child's problems be understood from observation of his play? How can play be curative? What does the play therapist do that is different from the recreation leader? To answer these questions, it is perhaps best to individually examine some basic elements of play therapy; relationship, communication, resolution of conflict, emotional growth, cognitive growth, limit setting, etc. For each element, various theoretical stances diagnosis, therapeutic goals and interventions and clinical examples will be covered.

Relationship :

At the very least, play "provides the child with the familiar tools to relate himself to the therapist" (Allen, 1934, p. 193). Axline in her many verbatim reports of child therapy demonstrates how, for the nondirective therapist, the toys are simply a starting point for discussions in which the therapist's unfailing acceptance of the child can be demonstrated. In one session with a delinquent, John, carving balsa wood medels provides John with an opportunity to test the therapist. Axline is fortunately able to use the incident to allow John to have an "increased awareness of himself" and "promote a seeking for an understanding of himself that will bring inner peace," two goals of non-directive play therapy. (Axline, 1947, p. 215.)

Most play theorists and therapists would see play as something more than a mere tool; however, all would agree that the relationship between the child and the therapist is the most basic and critical aspect of play work and that unless a positive relationship is established and maintained all other actions are useless. The ease or difficulty with which this is done is also a key diagnostic issue. The attitude with which a child greets the new therapist will usually reflect his past experience with adults, particularly authority figures. Does the client ignore, imitate, initiate or compete with the therapist or diagnostician? Does the child display trust, fear, hostility, dependence, etc. towards him/her? How long does it take and what actions by the therapist are necessary to establish a comfortable atmosphere for the child? The answers to these questions will begin to show how the child perceives himself in relation to authority figures and will identify possible problem areas.

Through play, the therapist has an unusually powerful means of establishing a positive relationship with a child. The child who is referred for therapy is one who has, or *believes he has* transgressed the standards of society or not meet the expectations of others. The play therapist presents the child with what is usually a unique experience—he/she presents the child with a room of toys "you may play with what you wish." Rarely has an adult encouraged a child to play; usually the adult role is that of exhortation—"do your schoolwork", "do your chores", "set up straight", etc. The initial approach of the play therapist demonstrates *very concretely* that he/she is willing to accept the child, *extraneous of the child's productions.* It also indicates that relatively few demands will be made of the child and that the medium of interaction will be that of the child's, i.e. play, and not that of the adult's, i.e. conversation. The selection of play as the of the therapy thus greatly helps to demonstrate the benign intent of the therapist and thus enhance the development of a positive relationship.

This positive relationship, so necessary to the progress of the therapy, may also be maintained through specifix interventions in the play. In the more directive therapies as practiced by Ginott (1963)

and the present writer, a child's anxiety may be kept at a manageable level (and thus the child's trust in the therapist maintained) by balancing anxiety provoking topics with pleasurable activities and vice versa. Repetitive activities, as noted by Piaget (1962), bring pleasure in themselves and thus anxiety can be reduced often by the simple introduction of familiar and repetitive play. In puppet and doll play, the therapist may take a role in which his/her benign intent can be demonstrated. For the child whose problems center around authority figures some or all of these techniques may be necessary to maintain the relationship. The following clinical sequence and analysis illustrates both the diagnostic significance of play with regard to authority figures and some of the interventions possible. The child was a seven year old boy. The therapist was a graduate student in training with the writer. The session reported was the second.

> Sequence one : "Robert (R) came into the room, sat on the therapist's (T) lap and drew a picture of a car carrier. R went into a narrative about how the employer had let all the cars fall off the ramp of the car carrier. R got off T's lap, picked up a plastic bat, stated that he was the boss and he was going to kill the employee, saying "you should have known better, I' kill you." T played the role of the employee and said that they should talk about what happened. He was very adamant and continued to state that he would kill the employee. R came back to his seat and continued to draw on the car carrier when T told him not to hurt anything with the plastic bat. They then role played the boss and employer again with T being boss and very understanding. R appeared calm at this point and ask T to draw a house for him . . . (Dudley, 1978).

> Analysis : The child's move to sit on the therapist's lap in the second session suggests a dependent and close relation with authority figures. However, the fantasy material suggests that this dependence is mixed with a preception of authority figures as harsh, unforgiving and threatening. The therapist attempts to demonstrate her benign intent by taking the role of the

understanding and forgiving authority figure in the second role playing episode. At the end of the sequence the child demonstrated another aspect of his perception of authority figures—that they will do what he asks. The therapist shows her willingness to follow the child's lead through out the sequence by moving from drawing to role playing and back again as the child does.

Thus, in play, the child and therapist meet on common ground and the basis for a healthy and positive relationship is established. For some therapists such as Allen and Axline, this is all that is necessary. For most others, however, play provides an infinitely rich medium in which many significant events take place, not the least of of which is communication.

Communications

Klein (1955) says that "the whole of behavior is expression" and equates the play of the child in therapy to the free association of adults. Although this is an extreme position, all play therapists would see the child's play as a form of communication. The child may appear to ignore the therapist but he/she is always aware of his presence and responding to it. The therapist need not worry about the child "talking" about the important issues, for, with time, the child will show them in play what they would like the therapist to know or what they are unable to keep from telling. For the child, play is a more natural and easier from of communication than words sometimes for he can relay feelings or or experiences for which he has no labels. (For example, a young child may say he feels "bad", but his play may further refine this to mean "mad", "sad", or "ill".)

If the child's play serves as a mode of communication then the child therapis's job is to watch with the some degree of concentration that the adult therapist listens. The child's actions, his reaction, his expressions must all be noted mentally and recorded. The significance of a child's play may not be clear when it occurs; however, if it can be recalled, it may be re-examined and understood at a later time.

