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CONTENTS

	Pages
Helping Behavior : A Naturalistic Study ... Afzal Imam	3
Effect of Language Similarity Between the Experimenter and the Subject on the Speed of Verbal Learning Nazre Khalique	17
Some Qualities of a Clinician Farrukh Z. Ahmad & Nazre Khalique	23
✓ Cross Cultural Concerns in Standardized Testing : Some Suggestions about the use of the MMPI in Pakistan Theriault Todd	27 ✓
Naturalistic—Experimental Approach : An Overview Afzal Imam	37
Log-Linear Model in Psychological Data Analysis Masoodul Haq & Nazre Khalique	41

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CONTENTS

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HELPING BEHAVIOUR : A NATURALISTIC STUDY*

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ABSTRACT

A field experiment was performed to investigate the effect of sex and nationality of the help-seeker on the helping behaviour of the bystanders. A total of 105 subjects, equally distributed among the three conditions, participated in this experiment. The major findings of the study were that a compatriot was more likely to receive help than one who appeared to be a foreigner. Sex of the victim had practically no effect on the helper. Furthermore, behaviour reported on the questionnaire was different from the behaviour actually observed in the field.

INTRODUCTION

The study of helping behaviour is relatively new in social psychology. It is amazing why such an important topic did not receive its due attention from psychologists. The recent interest along these lines may be attributed to the more recent techniques of investigation. Previously most of us relied on laboratory data and did not pay any significant attention to the data coming from beyond the laboratory. The field data were considered partially unreliable and unsystematic. With the application of the non-reactive technique it appears now possible to probe into the inhibited areas of the individual behaviour. This technique has proved effective because it does not admit of any contamination of data. Moreover, the subject neither feels offended nor does he introduce something new in the environment as a measure of self-defence.

We are social by nature. We thrive on community living, interpersonal relations, sharing of joys and sorrows of life and helping one

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another when in need. At least this would be the expected behaviour in a morally sound, healthy and prosperous society. Unfortunately, there have been many instances in real life situations where it has been observed that man has not helped man no matter how great the need (Allen, 1972). It has generally been observed that city dwellers do not help others the way folks do in small towns. They just don't want to get involved. The well-publicized incident such as the 1964 murder of Kitty Genovese is a case in point. She died while 38 people stood by and watched. Possibly the growing feeling of "alienation" in society in the States can be given as an excuse for such behaviour. But there are numerous examples in a more "warmer" society such as Pakistan where people involved in road accidents or similar other incidents have been found lying with multiple injuries and no immediate help came to their rescue.

Now, what could be the possible reasons for such apathetic behaviour demonstrated by the bystanders. Various social psychologists have tried, in their own ways, to provide the possible causative factors for such actions. Rosenthal (1964) interviewed the observers of the Genovese case and reported that basic factor remained fear of involvement—any kind of involvement. People are afraid of risking trouble and foresee possible dangers—physical or psychological. Moreover, there is always the tendency to put the responsibility on others who are present. This is the "diffusion of responsibility" variable studied by Darley and Latané (1968). Through an ingenious series of experiments, they discovered that help is more likely to be given by a single bystander when he is alone than when there is a group of bystanders present. In other words, the more people present at the scene of an emergency, the less likely it is that any one of them will offer help. Of course, the responsibility for helping is shared by all the bystanders. However, other investigators (Bryan and Test, 1967; Allen, 1972; Piliavin, Rodin and Piliavin, 1969) failed to find an inverse relationship between the number of bystanders and helping behaviour. More information about the behaviour or inaction of one of the 38 bystanders coming from Albert Seedman (See Takooshian, Haber, and Lucido, 1977), the detective who investigated the Genovese murder, fails to make sense and is really hard to be explained by the 'diffusion of responsibility' hypothesis. He dis-

covered that one of the 38 bystanders had a clear, close-up view of the murder taking place directly below his apartment door. He knew the victim personally, and yet he remained alone in his apartment for several hours without telephoning the police. While Latané has observed that possibly if there had been fewer than 38 witnesses present Kitty Genovese might have been alive today, the Lost Child experiment (Takooshian, Haber and Lucido, 1977), on the other hand, suggests otherwise. If there had been many more bystanders, it would have increased the chance that at least one of them had just arrived from a small town and was not yet accustomed to ignoring shrieks for help. He would probably have acted timely and perhaps saved her life.

Apart from "diffusion of responsibility" other variables such as threat, embarrassment and deservingness condition were also tested in the study of helping behaviour (Allen, 1972). It was observed that physical threat tended to decrease the number of correct ones more than the threat of embarrassment. Furthermore, the deservingness of the one in need does not seem to affect helping behaviour. A critical factor in whether people intervene or not is whether they define and perceive the situation as an emergency one requiring their assistance. In situations where the emergency is obvious as when an ill or drunk person collapses in a train it is likely that help will be offered, though hesitatingly in case of drunk (Piliavin, Rodin and Piliavin, 1969). Usually subjects in ambiguous emergency situations are less likely to intervene and are slow to do so even if they did. Furthermore, race of the victim is an important variable in helping behaviour under emergency situations. There is a clear tendency for same-race behaviour. The results of the study made by Gaertner and Bickman (1972) revealed that black subjects almost equally helped both blacks & whites. White subjects, on the other hand, extended less help to black victims as compared to whites. Even in non-emergency situations like donation to the Salvation Army, the tendency is to donate less when the solicitor is black than if the solicitor is white (Bryan and Test, 1967).

Not only the race but similarity in terms of nationality of the one in need of help is a determining factor in helping behaviour. Feldman (1968) found that helping behaviour is affected by whether

one is perceived as being a foreigner or a compatriot. It appears that the "we" feeling facilitates helping behaviour.

In yet another series of ingeniously designed experiments Bryan and Test (1967) studied altruistic behaviour in department stores and on a highway. They consistently found that the observation of helping models significantly increased the frequency of subsequent altruistic behaviour.

Many studies have aimed at the correlation between the sex of the bystanders and helping behaviour. Piliavin, Rodin and Piliavin (1969) report that men help more than women in emergencies. Similar results were found by Gaertner and Bickman (1972).

The above mentioned studies on helping behaviour have been conducted in the United States where the scope and facilities for investigation is immense. Very few studies have been made in Pakistan and fewer still have been field researches. Before starting the experiment the technique of investigation was tested in several locations. Quite a few friends warned us that the approach might not work since practically every one would offer to correct the misinformers irrespective of the sex and nationality of the victim; perhaps more corrections will be made in the case of foreigners as compared to the natives. Any how, the present study was undertaken primarily to acquaint ourselves with the techniques and difficulties involved in such naturalistic studies and secondly, to investigate the problem of bystander intervention in a society with different values than those of the western society. Perhaps, who knows, the study may produce a provocative and stimulating result.

METHOD

Subjects :

The subjects used were 105 female students of Karachi University who travel by Point Bus. The number of subjects was equally divided among the three conditions.

Location of the Study :

The study was conducted on the buses plying between the University and the city of Karachi. The Karachi University has a bus

service which takes the students to different parts of the city from 12.00 noon to 5.30 p.m. These are called Point Buses and the bus stand from where all the buses (numbering around 25) start is called the Point. The present study was conducted from the first week of May to last week of June and the observations were made from Saturday to Wednesday on 12, 1, 2.30 and 3.30 Point Buses.

Independent Variable :

The sex and nationality of the asker. In the first condition the asker was a female; in the second it was a male while in the third condition the asker was a male foreigner.

Dependent Variable :

The dependent variable in the study was whether or not the bystander corrected the misinformation given by the misinformer to the asker. The total number of corrections was broken down into two types of corrections : immediate and post corrections. Immediate corrections are those made by the bystander immediately after he heard the giver misinforming the asker and post corrections were those made by the bystander after the misinformer had left the bus.

Procedure :

The study was conducted at the bus terminus of the Karachi University. The various buses that take students to their homes were the site of the study. Three conditions were tested in the present study : Female-female condition, male-female condition, foreigner-female condition. Since the subjects were females the misinformer was always a female whereas the sex and nationality of the asker varied. The procedure remained the same in all the conditions. A female misinformer enters the rear of the Point Bus and sits down on the back seat or stands nearby. Appearing a little puzzled another person enters after a minute and directly asks the misinformer whether the bus was going to a place different from the one which it was actually bound for. The misinformer responds affirmatively and after a short while leaves the bus. Both the persons who sought the direction and the passenger who gave the direction were confederates acting out a given role. Subjects or bystanders were the innocent female students travelling in the bus.

The Point Buses were approached approximately 15 minutes before they were ready to start. Since the subjects were females only the rear seats of the buses were used. The misinformer entered the bus only when the back seats were occupied by at least two female students and took the seat or stood near the bystanders. After a minute when the misinformer had settled down, the asker, appearing somewhat puzzled, entered the bus and asked the misinformer directly if the bus was going to Nazimabad. The misinformer responded affirmatively. The asker thanked the misinformer for the information and took a seat nearby. The asker always asked if the bus was going to an area which it was not destined for as shown on the sign in front of the bus. If the bus was going to Society area the asker inquired about Nazimabad. On the Nazimabad bus he asked if it was going to Malir. In all cases the giver misinformed the asker before the innocent bystander had an opportunity to respond. The giver misinformed in a voice loud enough for the bystanders in the last row of the bus to hear it clearly. If the asker was not immediately corrected, he continued to remain in the bus, sitting or standing near the bystander. The asker positioned himself at very short distance from the bystander. He did not stare at the bystander but neither did he pretend to look out of the windows of the bus. A short while later, the giver who had initially responded to the inquiry stood up and left the bus very casually as most students do for drinking water, buying cigarettes, etc. The puzzled student (asker) remained seated near the other students.

The bus started and if the asker was not corrected by the bystander by the first stop of the campus (Refresho Stop), a slow ride that takes 10 minutes to reach it, then the asker left the bus. It was assumed that if the asker was not corrected within this distance, he would not be corrected at all. The dialogue between the asker and misinformer was carried on in Urdu whereas for the third condition in which the asker was a foreigner (Irani and Saudi Arabian) was done in English. Care was taken to give the reply in clear, confident tones loud enough to be heard by the asker and the bystander.

Slight difficulties were faced. Some observations had to be eliminated since either the confederates noticed friends sitting in the

observation bus or because some of the bystanders were so engrossed elsewhere that they did not appear noticing the dialogue between the asker and the misinformer.

RESULTS

As is evident from Table 1 that while the highest number of corrections was made in the case of male and female askers (85.7 each), the total number of corrections made in the third condition where the asker was a male foreigner was only 71.4%.

Table 1. *Number of immediate, post and total corrections made by the bystanders under different conditions.*

Direction Asker	Immediate Corrections		Post Corrections		Total Corrections		Total N
	No.	%	No.	%	No.	%	
Native Female	30	85.7	0	0	30	85.7	35
Native Male	27	77.1	3	8.6	30	85.7	35
Foreign Male	16	45.7	9	25.7	25	71.4	35

Table 2. *Number of immediate, post and total corrections made under different conditions in the questionnaire study.*

Direction Asker	Immediate Corrections		Post Corrections		Total Corrections	
	No.	%	No.	%	No.	%
Native Female	92	87.6	6	5.7	98	93.3
Native Male	74	70.5	10	9.5	84	80
Foreign Male	83	79	6	5.7	89	85.2

Whilst in the female condition the immediate and post corrections made by the bystanders were 30 and zero respectively, it was 27 and 3

respectively for the male condition. Thus we find no difference in total corrections (85.7%) between the two conditions. Albeit, there was a marked difference in the condition where the asker was a male foreigner. The immediate correction was 16 whereas the post correction was 9, making a total of 25 out of 35 (71.4%). When the data were subjected to statistical analysis no significant difference was found among the groups ($\chi^2=3.001$, df 2),

DISCUSSION

Socially responsible behaviour rests on the cultural norm which prescribes that a person should help those who are dependent upon him for help. However, there are certain prerequisites for such actions. The helper first defines the situation as clear or vague, soothing or risky. Not only that, he examines the plight of the help-seeker and assesses his relationship with the victim. Also, he takes into account the characteristics of the help-seeker and the physical or psychological barrier inherent in the situation. These and many more are important considerations in the study of helping behaviour.

However, the present field experiment was designed to explore the dimensions and extent of help expected to be given by a Pakistani girl to her compatriots and foreigners. To this end, three conditions were created: one in which both the asker and the misinformer were females; second, in which the asker was a male and third, in which the asker was a male foreigner.

The number of immediate corrections made by the bystanders was highest (85.7%) in the female condition. Surprisingly, no post corrections were made here. The most plausible reason for such a high rate of bystander intervention and help given seems to be the interpersonal attraction of the needy (Daniels and Berkowitz, 1963). Since the asker was of the same sex, it removed inhibitions, if any, in communicating with her and the slightest fear of the helping gesture being misinterpreted in any implicit way. Here the subject had, in fact, nothing to lose by way of correcting the misinformer. Also, the asker was a fellow student who also had to go through the long and tiresome journey home in the bus every day. The realization of the fact, what a botheration it is if one gets into the wrong bus, might

have aroused the feeling of sympathy resulting in the correction of the misinformer. Moreover, the strength of the "we" feeling and cohesiveness of the group was observed by the hostile behaviour of the bystanders towards the misinformer. Quite a number of girls cast an openly aggressive look to the misinformer and passed several interesting remarks.

So far as the question of not correcting the misinformer in the 5 observations are concerned, it must be remembered that hardly a situation is there where we get a cent percent positive result. For one reason or the other there are always some who remain unconcerned. Here, in this case, it may possibly be explained by the fact that since the study was made in the hot afternoon some of the subjects might have been feeling bad and bored and hence they did not feel like involving themselves in a business which was not theirs, any way.

Now, as regards the male condition, no difference whatsoever emerged between this condition and that of the female condition except that in the present case three post corrections were also made. The results are rather surprising, for in Pakistan there is usually a sex barrier. Girls are reluctant to talk to boys, let alone initiate the communication themselves. However, since the study was conducted in the university where there is a co-education and the atmosphere relatively more liberal, this barrier might have been removed. Moreover, the male asker was not considered as a stranger rather was taken as one of them and hence no hesitancy in making corrections. However, it was noted that the corrections were not as spontaneous as was the case with the female asker. But the number of post corrections was too small to merit further discussion.

In general, the behaviour of the subjects was not as aggressive as that of the previous condition. The wrong information given by a female to a male did draw some smiles and certain remarks from the male bystanders.

In the third condition where the asker was a male foreigner the results revealed the least number of immediate corrections and the highest number of post corrections. It is also apparent from Table I that the bystanders corrected the least in this condition. Several

explanations might be offered to account for this behaviour. Firstly, the most glaring factor seems to be the racial discrimination. In fact, Piliavin, Rodin and Piliavin (1969) have noted the tendency not to help one belonging to a different race. Moreover, Feldman (1968) believes that helping behaviour is affected by whether the victim is perceived as a compatriot or a foreigner. Hence, it is understandable why less corrections were made when the asker was a foreigner. In fact, one of the askers was a Saudi Arabian who seemed more like a native by appearance. It was just his accent that he was identified as a foreigner. Had he looked more like a foreigner from every angle of vision it could have resulted in a significant difference.

Although it may seem ridiculous to some but it is a fact that our culture does not encourage free intersex mixing. Hence the girls are shy enough to indulge themselves in matters where boys are involved, more so when the boy happens to be a foreigner.

There is yet another way of looking at the issue. Language, itself, might have posed a problem in the way of correcting the misinformer. Many Urdu medium students are reluctant to converse in English and hence in order to save themselves from embarrassment they might have preferred to keep quiet.

It should also be noted that this condition revealed the largest number of post corrections. It is just possible that the bystanders might have been in a conflicting situation. To make a correction in the presence of the misinformer would be tantamount to going against and possibly antagonising a member of one's own [sex and nationality. Hence it was understandable why so many post corrections were made in this condition.

Another factor that might considerably influence a bystander's helping behaviour is his perception of how helpless the help-seeker is. The individual who is perceived by observers as within his "home" territory is also considered to be able to take care of himself. The stranger, on the other hand, is seen as more helpless and less self-sufficient and hence dependent upon others (Allen, 1972). In a study Bryan (1966) observed that dependency elicits helping behaviour where the likelihood of material reward is remote. The present findings,

however, do not seem to approve of this proposition since the foreigner was not helped more than the compatriots. In fact, the foreigner comparatively received the least assistance from the bystanders.

Although "diffusion of responsibility" was not a variable under study yet it was noted that it did not work here. Many a time it was observed that more than one bystanders corrected the misinformer. Sometimes the number went up to five even though the question was never directed to them. Thus it can safely be concluded that Darley and Latané's hypothesis—the more people there are around, the less likely any of them will help—does not hold true, at least for the present sample used.

Many a study conducted by such investigators as LaPiere (1934) and McGrew (1967) have suggested discrepancy between verbal and overt behavioural responses. While LaPiere found negative verbal attitude but positive behavioural response, McGrew found positive verbal attitude but negative behavioural response. In order to investigate the relationship between actual and predicted behaviour, an attempt was made to replicate the present study as a questionnaire experiment. Obviously, the most appropriate sample of subjects to use in the questionnaire study would be one composed of students sampled in the field experiment. Since this was not practicable, a questionnaire was given to 105 female students chosen randomly from different areas of the University campus. Since the subjects were asked to predict their behaviour under all the three conditions given in the same questionnaire the sample in each condition remained 105.

A one-page questionnaire was used which portrayed exactly the same situations as the actual field study. The main situation was defined and they were simply asked to predict their probability of correcting the misinformer in the three already discussed conditions. Verbal instructions strongly emphasized that subjects were to answer according to what they actually thought they would do in such a situation. The results were analysed in the same manner as that of the field experiment. As is obvious from Table 2, the results showed that 87.6% of the female students would correct the female asker imme-

diately; only 5.7% said they will correct after the misinformer had left and 6.7% said they will not correct at all.

In the case of the male asker 70.5% of the students said they will correct him immediately: only 9.5% said they will make post corrections and 20% admitted that they will not correct. On the other hand, when the asker was a male foreigner, as much as 79% students predicted immediate correction; 5.7% said they will correct him only when the misinformer had left and 15.2% were sure they will not correct him at all.

Chi-square analysis of these data indicates a significant difference among the three conditions ($X^2=7.97$, $df\ 2$, $P<.05$). Further analysis revealed significant difference between male and female conditions ($X^2=8.08$, $df\ 1$, $P<.01$). Also, chi-square yielded a significant result in case of native female and foreign male conditions ($x^2=3.95$, $df\ 1$, $P<.05$). But when the native male and foreign male conditions were tested no significant difference emerged between the two conditions ($x^2=0.81$, $df\ 1$).

Hence it is clear that the behaviour reported on the questionnaire is different from the behaviour actually observed in the field. Whereas there was no difference in the total number of corrections between the male and female conditions in the field study, the answers to the questionnaire reveal that significantly more subjects will correct members of their own sex than one of a different sex. Cultural inhibitions may be the reason for such attitude. But when they actually come face to face with the needy male on a hot afternoon, it was really difficult not to help him. The widest difference found is in the total number of actual corrections made when the asker was a male foreigner. The difference is not altogether surprising when one considers the effect of such variables as the will to gain approval of the experimenter handing over the questionnaire and to be taken as an unbiased person. Most of the female students remarked, while filling out the questionnaire, that it was their responsibility to help the foreigner. But how many of us fulfill our social obligations can be seen from the results of the field study and the questionnaire study. Thus, it is clear that questionnaire data do not always correspond to what goes on in the real world.

In sum, the findings of the present study suggest that a compatriot is more likely to receive help than one who appears to be a foreigner. Sex of the victim had practically no effect on the helper. Furthermore, behaviour reported on the questionnaire seems to be different from the behaviour actually observed in the field.

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EFFECT OF LANGUAGE SIMILARITY BETWEEN THE EXPERIMENTER AND THE SUBJECT ON THE SPEED OF VERBAL LEARNING

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ABSTRACT

In an attempt to determine the effect of language similarity between the experimenter and the subject on the speed of verbal learning, it was found that the speed of verbal learning was significantly enhanced when the experimenter spoke in regional language (Punjabi) to Punjabi subject than when the experimenter spoke in nonregional language (English).

Similarity as a determinant of interpersonal attraction and attachment occupies a prominent place in modern social psychology. Degree of perceiving others as similar to one's own self is the basis of interpersonal relation as well as international relations. Greater the perceived similarity better the interpersonal/international relations. Researches on various dimensions of similarity, viz, attitudinal, economic, choice of a brand of an item of purchase, ability, and race and belief led to conclude that (i) we avoid those who differ and prefer those who have attitudes similar to those of ours (Byrne 1971, Heider 1958) even under what might seem to be unfavourable conditions (Bleda 1974), (ii) we like those who hold economic position similar to us (Byrne, et al 1966), (iii) we change our decision in the direction of one who appears to be a customer similar to us (Brock 1965), (iv) we like those who are equally competent in doing a task (Senn 1971), and (v) we are intimate with those who are similar in race and belief (Triandis and Davis 1965).