This is particularly true during the diagnostic phase of the treatment but remains important throughout the therapy,

What is communicated by a child's play? How do we "read" behavior? There are as many approaches to interpretation of children's play as there are ways of understanding adult verbalizations in therapy. When a child bangs two dolls together, does this symbollze the primal scene, mean that the child is angry or simply mean nothing at all? The answer to this question will depend greatly upon the therapist's theoretical stance, The humanists such as Axline and Allen will say that "the content (of the play) is of less importance than the use he is making of it in relating to me" (Allen, 1942, p. 195). The behaviorist will be interested in the play as it affords an opportunity to reinforce or extinguish certain behaviors. The psychoanalysts will of of course focus on the symbolic aspects of the play and their meaning as it displays the contents of the mind. Within the psychoanalytic school even, there are rather dramatic differences in how the play is understood. Klein (1955) equates the child's play with the free association of adults and therefore sees *all* actions of the child as important. Anna Freud strongly disagrees with this position as she feels the play is not consciously submitted to analysis as free association is in the therapy of adults (Freud, 1946). The ego analysts, such as Erikson, focus of the ego contents of the play and what the play displays about the child's developmental level, both emotionally and cognitively. Thus, a single action of a child at play could communicate many different things depending on who was the therapist.

For the psychodynamically oriented therapist, however, there are some principles of interpretation of play that are generally followed, apart from consideration of the specific symbolic meaning of a piece of play. They may be summarized as follows :

1. The child's play can be compared with that expected for his/her age and social group. This will illuminate defects, blocks, special interests and talents.
2. Patterns, repetitions and exaggerations suggest areas of concern for the child, just as verbal emphasis does in adult therapy.

3. Ommissions and periods of withdrawal also suggest areas of difficulty for the child, again just as in adult therapy, or that the child's experience has been very different than that of other children of the same age.

4. Changes in the mode of expression (from verbal to action and vice versa), in the object of the play or in the manner of relating to the therapist usually signify anxiety,' just as changing the topic does in therapy with adults.

5. The sequence of the play can be very important. One must assume that thoughts or actions that are related in time are also related in meaning i.e. that there is serial or random association between events. This is particularly critical in understanding the child's "response" to the therapists interpretations or questions, for the child will often not "answer" in words but in action.

6. Discrepancies and unusual reactions will usually again indicate areas of concern for a child. For example, the toys may be distorted to fulfill a particularly pressing need of the child or his verbal and motoric expressions may be diametrically opposed.

These guidelines in "reading" the play of a child will usually identify areas of concern for the child. A fuller and more specific set of types of behavior to note when developing a diagnosis through observation of play if included in the appendixes.

Applying these principles to an actual clinical example, let us return to the sequence of play therapy with Robert, the seven year old boy introduced above.

Analysis : in the sequence noted above Robert repeats his statement and role playing about the boss who would kill the employee. He also persists with his drawing of a car carrier. The verbal and physical emphasis that he places on this issue, displaying it in several modes, suggests that this is a highly critical area for him.

The communication through play is not limited to the child in play therapy. The creative child therapist may often intervene thorough play as well as words. Though again the degree to which this is done will depend on the individual style of the therapist, many have found actions to be more effective than words in play therapy, particularly with young children. Levy (1939) a psychoanalytically oriented therapist developed a very specific form of intervention wherein the therapist engaged the child in puppet or doll play symbolizing the conflicts the child was experiencing. This technique communicates to the child not only that the therapist understands what are the the child's concerns but also that it is permissable to "talk about them". Other nonverbal intervention tactics developed by the present and other authors will be discussed below.

Interventions

What happens in play therapy after a relationship has been established and the child's concerns communicated and understood? Again, there are as many different answers to this as there are theories of how the mind works. To some degree, the interventions in play therapy are determined by the goal of treatment, as in adult therapy. Compare these three statements about therapy with children; by humanist, psychoanalyst and behaviorist therapists :

> "The goal of therapy is for the child to experience has emotions in the protected framework of the relationship with the therapist." (Axisne, 1947, p. 101).

> "The purpose of psychoanalytic procedure is to understand the patient's mind and convey to him what goes on in it." (Klein, 1955, p. 236).

> "The therapy consists of mostly up adequate patterns of behavior by the use of reinforcement or by the extinction of undesirable behavior." (Russo, 1964, p. 43.)

The interventions used in any one case will also be influenced by the individual goals for the child—i.e. some problems are more easily resolved by certain interventions than others. Thus, a complete

listing of all the techniques used by play therapists would necessarily be very broad and beyond the scope of this paper. The more commonly used ones are discussed below :

Corrective Emotional Experience

The humanist psychotherapists such as Axline and Allen believe that the healing process of therapy is contained in the relationship with the therapist—that through this relationship, a "corrective emotional experience" takes place wherein the child learns to view his feelings, attitudes and experiences in a different light and perceives himself more positively because of the therapist's acceptance of him.

However, the "corrective emotional experience" can be specific as well as general, when the therapist attempts to allow the child to experience a specific type of relationship or express, in the context of the relationship, a particular type of emotion. An example of this is given below :

Regina, a seven year old girl, was referred to the author for constriction, fearfulness, extreme stubborness and social isolation. She was the eldest of four children (ages 7, 6, 5, 4) in a single parent family. In the initial interview, Regina appeared older than her age and very inhibited in her play. On the basis of history and observation, the therapist hypothesized that Regina had never "been allowed" to be a baby because of the rapid succession of siblings but had been forced to adopt a pseudo-mature role at an early age. The therapy was thus directed towards allowing Regina to "regress" during the therapy hour and be a baby, with the therapist playing mother. This was introduced to Regina as "would you like to pretend to be a baby" and baby toys, blanket, bottle, etc. were provided. During the next seven sessions, Regina produced very realistic crawling, crying, cooing, burping and temper tantrums etc., during the part of the sessions devoted to this type of play. She gradually lost interest in this and turned to age-appropriate play. Both the mother and school reported

dramatic improvement in all areas of concern and the reduction of constriction and fearfulness was also apparent in Regina's spontaneous play.

Thus, a corrective emotional experience" can be very general or highly specific and structured.

Catharsis or Expression of Feeling.

A closely related type of intervention is catharsis or encouraging the expression of feeling. Psychoanalytic theory, as noted above, sees play as the repetition of overwhelming experiences and most psychoanalytic therapists rely heavily upon this technique where traumatic or conflictual material is dramatized through the use of dolls, puppets, role playing or other toys. Erikson notes "to 'play it out' is the most natural self-healing measure childhood affords." (1950, p. 201).

Levy (1930) has developed the technique into a structured therapeutic approach for use with children whose presenting problem is a definite symptom precipitated by a frightening event or distortion of experience. In his approach the child is encouraged to "release" his feelings through aggressive or infantile behaviour, or by play in a specific situation designed by the therapist to evoke certain feelings such as sibling rivalry, The healing power of this and other cathartic play appears to come from two sources. One is the opportunity for ego mastery, as discussed above in the section on psychoanalytic views of play. The second source is the child's belief that the expression of negative feelings such as anger, jealousy, etc. will lead to punishment or destruction. When these feelings, fantasies or wishes are played out in the presence of an adult and no harm occurs, the child's view of them changes. Playing out the fantasies also appears more powerful than simply verbalizing them as it more closely approximates reality but is conducted under the protective guise of make believe.

Catharsis perhaps one of the most commonly used interventions in play therapy. In part this is because it is a technique perfectly suited to child therapy, as Erikson notes, but also may be widely used, especially by novice therapists, because it can be the simplest inter-

pertaining to the relationship. As we have seen before, this particular intervention is highly influenced by the theoretical beliefs of the therapist, perhaps more than by the problems or situation of the child client.

Many beginning play therapists are surprised to discover that verbal interpretations are "allowed" in play therapy for they imagine that play therapy consists of only nonverbal activities. Actually, play sessions with children over age four, (or younger even if they are verbal) often consist of a mixture of conversation and play. In fact, one of the great benefits of play therapy is that both verbal and nonverbal modes of communication can be used. If the child cannot articulate his fears or wishes, he can show them. The therapist may also used play to interpret; a demonstration may be much more effective than a statement.

> In a sequence with Robert, the seven year old boy noted above, Robert drew a spider, then asked the therapist if the spider was friendly. The therapist, correctly realizing that Robert was also asking if the therapist was friendly, answered that it was and used her hand as a spider. This became a mutual symbol and in future sessions Robert would ask to see the friendly spider when anxious. (Dudely, 1979).

Interpetation can take a variety of forms in play therapy and is limited only by the sensitivity and creativity of the therapist.

Clarification

Clarification to the correction of distortions and misunderstandings also forms a major part of most child therapy. It is perhaps more important in work with children than with adults because of their immature cognitive development. As Piaget notes, children tend to think concretely, develop an accurate understanding of causality only very slowly and are inveterate theory makers. Thus, they can frequently come to very wrong conclusions about what they see and experience Every experienced child therapist has seen the child who believes himself to be responsible for a parent's death or illness. This is a classic case of distortion arising from the limita-

vention *for the therapist*, requiring no specific diagnosis, no skill in interpreting and no elaborate planning when applied in it's most basic from i.e., telling the child "play with what you would like" and hoping something therapeutic comes of it. Some authors, including the present one, also believe that catharsis or encouragement of the direct expression of feeling can be misused, particularly with children with impulse control or ego boundary problems. Bixler (1949) gives an excellent example of dramatic improvement in an aggressive child which occurred when the therapist changed his style and *did not* encourage the expression of destructive behaviour in the therapy hour. This illustrates the key to successful use of catharsis in play therapy—like other techniques, it must be used judiciously and with a clear therapeutic goal in mind.

Interpretation

Interpretation is of course the most common form of intervention in psychodynamically oriented psychotherapy with adults and it is also, of course, very popular with child therapists as well. For some child analysts such as Klein, this is the major form of intervention by the therapist, for if the purpose of therapy is, as noted above, to relay the contents of the mind, then this is best accomplished by interpretation as that is exactly what an interpretation is—an explanation of feelings or behaviour. The assumption made by psychodynamic therapists is that an explanation of behavior, or "bringing material to consciousness" allows, in the simplest terms, more ego control of those feelings/behavior, among other things. This is assumed to be true in child therapy as well as in adult therapy.

Even within the psychoanalytically oriented therapists however, there is wide variety in the extent and type of interpretation that is used in play therapy. Klein, as noted, interprets frequently and at a "depth" level, focusing on material considered to be deeply repressed (1955). Anna Freud sees the interpretation to be the major form of intervention outside the relationship, but uses it very sparingly (1946). Levy used also almost no interpretation in his "release therapy" (1939). Erikson interprets both intra-and inter-psychic aspects of the play (1950) whereas Axline (1947) interprets *only* material

tions of the immature ego, and the confusion between wish and deed in young children. Obviously, the role for the therapist here is that of clarifier, that of substitute ego. With adults, a simple interpretation that, for example, they seem to believe that they were responsible for their parents death may suffice, for once this belief is brought to consciousness and exposed to adult judgement, the patient himself sees the patent unreality of it and it no longer is accepted. However, for children, interpretation is often insuffiicient, for having interpreted the belief, they do not see that it is impossible, but simply agree with you that is what happened; thus the importance and power of clarification in child therapy.

In clarifying, the therapist often takes a role similar to that of the teacher. Like a good teacher, the degree to which his material is accepted by the child depends on both the strength of the relationship and the creativity with which he imparts his message. Here again, the play therapist has the advantage of multiple modes, as in interpreting, and can often demonstrate as well as discuss.

For example, the present author was seeing Jessie, a six year old borderline psychotic boy who believed he had been responsible for his mother's death when he was three. While punching a bop bag, Jessie tore the bag, which deflated. He become extremely upset, as he believed that the bag was animate and that he had killed it. This led the author to discover that Jessie had extreme difficulty in distinguishing between animate and inanimate objects and that whenever he broke the latter, the traumatic experience of the mother's death and his belief in his own malignant omnipotence was recalled. This complex of action and belief was responsible for much of Jessie's more disturbing symptomology i.e. extreme anxiety attacks. The therapist then embarked with Jessie on a series of "repair activities" where articles were deliberately broken and then fixed, demonstrating both the difference between, animate/inanimate and constructive power. Jessie's anxiety attacks deminished dramatically.

Clarification, like interpretation, can take place in many ways in play therapy.