Among the many dimensions of similarity, language is one of them. A man who appears to belonging to the same speech community is generally considered a similar man. This is true in case of Pakistan as well. Punjabi is one of the regional languages of Pakistan. A man who speaks or converses in Punjabi to a Punjabi man is generally considered a similar man. So is the case with other regional languages of Pakistan.

Since researches show that perceived similarity of a man leads another man to accept his views or suggestions, a question arises whether the perceived similarity of the experimenter leads the subject take the learning task better.

As such, the present paper is an attempt to determine the effect of language similarity between the experimenter and the subject on the speed of verbal learning.

METHOD

Subjects :

44 female Punjabi students of an average age of 22 years served as subjects. They were students of third year honours class of English department. They were English medium students right from kindergarten school also. They used to speak Punjabi at home.

Experimenter :

A non-Punjabi lady of 25 years of age conducted the experiment. She was quite fluent both in Punjabi and English.

Design :

Using the odd-even method of division, the 44 subjects were divided into two equal groups, A & B. The experiment was divided into "a b and b a" sessions. In the first session the experimenter spoke first in Punjabi (a), a regional language, to Punjabi subjects of group A and gave instructions necessary for the conduct of the experiment. In the second part, the experimenter spoke in a non regional language i. e.; English (b) to the same group of Punjabi subjects. In the "b a" session of the experiment, the Punjabi subjects of group B were first exposed to nonregional language (b) and then to regional language (a).

Material :

Using the odd-even method of division, a list of 20 nonsense syllables was divided into two equal halves. One was randomly booked for the first part and the other for the second part of the session.

Procedure :

As the subject X of the "a b" session entered into the room for the first part (a) of the experiment, the experimenter greeted her in Punjabi; and asked her to take her seat. After a few minutes of light conversation (in Punjabi) she started giving her the following instructions in Punjabi.

"This is a memory apparatus. A few nonsense syllables will be exposed to you through this window. You are to learn by spelling them out. The nonsense syllables will appear one by one. After each has been exposed once, I shall ask you to recall them in the order they were exposed. You will be allowed one minute time to recall. I shall repeat this procedure until you are able to reproduce the entire list in correct order. Do it as fast as you can."

The number of trials taken by the subject X and the other 21 subjects of this session in learning a list of 10 nonsense syllables separately by the serial method of reproduction up to a criterion of an errorless trial was recorded.

The second part (b) commenced in the same way except that the experimenter spoke all in English. Here, also, the individual number of trials taken by the same 22 subjects in learning a second list of 10 nonsense syllables was recorded.

Like the subjects of "a b" session, the individual number of trials taken by the subjects of the "b a" session in learning the two verbal tasks by the same method of learning up to a criterion of an errorless trial was recorded.

RESULTS AND DISCUSSION

The number of trials taken by both the groups in learning a verbal task in two different situations was subjected to analysis of variance.

Table 1. Analysis of Variance

Source of Variation	SS	df	MS	F	p
Total	101.9	87			
Between subjects	52.4	43			
Subject groups (A)	2.5	1	2.5	2.11	>.05
Error between	49.9	42	1.18		
Within subjects	49.5	44	1.12		
Language types (B)	9.5	1	9.5	10.10	<.01
A X B	0.2	1	0.2	0.21	>.05
Error within	39.8	42	0.94		

Table 1 showed that the speed of verbal learning of one group of subjects was not significantly different from that of the other group. Speed of verbal learning in a situation where instructions were given in regional language was significantly different from the speed taken in a situation where instructions were given in nonregional language ($p < .01$). The contribution of both the factors A and B (i.e., subject groups and language types respectively) taken together was insignificant. This meant that factor B had a major contribution in the variance of performance of subjects. Significant effect of factor B led to the use of t-test for pairwise comparisons.

Table 2. t test of the Difference between Means for Correlated Groups

Situation	Mean	d	d ²	t	df	p
Instructions in Punjabi	7.27					
Instructions in English	8.00	-16	54	2.42	21	<.05
Instructions in English	7.59					
Instructions in Punjabi	7.00	13	45	2.08	21	=.05

Table 2 indicated that average speed (7.27) of learning was significantly greater (i.e., smaller average trials) in a situation where the experimenter gave instructions in the Punjabi language first than the average speed (8.00) taken in a situation where the instructions

were given in the English language last ($p < .05$). Average speed (7.00) was better also when the experimenter used Punjabi language last than (7.59) when English was used first ($p = .05$). Significantly greater speed in both the situations could be attributed to the feelings of similarity the subjects might have felt toward the experimenter who spoke in a language native to them.

The t-test, a measure of the significance of the difference between the average performance of the two independent samples, was also carried out in order to determine the primacy-recency effect of the language.

Table 3. t test of the Difference between Means of Independent Samples.

Language spoken	N	Mean	SD	SEM	SED	t	df	p
Punjabi first	22	7.27	1.16	0.24	0.31	0.87	42	>.05
Punjabi last	22	7.00	0.97	0.20				
English first	22	7.59	0.92	0.19	0.29	1.41	42	>.05
English last	22	8.00	1.05	0.22				

Table 3 indicated that both regional and nonregional languages spoken first or last had equal attraction to subjects ($p > .05$). There was no primacy-recency effect of language on performance.

It may be concluded that language, a factor perceived as common between the experimenter and subject, might have led the subjects to feel that the experimenter was a person who was similar to them and, consequently, to perform the task better.

To listen to a person or to carry out a task suggested by a person who is like us is easier and more satisfying than by a person who is not perceived as one of us.

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SOME QUALITIES OF A CLINICIAN

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Every individual faces difficulty, in one situation or the other, but some solve their problems while others fail to do so. The failure in problem solving behaviour means the persistence of tension in the individual. The state of tension is a painful and disturbing state, consequently, nobody wants to remain in it for long. Such an individual comes to a clinician to seek a solution of his problem; to expect help from him in getting rid of his difficulties; to ask him for assistance in getting release from anxiety, freedom from conflict and achieving maximum satisfaction and happiness. The clinician and the individual with a problem sit together with a definite purpose. The clinician extends his help to the individual seeking help. The latter derives benefit from the former's help. This professional set up is a face to face relationship. The relationship is directed towards a definite aim. To achieve this objective a comprehensive understanding of the personality of the individual seeking help is a matter of great importance. Parallel to it or even a matter of greater importance is the personality of the clinician himself. The personality of the clinician plays a considerable role in the effectiveness of his art of moulding the individual towards a better adjustment. His personality make-up colours the information gathered as well as the outcome of his attempts to help the individual. The clinician should be effective in dealing with individual coming to his clinic. Among the many qualities of a successful clinician the following are just a few important ones-

Self-appraisal is essential. A clinician should study himself first. He should know his own emotional difficulties and adjustment inadequacies. A failure to be emotionally healthy blocks the right understanding and right appreciation of the individual's problems and consequently the right interpretation of the trouble of the individual under study. All too frequently a clinician with

unrecognized problems of his own may project them on individual seeking his help. For example, the clinician who has not learned to adjust to his own parents may see family conflicts at the base of most of the individuals coming to him for help. Or a clinician who does not understand or accept his own particular problems, or who has unresolved problem(s) of one nature or the other may tend to insist that most of the individual problems stems from this type of maladjustment. This usually means that every clinician should himself undergo therapy not only once, but often, several times, as he gains deeper and deeper insight into himself. For this he may go to his teacher, a senior clinician or even a colleague.

The clinician should be able by his talk and attitude to create a friendly atmosphere within a few minutes. This friendly atmosphere is technically called 'rapport'. Rapport is a good friendly feeling and good interpersonal relation. Rapport rests on clinician's courtesy, co-operation, confidence, sincerity and helping attitude toward the individual with adjustment problems.

If an individual happens to be illiterate or inferior in social status, or junior in age he should not be looked down upon. The clinician should show respect because the individual under treatment is, after all, a human being. To have problems and difficulties is not something uncommon or surprising. It is only the inability of the individual to solve the problems that has brought him for treatment. So it should be realised that he is a human being plus a problem. He needs to be understood and respected as an individual. If he feels that his clinician respects him, understands him and accepts his viewpoint he unhesitatingly begins speaking out his love and hatred, his marital dissatisfaction, his family problem, his attitude towards boss or colleague and even his murderous or suicidal attempt.

The clinician's interest in the individual under treatment should find expression in his talk, in his facial expressions, and even in the posture of sitting. His helping attitude has a healing value.

When an individual shows adjustment difficulties his family and friends generally do not listen and appreciate him as he wants them to do. The clinician should know that the individual is deprived of a

sympathiser and a good listener. So a clinician should be a good listener and not merely a passive one. He should pay heed to what the individual says or whispers. He should also restate the attitude or clarify the feelings of the individual, whenever necessary.

A clinician is expected to respect the confidential nature of his knowledge of the individual seeking help, and not to discuss them with others, except where this is necessary for the welfare of the individual. He should not release documentary evidence about the individual to any one without the latter's (or his parent's or guardian's) permission. Case records or test records should never be put on display. Information which might harm the individual should never be revealed to any one. The leakage of any such information goes against the trust and confidence the individual has to develop in the clinician, if the clinician is really to be able to help him. The professional sanctity of the therapeutic relationship should remain inviolate.

A clinician should put himself in the place of the individual seeking help, peep into his symptoms, study his sufferings and appreciate the genuineness of his complaints, no matter how ordinary or unreasonable they might appear.

He should develop the attitude of self-detachment. He should not feel attraction and attachment to the individual while dealing with the latter friendly and sympathetically. He should not involve himself emotionally or develop weakness for the sex of the individual. In fine, he should feel himself professionally, not emotionally, related to the individual.

He should be well-informed in his talk and impressive, not imposing in his tone. He should use simple and understandable language and avoid terminology and ambiguity. He should use the interpretations at proper times.

He should not be in haste. During therapy he should not show that he is too busy to give sufficient time to the individual to talk about problems. He should not interrupt the flow of both verbal and nonverbal communications of the individual and should wait for an appropriate turn to make remarks and interpretations. He should also

let the individual think, if the individual assumes a thinking mood. He should not make haste in breaking the ice.

The disturbed individual may use improper language. The clinician should be able to accept the unexpected language just as he accepts other aspects of the individual's behaviour. He should not react personally or negatively to it if he aspires to be able to help the individual. He should possess a good amount of tolerance.

He should not criticise and condemn the individual, refute and reject his views, depreciate and deprecate his tendencies, for such types of acts may aggravate the already disturbed emotion of the individual seeking help. He should not make any value judgments.

He should realise his responsibility and act responsibly. He should not have any amount of passion, pride, and prejudice in his talk. He should try to help the individual adjust with vision and wisdom. He should have seeing eyes, hearing ears and a thinking mind.

All these qualities are acquired both by training and experience. Clinician appears with the mask of these qualities before an individual seeking his professional help. These qualities make the clinician effective in his profession.

**CROSS CULTURAL CONCERNS IN STANDARDIZED TESTING :
SOME SUGGESTIONS ABOUT THE USE OF THE
MMPI IN PAKISTAN**

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ABSTRACT

The problems associated with use of American tests, such as the MMPI, when used in Pakistan are explored. It was found that there is a significant correlation (.72) between elevated T-scores on the MMPI in a normal Pakistani population and the number of "culturally bound" items on a scale. Several possible "correction" formulae to make the MMPI more useful in Pakistan are suggested.

Personality inventories, intelligence scales, aptitude and achievement measures, and many other standardized psychological tests currently in use in Pakistan were developed and normed in the United States or Britain. In using these tests, a number of problems arise and certain cautions must be exercised. The purpose of this paper is to explain some of these problems, and suggest means for their more accurate application, looking specifically at the Minnesota Multiphasic Personality Inventory (MMPI).

Translations :

With tests developed in English, such as the MMPI, the tester in Pakistan has two options : To use the test with only those subjects fluent in English, or to translate the test into Urdu (or the most prevalent language of the population to be tested). Each poses a special set of difficulties that must be surmounted.

Obviously, the English language version of the MMPI should only be used with subjects fluent in that language. However, this does not ensure a uniform understanding of test items across subjects. Differences in grammar, construction and word usage between Asian and American speakers of English introduces undefined variance in

the test results. Furthermore, fluency, as self-defined by the test subject, can have many different meanings. Unless a standard test of English fluency is also administered, the tester has little or no way of knowing whether variations in T-scores are a function of language or emotional problems. For example, when the MMPI, English version, was administered to 24 Pakistani "fluent English speakers", the number of "?" (cannot say) responses ranged from 0 to 60. Does this range result from lack of comprehension or reluctance to answer the question? It is not possible to determine. Finally, the major objection to using the English version of the MMPI in Pakistan is, of course, that its applicability is severely limited. Those settings—i.e., large mental hospitals where professional time is at a premium—where the MMPI is most useful in making a rapid diagnosis are unlikely to have many patients who are fluent in English. Overall, the English version of the MMPI can be of only very limited value in Pakistan.

The Urdu version of the MMPI produced by Mirza (1976) avoids the problems noted above and in some ways is, of course, much more useful in Pakistan. The MMPI has been translated into many languages: Arabic, Iraqi, Turkish, Japanese, Korean, Chinese, and most European languages. However, all translations pose new problems in interpreting the results, as reviewed by Butcher & Clark (1979), Sechrest, et al (1972) and others have noted. These problems are the translation of idiom and slang, the translation of exact shades of meaning and emphasis, items based on culture-specific facts, and items based on social, religious and family customs. Each of these problems is reviewed below.

Idioms and Slang :

Over 70 items of the MMPI contain American idiom or slang. These can be extremely difficult to translate accurately. For example, the item "When I start a new job, I like to know who to get next to" was translated by a bilingual reader in "When I start a new job, I like to know who to stand next to." Thus, unless a translator is very fluent in both languages and can find an Urdu idiom or phrase that captures the meaning of the American phrase, many items will lose their emotional and social meaning in translation.

Exact Shades of Meaning :

In an exercise on translating the MMPI, six graduate clinical psychologists, fluent in English and Urdu, consistently made errors in translating terms of frequency, certainty and degree. For example, "few" was translated as "several", "I believe" for "I suppose", and "very" for "enough". These errors occurred even in very simple sentences and were more frequent in grammatically complex sentences.

It is difficult to determine the degree of variance introduced into the test because of the difficulties of translation. However, these two types of problems, idiom and exact meaning, can be avoided by the process of "back translation"—i.e., by having the test translated English-Urdu by one translator and then translated Urdu-English by another, thus providing a check on the accuracy of the translation.

Cultural Facts :

Even an excellent translation cannot escape the problems posed by those items based on American cultural facts. The item "I believe Lincoln was a greater president than Washington" is an obvious example of this. However, over 10 items on the MMPI are similar. For example, "I like to read Popular Mechanics magazine", or, "I like to read Alice in Wonderland". In these cases there must be a translation into equivalent meanings—i.e., appropriate Pakistani cultural facts must be substituted. This is extremely difficult to do in most cases and again, undefined variance is introduced into the test results. Mirza, in his Urdu version of the MMPI, does not substitute "equivalent meanings" in these types of items, and in the opinion of this author, wisely so.

Customs :

Nearly 80 items on the MMPI refer to social, religious, or family customs. These items present the most serious problem in using an American test, with American norms, in another culture. Clearly the pattern of responses to items referring to "church", "prayers", "alcohol"; "sex", and "betting", will be different in Pakistan than in America. However, some items are more

subtle, but cannot be assumed to have the same meaning in both cultures—e.g., "I would like to be a singer", or "In school, I was sometimes sent to the principal for cutting up". On American norms, the latter item is answered "True" by about 12% of test subjects. It is easy to assume that the frequency of "True" responses would be much lower in Pakistan.

With these types of items, the problem lies not in the translation per se, but in the interpretation of results. Do different response patterns on these items reflect a difference in level of pathology in the two cultures, a difference in response set (i.e., how much is "admitted" on the test) or simply a difference in customs or values? Some authors have, in their translations, simply attempted to substitute "equivalent items". For example, in one Japanese version of the MMPI, the author substituted "I believe I have a spirit" for "I believe in God", arguing that most Japanese do not subscribe to the western idea of "God" and that the substitute item would generate the same response pattern in a Japanese population as "I believe in God" does in an American one: (Butcher & Clark, 1979). However, the question must be raised whether these substitutions are indeed equivalent. This question can only be answered by re-norming the test.

Developing new norms for a translated version of the MMPI is the obvious answer to *all* of the problems noted above. In Pakistan this work has been begun by Mirza and others. However, re-norming a test like the MMPI is an immense task. The original development of the MMPI took over 10 years and many thousands of man-hours. Over 1600 "normals" and 1000 "pathological cases" were tested in the construction of the original test and there have been hundreds of studies further defining and refining the norms (Hathaway & McKinley, 1979). To repeat this process in Pakistan would be an awe-inspiring task and, in light of the limited applicability of the test, of questionable value.

Is the answer then to simply abandon the MMPI, since its use in Pakistan is fraught with so many difficulties? This is what many practitioners have done. However, if accurate results could be obtained with the test, the ease of administration and scoring would be of

great benefit when professional manhours are limited. Thus, perhaps we should turn to another method besides re-norming or "equivalent meanings" of correcting for the distortions introduced by translation of the test;- Development of a correction factor or formula that could be applied to the T-scores obtained on the Urdu version of the MMPI.

Correction Factors :

Mirza (1977) recommends that a T-score of 90, rather than 70 be used as a cut-off point for pathology on scale 8 (schizophrenia) due to the elevation of scale 8 scores in the general population. A small sample of "normals" in Pakistan (N=24) shows elevations on scales F, 2, and 8, with all scores above the mean (T=50). Butcher & Clark (1979) note that in Mexico, Japan, Hong Kong, and many other foreign countries also noted an elevation of scale 8 scores in the normal population, and also scales 6 (paranoia), 2 (depression) and F. These elevations have been usually interpreted as reflecting differences between the "typical American" and the "typical foreign subject." However, it is very interesting to note that, across many different cultures, the same scales are elevated. Are we to assume then that the "typical Chilean" is similar to the "typical Hong Kong resident"? This seems unlikely.

The similarity of scale elevations across different cultures suggests that the problem, or distortion, may lie in the scales themselves, not the various populations. To test this hypothesis, we must first return to our early data-i. e., which items of the MMPI are most "culturally bound", using idiom, cultural facts or based on customs.

Review of the MMPI shows that approximately 173 items fall into the "culturally bound" category. (See Appendix A for a list of these items.) The distribution of these items across the MMPI scales is as follows;

SCALE:	L	F	K	1	2	3	4	5	6	7	8	9	0
No. of "culturally bound items" :	2	20	5	6	17	10	20	24	11	5	19	15	19
Total no. of items on scale :	15	64	30	33	60	60	50	60	40	48	78	46	70

For comparison, the mean T-scores of a sample of 20 "normal" Pakistanis is given below :

SCALE :	L	F	K	1	2	3	4	5	6	7	8	9	0
Average T-score :	56	63	52	59	64	55	59	66	58	60	70	62	56

The correlation, as found by the Spearman Rank Order Test, between the average T-scores and the number of "culturally bound" items in a scale is .72, which is significant at the .05 level. Statistically, this suggests that 50% of the variance in the T-scores is accounted for by the "culturally bound" items on a scale, the more likely it is that a "normal" Pakistani subject will have an elevated T-score on that scale,

This finding supports the hypothesis that the elevations on the MMPI found in Pakistan and other countries are, in part, an artifact of the test rather than a reflection of a true difference in levels of pathology. It also suggests several possible methods for correcting for this artifact.

One method of correction would be to simply eliminate the "culturally bound items" from the test. This would be the easiest method of correction. Formulae to extrapolate the T-score from the remaining items on the scale would have to be developed and tested, however, to make this method valid.

For example ; The schizophrenia scale has 48 items, 19 of which are "culturally bound". If these 19 items were eliminated, the subject's T-score would be calculated on how many of the remaining 29 had been answered in the pathological direction and a percentage of "pathological responses" obtained. This percent could then be reapplied to the total, i. e., 48, and the corrected T-score found. To take a hypothetical case : Subject X has a raw score of 35 (T-74) on scale 8. Examination of his answers shows that he answered 20 or 70% of the culture fair (i. e., not culturally bound) items in the pathological direction. Applying this estimate of pathology *not due to* confusion on culture bound items to the total possible score of 48, we have a corrected raw score of 33 with a T-score of 71. On subject B, with a score of 35, uncorrected, we find that he answered 16 in the pathological direction. His corrected score would be $(16 \div 28) \times 48$

or 27 (T-score = 58). The correction formula for any scale would be $n(X \div Y)$ where N = total no. of items possible on the scale, X = no. of "culture fair" items answered in a pathological direction, and Y = no. of "cultural fair" items. Standard conversion or correction tables could be worked out for each scale for Pakistani subjects. (See Appendix B for sample conversion tables.)