Alternate Solutions

Another way in which the therapist serves as a substitute ego for the child is in the presentation of alternatives in problem solving. With an adult of average intelligence, the therapist may reasonably assume that the client has been exposed to many different models and thus that he has the capacity for arriving at an appropriate solution to an emotional or interpersonal dilemma. This assumption can not be made for the six or eight year old child whose experience has been limited to his family and school. and thus who has had limited and perhaps negative models. In [therapy, the therapist can use his own adult intellectual and imaginative capacities to present possible resolutions of problems, from which the child may pick one that suits him.

> For example, Brian, a ten year old boy repeatedly dramatized in play with small figures what was his actual social dilemma, that of being scapegoated. He showed one figure chased and attacked by most of the others. The therapist (the author) in play with the figures also, showed him several possible resolutions to this dilemma. She had the "Brian" figure 1) go to an "authority figure", 2) gather another group of "peer" figures, 3) stop running away 4) attack the leader of the "scapegoating group and 5) avoid the situation altogether. These different sequences were repeatedly played out in the therapy by Brian after their introduction and the second solution, joining another peer group was eventually adopted not only in the play but in real life.

In play therapy, these types of activities can serve the same purpose as reality discussion does in adult therapy. There is the additional advantage, however, that the "pretend" aspect of the play allows even easier learning, as Bruner notes, throught the "delibidinizing" effect of play.

Sublimation

A very important "problem" facing all children (and some adults) is that of "what to do" with one's socially unacceptable im-

pulses—i.e., how to become civilized and grown up. As the child develops, there are increasing demands made on him or her to not only delay gratification of impulses but to restrict their expression to socially approved places and modes if not to inhibit them altogether. Thus a major emotional task of childhood is to channel impulses, or dynamic terms, to sublimate them. Sexual and aggressive feelings, and also some forms of competition, jealousy, etc, must not be directly displayed in most households.

Many children who are referred for therapy have problems in this area of regulation of impulse. Some have "overachieved" i.e. become constricted and exhibited beyond what is required. For others, sufficient impulse control has not yet been obtained and feelings, particularly aggressive ones, are directly and primitively displayed. For both types of children, additional assistance at learning to sublimate, rather that express or repress feelings is indicated. Play offers the prefect medium in which to do this, for in both psychoanalytic and Piagetian psychology, much of play is sublimation and practice of expression of feelings in an acceptable, "pretend" mode. Most children, theorists believe, "naturally" learn to sublimate their impulses in spontaneous play—e.g. rather than compete with the father who is a pilot, the son may plan pretend games around "air battles" or develop a hobby of making model airplanes. Those children who have come to therapy have *not* been able to adaptively "use" their play for this purpose. Spontaneous play, *in the persence* of the therapists, has, for the inhibited child an advantage over his normal, outsid-the-hour, play, for he can experimentally express impulses, perhaps even be encouraged in doing so by the therapist (see catharsis above) and once they are expressed then note the therapist's acceptance of them. The therapist's acceptance of the impulses will, if the relationship is strong, alter the child's attitude about them. The natural growth process, or tendency to sublimate naturally through play can then proceed. If not, the therapist can facilitate the sublimation by specific intervention. The latter, directed sublimation, is also the technique used with the child whose problem is undercontrol of impulses. Thus, the very aggressive child may be specifically encouraged to hit the bop bag rather than his

brother, to play out in fantasy rather than reality his destructive wishes, to compete on the sports field or game board rather than directly. The therapist may encourage the sublimation process by simply supporting activities of this nature when they occur, or may actually direct or demonstrate them. (Incidentally, this is one technique from play therapy which is very easily taught to and learned by parents to be used in the home to help control aggressive or rivalious behavior.)

Practice in Areas of Strength of Weakness

An aggressive child may be said to be deficit in the ability to sublimate. He may also be deficit in the abitity to simply inhibit or restrict expression of impulses. Play can be used to "practice" in this area, or in other areas of weakness, whether they be physical, emotional or cognitive. Occupational therapists and physical therapists have long recognized the value of exercise to improve performance in areas of disability. The same principles can be applied in play therapy. Smith (1967) and others, as noted above, have demonstrated experimentally that play at games reqriring self control improves a child's ability to control themselves in other situations. In play therapy, this "practice" aspect of play can be specifically applied. The present author has developed a series of activities that, in her experience, clearly assist children with certain types of problem. For example, impulse control problems are assisted by play at stop and go games like stoop tag, red light—green light, simple simon, slap jack and calming activities such as isometrics and meditation. Body integrity problems improve with play with mirrors, drawing people, touch and name games, doll play, video taping and picture taking. A complete list of activities assisting with specific problems is given in the appendix.

For some children who are suffering from low self esteem, practice in areas of strength may be indicated. These children usually have an unrealistic picture of themselves in that their abilities are *greater* than they recognize. Repeated demonstration of these abilities, along with appropriate comments from the therapists will often be much more powerful in changing their self perception than words alone.

Shaping Behavior

Practice in areas of strength or weakness may be accompanied by explicit praise. In this, the therapist is exercising another type of intervention, behavior shaping, is utilized by both child and adult behavior therapists. Behavior modification is, of course, based on learning principles. These principles of reinforcement of desired behaviors and extinction of undesired ones are easily adapted to the play therapy situation. The reinforcement used may be verbal or concrete (such as candy, tokens, etc.) and the punishment also verbal or physical (aversive noise, mild shock, withdrawal of priviledges, removal from surroundings). The key to operant conditioning, especially with children is to develop a clear and unambiguous link between the behavior and the consequences. Generally, operant techniques are used to treat specific problems such as temper tantrums, overactivity, phobias, etc. but they have also been successfully applied in multiple problem cases.

> Russo (1964) gives an account of an eight year old boy who was hyperactive, impulsive, impatient, anxious and underachiever. The basic approach was to allow free play during the therapy hour but to socially reinforce only socially acceptable behavior. The reinforcement was provided by mother under the direction of the therapist. Unacceptable behavior was ignored. Within twenty sessions, dramatic improvement in behavior at home and at school was reported.

This technique also has the advantage of being easily taught to parents as shown in the example above.

The use of explicit praise and punishment for play behavior stands in direct contradiction to the procedures of psychodynamic therapies wherein the therapist is careful to maintain a non-judgemental attitude towards the client's productions. Howevers it is possible that there is *implicit* shaping of behavior in the approaches of both the relationship oriented and psychodynamic therapist for when an inhibited child expresses a hither to "unacceptable" (to him) impulse through play, it is accepted by the therapist, contrary to his expectation, and thus reinforced. Behavior therpists also, in their

case accounts, tend to also occasionally "interpret" behavior and perform many of the other interventions noted above. Thus, the differences between behavior therapists and psychodynamic therapists may be more ones of focus, semantics and speculation as to what "works" in therapy rather than substantive ones.

Limit Setting

A specialized form of behavior shaping is limit setting, a highly misunderstood issue in play therapy. The "permissive" attitude of the therapist advocated by relationship and analytic therapists has sometimes been understood to mean that the child is allowed to be completely uncontrolled in the play session. However, Axline, perhaps the most permissive of therapists notes that

> "Limitation boundaries that prevent the child from attacking another person or destroying property seem to develop within the child a feeling of security or stabitity in the therapeutic relationship" (1947, p. 21).

And Moustakas, another relationship oriented therapist states unequivacably "without limits there would be no therapy" (1953, p. 15).

Ginott (1959) perhaps best clarifies this issue by differentiating *what* is accepted unconditionally by the play therapist—all fantasies thoughts, wishes and desires are allowed but direct acting out is not permitted; the therapist intervenes and redirects the child into symbolic activities. Ginott also notes several important reasons for clear limit setting in addition encouraging sublimation. Limits enable the therapist to maintain an attitude of acceptance, assure the safety of patient and therapist and strengthen ego controls, It is this latter reason which is the most interesting and which also implies certain techniques in limit setting.

Appropriate limit setting includes distinguishing between wishes and deeds, accepting the former and limiting the latter. It also distinguishes between the child and his behavior, again accepting one while rejecting the other. These are important concepts for children to learn. One of the most common distortions of childhood is the

confusion of wish and act—and limit setting is one way of clarifying this in therapy. For many children in disturbed families, this may be their first experience in having these distinctions clarified for them, for parental injuctions are often aimed at climination of negative feelings as well as actions. Thus properly applied, limits are therapeutic.

Proper application also means that the limits are internalized by the child over time. Interpretation alone, very effective with adults, are rarely sufficient with children, because of their immature stage of ego development. Bixler (1949) gives a dramatic account of the improvement seen in a boy after the therapist moved from using interpretation to explicit limit setting to stop destructive acting out. For internalization to take place, the therapist must not only limit the child's behavior but must also clearly indicate that the child is expected to do this himself. A case where this did not happen illustates this issue.

> A therapist in training allowed Steve, a seven year old, to eat the leaves of plant in his office. After this was noticed by his supervisor and he was instructed to set limits on this behavior, the therapist then set the plant out side the door while in session with Steve. Thus, though the safety of Steve was assured, Steve learned nothing regarding self control for the future.

The above example also illustrates what is often a problem in limit setting for beginning child therapists: they find it difficult to confront the child, equating limit setting with punishment and rejection. Unfortunately. this is also the distortion that the child believes and unless the therapist can grow in this area, his child client will not be able to grow either.

Generallzation

In promoting the internalization of limits, the therapist is aiming for the generalization of attitudes, feelings and behavior from the therapy hour to real life. The other inerventions noted above also carry this implicit goal. However, there are additional ways in which,

particularly towards the end of therapy, generalization can be enhanced. This can be accomplished by the introduction of more "real material" into dramatic play—e.g., a puppet can be labeled "your mother" rather than "a mother". The child particularly at the closing stage of therapy is also more willing to direct discuss or role play "real" situations and thus problems can be explicitly discussed. The child can also be encouraged to "try out" in real life some of the things he has learned in therapy, if appropriate. Inclusion of the parents in play sessions or in using play therapy techniques also enhances generalization from the therapy hour. In many cases, particularly those where catharsis, interpretation and clarification have played a major role, techniques for generalization will be neither necessary nor appropraiate. In others, the more behaviorally directed cases, generalization will be critical.

Differential Treatments

Relatively little has been said about when and where to use the different interventions listed. Every intervention is not appropriate for every case all of the time, in the opinion of the present author nor is any intervention always inappropriate for any given case. The skill of the therapist comes in accurately understanding what the child is communicating and responding with the appropriate intervention at that point in time, However, beyond this general statement, some guidelines about differential application of intervention can be given. Catharsis or expression of feeling is useful in many cases but is most effective with children with problems of inhibition. Divid Levy's "release therapy" was developed to treat an even more specific group of clients within this general category as noted above. Specific activities that can be therapeutic with children with security and loss problems, those with fears of loss and destruction and those with general problems in inhibition have been developed by the present author and are listed in the appendix, Behavior shaping is more usefully applied with children with impulse control problems. Additional activities for these syndromes which were developed by the author are included in the appendix. A corrective emotional experience could not possibly

harm a child but seems most indicated when the relationship with the parents is or has been seriously disturbed. Interpretation, clarification, presentation of alternative solutions, practice and limit setting simply are significant aspects of the therapy with any child: Here the choice of technique may rest more on the therapist's beliefs than the child's condition. Finally, as noted above, the choice of intervention is always dictated in part by the degree to which it fosters and supports the relationship and communication between the child and the therapist. All theorists and therapists will in the end agree that these are the critical elements of child treatment.

SUMMARY

Play is many things as we have seen—but all authors agree that it is a critical part of growing up. Play therapy, like any other therapy is highly dependent upon a strong relationship between therapist and client and communication is perhaps the most critical aspect of the relationship. However, beyond this, play therapy includes many of the techniques and interventions used in adult therapy. What makes play therapy unique and unusually effective with children, however, is the multiple modes of communication available to both parties and the fact that it capitalizes on the "natural" and growth inducing process of play. Last but not least, as one beginning play therapist noted with surprise, "play therapy is fun."

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Appendix A

BASIC TOYS FOR USE IN PLAY THERAPY

You will have the minimum equipment necessary for play therapy if you choose at least one toy from each group listed below. The starred items are particularly useful and popular with children.

Aggressive Toys: cap gun or water pistol, rubber knife, palstic hammer, toy soldiers, bop bag.*

Dependency Toys: baby doll*, baby bottle, crib, toy dishes, blanket, stuffed animals.