This method has the advantage of being simple, easy to apply, and not requiring any norming. In addition; one can then assume that the remaining variance in the scores is *not* due to misunderstanding of idiom, familiarity with American cultural facts, or major differences in custom. However, as with any shortened form of the MMPI, the reliability and validity of the test may suffer. (See Dahls-
trom, 1980 and Walker, 1967 for discussions of these problems.) The assumption that one can extrapolate from one part of the scale to the whole scale becomes less valid as the proportion on which the extrapolation is made becomes smaller, (i. e., if one extrapolates from 98% of the items to the whole, it is more likely to be valid than from 60%).

A further refinement of this approach would be to determine the actual response pattern of a group of "normal" Pakistanis on the "culture bound items" on each scale. For each scale, those items where the "normal" Pakistani response differed from the American "normal" response could be determined. This figure could then be used as a constant to be subtracted from the raw score achieved by any Pakistani on that scale. For example, of the 19 culture bound items on the Sc scale, let's assume it was found that 8 were always answered in the "pathological" direction by Pakistani normals. In other words, these 8 items are *not* counted as pathological on an individual's score. Thus, 8 is subtracted from his score. The correction formula for any scale would be $X - C$, where X is the raw score and C is the constant generated by norming of Pakistani responses to "culture bound" items.

This approach has the advantage of reducing the number of items to be eliminated from the MMPI, but requires some norms to be developed. However, considerably less work would be required to determine the "normal" response pattern to "culture bound" items than to renorming the entire test.

A more formal test of what actually constitutes the group of "culture bound items" and empirical tests of the above-mentioned "correction factors" will appear in the future by the current author.

Additional variations on correction factors for the MMPI are possible. It is hoped that this paper will serve to spark interest in this topic and thus broaden the applicability of the MMPI in Pakistan.

SUMMARY

The problems associated with tests developed and standardized in the United States when used in Pakistan were explored, examining the MMPI in particular. It was found that there is a significant correlation (.72) between the number of "culturally bound" items on a scale and the elevation of that scale in a sample normal population in Pakistan. This suggests that these elevations are an artifact of the test rather reflect differences in levels of pathology between the two cultures. Several possible formulae that would correct for this artifact are suggested and further exploration of this issue encouraged.

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Appendix A**MMPI "CULTURALLY BOUND" ITEMS**

1. Items using American idiom or slang: 10, 16, 19, 26, 28, 29, 35, 38, 39, 41, 43, 56, 57, 62, 71, 76, 79, 82, 84, 88, 110, 111, 118, 143, 146, 162, 171, 181, 233, 236, 241, 248, 260, 268, 271, 277, 298, 311, 331, 361, 375, 379, 380, 381, 382, 404, 409, 410, 419, 426, 437, 438, 447, 452, 455, 465, 468, 475, 477, 481, 489, 495, 498, 500, 502, 505, 506, 509, 516, 531, 534, 549, 555, N=64
2. Items referring to American cultural facts: 1, 70, 81, 118, 126, 146, 213, 255, 256, 295, 346, 463, 513, N=13
3. Items referring to American social, religious or family customs: 11, 14, 18, 20, 25, 27, 37, 50, 53, 58, 63, 69, 87, 92, 95, 98, 101, 116, 126, 133, 179, 199, 208, 215, 229, 231, 235, 239, 249, 285, 297, 302, 320, 324, 376, 378, 391, 417, 427, 430, 435, 446, 457, 460, 462, 466, 470, 474, 483, 486, 488, 490, 491, 519, 538, 542, 548, 550, 558, 566, N=60

Appendix BSAMPLE CONVERSION TABLES TO CORRECT FOR
"CULTURALLY BOUND" ITEMS ON THE MMPI

Formula : $Dc = N (X \div Y)$ where Sc is corrected raw score, X is no. of "culture fair" items answered in pathological direction, Y is no. of "culture fair" items on a scale and N is the total no. of items on the scale.

F Scale conversion table

When X = 1 2 3 4 5 6 7 8 9 10 etc.

Sc = 2 3 4 6 8 10 11 13 14 16 etc.

D Scale conversion table

When X = 1 2 3 4 5 6 7 8 9 10 etc.

Sc. = 1 3 4 6 7 8 10 11 12 14 etc.

Sc Scale conversion table

When X = 1 2 3 4 5 6 7 8 9 10 etc.

Sc. = 1 3 4 5 7 8 9 11 12 13 etc

NATURALISTIC—EXPERIMENTAL APPROACH: AN OVERVIEW

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It would be ideal indeed if we could gather all our psychological knowledge from the laboratory experiments, because an experiment is relatively precise and definite. Although no experiments are entirely perfect, they are very helpful in enabling us to reach far-fetched conclusions with considerable accuracy in and assurance about what we have observed. The logic behind the use of manipulative experimental mode of research has been extensively described in literature (Campbell and Stanley, 1963, Selltitz, Jahodo, Deutsch and Cook, 1961). In fact, for more than a century the laboratory experiment has been considered by the psychologists as the basic and a prime source of data for behavioural science.

Unfortunately, it is not always feasible to apply the experimental method in every situation. Some areas of observation can hardly be controlled, and there are others, which can never be controlled. Under such circumstances there is no alternative left, except to wait and simply observe the things as they happen and draw our own conclusion as carefully and accurately as possible. Very recently there is a growing and healthy realization that the person in the laboratory is not the same as the person beyond the laboratory. If he is behaving in the laboratory in one way, it is not always necessary that he will behave in the same way in a real life situation. In the laboratory he is passive and something to be experimented upon, whereas in the real life situation he is free to behave in his own true manner. The moment he enters into the psychological laboratory, he enters with preconceived notions about the experimenter, the purpose of the experiment, and about his own self. Such preconceived notions may affect the results of the investigation under consideration. In fact, in quite a few cases (in questionnaire type assessment), he guesses the purpose of the experiment and hence is not willing to expose his true self to the stranger. Under such peculiar circumstances experiments are difficult to conduct and responses are not easy to interpret.

An alternative to laboratory investigations is observation and experimentation in the actual field setting. We gain appreciably if we study behaviour in its everyday naturally occurring context and adopt naturalistic methods of research. In such settings behaviour is more likely to be less distorted, less fragmentary, more free and less constrained and restricted. Psychology and specially social psychology would profit by increased attention to the world beyond the laboratory. It may be mentioned that this idea is not new. As early as 1943 Lewin said: "Although it appears possible to study certain problems of society in experimentally created, small, laboratory groups, we shall have also to develop research techniques that will permit us to do real experiments within existing "natural" social groups. In my opinion the practical and theoretical importance of these types of experiments is of the first magnitude".

Even though the literature dealing with the naturalistic mode of research is in no way comparable to experimental research either in quantity or quality, yet there are happy signs of keen and clear interest in this direction (Bickman and Henchy, 1972; Festinger and Katz, 1953; Sigall, Aronson, and Van Hoose, 1970; Webb, Campbell, Schwartz, and Sechrest, 1966; Willems and Raush 1969). Scientific methods of data collection are limited by the awareness of the human subjects about a specially induced situation in which he is expected to respond. He is thus reacting not only to the experimental stimuli but also to the other extraneous factors including the presence of the experimenter. The experimental method may thus be termed as reactive. Against this background, let us discuss an area of field research where Non-Reactive techniques have been profitably utilized. In these investigations, the subjects were unaware that they were participating in an experiment or that they were being treated in any special way. Thus they could not react to the factors other than the one being observed. This can thus be termed as non-reactive mode of data collection.

There are also certain ethical issues involved where the deception of large number of people is concerned. Since the greatest attraction of this research is that the subject is kept fully unaware of his participation in an experiment, he cannot be forewarned. The question

whether people should be used in various studies without their consent is difficult to answer. But I do not think it to be a very pertinent question in this context. So long as the field experiments do not disrupt the normal behaviour of the people, the consent of the subjects is not of crucial importance.

In the end it may be emphasized that it would be wrong to assume that naturalistic and manipulative-experimental research do not have much in common. In fact, the two approaches are mutual and highly complementary. To make any hasty and sharp division between experimental and naturalistic modes of approach is to miss the whole point of mutual inter-dependence of research techniques. It is, therefore, suggested that no single technique for the study of behaviour is sufficient and it is always profitable to use different tools and techniques to check and evaluate our results in behavioral sciences. We may also state at this point that because of its ease of application and lack of emphasis on expensive equipments, non-reactive techniques of data collection are highly suitable for application in developing countries where we still have a vast area of human behaviour waiting for exploration.

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LOG-LINEAR MODEL IN PSYCHOLOGICAL DATA ANALYSIS

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ABSTRACT

A log-linear model, a procedure already discussed by statisticians, has often been ignored by researchers in behavioural sciences. According to log linear model the logarithm of the average frequency in the entire population $\bar{X}$ can be expressed as :

$$\text{Log } \bar{X} = (A \ B)_{ij} + (A)_i + (B)_j + (\text{Over all Effect}).$$

$$\text{Log } \bar{X} = (A \ B)_{ij}^{(12)} + (A)_i^{(1)} + (B)_j^{(2)} + (A \ B)^{(0)}$$

The analysis of a 2-way contingency table requiring the testing of interaction parameter $(A \ B)_{ij}^{(12)}$ becomes informative if the log-linear model is used.

Researchers who prefer to be precise and accurate in their reports use statistics. Like other statistics, chi square (X^2) is used in psychological researches. X^2 is based on certain assumptions. It is used in three situations: (i) to determine the nature of score distribution, (ii) to determine the nature of association between psychological variables, and (iii) to determine differences of response patterns of one or more groups of individuals.

The application of X^2 to the third situation is the focus of our attention. We often take interest in determining significance of response patterns of men, women and children to a question, for example, Is Coke a tasteful drink? The hypothetical responses of the three groups of individuals are presented in a contingency table given below:

	Very tasteful	little tasteful	Not tasteful.
Men	f_{11}	f_{12}	f_{13}
Women	f_{21}	f_{22}	f_{23}
Children	f_{31}	f_{32}	f_{33}

In this situation, X^2 formula $\sum \frac{(f_o - f_e)^2}{f_e}$ is generally used.

The formula intends to see the difference between the obtained responses and the expected responses of individuals.

The authors here attempted to analyze the data (response patterns of men, women and children) in terms of row, column and interaction.

The analysis of contingency table becomes much more elegant if we introduce the log-linear model, a procedure already discussed (Anderson 1974, Anderson 1980, Birch 1963, Goodman 1970 and Haberman 1974) but often ignored by Psychologists. According to loglinear model the logarithm of the average frequency in the entire population $\bar{X}$ can be expressed as :

$$\log \bar{X} = (A B)_{ij} + (A)_i + (B)_j + (\text{Over all Effect})$$

$$\log X = (A B)_{ij}^{(12)} + (A)_i^{(1)} + (B)_j^{(2)} + (A B)^{(0)}$$

Where $(A B)_{ij}^{(12)}$ = Interaction parameter in cell (i,j) for criteria 1,2. It gives the joint effect of criteria 1 and 2.

$(A)_i^{(1)}$ = Row effect parameter in row (i), for criteria 1. It gives the effect of criteria 1.

$(B)_j^{(2)}$ = Column effect parameter in column (j) for criteria 2. It gives the effect of criteria 2.

The analysis of a 2-way contingency table requires that the interaction parameter $(A B)_{ij}^{(12)}$ be tested. The procedure to test it is as follows:

Step 1: Set the Null Hypothesis $H_{12} : AB_{ij}^{(12)} = 0$ for all values of i & j.

The hypothesis is that the two attributes in each cell do not interact.

Step 2: To test step 1, find the sample estimates;

$${}^A (AB)_{ij}^{(12)} \text{ of } (AB)_{ij}^{(12)} \text{ i.e.,}$$

$$\hat{(AB)}_{ij}^{(12)} = \log x_{ij} - \frac{1}{k} \sum_{j=1}^k \log x_{ij} - \frac{1}{m} \sum_{i=1}^m \log x_{ij} + \frac{1}{mk} \sum_{m,k} \log x_{ij}$$

$$\text{and Var } \hat{(AB)}_{ij}^{(12)} = (1 - \frac{2}{k}) (1 - \frac{2}{m}) (x_{ij})^{-1} + \frac{1}{m^2} (1 - \frac{2}{k}) \sum_{k,r} (x_{rj})^{-1} + \frac{1}{k^2} (1 - \frac{2}{m}) \sum_{i,t} (x_{it})^{-1} + (\frac{1}{mk})^2 \sum_{r,t} (x_{rt})^{-1}$$

The statistics " $\hat{(AB)}_{ij}^{(12)} / \sqrt{\text{Variance } \hat{(AB)}_{ij}^{(12)}}$ " follows a standard Normal variable, when $(AB)_{ij}^{(12)} = 0$, and when its value is compared with ± 1.96 , the significance of $\hat{(AB)}_{ij}^{(12)}$ can be found at 95% level of confidence.

Step 3 : (a) If $(AB)_{ij}^{(12)} = 0$ is accepted for all, i, j , the conclusion would be that the criteria 1,2, have no interaction for all i and j .

(b) If $(AB)_{ij}^{(12)} = 0$ is rejected for all, i, j , then the conclusion would be that the criteria 1,2, have significant interaction, for all i, j .

(c) It is possible that $(AB)_{ij}^{(12)} = 0$ is accepted for some i and j and it is rejected for other values of i, j . In this case interaction is significantly large in some cells (i, j) and insignificant in others.

After the above mentioned analysis of contingency table with respect to the parameter $(AB)_{ij}^{(12)}$, we proceed to the analysis of the parameters $(A)_i^{(1)}$ and $(B)_j^{(2)}$.

However, it has to be noted that the analysis of the parameters $A_i^{(1)}$ and $B_j^{(2)}$ would be acted upon if the parameter $(AB)_{ij}^{(12)}$ has been accepted as 0.

Under the hypothesis $(AB)_{ij}^{(12)} = 0$ for all i and j , the procedure for the analysis of $(A)_i^{(1)}$ and $(B)_j^{(2)}$ is as follows:

Step 1: The testing rule when $(A)_i^{(1)} = 0$ and $(AB)_{ij}^{(12)} = 0$ is :

$$Z_1 = 2 \sum_{i=1}^m X_{i.} \{ \log_e X_{i.} - \log_e (-\frac{X_{i.}}{m}) \}.$$

The above calculation shows that the values when compared with ± 1.96 are found to be significant only in those cells which are shown by a * mark. In other cells the values are insignificant. It may therefore be said that people holding higher values of job satisfaction (e.g. see row numbers 6, 7, & 8) are prone to committing smaller measures of offences, as compared to persons holding smaller job satisfaction (see column numbers 1, 2 & 3). The table 1 also shows that people, even with the highest level of job satisfaction (see row no 8) can commit offences of a substantial magnitude (see columns 1 & 5).

A look at table 2 shows that except for a small number of cells, the interaction (AB^{12}) is insignificant, in the majority of cells. The few cells where Z_{ij} is significant require further analysis, which can be performed by making separate tests regarding row and column effects.

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CONTENTS

The Scope of Psychoanalytic Therapy in Pakistan	...	3
Farrukh Z. Ahmad & S. S. Jaleel		
• Multiple Administration of the MMPI with	...	
Schizophrenics	...	23
Laeq Mirza		
Conformity Among Females in Japanese,	...	
Indian and Pakistani Societies	...	37
Abdul Haque		

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THE SCOPE OF PSYCHOANALYTIC THERAPY IN PAKISTAN

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ABSTRACT

The need for developing therapeutic interventions suited to socio-cultural and economic conditions prevailing in Pakistan has been stressed. Classic psychoanalytic techniques which include the use of the couch, free association, the analysis of resistances, the handling of transference and working through have been discussed. These techniques were evaluated in the context of their potential application in Pakistan and suggestions regarding therapeutic approaches that the clinician can adopt have been made.

1. RATIONALE AND INTRODUCTION

Pakistan society being in a state of transition and subject to the stresses and strains typical of developing countries is witnessing an increasing incidence of mental illness. The need is more urgent than ever for selecting and evolving psychotherapeutic techniques and interventions that are uniquely suited to the Pakistani personality and Pakistani cultural conditions.

The present paper will deal with the relevance and application of classical psychoanalytic techniques in Pakistan.

Fread (1856-1939), the father of psychoanalysis, had perhaps the greatest impact on the understanding of the human mind and revolutionized how we think about ourselves. He spent almost his entire life in Vienna where he invented and developed psychoanalytic theory and therapy.

Fread discovered for science the meaningfulness of dream life and thereby exposed the mechanisms by which we habitually deceive ourselves. Through a series of concepts such as transference, infantile sexuality, aggression, defence, identification, regression, and by means of the technique of free association, he transformed our image of man (Roazen, 1976).

Psychoanalytic technique was derived from the treatment of hysterical patients by hypnosis. Hypnosis was subsequently discarded by Freud in favour of free association. Psychoanalytic technique consists essentially in instructing and helping the patient to associate freely, in interpreting both his associations and the obstacles he encounters in trying to associate, and in interpreting his feelings and attitudes toward the analyst.

Freud also described the psychoanalytic method as rendering unconscious ideas conscious, in a series of uncomfortable discoveries that produce psychological resistance in the patient. But for Freud there was no path to a successful psychoanalysis other than bringing unconscious material into awareness. The therapist's job, then, was to help the patient accept whatever lurked in his unconscious mind, a process Freud saw as a kind of education (Goleman and Speith, 1982).

It may be argued that the moral oppressiveness that characterized European society during Freud's time has its parallels in Pakistani society today. However, it must be remembered that Freudian psychoanalysis flourished in the U.S. and until today it is America and not Europe that is the stronghold of psychoanalytic tradition. This is understandable in the context of American individualism.

Culturally determined preferences for psychotherapy are also evident in the preferences given in Germany to autogenic training, a kind of self imposed drill in thought, feeling, and behaviour; to Morita therapy in Japan, an ego-directed self-controlling procedure based on Zen Buddhism; and to collective procedures aimed at restoration of the capacity to work in the Soviet Union (Witkower and Dubrenil 1970).

Thus, it is contended that a historical survey of the creation and development of various schools of psychotherapy will reveal the crucial influence that culture and national personality structures have on the acceptance of and response to various therapeutic approaches. The present paper should also be considered in the context of developing therapeutic procedures that are useful and appropriate in

Pakistan rather than as an attempt to critically evaluate Freudian psychoanalysis, per se.

II. THE PATIENT'S QUALIFICATIONS

As early as 1898 Freud had expressed an enduring conviction of his regarding the kind of patients who would be accessible to analysis:

"Psychoanalytic therapy is not at present applicable to all cases..

It demands a certain degree of maturity and understanding in the patient and is therefore not suited for the young or for adults who are feeble-minded or uneducated. It also fails with people who are very advanced in years, because, owing to the accumulation of material in them, it would take up so much time that by the end of the treatment they would have reached a period of life in which value is no longer attached to nervous health. (Finally, the treatment is only possible if the patient has a normal psychological state from which the pathological material can be mastered. During a condition of hysterical confusion or an interpolated mania or melancholia, nothing can be effected by psychoanalytic means.) Such cases can nevertheless be treated by analysis after the violent manifestations have been quieted by the usual methods. In actual practice chronic cases of psychoneurosis are altogether more amenable to the method than cases with acute crises, in which the greatest stress is naturally laid on the speed with which the crises can be dealt with. For this reason, the most favourable field of work for this new therapy is offered by hysterical phobias and the various forms of obsessional neurosis" (Freud, 1953 f).

(The above-mentioned points suggest that there are considerable limitations to the kind of patients who would benefit from analysis. This would be particularly true of the practice of psychoanalysis in Pakistan where the majority of the people are uneducated and where many of the patients with psychological problems who seek professional help are in the severely disturbed category.)

In 1904 Freud listed the "various qualifications...required of any one who is to be beneficially affected by psychoanalysis. To begin, with, he must be capable of a psychically normal condition," and

exhibit "a certain measure of natural intelligence and ethical development..." Freud thought it was pointless for an analyst to try to help someone of a "worthless" character, "because if the physician has to deal with a worthless character, he soon loses the interest which makes it possible for him to enter profoundly into the patient's mental life." (Freud, 1953 c).

The preliminary interviews give the analyst the opportunity to evaluate the patient with regard to three important considerations: (i) ego functioning, (ii) motivation, and (iii) capacity for psychological work (Gill et al; 1954). It is on the basis of such assessments that the analyst decides whether or not the patient is suitable for therapy.