Pretend Toys: Miniature animals, people, cars, houses*, doll house and furniture, doctor kit, puppets*, dress-up clothes.

Creative Toys: clay, crayons, magic markers*, finer paints, chalk board and chalk.

Active Toys: ball*, top, marbles, jump rolpe, baseball bat and glove, ring toss, ping pong set.

Construction Toys: Thinker toys*, Lincoln logs, Lego sets.

Competitive Toys: playing cards,* checkers, chess, ping pong, pool table, board games.

Intellectual Toys: puzzles, coloring books, comic books*, story books, crossword puzzles and mazes, dot-to-dot games.

Appendix B

DIAGNOSTIC ITEMS TO OBSERVE IN SPONTANEOUS PLAY

If the diagnostician is able to answer the following questions after observation of a child's spontaneous play, a fairly accurate diagnosis should be easy to develop.

Physical Development :

Activity level : is the child lethargic, overactive?

Gross Motor Co-ordination: can the child perform activities at an age appropriate level?

Fine Motor Co-ordination: can the child perform activities at an age appropriate level?

Sensory capacity: Informally tested, is the child's vision and hearing within normal range?

Imitation: can the child repeat simple movement and sentences?

Emotional Development :

Curiosity: is the child curious, does he explore his enviroment or does he appear inhibited? If inhibited, how much encouragement does he need to explore?

Emotions displayed:

What emotions are displayed spontaneously? What are they in response to? How intense are they? Are they "out of proportion" to the situation?

Themes: What, if any, themes are expressed in the child's play? Are they repeated? Who are the heroes, the villlans in the play? What role does the child take? Are toys appropriate ly or inappropriately used in the play.?

Ego functioning and Cognitive Development :

Concentration: Is the child able to concentrate on tasks? For how long and under what conditions ? Is his activity random or purposeful? How distractible is the child?

Impulse Control : Is the child able to delay the expression of impulses? If so, under what conditions? Is his frustration tolerance high or low? What is his response to limit setting What is his response to frustration?

Anxiety: What triggers anxiety? How is it expressed? What follows the expression of anxiety?

Aggression: What triggers aggression? How is it expressed? What follows the expression of aggression?

Ego Boundaries and Reality Testing: Is the child able to distinguish between himself and the toys, himself and others? Does he imput human motvies to inanimate objects? Does he become confused about what is real and what is not real? Is he able to stop make believe activities at will?

Interpersonal and Cultural:

Capacity to relate: How does the child relate to you. Does he ignore, imitate, interact, initiate or compete with you? What are the dominant relationships displayed in the play--i.e., hostile, trusting, fearful, dependents, etc. ?

Self Esteem or Superego functioning: What is the child's attitude towards his own productions and play, approving critical, etc?

Models and Ideals: What roles does the child assume for himself in the play, for others?

Appendix C

ACTIVITIES FOR COMMON CHILD PROBLEM

After each type of problem there is listed a set of activities that have been found by the author to be useful in resolving that problem.

SECURITY AND LOSS PROBLEMS: repetitive activities, counting, ordering and structuring activities, keeping scrapbooks, telling continuing stories, building houses and forts, keeping a special toy for this child's use only, putting the child's picture up on the bulletin board in the office, making tape recordings of the child or sessions and replaying them, using letters or calls to maintain continuity during breaks in the therapy. All of these activities tend to maintain a sense of stability and continuity for the child.

BODY INTEGRITY PROBLEMS: play with mirrors, identifying parts of the body, drawing people, doll play, making a video tape of the child and playing it. These activities are helpful with children who are very young or very regressed. For older children and teens who have difficulties with ego boundries, yoga and other exercises, body building, practice with make-up. and identification of positive parts of their bodys will help to increase self esteem in body image and solidify ego boundries.

IMPULSE CONTROL PROBLEMS: stop and go games like stoop tag, red light; green light, simple simon, slap jack are helpful in developing self control as are internal mediation devices like "count to ten", isometric exercises and mediation. The child with impulse control problems can also be taught displacement and channelled activities such as competitive sports, use of fantasy, intermediate activities such as expressing anger in a written form rather than physical, etc.

IMPULSE CONSTRICTION PROBLEMS: Loose, creative media such as finger paints, clay, messy activities such as sand, water, and mud play. explosive activities such as ballon bursting. cap guns, yelling, hammering, scribbling, pillow fights, etc, will all be helpful

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with these children as will destructive activities where no harm is done—e.g. knocking over towers of blocks, tearing up old phone books or magazines, etc.

FINE MOTOR and EYE HAND CO-ORDINATION: Coloring books, construction toys, model building, handicrafts, building card houses, cutting out figures, hand games, needlepoint and knitting, jacks, ping pong all help to develop co-ordination.

FEARS OF DESTRUCTION: Hide and seek, monster stories with happy endings, certain types of fairy tales, building, repair, construction and mastery tasks.

FEARS OF COMPETITION: Graduated use of games on a continuum from pure luck games to pure skill games.

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BIRTH ORDER, SEX AND TEMPERAMENT

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ABSTRACT

The paper attempts to determine temperamental differences as a function of birth order and sex, Statistical analysis based on a small sample of post graduate students revealed significant differences between males and females of identical ordinal positions in matters of tough-mindedness ($p < .01$), acceptance ($p < .01$), activity ($p < .05$) and responsibliity ($p < .01$). As such, it may be concluded that temperament of an individual depends both on his ordinal position and his sex,

INTRODUCTION

The present research paper is written to supplement Farooqi's research (1981) on "Birth-order and Temperament" which reveales significant temperamental differences between first-borns and later-borns ($P < .05/.01$). Considering the significance of sex roles (assigned to males and females) which vary from culture to culture, the researcher further hypothesizes that sex roles may be another variable underlying temperamental differences between the first-born or later-born males and females.

Referring to Freudian and Adlerian theories of personality, it can be stated that a child's position in a sequence of brothers and sisters greatly affects the course of his later life, adjustment, and temperament. Most probably, because, the child becomes aware of his status in family and of the role he is expected to play. Moreover. it has been observed that dissatisfaction with one's ordinal position in the family constellation does lead to sibling rivalry and friction which deteriorates parent-child relationship. Toman (1970) argues that birth-order has much to do with sibling rivalry as well as intra and

inter family relationship, because, such relationships are generalized to "significant others" in particular and to "other people" in general.

According to Gewirtz (1948), Beller (1948), Sears (1956), Haeberle (1958) and Schachter (1959), the first-born subjects were found more dependent than later-borns. Ehrlich (1958) demonstrated that first-born subjects tended to be more influenceable than later-borns. These findings were further supported by the researches conducted by Capra & Dittes (1962), Staples and walters (1961), Becker and Carroll (1962), Strauss (1951), Carmischooler (1964) and Farooqi (1981).

Despite these findings temperamental differences are to be found among persons having identical ordinal position. Now the question arises : Why do some first borns or later-borns tend to be sociable and others solitary; or some ascendent and others withdrawing ; or some happy and others gloomy?

It can be argued that the effects of an ordinal position (first, middle, last) on the personality pattern of the child is, in fact, dependent upon other factors such as age and sex of the child. Maccoby (1958) believes that slight differences between males and females become more distinct as they grow because girls are trained to be less aggressive and more cooperative whereas competitive and dominant tendencies are encouraged in boys. Broom and Selznick (1957), Mead (1952), Sears, Maccoby and Levin (1957) argue that effects on the child will be greatly influenced by how he perceives his status and roles assigned to the male and the female.

An examination of relevant literature reveals that in many cultures, the low of primogeniture-favouring the first born is aecession to title, property and wealth is based on the superiority of the first born male child exclusively. In Pakistani culture a male child is welcomed much more warmly than a female child. Moreover, first-born female child increasingly shares domestic responsibilities while the male child is endowed with masculine responsibilities Such cultural concepts about the sex of the child do influence parental attitude ; and consequently, result in personality differences among the children having indentical ordinal position. For example, Caudill (1963) studied Japanese psychiatric patients and found a significantly greates

percentage of first-born males and later-born females among the schizophrenic patients,

The present research was undertaken to test two hypotheses :

i) Whether there are significant temperamental differences between the first-born males and first-born females ?

ii) Whether the later-born males differ significantly from the later-born females in terms of temperament?

METHOD

Sample : Sample consisted of 49 post graduate students enrolled at P. U. (1980-81). Proportional Stratified sampling technique was used, because, the population consisted of 31 female and 18 males students of the Department of Psychology. 62% cases were drawn from each stratum (Male/Female) and thus, a sample of 49 subjects (31 females and 18 males) was obtained. Major variables controlled were age, education and socio-economic status of the subjects.

Material:

Thorndike Dimensions of Temperament (TDOT) was administered and following scales were considered to determine the temperament of the subjects :

1)	Sociable	(Soc)
2)	Ascendent	(Asc)
3)	Cheerful	(Che)
4)	Placid	(Pla)
5)	Accepting	(Acc)
6)	Tough-minded	(TM)
7)	Reflective	(Ref)
8)	Impulsive	(Imp)
9)	Active	(Act)
10)	Responsible	(Res)

RESULTS

t-test was used to determine the significance of differences between the first-born males and females as well as between the later-born male and females.

Tables 1, 2, 3, 4 & 5 do not indicate any significant difference between the first-born males & females on Soc, Ase, Che, Pla & Acc ($p>.05$).

FIRST BORN

TABLE : I. Male—Female Difference on ' Soc, '

Sex	N	Mean	SED	df.	t
Male	7	50.86	14.32	11	1.28
Female	6	32.5			

$p>.05$

TABLE : 2. Male—Female Difference on ' Asc '

Sex	N	Mean	SED	df	t
Male	7	66.67	9.46	11	1.11
Female	6	77.14			

$p>.05$

TABLE : 3. Male—Female Difference on · Che '

Sex	N	Mean	SED	df	t
Male	7	52.29	16.53	11	.42
Female	6	59.17			

$p>.05$

TABLE : 4. Male—Female Difference on · Pla! '

Sex	N	Mean	SED	df	t
Male	7	61.14	11.89	11	.98
Female	6	49.5			

$p>.05$

TABLE : 5. Male—Female Difference on ' Acc '

Sex	N	Mean	SED	df	t
Male	7	64.14	17.24	11	1.22
Female	6	43.17			

$p \geqslant 05$

Table 6 reveals significant difference between first-born males and females on T-M ($p<.01$)

TABLE : 6. Male—Female Difference on "T-M"

Sex	N	Mean	SED	df	t
Male	7	65.67	10.22	11	3.97
Female	6	25.14			

$p<.01$

Tables 7, 8, 9 & 10 reveal insignificant difference between first-born males and females on Ref, Imp, Act & Res. ($p>.05$)

TABLE : 7. Male—Female Difference on "Ref."

Sex	N	Mean	SED	df	t
Male	7	71.43	14.78	11	.68
Female	6	61.33			

$p>.05$

TABLE : 8. Male—Female Difference on "Imp."

Sex	N	Mean	SED	df	t
Male	7	35.29	12.67	11	.77
Female	6	25.5			

$p>.05$

TABLE : 5. Male—Female Difference on ' Acc '

Sex	N	Mean	SED	df	t
Male	7	64.14	17.24	11	1.22
Female	6	43.17			

$p \geqslant 05$

Table 6 reveals significant difference between first-born males and females on T-M ($p < 01$)

TABLE : 6. Male—Female Difference on "T-M"

Sex	N	Mean	SED	df	t
Male	7	65.67	10.22	11	3.97
Female	6	25.14			

$p < .01$

Tables 7, 8. 9 & 10 reveal insignificant difference between first-born males and females on Ref, Imp, Act & Res. ($p > .05$)

TABLE : 7. Male—Female Difference on "Ref."

Sex	N	Mean	SED	df	t
Male	7	71.43	14.78	11	.68
Female	6	61.33			

$p > .05$

TABLE : 8. Male—Female Difference on "Imp."

Sex	N	Mean	SED	df	t
Male	7	35.29	12.67	11	.77
Female	6	25.5			

$p > .05$

TABLE : 9. Male—Female Difference on "Act."