(Thus in order to be analyzed by the classical psychoanalytic method the patient must be in contact with reality, possess adequate thinking and conceptual abilities, have areas of the personality which are free of neurosis, be psychologically sophisticated and able to appreciate the concept of psychological causality) and respect relatively well to the speculations and hypotheses of the therapist concerning his illness. Moreover, the patient must be strongly motivated, his symptomatology has to be ego dystonic, and he must be prepared to bear the deprivations associated with the psychoanalytic method. All in all, "one has to be a relatively healthy neurotic in order to be psychoanalyzed without modifications and deviations" (Greenson, 1959).

(It is evident from these qualifications that a sizable number of mentally ill persons in Pakistan do not meet the criteria for being psychoanalyzed.) One of the major problems here is probably the criterion of the patient accepting the principle of psychological determinism. (The generally religious minded and fatalistic Pakistanis seek the cause of mental illness in punishment by God or simply 'a matter of fate'. There is very little awareness as to the role of psychodynamic factors in mental illness and 'depth' interpretations would probably not go down very well with most Pakistanis. Furthermore, such 'healthy neurotics' as there are in Pakistan more often than not carry on one way or another though life without

seeking any kind of psychological treatment which either they are not aware of or is considered a sign of 'weakness' and has quite a stigma attached to it. If they do seek help it is usually an assortment of quack remedies that they try out. Consequently, by the time the patient comes to a psychotherapist his condition is often much deteriorated and at an advanced level of chronicity precisely the kind of patient with whom psychoanalysis is ineffective. The other problem here is that the average Pakistani who wants treatment for a psychological disorder visits a psychiatrist for the prescription of drugs that help in the quick alleviation of his symptoms and leaves the underlying cause of the problem unaffected.

III. FREQUENCY OF VISITS AND ATTITUDE TOWARDS PAYMENT

Freud generally saw his patients six days a week, fifty five minutes per session. The five day analytic week became customary in the United States. Thus psychoanalytic treatment requires the analyst to spend considerable time with the patient in order to get to know him very well. "In a sense, the psychoanalytic treatment is a partial living with the patient having a chance to observe him upon a great many occasions" (Greenson, 1959).

Freud also considered it necessary that patients pay their analyst and that as a rule free treatment should not be given. He proposed as a general principle that the analyst should: "refrain from giving treatment free and make no exceptions to this in favor of his colleagues or their families" (Freud, 1953 b). He thought that the financial sacrifice involved in the payment would be a privation that would spur the patient to progress in the analytic work.

This brings us to another problem in the application of psychoanalysis in Pakistan. The therapeutic approach presupposes that the patient will have the necessary financial resources to pay the analyst for 5-6 sessions per week spread over a period of (at times) several years. This large investment of time and money excludes the vast majority of Pakistanis.

IV. THE USE OF THE COUCH AND EVENLY-SUSPENDED ATTENTION

The psychoanalyst uses the couch to facilitate the method of communication vis free association. The patient lies down on it while the analyst sits behind it. By reclining the patient is exposed to fewer distractions and finds it easier to give expression to his fantasies and memories. The analyst, on the other hand, has the opportunity to observe the patient and does not have to be aware of his own facial expressions.

As Freud frankly explained :

"I cannot put up with being stared at by other people for eight hours a day (or more). Since while I am listening to the patient, I, too, give myself over to the current of my unconscious thoughts, I do not wish my expressions of face to give the patient materials for interpretations or to influence him in what he tells me..." (Freud, 1953 b).

Freud also wrote about patients rebelling against reclining on the analytic couch. This would perhaps be even more of a problem in Pakistan where people tend to be quite inhibited and rarely psychologically sophisticated.)

Freud advised against the taking of full notes and even the keeping of shorthand records during analytic sessions. This would make an unfavorable impression on some patients, he thought; besides, the analyst would be partly occupied with note-taking when it would be better that he spend all his energies in listening to the patient and interpreting what he says.

Freud introduced a simple but revolutionary technique whereby he felt that the analyst could deal with the volume of his patients' productions. He explains :

"...(the technique) rejects the use of any special expedient (even that of taking notes) It consists simply in not directing one's notice to anything in particular and in maintaining the same 'evenly-suspended attention' (as I have called it) in the face of all that one hears. In

this way we spare ourselves a strain on our attention which could not in any case be kept up for several hours daily, and we avoid a danger which is inseparable from the exercise of deliberate attention. For as soon as anyone deliberately concentrates his attention to a certain degree, he begins to select from the material before him... This, however, is precisely what must not be done. In making the selection, if he follows his expectations he is in danger of never finding anything but what he already knows; and if he follows his inclinations he will certainly falsify what he may perceive. It must not be forgotten that the things one hears are for the most part things whose meaning is only recognized later on...

"...The rule for the doctor may be expressed: 'He should withhold all conscious influences from his capacity to attend, and give himself over completely to his "unconscious memory"'. Or, to put it purely in terms of technique: 'He should simply listen, and not bother about whether he is keeping anything in mind'" (Freud, 1959 b).

(The application of this technique, which appears theoretically sound, should pose no problems in Pakistan since it obviously has nothing to do with the patient. This is as good a place as any to emphasize that this or any other psychoanalytic technique should be practiced only by the analyst who has been trained in them and who has also undergone analysis himself.)

V. THE ATTITUDE OF THE THERAPIST

Freud recommended that the therapist be completely neutral: "The doctor should be opaque to his patients and, like a mirror, should show them nothing but what is shown to him" (Freud, 1959 b). Analytic neutrality may block the therapist's spontaneity but it is said to have some advantages. These include the belief that the blank screen analytic approach is more amenable to arousing the patient's transferences and that it may also protect the patient from the analyst's sadism. Roazen (1976) explains:

"A standard of active intervention, if that is the opposite of neutrality, can pave the way for far more extensive damage than any other device. But there are ways in which an analyst's passivity can in fact be aggressive, and the classical analytic situation contains hidden suggestive elements that may be manipulative".

Using an analogy to emphasize his commitment to neutrality as the proper approach. Freud said:

"I cannot advise my colleagues too urgently to model themselves during psycho-analytic treatment on the surgeon, who puts aside all his feelings, even his human sympathy, and concentrates his mental forces on the single aim of performing the operation as skillfully as possible. Under present day conditions the feeling that is most dangerous to a psycho-analyst is the therapeutic ambition to achieve by this novel and much disputed method something that will produce a convincing effect upon other people. This will not only put him into a state of mind which is unfavorable for his work but will make him helpless against certain resistances of the patient, whose recovery, as we know, primarily depends on the interplay of forces in him. The justification for requiring this emotional coldness in the analyst is that it creates the most advantageous conditions for both parties: for the doctor a desirable protection for his own emotional life and for the patient the largest amount of help that we can give him today" (Freud, 1959b).

This uninvolved and detached attitude on the part of the analyst might pose a problem in the practice of psychoanalysis in Pakistan in that this attitude may correspond with the image the patient has of his father being cold and distant—typical of the paternal role in our society. In the absence of a warm and supportive atmosphere it would, therefore, probably take very long for a rapport to be established between patient and therapist and the chances of the patient dropping out from treatment would also be higher.

Related to this problem is the patient's expectation that the therapist will be more directive, assertive and 'advice-giving', than the psychoanalyst is supposed to be.

VI. THE TECHNIQUE OF FREE ASSOCIATION

(It was Freud's adoption of the free association technique which enabled him to abandon hypnosis; By "following a dim presentiment", Freud "decided to replace hypnosis by free association" (Freud, 1958 c). And "with the abandonment of hypnosis the applicability of the treatment was assured to an unlimited number of patients", for "it depends upon the choice of the patient whether he can be hypnotized or not, no matter what the skill of the physician may be, and... a large number of neurotic patients can not be hypnotized by any means whatever..." (Freud, 1953 e).

The technique of free association which was referred to as the 'basic rule' describes a mode of thinking encouraged in the patient by the analyst. It involves the patient reporting everything that comes to his mind without reservation and without making any attempt to concentrate while doing so. Thoughts and feelings are expressed, however disconnected, incongruous, or shameful they may appear to the patient. The objective of free association is to discover connections between symptoms and the lived experiences which give them their meaning, and to discover their cause.

In one of his lectures, Freud described the procedure of free association and how it helps in uncovering repressed complexes, thus:

"If in our search for a repressed complex in one of our patients we start out from the last thing he remembers, we shall have every prospect of discovering the complex, provided that the patient puts a sufficient number of his free associations at our disposal. Accordingly, we allow the patient to say whatever he likes, and hold fast to the postulate that nothing can occur to him which is not in an indirect fashion dependent on the complex we are in search of. If this method of discovering what is repressed strikes you as unduly circumstantial, I can at least assure you that it is the only practicable one.

"When we come to putting this procedure into effect, we are subject to yet another interference. For the patient will often pause and come to a stop, and assert that he can think of nothing to say, and that nothing whatever occurs to his mind. If this were so and

if the patient were right then our procedure would once again have proved ineffective. But closer observation shows that such a stoppage of the flow of ideas never in fact occurs. It appears to happen only because the patient holds back or gets rid of the idea that he has become aware of, under the influence of the resistances which disguise themselves as various critical judgements about the value of the idea that has occurred to him. We can protect ourselves against this by warning him beforehand of this behavior and requiring him to take no notice of such criticisms. He must, we tell him, entirely renounce any critical selection of this kind and say whatever comes into his head, even if he considers it incorrect or irrelevant or nonsensical and above all if he finds it disagreeable to let himself think about what has occurred to him. So long as this ordinance is carried out we are certain of obtaining the material which will put us on the track of the repressed complexes" (Freud, 1972).

Thus, as can be gauged from Freud's description, the fundamental assumption of the technique of free association is that these ideas which appear to be fortuitous are not fortuitous at all. All lines of thought lead to what is significant and the course of the association is psychologically determined. In the course of free association and exploration of resistances that oppose the patient's ability to free associate the analyst arrives at an understanding of the hidden conflict that lies at the root of the patient's neurosis.

(The technique of free association is presumably more successful with those who tend to be very verbal, uninhibited, and spontaneous. This technique may meet with much more skepticism and opposition by the average Pakistani (than by the average Westerner) who would probably find it difficult to accept that free association would be instrumental in his recovery. This is in view of the lack of psychological mindedness and inhibited nature of most Pakistanis. However, one might speculate that free association may be successfully used with members of the uneducated class since they would tend to be less inhibited, resistant, and consciously aware of what they were saying and therefore, more spontaneous.)

VII. RESISTANCE AND ITS ANALYSIS

As a clinician, Freud came to believe that in the course of treatment the patient's forces of self-deception are gradually turned against the analyst. He went so far as to assert that the patients' "overcoming of these resistances is the essential function of analysis...." (Freud 1958 d). A "resistance" was once sweepingly defined as "whatever interrupts the progress of analytical work...." (Freud, 1953 d).

Resistance may also be defined as the use of defenses in the analytic situation (Wolman, 1983). All the conscious and unconscious impulses, motives, emotions, and activities which oppose the goal of psychoanalytic treatment are included in the concept of resistance. Anything that impedes the establishment of a rational ego is a source of resistance.

Freud referred to the motive for resistances and their handling:

"The discovery of the unconscious and the introduction of it into consciousness is performed in the face of a continuous resistance on the part of the patient. The process of bringing this unconscious material to light is associated with "pain" (Unlust), and because of this pain the patient again and again rejects it. It is for you (the analyst) then, to interpose in this conflict in the patient's mental life. If you succeed in persuading him to accept, by virtue of a better understanding, something that up to now, in consequence of this automatic regulation by pain, he has rejected (repressed), you will then have accomplished something towards his education.... Psychoanalytic treatment may in general be conceived of as such a re-education in overcoming internal resistance" (Freud, 1959 a).

Greenson (1959) discusses how different resistances arise and are manifested: "The transference relationship to the analyst, is often an important source of resistance, particularly when there is negative transference. A strong positive transference may also be a cause of resistance. This may influence the patient to seek love and approval from the analyst rather than to seek a greater understanding of his preconscious and unconscious thoughts and feelings. The superego, particularly the unconscious and irrational super-ego which

seeks to avoid the recall of guilt laden memories, may be an important source of resistance. Secondary gain from the symptoms can influence the unconscious and irrational ego and motivate it to combat the therapeutic endeavors. The id contributes also to the resistance, particularly in the "adhesiveness" of the libido, namely the search for old, quick gratifications and the reluctance to give up infantile satisfactions".

As regards the analysis of resistance there are several steps. First it is important to recognize what the resistance is and whether it is conscious or unconscious. The patient must also be made to understand that for some unconscious reason he is actively resisting the analytical work. The second step is to find out why the patient is resisting, what painful situation does he fear will gain conscious expression? Then the therapist should become aware and make the patient aware of the nature of the defense mechanism that is being used in the service of the resistance and how that defense has been characteristically employed by the patient in a variety of situations. At the end of this analysis, the resistance may be traced back to its source...the instinctual impulse which gave rise to it.

Freud emphasized the importance of dealing with resistances in the following words: "The struggle against all these resistances is our main work during an analytic treatment; the task of making interpretations is nothing compared to it. But as a result of this struggle and of the overcoming of the resistances, the patient's ego is so much altered and strengthened that we can look forward calmly to his future behavior when the treatment is over..." (Freud, 1972).

In Pakistan one might expect the psychoanalyst to encounter an unusually large number of resistances in his patients. Given our sociocultural conditions there is probably a lot more repression, particularly of sexual impulses, than among Westerners. The situation is further complicated in that in our autocratic social set up, the doctor is conceived of as a strong authority figure and there may be considerable resistance against freely expressing oneself in his presence. Patients may also quickly adopt a submissive role and uncritically accept all the interpretations that the analyst makes to them.

This, of course can also be a form of resistance—resistance to greater understanding of their unconscious selves.

(It is important for the Pakistani therapist to have a sound knowledge of Islam. This is because patients often have misconceptions about religion and they use these false ideas to justify their symptoms and indirectly resist the therapists efforts to help him.

The idea of psychotherapy is alien to most Pakistanis and the relatively rigid and formalized approach of psychoanalysis would seem even more so. This would, perhaps, be the foremost source of resistance when a patient enters a psychoanalytic relationship. Overcoming this resistance would require the analyst to spend several sessions explaining to the patient what he can expect from the treatment, the rules he will be expected to follow and the reasons for doing so. The analyst will also have to deal with the patient's preconceptions about treatment methods as well as about the analyst, himself.

VIII. TRANSFERENCE AND ITS HANDLING

Transference refers to the patient's feelings, attitude, and behavior towards the analyst, not as the latter exists in himself but in so far as people who have played a part in the patient's past, and particularly during his childhood, come to life in him again. The therapist seems, in the eyes of the patient, to be the reincarnation of someone who had been the object of his libido during the first period of his development, for example, one of his parents. The same feelings are now transferred to the therapist. By 1912, Freud came to see transference as a vital part of the therapeutic process: "finally every conflict has to be fought out in the sphere of transference".

The therapeutic value of the transference is that in the course of the analysis the patient re-lives the childhood experiences which have generated disturbances (transference neurosis). Freud was the first to see transference as an avenue to what he considered the earlier and true:

"...the patient does not remember anything of what he has forgotten, but acts it out. He reproduces it not as a memory

but as an action; he repeats it, without, of course, knowing, that he is repeating it...the repetition is a transference of the forgotten past not only onto the doctor but also onto all other aspects of the current situation". (Freud, 1958b).

This re-living takes place under more favourable conditions, assuming that the analyst adopts a more broad-minded and more understanding attitude towards the patient, or reacts more adequately than the patient's parents or other cruel figures of the past. By this re-living the patient offers the analyst an opportunity to understand, reconstruct and demonstrate the patient's past reactions to key figures. Therefore, the transference is extremely important since it offers the most valuable method of breaking through to the infantile life of the patient.

The feelings that the patient transfers to the therapist can be either positive or negative; the patient might feel either love or hatred for the analyst. Either way it can act as a source of powerful resistance that hinders therapeutic progress. Freud expressed himself thus: "...transference emerges as the most powerful resistance to the treatment" all the forces which have, caused the libido to regress will rise up as 'resistances' against the work of analysis, in order to conserve the new state of things" (Freud, 1958a). The patient tends to stubbornly hold onto these resistances at the expense of any motivation, even that of getting well.

On the positive side, transference is important in that it reveals a very clear picture of the patient's inner conflicts. Moreover, it helps in facing upto and working through, in a much more favourable setting, those unresolved conflicts that have impeded maturation. The resolution of transference is felt by Freudian psychoanalysts to be the most powerful means for restructuring the personality. To achieve this the analyst has to interpret the phenomena involved in the transference. He has to make clear to the patient the deeper meanings of his feelings and behavior. The interpretations of transference include the interpretation of its manifestations, its origins and its original and present purposes. The working through

of transference is accompanied by a recollection of forgotten infantile and childhood experiences—a recounting of distortions in relationships with parents or parental surrogates.

Interpretations, will usually be denied in the beginning as part of the resistance manifestation. Early on Freud had mentioned the "difficult task of dissolving this transference, of making the patient once again independent" (Freud, 1953a).

Greenson (1959) elaborates on this problem and its resolution: "Acknowledgement of the unreal nature of transference is usually opposed by the patient, because this either constitutes too great a threat for him or because he does not want to relinquish transference gratifications which are deemed essential to life itself. So long as the patient continues to accept transference as factual, the analysis will remain interminable, unless forcefully terminated by either participant. With persistence on the part of the therapist interpretations usually take hold, and the patient is rewarded with greater insight, an increased sense of mastery, liberation from neurotic symptoms, and a genuine growth in maturity";

In view of the autocratic and hierarchical social structure in Pakistan the nature of the transference relationship in a psychoanalytic situation here would probably be quite similar to what Freud experienced in Vienna. The culturally sanctioned dominant role of the therapist doctor and the submissive one of the patient would be conducive to the establishment of such a relationship. The handling and working through of transference reactions could therefore, conceivably, be of benefit to Pakistani patients

IX. DREAMS AND THEIR INTERPRETATION

Psychoanalysis assumes that dreams have psychological meaning, which can be arrived at by interpretation. According to Freud's original formulations dreams have a manifest content, which is the dream as experienced or remembered, and a latent content which is discovered by interpretation. He also held that the dreamer performs work (dream work) in translating the latent into the manifest content, and that, therefore, dream interpretation is the reverse of dream

work. Freud also postulated that a dream represents "an attempt by the dreamer 'at the fulfillment of a wish' (Freud, 1961). The 'hidden meaning' of a dream becomes distorted because of the role of 'internal conflict, a kind of inner dishonesty'. (Freud, 1953c). Freud also wrote that 'the majority of the dreams of adults deal with sexual material and give expression to erotic wishes' (Freud, 1953c).

Freud's technique for understanding the latent meaning of dreams was to use free associations. The associations made by the patient do not directly supply the key to the symbolic meaning to be attributed to the surface content of the dream, but they do lead to certain situations and representations which make "conjectures" and "reconstruction" possible, and it was under these conditions that a psychoanalytical dream symbolism was developed, according to which certain well-defined dream images acquired a fixed meaning. It is not always possible to reach a real understanding of the dream, but every effort is made to analyze it as completely as possible. The dream content when properly understood, enables the patient to go beyond his resistances and to become aware of important underlying dynamic factors.

Dream interpretation in the psychoanalytic sense would meet with resistance by a number of Pakistanis many of whom believe in a dream's religious and precognitive connotations or have intuitive superstitions about what dreams mean. They would, therefore, be hard put to accept that the latent content of a dream is a wish which is fulfilled in the dream in hallucinatory form. Moreover, the erotic significance of dreams as well as the meanings of symbols in psychoanalytic dream theory would conflict with the belief and value systems of many Pakistanis.

X. RULES OF INTERPRETATION AND WORKING THROUGH

Interpretation refers to the process of elucidating and expounding the meaning of something abstruse, obscure, etc. Psychoanalytic interpretations are statements made by the analyst to the patient in which he attributes to a dream, a symptom, or a chain of free associations some meaning over and above (under and below)

that given to it by the patient (Rycroft, 1968). The basic rule here is that one interprets the surface before the depth i.e. interpretations should begin with what is conscious and accessible to the patient's rational ego and then proceed on to the relatively inaccessible and unconscious. Thus, the patient's defenses are interpreted before dealing with the material that he is defending against. The defenses are handled in essentially the same way that resistances are. The dosage and timing of interpretations depend on how strong the patient's ego is in confronting his dangerous instinctual impulses and emotions.

It is important that the analyst repeats his interpretations. Single interpretations even though they may help the patient gain insight into his conflicts are not enough to produce definitive changes in the patient's attitude and behavior. Working through involves assisting the patient to discover step by step over an extended period of time the full implications of some interpretation or insight.

Freud recognized that the "working through" of a patient's resistance "may in practice turn out to be an arduous task for the subject of the analysis and a trial of patience for the analyst" (Freud, 1958b). Insufficient working through will at best lead to temporary improvement in the patient and old, irrational ways of seeking gratifications will reassert themselves. So it must be continued until there is positive evidence of the patient's ego having developed new and more adaptive ways of dealing with the id's instinctual impulses and the superego's irrational demands.

XI. CONCLUSION AND SUGGESTIONS

In conclusion, it is difficult to judge whether psychoanalytic therapy, as a whole, is or is not applicable in Pakistan. The scope of application of different individual techniques differs.

However, it does appear that the psychoanalytic method would be practicable with only a select group of the Pakistani elite who have the resources financial and psychological—that the majority lack. This is not to say that several of the techniques that Freud originated can not and should not be used with modifications, keeping

in mind the limitations and cultural idiosyncracies of Pakistanis. It may also be suggested that rather than the long drawn-out classic psychoanalytic technique it might be more practical to use briefer psychoanalytically oriented psychotherapy that is more flexible in its methodology and approach.

Freud himself admitted: "I must however make it clear that what I am asserting is that this technique is the only one suited to my individuality. I do not venture to deny that a physician quite differently constituted might find himself driven to adopt a different attitude to his patients and to the task before him" (Freud, 1959 b). In addition to the individuality of the physician, Freud might have also mentioned the uniqueness of the culture.

A positive trend evident in psychotherapy today is the basing of treatment programs on patient rather than clinician variables. That is to say, the choice of therapy is determined by the patient's psychology and the nature of his problem rather than by the clinician's orientation. This, of course, necessitates the clinician becoming versatile in the use of a wide range of therapeutic tactics and interventions. The practice of psychotherapy in Pakistan lays a similar demand on the clinician here.

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MULTIPLE ADMINISTRATION OF THE MMPI WITH SCHIZOPHRENICS*

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ABSTRACT

Forty schizophrenics were administered the MMPI when they were in a disturbed state and when they had improved. The results of these double administrations were compared with those of a standardization sample as well as with each other. Results were also discussed with special reference to scales F and Sc both of which were found to be sensitive indicators of schizophrenic psychopathology and changes in mental state.

INTRODUCTION

The work on Urdu Translation and standardization of the MMPI was undertaken in 1968 as a part of the Schizophrenia Research Project (SRP) at Jinnah Post-Graduate Medical Centre, Karachi, Pakistan. Initial success with the test is confirming the psychiatric diagnosis of schizophrenia helped to secure the necessary financial and professional support for the plan for standardization. However, very soon the high expectations aroused by the first wave of optimism had to face the fact that the peak score on scale 8 was not a prerogative of the schizophrenics only. The normal population in Pakistan seemed to have an equal claim on it.

Fig. 1
K — corrected T — Score Profile of the Pakistani Male Sample by Minnesota Norms
N = 500

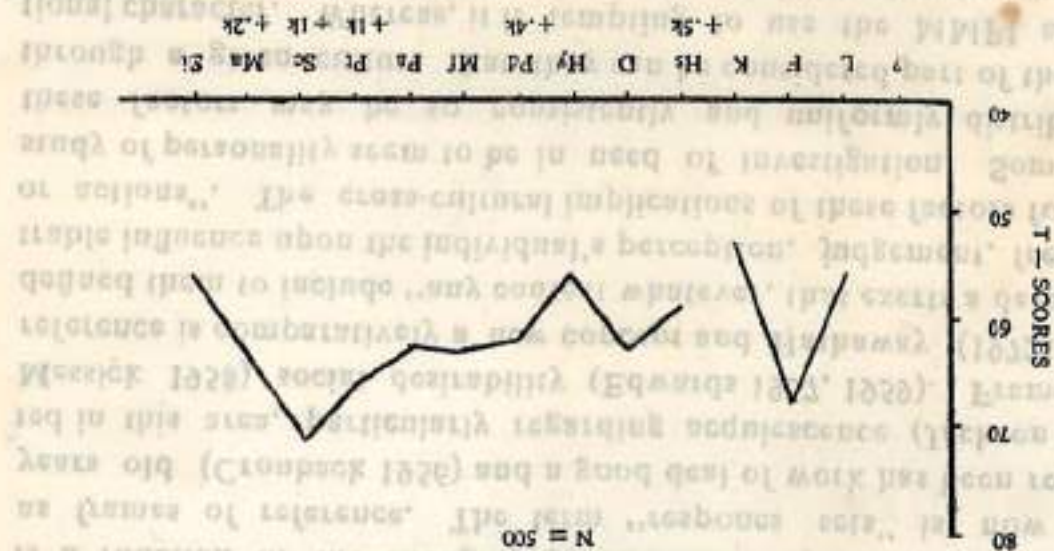


Fig. 1 gives the profile of male sample population ($N=500$) in T-Scores calculated with the help of the Minnesota conversion tables. It shows a pronounced elevation on most of the clinical scales and on scales F as compared with the Minnesota population. Although shifts in normal scores have been noticed by workers in different cultural settings, the elevation on scale 8 and F is perhaps most marked in the case of Pakistani population among the norms reported so far. The nearest mean scores are the ones published by Abe (1969) for the Japanese sample. The mean Raw scores with K on the two scales for the Pakistani, Japanese and the Minnesota populations are as follows:-

POPULATION		F		Sc	
Pakistanis	10.11	33.69	32.57	22.26	3.85
Japanese	8.90				
Minnesota (USA)					

Such elevations in mean scores as compared to the original norms cannot be interpreted in terms of bizarre mentation and behavioral disturbance usually associated with them. It seemed that the explanation for this phenomenon will have to be sought in the area of cultural dimensions of personality.

It is possible that most of the variance recorded between cultures is a function of the changing patterns of response sets as well as frames of reference. The term "response sets" is now 20 years old (Cronbach 1956) and a good deal of work has been reported in this area, particularly regarding acquiescence (Jackson and Messick 1958) social desirability (Edwards 1957, 1959). Frames of reference is comparatively a new concept and Hathaway (1972) has defined them to include "any context whatever, that exerts a demonstrable influence upon the individual's perception, judgement, feelings or actions". The cross-cultural implications of these factors for the study of personality seem to be in need of investigation. Some of these factors may be so consistently and uniformly distributed through a given culture that they can be considered part of the national character. Whereas, it is tempting to use the MMPI as an instrument of cross-cultural analysis of personality, the present state of our knowledge in this field is not sufficient for this undertaking.

It can be more rewarding, at the present stage, to make extensive use of the test within various cultural settings to discover meaningful correlates of scores and patterns on the MMPI scales in terms of behaviour, mental states, attitudes including response sets, etc. One way of doing this is to test and retest large segments of population and study closely the characteristics of the people who obtain different levels of score on it. This is what Meehl (1951) has called "turning the research question around". Such a procedure can help to extend the use of the test beyond the categories for which it was originally developed.

It is not feasible, however, to adopt this method in a situation which does not facilitate a large scale assessment of the personality characteristics of the subjects by any other means but the test in question. It was, therefore, decided to try another variation of this approach which could be called "turning the test around". In essence it means longitudinal study of defined groups of persons with multiple administration of the MMPI to discover the relationship between noticeable changes in personality and significant patterns of scores on the test.

In order to obtain results unbiased by the massive research already conducted, it was decided to have an open mind and make a fresh start. It was thought desirable to adopt this naive attitude in order to gain fresh insight into ways of maximising meaningfulness of the MMPI scores in a new cultural setting.

METHOD

Subjects for the multiple administration of the MMPI were all schizophrenic patients registered with the Schizophrenia Research Project (SRP) at Jinnah Post-Graduate Medical Centre, Karachi. SRP was initiated in 1968 with the main objective of evaluating the effectiveness of regular treatment and consultation facilities provided by the project. The Project came to end in 1974.

The patients for SRP were selected according to following

1. Diagnosis Schizophrenia
2. Age 18 to 40
3. No Physical disability or mental retardation

Services of SRP mainly consisted of free psychiatric consultation and medication. No systematic psycho-therapy or counselling was attempted apart from regular visits to psychiatrists and social workers. The work of psychologists was confined to testing.

The subjects could make use of the services offered by the project as long as it lasted. The translated version of the MPI was included in the psychological tests routinely administered to all the new entrants to the project soon after their registration. It was presumed that the subjects were in a disturbed state at the time of the first administration of the MPI. The test was again administered to these patients on SRP which were considered by the psychiatrists to be much improved or free of symptoms. Further administrations were attempted whenever some significant change was noticed in the mental state of the subjects. The present paper, however, deals with the results obtained through the first two administrations only.

In total 40 double administrations of the MPI were completed with the male subjects, during the period from April, 1969, to November, 1973. The psychiatric diagnosis of these patients was the following :

Paranoid Schizophrenia	18
Hebephrenic Schizophrenia	15
Simple Schizophrenia	3
Catatonic Schizophrenia	1
Schizo-Affective	2
Unclassified	1
Total	40

The age range of the subjects varied from 17 to 36 years with a mean age of 24 years. The interval between the two administrations ranged from 69 days to 1357 days with a mean of 604 days (one year seven months and twenty-two days). The number of double administrations in the case of females was not large enough for a comparative analysis. It was not found possible to create a matched control group for this study.

RESULTS

The results obtained through the two administrations of the MMPI are given below in Table I :

TABLE I

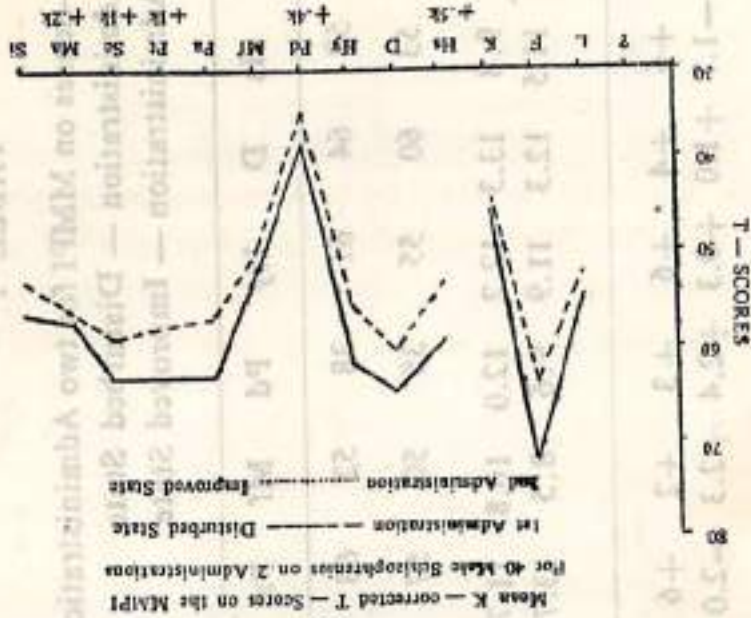
Mean and Standard Deviation of T—Scores on MMPI for two Administrations with 40 Schizophrenics
1st Administration — Disturbed State
2nd Administration — Improved State

	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
Mean	1st	54	72	46	59	64	61	38	52	63	63	63	57
	2nd	52	64	45	53	60	55	35	50	57	58	59	56
Standard	1st	14.7	22.2	12.8	9.8	13.3	12.2	12.0	10.8	11.7	12.8	11.3	12.0
Deviation	2nd	13.3	20.9	12.1	11.5	12.3	11.9	9.6	8.5	13.7	13.9	15.4	12.7
$(M_1 - M_2)$		+2	+8	+1	+6	+4	+6	+3	+2	+6	+5	+4	+1
$(SD_1 - SD_2)$		+1.4	+1.3	+0.7	-1.7	+1.0	+0.3	+2.4	+2.3	-2.0	-1.1	-4.1	-0.7

Codes.	1st Administration	26783-1905/:4	F-L/K
	2nd Administration	2-87693105/:4	F-L/K

The most prominent feature is the general lowering of the mean scores, on second administration on all scales including the validity scales. The mean score difference ranges from 8 on scale F to 1 on scale Ma and K. Mean scores on scales, Hs, Hy and Pa come down by 6 points, on Pt by 5 points and those on Sc and D by 4 points. The mean score on Pd which is the lowest score, comes down further on the second administration by 3 points. The codes for the two administrations respectively are 2-6783-1905/4 F L/K and 2-87693 105/4 F-L/K.

Fig. 2

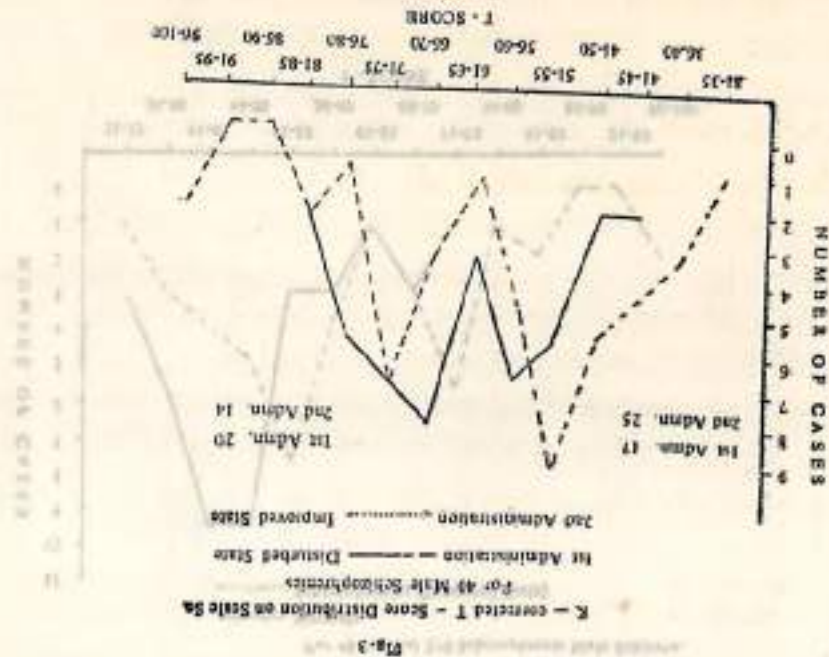


Also at the above profiles obtained by the two administrations reveals a close correspondence between the two in spite of the lower ing in the mean scores, reflecting the basic personality pattern of the subjects. Some aspects of these profiles seem to be in need of special attention. Two of these are the elevated score on Hy and the deeply submerged score on Pd.

A number of studies have indicated a relationship between the high score on Hy and lack of sophistication. Although normals also tend to have an elevated score on this scale in Pakistan, it assumes a special significance in the case of schizophrenics. It has been previously observed that whereas people in the western countries it react to a stressful situation with anxiety, in the eastern countries it very often takes the form of hysterical reactions.

At the time of the derivation of the scales, efforts were directed at making scale F as independent of clinical scales as possible to make it a criterion of validity of the test. The high item overlap between F and Sc (15 items) and the nature of the content of the items make them closely related. Elevation on scale F has been found to go with the rise in scores on scale Sc. It has also been observed that these two scales are not very much affected by temporary stressful situations (Brozek and Schiele 1948). The resistance of these scales to environmental changes make them suitable measures for personality transformations of a durable nature. On the face of the results obtained through the double administration of the MMPI with schizophrenics, F scale seems to promise to provide a better index of the improvement than scale Sc. It was, therefore, thought desirable to have a close look at the performance of the subjects on the two scales.

The differences between the variance of the two administrations reveal a wider dispersion of scores on scale 8 on second administration. Part of this is contributed by two cases which had higher scores on second administration, perhaps because of a sudden change for the worse. It was decided to compare the frequency distribution of T-Scores on this scale for the two administrations (Fig. 3).



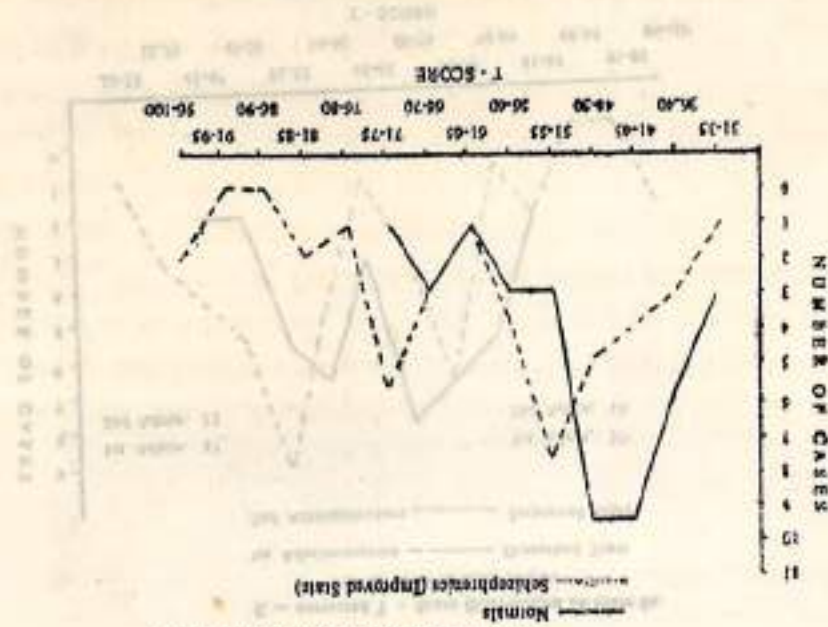
The striking aspects of the graph are given

1. Both distributions have an M shape with two clear peaks. One of the peaks in both distributions lies below 61 T-score and the other above this score.

2. Significant number of subjects in the second administration register a shift in their scores from the sector lying above 65 T-score to the sector below 61 T-score. Surprisingly the pattern of the distribution of the scores retains the shape of M. The T scores 61 to 65 seem to have a special importance for schizophrenics and, therefore, merit special attention. This aspect of scale Sc will be taken up for interpretation in a later part of the paper.

To ascertain that an "M" type of score frequency distribution is not a characteristic of Pakistani population, 40 male answer sheets were randomly selected from the sample used for standardization in Pakistan and their score frequencies on scale 8 were plotted along with the frequencies of the schizophrenics on this scale (Fig. 4).

Fig. 4



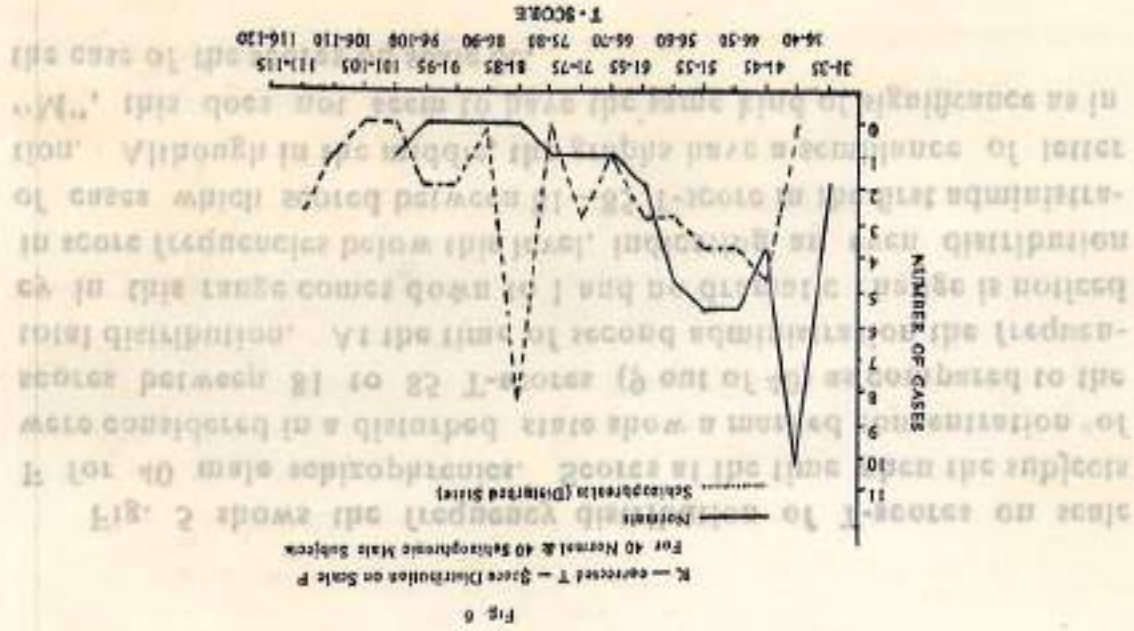
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score on scale 26' (mean 61.1) and 1-scale on the dimension was' the follow-

High F Score is generally considered to have a definite psychological connotation, probably reflecting significant personality disorder in scattered psychological areas (Kazan and Scheinberg, 1945). This interpretation is endorsed by the present study. It seems feasible to interpret the scores lying above T Score 61 in the same way as indicated in the case of scale Sc. Contrary to expectations from the greater lowering of mean score on second administration, the score on scale F does not prove to be a better index of improvement than score on scale Sc. Using 61 T-score as the dividing line, the following discriminations were achieved :

Score Frequency on		Score Frequency	
Scale Sc.		on F Scale	
1st Adm. 2nd Adm.		1st Adm. 2nd Adm.	
T-Score	Below 61	42.5%	62.5%
	61	%	%
	Above 61	57.5%	37.5%
	Below 61	52.5%	40%
	61	2.5%	5%
	Above 61	45%	55%

Therefore, it was considered more profitable to look at the shifts in scores on both Sc and F scales when trying to evaluate the change in mental state. The present study provides some evidence for the view that F scale is a good indicator of dramatic changes in mental state, whereas scale Sc provides a better measure of gradual transformations. To gain more insight into the functions of the scores on scale F, T-Score frequencies on this scale for 40 schizophrenics (disturbed state) were plotted alongside the frequencies of T-scores on the same scale for 40 normals (Fig. 6).