Sex	N	Mean	SED	df	t
Male	7	62.57	10.88	11	1.54
Female	6	45.83			

$p>.05$

TABLE : 10. Male—Female Difference on "Res."

Sex	N	Mean	SED	df	t
Male	7	67.71	12.20	11	.27
Female	6	64.33			

$p>.05$

LATER BORN

Tables : 11, 12, 13 & 14 reveal insignificant differences between the later-born males and females on Soc, Asc. Che & Pla ($p>.05$).

TABLE : 11. Male—Female Difference on "Soc"

Sex	N	Mean	SED	df	t
Male	11	67.25	11.15	34	1.22
Female	25	53 64			

$p>.05$

TABLE : 12. Male—Female Difference on "Asc,"

Sex	N	Mean	SED	df	t
Male	11	73.54	8.38	34	.31
Female	25	70.92			

$p>.05$

TABLE : 13. Male—Female Difference on "Che."

Sex	N	Mean	SED	df	t
Male	11	54.54	9.93	34	1.43
Female	25	68.72			

$p>.05$

TABLE : 14. Male—Female Difference on "Pla"

Sex	N	Mean	SED	df	t
Male	11	37.54	6.26	34	.009
Female	25	37.60			

$p>.10$

Tables 15 & 16 reveal significant differences between the later-born males and females on Acc & T-M ($p<.01$).

TABLE : 15. Male—Female Difference on "Acc"

Sex	N	Mean	SED	df	t
Male	11	67.73	7.46	34	3.57
Female	25	41.12			

$p<.01$

TABLE : 16. Male—Female Difference on "T-M."

Sex	N	Mean	SED	df	t
Male	11	64.56	8.03	34	4.16
Female	25	31 18			

$p<.01$

Tables 17 & 18 show insignificant differences between the later-born males and females on 'Ref. & Imp ($p>.05$).

TABLE : 17. Male—Female Difference on "Ref."

Sex	N	Mean	SED	df	t
Male	11	57.26	9.09	34	.009
Female	25	57.44			

$p>05$

TABLE : 18. Male—Female Difference on "Imp."

Sex	N	Mean	SED	df	t
Male	11	30.73	9.04	34	.94
Female	25	38.32			

$p>05$

Tables 19 & 20 indicate significant differences between the later-born males and females on Act ($p<.05$) and Res ($p<.01$).

TABLE : 19. Male—Female Difference on "Act."

Sex	N	Mean	SED	df	t
Male	11	66 09	8.43	34	2.50
Female	25	45.28			

$p<.05$

TABLE : 20. Male—Female Difference on "Res."

Sex	N	Mean	SED	df	t
Male	11	77.27	9.17	34	3.21
Female	25	47.85			

$p<.01$

DISCUSSION

Summary of statistics as presented in Tables : 6, 15, 16, 19 & 20 reveals significant temperamental differences between first-born males and females as well as between later.born males and females on T-M ($p<.01$) ; Acc ($p<.01$) ; Act ($p<.05$) ; and Re ($p<.01$) scales. However, no significant differences were found on other scales eg., Soc ($p>.05$) ; Asc ($p>.05$) ; Che ($>.05$) ; Pla ($p>.05$) ; Ref ($p>.05$) & Imp ($>.05$). Therefore, it may be concluded that both the hypotheses have been supported partially. Moreover, it may be argued that significant temperamental differences between the males and females having identical ordinal positions is the result of different sex roles and status assigned to the male and female child. Other possible factors may be attributed to parental treatment of male and female child ; concepts of "masculinity" and 'feminity" and socialization process itself.

Maccoby's (1958) research indicates that boys are significantly more independent and active due to the difference in parent child relationship. According to Goldberg and Lewis (1967) boys are more independent, exploratory and vigorous than girls, because, of the different quality of their relationship with their mother in particular This assumption is further supported by Sampson's (1962) research which revealed significant difference between first-born male and females on conformity, Mead (1959) states that the standard personality differences between the sexes are cultural creations to which each generation of male or female is trained to conform. In fact, certain stereotyped traits are selected and are largely or exclusively ascribed to males or females, merely, because of their maleness or femaleness. Thus, the female is socialized to believe in and adopt as necessary her traditional role of dependent timid, sensitive and suggestible person. Contrary to it, the male child's independent, exploratory, and vigorous behaviour is rewarded continuously ; consequently the process of socialization results in his dominant and aggressive temperament in adulthood as supported by atbles 6 ($p<.01$) and 19 ($p<.01$).

Referring to Tables 6, 16, 19 & 20 it may be concluded that first-born males and later-born males tend to be more tough-minded, active and responsible than first-born females and later born females.

Hence, it may be inferred that the effects of ordinal position on the temperament of a child depend more on his sex than on his position. It's further supported by Farooqi's research (1981). However, insignificant results on other scales may be attributed to the homegeneity of the sample, middle class socio-economic status and similar educational level. Referring to Bossard and Boll (1960) and Baylay and Schaefer (1960): "middle-class parents demand more social conformity and set high achievement goals for their children;" it may be inferred that such parental expectations have caused sociable, ascendent, and reflective attitudes in all subjects (of present research irrespective of their sex or ordinal differences.

Despite the small size of sample of both sexes, the present information may be helpful in under standing and solving problems related to poor parent-child relationship, sex-role conflicts, and sibling rivalry. If parents stop advocating the stereotyped male and female roles; change their differential attitudes toward sons and daughters; and provide them with equal opportunities for personal growth and self-fulfilment; then, intra and interfamily relationships may be improved. Consequently, the child (irrespective of his ordinal position or sex differences) will make better adjustment in adulthood. In fact, the family unit remains the crucial guiding influence in the child's personality development; and conversely, faulty family patterns are a fertile source of unhealthy development and adjustment. Moreover, if relationships between siblings are fraught with jealousy and hostility or take other undesirable forms eg., an old sibling being the favoured child or an undesirable model they are likely to have an adverse effect on development of other children also. Siblings often serve as close-range models for one another. However, an intensive and extensive research work is required to compensate for the dearth of research data on the long-range effects of sibling relationships on personality development and psychosocial adjustment in adulthood.

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