The similarity between the sharp peaks on the two graphs is highly striking. It seems that the bizarre content of the items in this scale is instrumental in this clear polarization of the response pattern in both schizophrenics and normals. In the case of the scale Sc by comparison, the items do not seem to lend themselves to such extreme responses.

DISCUSSION

The standardization of the MMPI for the urban population of Pakistan has shown the maximum elevation on scale 8. Because of the tightening up of the scale 8 in its upper ranges, it has lost some of its discriminatory power in the standardized form. One way of counter-acting this effect was to try to artificially lower the scores by modifying the items. It was, however, decided not to interfere with the content of the items, in order to preserve its usefulness as an instrument of cross-cultural research.

Clinical experience with schizophrenics had indicated that this group of psychiatric patients was characterized by a fluidity of verbal responses which seemed to reflect changes in their mental state. This was most prominent in the case of paranoid schizophrenics. The stages on the way to an acute breakdown from a symptom free state are quite often indicated by varying responses to questions touching upon sensitive areas. For example to the question, "I have no enemies who really wish to harm me", the following answers could be expected at different stages of illness:

"True—but I have felt the opposite sometimes"
"I have sometimes a feeling that there are persons who might harm me"

"True—I have no enemies"

False—I know the people who wish to harm me"

The first two responses show an element of insight. The third usually goes with a state which could be termed "The defensive tightening up" in the face of an imminent breakdown. Denial is a com-

mon feature of this phase which can be accompanied by withdrawal and even muteness. In those cases in which the patients go into a florid state, a clear statement of suspicion is made with out any reservations. This clinical observation seems to fit in with the results obtained from the double administration of MMPI with schizophrenics. As stated earlier, there seems to be a sensitive zone, around T Score 61 as far as the Sc scale is concerned, which schizophrenics tend to avoid while moving up or down the scale during the course of their illness. This zone may correspond to the phase of "the defensive tightening up" mentioned above.

Although much further exploration will be needed in this area of intra-psychic qualitative changes, it is felt that a beginning could be made with the help of the MMPI. Test administration to psychiatric patients, particularly to schizophrenics can reflect only their state of mind at the time of the administration of the test.

The recent revolution in psycho-tropic drugs and other methods of treatment have brought about radical changes in the course of illness. Confinement in the Mental Hospitals, which was a common fate of a large number of mental patients, is now considered inhuman and obsolete. Treatment and rehabilitation services to these patients are now being provided by day centres and psychiatric units in general hospitals. The situation is fundamentally different today than it was at the time of the development of scales for the MMPI. Chronicity was seen as a common feature of schizophrenia at that time. Modern methods of treatment have enabled us to have longer periods of remission, and help the schizophrenics to spend more and more time outside the hospitals as useful members of the society. It appears worthwhile to administer the MMPI repeatedly both during the periods of acute episodes as well as periods of remissions, to gain insight into the intra-psychic changes. In the case of the schizophrenics, this information can be used to plan long term treatment and rehabilitation programmes. It is hoped early to attempt generalization in this respect, but it is hoped that it will be possible in not too distant a future to prepare a guide book regarding the relationship between various modern approaches

to mental illness and significant changes in the score patterns on the
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CONFORMITY AMONG FEMALES IN JAPANESE, INDIAN AND PAKISTANI SOCIETIES

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ABSTRACT

The present study was designed to compare the Pakistani Muslims and Indian Hindus with those of Japanese No-religion subjects on Personal Compliance scales. It also examined the relationships that existed between conformity responses and five other components of Personal Compliance scales. The Japanese, Hindi and Urdu versions of the CPR1 Compliance questionnaire were administered to the female subjects in Japan, India and Pakistan. The results indicated no significant differences between personal compliance scores of the Pakistani and Japanese subjects on the one hand, and between the Indian and Japanese respondents on the other. Further, it showed no positive relationships between conformity and five other contents of personal compliance scales, suggesting conformity as a compassionate attribute. The Asian female data, thus, gave no support to Eckhardt's compassion-violence hypothesis. On the contrary, it predicts that conformity having desirable meaning in Asian cultures would contribute to the development of compassionate personality attributes.

INTRODUCTION

The concept 'conformity' defined as acceptance of decisions made by others rather than by oneself, was found a compassionate attribute both in the Japanese and Pakistani cultures. The assumption was based upon the responses on the CPR1 Compliance-Compliance questionnaire (Eckhardt & Young, 1974) recently collected from male adults in Pakistan (Haque, 1979) and from young adults of both sexes in Pakistan and Japan (Haque & Haratani, 1979). In the Western world, the concept was generally found compulsive (Eckhardt, 1979). Berrien (1965) reviewing various studies on Japanese and Americans can values portrayed the Japanese in comparison with Americans as "being more deferent, more respectful of and dependent upon high status persons, more self-abasing, and more willing to work long hours". Again Berrien, Arkoff and Iwahara (1967) found much similarity in the personal values of the two generations of men and

women in Japan. Earlier, Kikuchi (1964) and Gordon (1966) viewed that the interpersonal relationships of the Japanese could be characterized by high conformity score and low recognition score on Gordon's SIV (1960). In the Indo-Pakistan, subcontinent, both the Muslim and Hindu communities generally accept the decisions made by their elders rather than being independent. In a study Sundberg, Kohila and Tyler (1970) found that the Indian Hindu youngsters (boys and girls) scored significantly higher on deference ("One should believe what is taught by schools and good books; they should be accepted as right") and conformity ("Life is like a game. If you play by the rules you are likely to win the prize") than American boys and girls.

Conformity was defined by Gordon (1960) as "doing what is socially correct, following regulations closely, doing what is accepted and proper, being a conformist". Eckhardt (1972) conducting various studies in the Western cultural setting on the relationship between conformity and aggression suggested that conformity "contributed to violence (both behavioural and structural) as much as aggression did, if not more so". In his updated Compassion Manual, Eckhardt (1979) holds: "Although compassion is opposed to militarism vs. pacifism, it is just as opposed to conformity vs. nonconformity, if not more so. Peace research and education which are focussing upon the problem of aggression without at the same time emphasizing the problem of conformity may defeat their own purpose of peace". The statement strongly suggests that conformity contributes to violence and that it is opposed to compassion and peace.

THE PURPOSE OF THE STUDY

In view of the differences in the cross-cultural meanings, conformity may be considered a variable which might change significantly from the Eastern culture to the culture of the West. Eckhardt's (1979) compassion-complulsion theory would predict high conformity to be associated with high religiosity. The present study is, therefore, designed to compare the Pakistani Muslims and Indian Hindus with those of Japanese No-religion subjects on the personal complulsion scales. Here, the Japanese sample served as standard group. Second, it examines the relationships that exist between conformity

responses and five other specific contents of Eckhardt and Young's (1974) personal compulsion scales (i.e., Irrresponsibility, Impulsivity, Neuroticism, Misanthropy and Frustrating Childhood Discipline). Eckhardt's theory would predict high personal conformity to be associated with high scores on other five sub-scales.

SUBJECTS AND METHOD

The religiously mean scores of the groups (Japan, India and Pakistan) compared are 5.42, 8.80 and 9.50 respectively. A t-test indicated significant differences ($p < .001$) between the religiously scores of Pakistan and Japan (Haque & Haratani, 1979). The Japanese subjects, having No-religion, served as a control group. The t-test for the Indian and Japanese subjects on the religiously mean scores was not calculated since the detail data of the Indian females (Bhargava & Gupta, 1978) were not available. However, the mean differences (India = 8.80; Japan = 5.42) are pretty obvious. The three Asian groups compared belonged to educated middle class families. The average age of the respondents was 20.64 for the Japanese and 19.67 for Pakistanis.

The Urdu version (Haque, 1979) of the CPRI compassion-compulsion questionnaire (Eckhardt & Young, 1974) was administered to the undergraduate students of Government Girls' College, Hyderabad, Pakistan. In Japan, Professor Tatsuo Haratani, using the back-translation technique, translated the CPRI questionnaire and collected the data from the female students of Osaka Kyoiku University. In the present study, the author was concerned with the following six personality variables which measure: 1. Conformity/Independence ('I like to have proper and correct social manners'); 2. Irrresponsibility/Responsibility ('It is all right to get around the law if you don't actually break it'); 3. Impulsivity/Self-control ('I have periods of such great restlessness that I cannot sit long in a chair'); 4. Neuroticism/Self-confidence ('I certainly feel useless at times'); 5. Misanthropy/Faith in People ('Most people make me sick'); and 6. Directive/Non-directive childhood discipline ('My parents often acted as if my making a mistake were a deadly sin'). On the CPRI questionnaire, the 12 Personal Compulsion scales are scored on a five-point scale with 'Strongly Disagree'

personal computer data of Indian female respondents (Table 1) also seem to bear no relationship with conformity. Thus, the Asian female data lend no support to Eckhardt's (1979) conformity-violence hypothesis.

In order to demonstrate the compassionate character of conformity in Asian cultures, a few studies may be cited from the area of familial relationships as it exists in Asia. Sundberg, Sharma, Wodli and Rohila's (1969) data clearly showed that the Indian adolescents perceived significantly greater family cohesiveness, whereas Americans more self-decisiveness. Family cohesiveness was defined by these authors as "the reporting of many joint family activities and positive attitude toward family interaction". Interpreting the results they said: "Indians tend to take close family relations for granted, whereas American youngsters are more overtly concerned American family security cannot be easily assured to the person because of the individual responsibility in finding a mate and because of the prevalence of divorce". Several writers considered the closeness of mother-child relationship as a fundamental character of Japanese culture. For a Muslim "Paradise lies underneath the feet of the mother", said Prophet Muhammad. Thus, submission to the wishes of mother is obligatory for a Muslim believer. Recently Haque (1978) demonstrated that the Muslim mothers in Sind (Pakistan) desired the development of conformity in their children. A Filipino mother says: "I would like my children to feel that we have duties to them, but they in turn have duties to us, their parents". Filipino children are given "early training in affectionateness and respect", observed Guthrie & Jacobs (1966).

Here, it seems important to see the meaning attached to the concept 'conformity' in a particular society. The essential components of the concept are "respect, obedience, orderliness and humbleness". Haque (1978) asked Pakistani mothers to rate the favourableness of various concepts on a 4-point scale. The mean values of different concepts indicated that "respectful to elders" (2.68), "respectful to teachers" (2.63), "well-mannered" (2.54), "obedient" (2.47) and "orderly" (2.45) ranked quite high on the hierarchy of values, whereas "independent" (1.50) had the lowest

value. More recently, quite high percentage of Muslim adults and children in Hyderabad (Haq, 1982) found "submissive", "meek" and "dependent" as desirable female stereotypes. Thus conformity, having desirable meaning in Pakistani society, would contribute to the development of compassionate attitudes. It may be seen from the results obtained in other Asian countries (Japan, India and Philippines) that conformity has generally a compassionate meaning in Asia. From the interpersonal relationship point of view as found in Asian studies cited above, it may be postulated that conformity being desirable attribute in Asian cultures, would produce a compassionate personality structure rather than compulsive personality.

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CONTENTS

Measuring National Stereotypes	...	...	3
Abdul Haque			
Effect of Cash and Credit on the Speed of Verbal Learning: A Trend Analysis	...	...	23
Nazre Khaliq			
Some Socio-Cultural Attributes and Status Inconsistencies among the University Academic Community in Pakistan	...	...	29
Habib A. Mufti			
Television Programmes for Children	...	...	45
Alay Ahmad			

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For

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ABSTRACT

The study makes an attempt to review the various techniques of measuring national stereotypes in the hope of stimulating young social scientists, particularly of developing countries, to conduct researches on the subject which has much interdisciplinary significance and value. The techniques that have been discussed are adjective checklist, free association method, content analysis, semantic differential scale, percentage attribution method, and stereotype differential techniques. In addition to these commonly used techniques, the methods of cross-cultural comparison across two or more cultures and historical comparison within a culture have been discussed. The paper suggests the merits of classical adjective checklist technique, semantic differential scales and content analysis for the study of national and international images.

INTRODUCTION

Walter Lippman (1922) originally employed stereotypes or "Pictures in our heads" as a behavioural concept in the analysis of public opinion. Lippman thought stereotype as a simplifying mechanism which makes an individual capable of dealing with too big and too complex world of our. Describing the mode of perceiving objects and persons, he said: we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture" (pp. 61). Stereotyping, a psychological concept, may be conceived as simplified cognition which brings about ordering and structural simplicity in our cognitive functions. In social psychological research, stereotypes have been termed as *ethnic* or *national* 'Ethnic stereotypes' mean those existing among sub-groups (racial, religious, or lingual) within a nation; and 'national stereotypes' refer to the commonly shared images in a national group about one's own group or about other national groups.

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The concept of national stereotypes and its measurement represented a general pooling of research efforts of at least three disciplines viz. : Social Psychology, Sociology and International Relations. The Katz-Braley technique (1933) utilized by various social psychologists set the pace for a wide range of researches of nationality stereotypes. The General Conference of UNESCO in 1947 under "Tensions Projects" authorized the Director-General to promote inquiries into "the conceptions which the people of one nation entertain of their own and other nations". In the words of Buchanan and Cantril (1953) the Unesco survey was conducted with a view "to bring out into the open for examination the 'pictures' of foreign peoples and the 'map of the world' in the heads of the citizens of nine nations" (pp. 1). Earlier, an entire issue of the International Social Science Bulletin (1951) was devoted to the problem of National Stereotypes and International Understanding. The UNESCO 1948-study was followed up with French and German subjects (Reigroiski and Anderson, 1959) during 1956-57. The Unesco interest in the subject not only generated studies in the West but also directly or indirectly influenced the psychologists in the East (Lebanon : Prothro, 1954; Prothro & Melikian, 1955; Pakistan : Sailer, 1955; Zaidi & Ahmed, 1958; India : Rath & Das, 1958; Sinha & Upadhyaya, 1960a 1960b; *Philippine* : Borremann; 1958; *Japan* : Haratani, Matsuyama & Minami 1960). A decade after Klineberg's review (1950), the International Committee for Social Scientific Psychology under CONFLUENCE series, recognizing the interdisciplinary significance of the subject, published "National Character and National Stereotypes" (Duyker & Frida, 1960), a trend report prepared for the International Union of Scientific Psychology. The volume not only makes an attempt at conceptual clarity of the subject but also provides a detailed bibliography. It may be said that during the fifties the applied significance of the concept 'national stereotypes' in international affairs became well established but in the words of Kellman (1965) : There has been only little systematic effort so far to relate images to national and international events; and in particular, to explore in detail the way in which they are affected by and in turn affect the relations between nations" (pp 13).

The importance of images in policy decisions by statesmen has been recognized by specialists in the field of international relations. Joseph Frankel says : "Once statesman has formed an image of an issue, this image acts as an organizing device for further information and as a filter through which this information must pass. Images, not detailed information govern political behaviour" (Reported by Stagner, 1267, pp. 15). In recent years doctoral dissertations submitted to the Department of International Relations in American Universities clearly document the significance of image study in foreign affairs.

The subject of national and international images gets a central place in the SPSSI - sponsored volume "International Behaviour", edited by Kelman (1965). The new discipline of "International Behaviour" or "The Social Psychology of International Affairs" was organised by Kelman around two interrelated foci : (a) national and international images; and (b) processes of interaction in international relations. The significance of national images for international situations has also been brought out in several volumes published during the 60s and 70s (Osgood, 1962; Wright, Evan & Deutseh, 1962; Klineberg, 1964; Sherif, 1966; Frank, 1967; Stagner, 1967; Tanaka, 1972; Stone, 1974; Segall, 1977). In view of the interdisciplinary importance and significance of the concept 'national stereotypes' (or international images), it seems interesting to review the various techniques of measuring national stereotypes adopted by researchers since the classical study of Katz & Braly (1933).

NATIONAL STEREOTYPE RESEARCH TECHNIQUES

The most commonly used methods to the study of national stereotypes are adjective checklist technique, free association method content analysis, semantic differential technique, percentage attribution method, and stereotype differential technique.

Adjective Checklist Technique

The adjective checklist as a measure of nationality stereotype research was first developed in America in 1932 by Katz & Braly (1933). One hundred Princeton college students were asked to select

the traits which they considered most characteristic of the ten ethnic groups namely, Germans, Italians, Jews, Negroes, Irish, English, American, Chinese, Japanese, and Turks. The subjects selected the traits from a list of 84 traits which they were given. The instructions used in the Katz-Brady study read as follows:

"Read through the list of the words on page one and select those which seem to you typical of the Germans. Write as many of these words in the following space as you think are necessary to characterize these people adequately. If you do not find appropriate words on page one for all the typical German characteristics, you may add those which you think necessary for an adequate description".

After this procedure was followed for all the ten ethnic groups, subjects were asked to go back and mark with an X the five words in each list seemed the most "typical" of each ethnic group. Only the starred adjectives were used in the data analysis. Katz & Brady's findings obtained a very high degree consensus (uniformity) on the assignment of traits to the various. For example, the Germans were seen as "scientifically minded" by 78% of the subjects; the Jews were viewed as "shrewd" by 79% and Negroes were characterized as "superstitious" by 84%. The checklist technique both because of its simplicity and validity has not only been adopted in America but all over the World. And the data collected through this technique during the last four decades in the West as well as in the East showed a similar high degree of consensus on assignment of some traits to the target groups. Thus the Katz-Brady technique yields high uniformity (consensus on some outstanding characteristics) and is well documented & Katz & Brady, 1933; Gilbert 1951, Sinha & Upadhyaya, 1960b; Zaidi, 1964 Ehrlich & Rinehart 1965, Haque 1969, Karlin, et al 1969 Anant, 1971, Haratani 1971).

Free Association Method

Although adjective lists in a Katz-Brady pattern are prepared from free responses to the names of target groups (Katz & Brady, 1933; Vinake, 1949; Berreman, 1958; Taft 1959; Sinha & Upadhyaya,

1960 a, Chandra 1967; Haque & Sabir 1971) but free association as a stereotype research technique has been adopted by a few researchers (Ehrlich & Rinehart, 1965; Gardner & Taylor, 1969). The American sociologists, Ehrlich & Rinehart (1965) criticized the adjective checklist technique on the grounds that the list may not contain traits relevant to the target group. In the free association method, Ehrlich & Rinehart (1965) asked the Ohio state University students to list all words, adjectives, or traits which they needed to adequately describe the seven target groups (Turks, Russians, Negroes, Japanese, Alorac, Jews, and Americans). Recently the Canadian Psychologists, Gardner & Taylor (1969) have investigated personal and consensual stereotypes to ethnic-group labels in a free continuous response situation. Gardner & Taylor (1969) used standard instructions for word-association test following Noble (1952). However, the free association (open-ended format) as an independent technique for nationality stereotype research is difficult to quantify and to interpret. The best use of the free association method lies in adequate pretest of the adjective checklist. Ehrlich and Rinehart (1966) replying their critique (Bergh 1966) hold: "we are concerned with the misuse of the original checklist by researchers who failed to check the current validity of that instrument or failed to pretest their own checklists."

Content Analysis

Eysenck & Crown (1948) in England, Duijkar & Frijda (1960) in Amsterdam, and Ehrlich & Rinehart (1965) in America at different times criticized the adjective checklist technique on the ground that the method does not provide real life conditions for the 'spontaneous' expression of nationality stereotypes. Eysenck & Crown (1948) viewed that the results obtained by the Katz-Braly technique was primarily predetermined by the methodology used and that the methodology forced the subjects to make responses in stereotyped fashion. Duijker & Frijda (1960) hold: "The purpose of scientific technique is not to create new stereotypes in the respondents, it is only to discover already existent ones" (p. 118). For them content analysis of "spontaneous" materials such as novels, short stories,

plays, public speeches, etc, are the materials "ideally suited for the study of national stereotypes" (p. 119).

Holsti (1968) a political scientist, broadly defined content analysis as "any technique for making inferences by systematically and objectively identifying specified characteristics of messages" (p. 601). The technique could be employed on letters, on press conferences, on speeches, on newspaper items, on books, on radio and television programmes. The use of content analysis as a research methodology to the study of stereotypes and images dates images dates back to the time of World War II when Writers War Board, with the assistance of the Bureau of Applied Social Research at Columbia University (U.S.A.) made extensive analysis of the "stock characters" contained in the media of mass communication such as novels, short stories, newspaper items, movies, stage, and radio (Allport, 1954, p. 200). The Board published the book "How Writers perpetuate 'Stereotypes' in 1945.

Berelson & Salter (1964), who were associated with Writers' War Board, made a contents analysis of 198 short stories published in eight of the most widely read magazines in America in 1937 and 1943. The magazines included in the study were Saturday Evening post, Collier's American, Cosmopolitan, Women's Home Companion, Ladies Home Journal, True Story and True Confessions. A quantitative analysis of the majority and minority American characters showed substantial differences. The authors concluded that in the stories Americans (White, Protestant English-speaking, Angloaxon) received better treatment, both qualitatively and quantitatively, than the minority and foreign groups, of all the characters in magazine fiction, the Negroes and the Jews (American minorities) were depicted the least favourably.

In New Zealand, Erwin (1964) made intensive study of Maori stereotypes through printed materials (during the years from 1642 to 1843). The materials studied included official accounts of voyages, the reports of travellers, the letters and journals of residents, parliamentary reports, missionary journals, and the reports of the Zealand Company. Erwin concluded that "the frequency with which the

various traits are mentioned remains relatively stable throughout the whole period. The earliest deduced these traits from their actual experiences, but as time passed and information about the Maori accumulated, people tended more and more to base their opinions of the natives as much on general expectation as upon their own experience" (P. 19).

Another area of content analysis researches conducted in America relates to the American-Soviet images (Dallin, 1947; Holsti, 1962 & 1967; Angell, Dunham & Singer, 1964; Eckhardt & White, 1967). Dallin (1947) made a detailed analysis of Soviet press in 1964 especially Pravda, official newspaper of the Communist party. According to Dallin 80 percent of all American news in Pravda cover under the following four main headings :

1. Militarism and imperialism in American foreign policy ("atomic diplomacy" and "dollar dictatorship") ;
2. Pro Soviet views and statements critical of American and British policy expressed in the United States ;
3. Reactionaries in the United States, Fascists, racial discrimination, "monopoly capitalism", and redbaiting" ;
4. Industrial strife, unemployment, inflation and inevitability of an economic crisis.

Holsti's (1962 ; 1967) case study about John Foster Dulles' images of the enemy (Russia) is and another example of content analysis. The primary data of this study were derived from the verbatim transcripts of all public available statements made by Dulles concerning the Soviet Union during the year 1953-1959, including 122 press conferences, 70 addresses, 67 appearances at congressional hearing, and 166 other documents. Holsti (1962) holds : "Dulles" image of the Soviet Union was built on the trinity of atheism, totalitarianism, and communism, copied by a deep belief that no enduring social order could be erected upon such foundations".

Still another example of content analysis of American and Russian elite media could be found in the studies of Angell, Dunham, & Singer (1964). The period covered by these studies was May 1, 1957

to April 30, 1960, and took four years to complete the research. The findings confirming the mirror-image hypothesis, in the context of American-Soviet Union cold war, portrayed each other as "aggressive" and "treacherous".

Eckhardt & White (1967) tested the mirror-image phenomenon through the value analysis of public speeches made by John F. Kennedy and Nikita Khrushchev. The method of value analysis — a form of content analysis was used to analyse the values explicitly stated or clearly implied in the speeches of Kennedy and Khrushchev. Eckhardt & White (1977) and White (1977) utilized content analysis to demonstrate mirror image phenomenon in the context of Arab-Israeli conflict.

Semantic Differential Technique.

The exploration of nationality stereotypes on three dimensions (evaluation, potency, and activity) of semantic space introduced by Osgood, Suci, and Tannenbaum in the year 1957 was first adopted by Prothro & Keehn (1957). The 7-point ratings on 41 adjective scales were collected from 100 English-speaking Arab students. The concepts rated were Italians, Turks, and Germans. From ratings obtained on 7-step scales, it was possible to describe the stereotypes of the students toward these national groups. It seems relevant to point out that semantic differential technique as applied to nationality stereotypes researches differs only with regard to the objectives of measurement. The objective of Osgood and his associates was to isolate the meaning of different words in a particular culture whereas particular culture whereas the prime interest of the nationality stereotype researches is to identify the characteristic way of perceiving the target nationalities.

Prior to the work of Prothro and Keehn, the attempt to quantify evaluative judgements on 7-step scales in the investigation of stereotypes was begun in America by Stagner & Osgood (1941; 1946) with the name "gradient technique". Gundlach (1944) also employed 7-step technique to determine the stereotype of college students toward the enemy, allied, and domestic nationality groups during the period of World War II. More recently, Deaux (1968) and Lawson & Giles (1973) with American and British subjects respectively and

Tanaka (1972), Salazar & Marin (1977), and Haque & Lawson (1980) demonstrated the fruitfulness of the semantic differential technique to the study of nationality stereotypes. This technique is not only useful for the study of semantic space but also "lend themselves to systematic analysis and comparison far better than do purely descriptive reports of stereotypes" (Prothro & Kechn, 1957). The technique also provides a better check against individual inconsistency. However, in spite of having structured format, the semantic differential technique does not provide for "an index of consensus comparable to that employed by Katz and Braly" (Gardner, Rodensky & Kirby, 1970).

Stereotype Differential Technique And Percentage attribution.

Recently, some social psychologists criticized the Katz-Braly paradigm on the ground that the technique does not allow for individual difference measures to the same extent as it does for the stereotype. As an alternative procedure, Brigham in a series of studies (1971a; 1971b; 1972) advocated "percentage attribution methods" whereas Gardner and his associates (1968; 1970a 1970b; 1972) preferred the stereotypes differential technique" which is a slightly modified form of "semantic differential".

Brigham's (1971b) technique of "percentage attribution" involves asking subjects to circle the percentage (on a row of percentages ranging by tens from 0 through 100) of members of a given ethnic group on a number of listed traits. In a study with 200 white Colorado University students, he used the following instructions:

"From our knowledge of widely differing child-rearing practices, social institutions, family relationships, and cultural patterns that characterize different ethnic groups and nationalities, it is obvious that people from different groups will, on the average, possess quite different and unique patterns of traits and characteristics . . . For each characteristic, circle the number of which comes closest to your estimate of the percentage of the members of that group who actually have that characteristics" (Brigham, 1971b).

in order to explore the "broad psychocultural trends in stereotype persistence and change". It may be pointed out of comparisons of national stereotypes were made by Mcenes (1943) and Seago (1947) in American and by Sinha & Upadhyaya (1960a; 1960b) in India over a relatively short period of time but the situations compared were extraordinary. In Gilbert's study, the Kaiz-Bray technique was repeated after a lapse of 18 years. Again after a lapse of 17 years since Gilbert's (1951) study Princeton undergraduates (third generations) were administered reported in 1933. Both the studies (Gilbert 1951; Karlins, Coffman & Walters, 1969) are considered important in the history of nationality stereotype research and provide us with broad psychocultural perspective on the study of national stereotypes.

In this part of the world, Haratani (1971) and Haratani, Matsuyama & Minami (1960) in Japan and Haque & Sabir (1971) in Pakistan made comparative study of nationality stereotypes in a long-time perspective. Haque & Sabir (1971) made a comparative analysis of 6 national groups, including self-image over a period of 18 years since Sailer's (1955) study in Lahore. The study explored the broad psychocultural trends in stereotype persistence of Pakistani (Muslim) respondents about the Indian (Hindus) and five Muslim nationalities. Haque (1973) made an attempt to test mirror image hypothesis (Bronfenbrenner, 1961) through comparative analysis of the content of stereotypes based upon the Kaiz-Bray technique found in the Indian and Pakistani studies over a period of two decades. The analysis compares both cross-cultural and historical comparisons within a culture and cross-cultures. The results showed not only the cross-cultural validity of the concept "mirror image" (i.e., inter-cultural generality) but also indicated some of its limitations (i.e., inter-cultural differences).

SUMMARY AND CONCLUSIONS

In view of the inter-disciplinary significance and value of the concept 'national stereotypes', the study in designed to survey the various techniques of measuring national stereotypes. The methods reviewed are adjective checklist technique, free association method, content analysis, semantic differential scales, percentage attribution

method, and stereotype differential technique. The paper also discussed the methods of cross-cultural comparison across two or more cultures and historical comparison within a culture.

The following tentative conclusions are drawn from the numerous studies conducted in the East as well as in the West :

- (a) The classical adjective checklist technique developed by Kaiz & Braly (1933) to the study of national stereotypes (i. e., commonly shared image about one's own group or about other nationalities) has been adopted all over the world and the data collected by various researches showed a high degree of consensus on the assignment of some outstanding characteristics for the target groups. Thus, the Kaiz & Braly technique has the advantage of determining an index of uniformity (consensus) which other techniques do not adequately provide for. However, it is suggested that the adjective checklist technique is both easy and reliable if : (a) the final list of adjectives is selected on the basis of free association method; and (b) the meaning of each adjective in the target culture is determined through 7-step semantic differential scales.

- (b) Although semantic differential technique does not provide as much an index of uniformity as Kaiz-Braly pattern does but the 7-point scales lend themselves to systematic analysis and comparison for better than purely descriptive reports of national stereotypes. The technique provides a better check against individual inconsistency. In recent years, several authors (Salazar & Marin, 1977 ; Haque & Lawson, 1980 ; Bizman, 1982) have fruitfully demonstrated mirror image phenomenon using semantic differential technique. Because of the cross-cultural validity of the technique, it is suggested that those interested in mutual perceptions of two national or ethnic groups in conflict will find it very useful.

- (c) The adjective checklist technique has been criticized on the ground that the method does not provide real life con-

ditions for the "spontaneous" expression of national stereotypes. A number of researchers (Dijker & Frida, 1960; Angell, Dunham & Singer, 1964; Berelson & Salter, 1964) think that content analysis of "spontaneous" materials such as novels, short stories, plays, public speeches, press conferences, newspaper editorials, radio and TV programmes are materials ideally suited for the study of nationality stereotypes. More recently, Brislin (1980) has outlined the following four aspects of content analysis: (a) the sampling of the materials to be analysed, (b) the development of categories and subsequent coding of material into them, (c) the establishment of reliability of the coding procedure, and (d) the establishment of validity for the results. Finally, it may be cautioned that the entire exercise of content analysis must be done with complete objectivity.

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EFFECT OF CASH AND CREDIT ON THE SPEED OF VERBAL LEARNING : A TREND ANALYSIS

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ABSTRACT

In an attempt to determine the cash and credit groups' trend of the average speed of learning a verbal task up to three trials, it was found that the trend was upward and without significant curvature.

Both humans and animals seek satisfaction and shun dissatisfaction. They improve or change their behavior and attitude towards satisfaction. This has been explained under different names by different researchers. Thorndike (1898) has explained it in terms of effects of behavior, Freud (1933) in terms of pleasure principle of behavior, Skinner (1938) in terms of reinforcement of behavior, Kornhouser (1939) in terms of attitude of people, Thibaut and Kelley (1959) in terms of outcomes of behavior, and Homans (1961) in terms of payoffs or profits of behavior. They all agree that consequence of behavior affects subsequent behavior.

Although the present experiment falls under the category of reinforcement schedule—immediate and delayed reinforcements, it is not basically concerned with determining the differential effects of reinforcement schedules on the speed of verbal learning. It is concerned with making a trend analysis of the average speed of verbal learning up to three trials under cash and credit payment schedules.

METHOD

Subjects :

Twenty undergraduate boys of an average age of 19 years. They all belonged to middle economic section of the society.

Design :

Subjects were randomly divided into two equal groups—cash group and credit group. Each subject for the cash group was paid a cash of Rs. 5 for the verbal task he was asked to do and each credit group subject was promised to be paid Rs. 5 next day. Each subject of both the groups was separately given three trials.

Material :

A list of 10 nonsense syllables.

Procedure :

After observing experimental paraphernalia, the subject of the cash group was given the following instructions:

"A few nonsense syllables will be exposed to you through this aperture. You are to learn by spelling them out. The nonsense syllables will appear one by one. After each has been exposed once, I shall ask you to recall them in the order they were exposed. You will be allowed one minute time to recall. I shall repeat this procedure. Since I am taking your time, I give you Rs. 5 as a remuneration. Do the task as fast as you can".

The number of correctly recalled nonsense syllables after each trial of learning was recorded and the subject was asked to stop doing the task after the three trials.

The subject of the credit group was given the following instructions :

"A few nonsense syllables—repeat this procedure. Since I am taking your time I shall give you Rs. 5 as a remuneration tomorrow or day after tomorrow. Do the task as fast as you can".

The number of correctly recalled nonsense syllables after each trial of learning was recorded and the subject was asked to stop doing the task after the three trials.

RESULTS AND DISCUSSION

Table 1 Analysis of Variance

Source of variation	SS	df	MS	F	p
Payments (A)	9.6	1	9.6	2.5	
Error (a)	68.8	18	3.8		
Trials (B)	30.7	2	15.35	30.7	<.01
AxB	3.1	2	1.55	3.1	
Error (b)	18.2	36	0.5		
Total	130.4	59			

The analysis of variance (Table 1) showed that $F_{2,5}$ at 1/18 df was not significant for cash and credit effect (A). This was because the two means for cash group and credit group had been averaged over three trials. They corresponded to a general over-all measure of performance for each payment schedule. $F_{2,5}$ at 1/18 df indicated that the over-all measure of performance for two groups did not differ significantly.

So far the trial effect (B) was concerned, $F_{30,7}$ at 2/36 df, was significant at a level much less than 1 per cent. This was because the three trial means had been averaged over two payment schedules and it was concluded that three trial means differed significantly.

So far the significance of the payment schedules $\times$ learning trials interaction (A $\times$ B) was concerned $F_{3,1}$ at 2/36 df was insignificant. The tabled value of F at 2/36 df with $\alpha = 0.05$ was 3.26 and the obtained value 3.1 just missed being declared significant at this level. Meaning thereby that learning curves for cash and credit groups were of the same form. This was because the payment schedules were randomized over the subjects.

Since the payment schedules were randomized over subjects error (a) 68.8 which was based on the pooled sum of squares between the subject tested in each payment schedule was considerably larger than 18.2—the pooled subjects $\times$ trials interaction sum of squares calculated separately for each payment schedule i.e., error (b).

Table 2 presented the two orthogonal comparisons, linear and quadratic, made in order to test the over-all trend of the trial means for cash and credit payment schedules. The sum of squares for the

Table 2. Analysis of variance of Linear and Quadratic Components

Source of Variation					
Linear component :	Trial	SS	df	MS	F
Groups trials :	1	30.625	1	30.625	61.25
Quadratic component :	1	3.025	1	3.025	6.05
Groups trials :	1	0.075	1	0.075	0.15
Trial :	1	0.075	1	0.075	0.15
Groups × trials :	1	0.075	1	0.075	0.15
Error(b) :	36	18.2	36	0.5	

of Interaction Sums of Squares

linear component of the trend was 30.625 and the resulting $F_{61.25}$ at 1/36 df was significant at level much less than 1 per cent. The sum of squares for the quadratic component of the trend was 0.075 and the resulting $F_{0.15}$ at 1/36 df was not significant (Table 2). The sum of squares for the linear component of the trend (30.625) and the sum of squares for the quadratic component of the trend (0.075) were equal to 30.7 i.e., the sum of squares for trials with 2 df (Table 1). Thus it was concluded that the trend of the over-all trial means was essentially linear and there was no significant curvature (Figure 1).

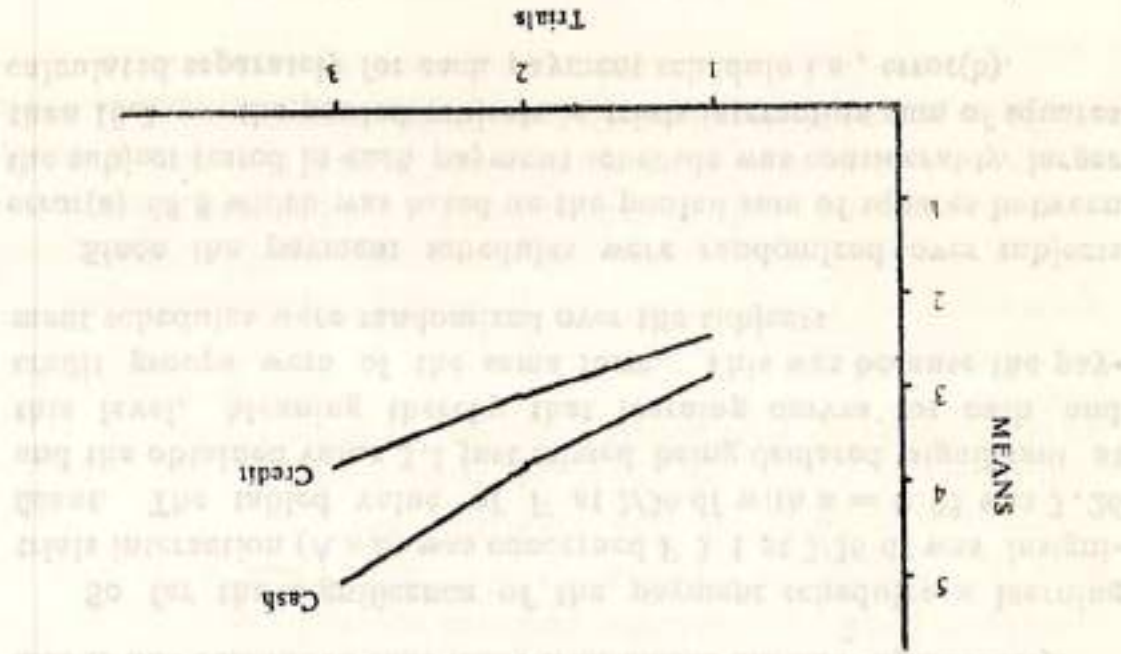


Figure 1. Means for payment Schedules(A) at each trial of learning (B)

The linear component of the group $\times$ trial interaction sum of squares was 3.025 and the resulting F 6.05 at 1/36 suggested that trends for cash and credit groups were linear and they differed significantly at level less than 5 per cent. The quadratic component of the group $\times$ trial interaction sum of squares was 0.075 and the resulting F 0.15 at 1/36 df suggested that a quadratic component of the trends for the two groups did not differ significantly (Figure 1).

The sum of linear interaction (3.025) and the sum of quadratic interaction (0.075) were equal to 3.1 i.e., the sum of square for the payment schedules $\times$ trial interaction with 2 df (Table 1).

Figure 1 further showed that average speed of learning from trial to trial was constant in both the groups. However, the speed of learning in cash group was much more rapid than that in the credit group i.e., almost double of the credit group. Initially, the mean of the learning speed of each group was obviously not significantly different i.e., in Trial 1. The mean of the learning speed in Trial 3 for the cash group was greater than that for the credit group which indicated the differential effects of cash and credit. The conclusion could be tested by the application of t test to both the groups for Trial 1 and Trial 3 separately.

Insignificant effects for cash and credit groups (Table 1) was due to the speed of learning in Trial 1. Analysis of variance ignoring Trial 1 would show the significant difference between the performance of the two groups which might be interpreted to mean that the two payment schedules produced significantly different effects on the speed of learning.

In summary, the trends of the means of both the group were linear and without significant curvature. The direction of the linear trend was positive. Meaning thereby that the trends for cash group mean and that of credit group mean were upward i.e., there was a successive improvement of learning a verbal task over the three trials under both the payment schedules.

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SOME SOCIO-CULTURAL ATTRIBUTES AND STATUS INCONSISTENCIES AMONG THE UNIVERSITY ACADEMIC COMMUNITY IN PAKISTAN

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ABSTRACT

Social scientists, specializing in social stratification, have attempted to construct a new variable designated as Consistency-Inconsistency characteristic by merging traditional status characteristics like income, education and occupation. Research focused on the viability of this new variable as explanatory for stress, marginality, status striving and the like remains a topic of academic debate. The data have been derived from a representative sample of University teachers. The sample comprised of four status categories of respondents from six established universities in Pakistan. Status inconsistency has been markedly revealed by the two middle categories. Further, irrespective of consistency-inconsistency, the University Community identifies with Middle Class and expresses a sense of blocked opportunity. Inconsistency though, affects job satisfaction and perception of power. An additive and interaction model have been suggested from more reliable conclusions.

An examination of the literature on Universities as Formal Organizations suggests that some socio-cultural factors can depress or raise the level of professional performance and other cultural interactions among the University Academic Community. The University Community in Pakistan seems to be striving to seek an identity of their own and also seeks recognition in the realm of ideas, profession-al orientation and specialized roles. For such socio-materially advanced society as United States, Gordon contended that "intellectuals in the United States do not fit the contours of the sociological mold cast by the forces of race, religion and origin in contemporary group life. They act in patterned ways so as to form at least the elementary structure of a sub-society of their own" (Gordon, 1964). The contours of a University Academic sub-society in Pakistan do not seem to have been visibly codified but there are some indica-

The dependent variables (socio-cultural attributes) in this study seem to be somewhat similar to these reported reactions or consequences of status inconsistency. Therefore, the measurement of status inconsistency as an independent variable is directed towards testing the salience of inconsistency variable. An interaction statistical model has also been suggested.

METHODS OF DATA COLLECTION

The original motivation for the research extended beyond the simple desire for reliable knowledge about Pakistani Universities or Organizations. Testing of controversial theory in Pakistani context is also contemplated. The data were originally collected in 1981-82 from six universities of Pakistan. Our population consisted of all the four academic ranks in these six Universities. The Universities selected were those established before 1965 so that their organizational structure became established during the decade. This rule enabled the author to keep the number of Universities manageable avoiding those that have appeared in recent years. List of teachers from six Universities (The Punjab, Jamshoro, Peshawar, Faisalabad, Engineering University, Lahore and the University of Karachi) were secured. A 50 percent sample on sample proportionate basis, was drawn by random number tables. The rate of response, inspite of variety of devices used to stimulate response, did not rise above 53 percent. The total sample size for analysis thus consisted of 509 cases. For this report, the researcher pulled out by systematic simple random basis one third of the total cases available. The proportion of Professors was raised a little because their size was getting quite small compared to other categories. The findings reported in this study thus composed of:

RANKS	N	PERCENT
Professors	182	100
Associate Professors	20	11
Assit. Professors	54	30
Lecturers	64	35
	44	24

The questionnaire, eliciting information on dependent and independent variables, consisted of 25 questions, a few relating to background information but mostly concentrated on professional roles and responsibilities, Academic Activities, Strivings and Aspirations, Perception of Power (influence) at various levels, Formal and Informal Social Participation, Life Style etc. The questionnaire mostly comprised of multiple response questions with a few dichotomous questions coded before mailing.

MEASUREMENT OF STATUS INCONSISTENCY

The basic dimensions for ascertaining status inconsistency in this analysis are age, academic qualifications and the institutional salary. Each variable, was dichotomized. Thus eight combinations (2³) were available, out of which only two (HHH, LLL) reflected consistency of status. The heterogeneous combinations like (HHH, HLL) etc. yielded inconsistencies. The original questionnaire contained more than one question on each dependent dimension but for this report one question on each is depended upon except for Power Perception where three questions from three different levels (influence in department, in Faculty and in the University as groups) are merged to find out degrees (High, Medium, Low) of Power Perception. This is done on the procedure followed in the construction of Family Extendedness Scale (Jahangir, 1967). The analysis, as it depends mostly on dichotomous scale, introduces some inaccuracies and is likely to inversely affect the significance tests proposed. Our findings should therefore be treated as some what tentative.

At a later stage, the researcher proposes to examine interaction effects, using a method suggested and demonstrated by Duncan (1966) and applied in several similar researches. There is a debate in Sociological literature if the interaction (inconsistency) models do really explain what remains unexplained by the additive model. The debate remains unresolved.

The proposed additive model would be :

$$D = U + A + B + C + e$$

Where D = the dependent variable score and A, B, C are scores on variables included in inconsistency viz age, qualifications, Institu-

TABLE 4.

Percent Distribution of Four Academic Ranks on Conservatism/Liberalism.

Ranks	Total		
	Conservative	Liberal	Depends
Professors	8	6	21
Associate Professors	31	27	32
Assistant Professors	39	34	31
Lecturers	22	33	16
	100 (36)	100 (70)	100 (58)

Table 4 presents distribution of Conservatism/Liberalism: On this dichotomy again, last three categories more than Professors seem to agree being conservative, the same being true for liberalism. As in the previous table, a large majority reflects on the merit of the event for taking either conservative or liberal attitude.

TABLE 5.

Percent Distribution of Four Academic Ranks on Perception of Blocked Opportunity.

Ranks	Blocked Opportunity	
	Yes	No
Professors	12	9
Associate Professors	33	25
Assistant Professors	33	39
Lecturers	22	27
	100 (121)	100 (56)

Table 5 concentrates on Blocked Opportunity: The distribution is not in any way different from the previous table. There is about equal division on affirmative and negative responses among the last three categories. A large majority thus feels that they have obstacles in showing true worth.

TABLE 6.

Percent Distribution of Four Ranks on Perception of Power			
Ranks	Power Perception		
	High	Medium	Low
Professors	11	12	6
Associate Professors	56	28	18
Assistant Professors	33	36	29
Lecturers	00	24	47
Total	(18)	(147)	(100)

In Table 6 we deal with Power Perception: Associates more than other sub groups indicate greatest influence. Possession of moderate sense of power is about equally distributed in all the first three categories. Powerlessness is most intensely felt by Lecturers, followed by Assistant Professors. High Power is not perceived by Professors group either.

TABLE 7.

Percent Distribution of Respondents on Status Inconsistency.			
Ranks	Status Inconsistency		
	Consistents	Inconsistents	
Professors	18	3	
Associate Professor	11	54	
Assistant Professors	33	37	
Lecturers	38	6	
Total	102	100 (80)	

Classification by Status - Inconsistency is depicted in the above table: Taking the sample as a whole, (which is a fraction of original sample) there is 5 : 4 ratio between consistents and inconsistents although to grasp inconsistents, larger sample size is needed. The consistency seems to be distributed unevenly between sub groups. Lecturers are most outstanding in this attribute within inconsistency sub group. Associates are more than half and Assistant Professors more than one-third. Inconsistency is largely revealed by the two middle sub-group.

Distribution of dependent variables in relation to inconsistency have been shown from Tables 8 to 13. These tables may be read both vertically (for among group variance) and horizontally (for within group variance).

TABLE 8.

Table showing the Relationship between Inconsistency among the Four Ranks and their Class Identification.

Professors Assoc. Profs. Asstt. Profs. Lecturers Total
Social

Class	Con. Inc.	Con. Inc.	Con. Inc.	Con. Inc.	Con. Inc.	Con. Inc.	Con. Inc.	Total
Lower	0	0	10	17	14	0	12	(16)
Low Mid.	0	0	20	25	54	46	40	(52)
Upper Mid.	88	100	60	58	23	50	45	(82)
Upper	12	0	10	0	8	4	3	(8)
	(17)	(2)	(10)	(36)	(35)	(24)	(33)	(164)
	100	100	100	100	100	100	100	100

In the above table, one can observe that within Professors subgroup, who are mostly consistent, a larger majority identify with upper middle class and only a small fraction express belongingness to upper class. Among Associate Professors, where consistency-inconsistency is highly unevenly distributed (5:18) identification with upper middle class is evenly distributed. Close to one fourth show belongingness to lower middle class. A reverse trend is depicted among the latter categories where frequencies for upper or upper middle class are comparatively smaller. In these categories, (Assistant Professors and Lecturers), the response of belonging to lower middle class is about equally weighted. For lower class belongingness, there are no indications even among the Lecturers' subgroup.

It may be concluded from this distribution that inconsistency of status has only transitory impact for all categories in making judgment about their class identification.

TABLE 9.

Table showing Relationship between Inconsistency and Job

satisfaction of University Teachers.

Professors Assoc. Profs. Asstt. Profs. Lecturers Total

Job Satis- faction	Con. Inc.	Con. Inc.	Con. Inc.	Con. Inc.	Lecturers	Total
Highly Satisfied	39	0	40	3	12	33
Partly Satisfied	39	100	50	46	56	54
Partly dissatisfied	11	3	10	23	18	3
Highly dissatisfied	11	0	0	8	14	10
Total	(18)	(2)	(10)	(40)	(34)	(30)
	100	100	100	100	100	100

From table 9, one can make out that a large majority of Profes-

sors who are excessively consistent express job satisfaction. Among

Associate Professors where division between consistency and incon-

sistency is most conspicuous, majority indicate either part satisfaction

or part dissatisfaction with their job. Similar are the responses for

Assistant Professors' group. Lecturers, the youngest of the four sub

groups who are the fresh entrants in teaching career are largely con-

sistent and vindicate job satisfaction.

Status inconsistency seems to visibly affect the two middle groups

as regards their job satisfaction attitude.

TABLE 10.

Table showing Relationship between Inconsistency among the

Four Academic Ranks and their view on Traditionalism

Professors Assoc. Profs. Asstt. Profs. Lecturers Total

Tradi- tionalism	Con. Inc.	Con. Inc.	Con. Inc.	Con. Inc.	Lecturers	Total
Agree	32	0	30	22	22	15
Disagree	33	50	10	12	16	56
Depends	28	50	60	66	56	63
Total	(18)	(2)	(10)	(41)	(32)	(27)
	100	100	100	100	100	100

Table 10 shows that for views on 'traditionalism' as defined in this study, consistent Professors are equally dispersed in three response categories. Associate Professors, both consistent or inconsistent make the judgment on the nature of the problem. Likewise, Assistant Professors as well as Lecturers weigh their judgment, in two third cases, on the nature of the problem.

Inconsistency appears to contribute its share in the last three rank categories.

TABLE 11.

Table showing the Relationship between Social Inconsistency among the Four Academic Ranks and their Views on Conservatism/Liberalism.

	Professors	Assoc Profs.	Asst. Profs.	Lecturers	Total
Conservatism/	17	22	42	54	129
Liberalism	0	24	18	12	54
Conservatism/	100	100	100	100	100
Liberalism	0	34	40	30	104
Depends	66	0	30	24	120
Total	(18)	(01)	(09)	(40)	(68)

Table 11 is not much difficult from the previous one. About similar is the distribution of University community views on conservatism/liberalism. Inconsistents outweigh consistent on the nature of problem 'depends'.

TABLE 12.

Table showing Relationship between Status Inconsistency among the Four Academic Ranks and their Perception of Blocked Job Opportunity.

	Professors	Assoc. Profs.	Asst. Profs.	Lecturers	Total
Blocked	50	64	77	53	244
Opportunity	78	50	80	57	265
No	22	50	47	20	139
Total	(18)	(02)	(11)	(43)	(74)

In this table 12 is shown the distribution of consistent-inconsistent teachers by their sense of blocked opportunity. As regards the opinion on blocked opportunity, four fifth consistent Professors express affirmation. A large majority of both consistent-Inconsistent Associates and Assistant Professors check the 'yes' category. Among the Inconsistent Lecturers, a small proportion do not agree that the opportunity is blocked. Views on affirmation of blocked opportunity have been almost unequivocally expressed irrespective of consistency-inconsistency attribute.

TABLE 13.

Table showing Relationship between Status Inconsistency among the Four Academic Ranks and their Perception of Power.

Perception of Power	<u>Professor</u>		<u>Assoc. Profs.</u>		<u>Asstt. Profs.</u>		<u>Lecturers</u>		<u>Total</u>
	Con.	Inc.	Con.	Inc.	Con.	Inc.	Con.	Inc.	
High	28	0	14	04	38	18	91	05	18
Med.	18	3	12	14	12	12	39	40	142
Low	8	0	8	82	50	70	50	55	17
Total	(18)	(02)	(11)	(43)	(32)	(30)	(35)	(06)	(177)
	100		100	100	100	100	100	100	100

In Table 13 Power distribution is classified by consistency-inconsistency. As far as the Perception of Power (as defined in this research) is concerned, inconsistencies in all four sub groups sense as ipossessng low power. Consistents believe to possess high Power. Among the middle sub groups witnessing most inconsistency, it may well be made out that high inconsistency corresponds with the Perception of low level of Power. As stated earlier, a greater mojority of the total group does perceive medium degree of Power. More reliance of these findings can be confidently made after interaction tests are undertaken.

CONCLUSION

The University Academic Community, what ever its limitasious, has a close psychological proximity to lower/upper Middle Class in Pakistani Society. Taking all things into account, job satisfaction score is not high. Traditionalism also varies among the four categories but the merit of the problem mostly decides what attitudes traditional/conservative or liberal is adopted in making judgment about the issues. A feeling of blocked opportunity is markedly visible among the majority. Also the Academic Community, irrespective of rank, sense moderate influence in departmental faculty and 'varsity affairs. Four out of nine share the stress due to status inconsistency. This attribute differentially affects the dependent variable-the socio-cultural factors summarized above. It affects class identification only transitionally whereas it has visible affects in their job satisfaction. The inconsistency attribute does not seem to affect the sense of blocked opportunity which is widely prevalent, Although a medium perception of power has been evidenced among all four categories, the impact of inconsistency for Associate and Assistant Professors sub-groups seems meaningful.

This, It is admitted, is an analysis using aggregate data. The purpose was to obtain a profile of the Universty Teacher's Community which has been, at least tentatively, revealed by this empirical investigation. This research endeavour has, in its humble way, contributed to the debate on the salience of status inconsistency variable. More reliable conclusions will be available by employing proposed significance tests of interaction of dependent variables and the independent variable-Inconsistency of Status Attributes.

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TELEVISION PROGRAMMES FOR CHILDREN

ALAY AHMAD

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ABSTRACT

Fifty fathers were interviewed with a view to determine which TV programmes were considered better by them for their school going children. The open-ended interview showed that they preferred educational programmes for their children.

INTRODUCTION

There is general anxiety among parents about certain television programmes and their possible harmful effects on their children. Serhamm, et al (1961) found that parents considered harmful programmes those involving horror, crime and violence. Similarly, a recent study conducted by Ahmad (1978) highlighted the facts that Pakistani parents did not like programmes containing crime, violence, romantic and sexual contents. It appears from the above mentioned studies that parents would like to eliminate such programmes because TV could act as Pied Piper (Witty, 1967) to develop undesirable behaviour in their children. It seems to the present author that parents want nonaggressive and other types of TV programmes for their children. A related aspect of the same problem is to determine television programmes for future telecast for children from parental point of view. It is interesting to note that no scientific study has been made on this subject in Pakistan and has also received less attention elsewhere.

METHOD

Subjects :

50 fathers having school going children served as subjects. They were either college or university teachers of Peshawar. Each of them had been watching TV programmes since a year, at least.

principle of simplicity was operating in the present study (Lumsdaine 1972, Lundgren, 1972, Schramm, et al 1961).

It emerged from the present study that fathers' demand was to design television programmes which might provide cognition, and escape from daily pressures to the children audience. To summaries, children's televiewing behaviour was a function of decision process (Weiss, 1968) needs and their environment (Ahmad, 1980).

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CONTENTS

The Effect of a Model's Feeling on Helping Behaviour	...	...	...	3
Afzal Imam				
An Experimental Test of the Skaggs-Robinson Hypothesis on a Pakistani Sample	...	...	...	9
Najma Najam				
A Comparative Study of the Personality Profile of Science and Arts (Boys) Students of Matric Class	...	...	...	15
Iftikhar Ahmed				
Token Economy as a Method of Teaching Basic Concepts to the Mentally Retarded ...	...	...	...	29
Yasmin Nilofer Farooqi & Kauser Qayyum				
Hypnosis as a Diagnostic and Therapeutic Technique in Pakistan	...	...	...	43
Farrukh Z. Ahmad & S. Saleh Jaleel				

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THE EFFECT OF A MODEL'S FEELING ON HELPING BEHAVIOUR

AFZAL IMAM

Department of Psychology, University of Karachi.

ABSTRACT

The study was conducted in a natural setting to ascertain the trend of helping behaviour in a developing country like ours and further to determine the effect of a model's feeling on helping behaviour. A total of 51 subjects were used in the present study. Letters with positive feelings brought significantly more returns than letters depicting negative emotional tone. However, there was no significant difference between neutral and positive conditions. Also no significant difference was found between neutral and negative conditions.

INTRODUCTION

The study of helping behaviour is relatively new in Social Psychology. It is amazing why such an important topic did not receive its due attention from Psychologists. The recent interest along these lines may be attributed to the more recent techniques of investigation. Previously most of us relied on laboratory data and did not pay any significant attention to the data coming from beyond the laboratory. Field data were considered partially unreliable and unsystematic. With the application of the non-reactive technique it appears now possible to probe into uncharted areas of individual behaviour. This technique has proved effective because it does not admit of any contamination of data. Moreover, the subject neither feels offended nor does he introduce something new in the environment as a measure of self-defence.

In a series of ingeniously designed experiments Bryan and Test (1957) studied altruistic behaviour in department stores and on a high-way. They consistently found that the observation of helping models significantly increased the frequency of subsequent altruistic behaviour. In another naturalistic experiment Hornstein, Fisch and Holmes (1968) studied the impact of social models on helping

behaviour. They collected data from a number of pedestrians without giving them the slightest hint that they were participating in an experiment. Just accidentally the pedestrians happened to find an open, addressed but unstamped envelope containing a wallet and a letter to the wallet's owner. The owner's name was, of course, fictitious. This letter described the feelings of the previous finder about returning the wallet. In the case of similar-model conditions letters with neutral and positive feelings brought significantly more returns than letters depicting negative emotional tone. But there was no statistical difference between the neutral and positive conditions. Again, the overall returns produced by similar and dissimilar models were not statistically different. In the dissimilar model condition the feelings (positive, negative and neutral) of the former finder produced no differences in return rates.

Similarly, other experiments (Rosenbaum and Blake, 1955; Rosenhan and White, 1967) have been done along these lines. The data collected by previous investigators support the proposition that observation of a helping model increases the frequency of subsequent helping behaviour.

The present study arose out of a heated and thought provoking discussion in the class room while the author was delivering a lecture on helping behaviour. A large majority of the students were of the opinion in fact they were very certain, that in a developing country like ours, nobody will help others by way of returning the lost article. Of course, there were a few students who challenged this proposition and insisted that many people happened to be socially responsible and honest in their dealings and they would feel duty bound to return the lost article to their real owners. The author thus seized upon this idea and decided to conduct an experiment to clarify the position.

METHOD

Subjects :

The subjects used were 51 students of Karachi University. Approximately 80% were males and 20% females. The estimated average age of the subjects was 24 years.

Procedure :

The present study was conducted at the University of Karachi. One day 51 students at the University campus found an addressed but unstamped envelope containing a diary and a letter to the diary's owner. The diary and the letters are described below.

The Diary : The diary was small and very personal containing the names and addresses of very close friends of the owner both at home and abroad. Besides names and addresses there were dates of appointment with the doctor, a reminder for the collection of a passport, visa, identity card, etc. Also, there were other bits and pieces of information that would be important only to the owner. There was also a 40 paisa stamp in it. An equal number of diaries had a positive, neutral and negative letter around it.

The Letter : The letter was written on a 6" by 8" white paper bearing no identifying marks. Similarly, the envelope was plain and unstamped. When found it was properly addressed to the diary's owner.

In all the conditions the letter began in the same manner. The owner's name was fictitious and such as to avoid any ethnic or religious group identification.

In the neutral condition the letter read :

Dear Mr. Anwar,

Here is your diary which I found and am returning.

In the positive and negative conditions the letter continued describing the previous finder's feeling about finding and returning the diary.

In the positive condition the letter added :

It has been a pleasure for me to return this diary which I found. You must be very troubled at losing it and so I decided to post it at my earliest.

In the negative condition it read as follows :

If your things are so dear to you why don't you take more care of them? Why do you make a nuisance of yourself and inconvenience to others?

In an effort to avoid any systematic biasing the dropping of letters was done randomly. One person surreptitiously dropped the envelope containing the diary and the letter and at the same time one observer, unobtrusively located, verified its recovery by the subject. Sex and approximate age of the subjects were also noted down by him.

RESULTS

Of the 51 diaries dropped 18 (35.3%) were returned. Most finders having discovered the stamps used them for the postage but some put their own stamps. Of the 18 returned 9 (50%) were positive, 7 (38.9%) were neutral and 2 (11.1%) negative. A chisquare test was run to ascertain the differences among various conditions. The difference between positive and negative conditions was statistically significant ($\chi^2=4.45$, df 1, $P<.05$). On the other hand, no significant difference was found between positive and neutral conditions ($\chi^2=.25$, df 1). Also, no significant difference emerged between neutral and negative conditions ($\chi^2=2.78$, df 1).

DISCUSSION

The present study was conducted in a natural setting to ascertain roughly the trend of helping behaviour in a developing country like ours and further to evaluate the effect of a model's feeling on helping behaviour. Of course, the author is fully conscious of the limitations of the study wherein only a very selective set of population has been utilized. Anyway, whatever might be the drawbacks, one thing very clearly emerged out of this investigation is that we are definitely not far behind the developed countries in terms of helping behaviour. We are as good as any other nation of socially responsible people who are ready to help others in time of need. The data obtained bear testimony to this effect. As compared to the study of Hornstein, Fisch and Holmes (1968) wherein the return rate was 40%, our study produced a return rate of 35.3%. The difference is not significant especially when we take into account the differences in the number and characteristics of the population. Our results are supported by the Hornstein et al. study (1968) in other respects too. The difference between positive and negative

conditions was significant in statistical terminology. Again, there was no significant difference between positive and neutral conditions.

In sum, the findings of the present field experiment seem to suggest that our people are as honest and socially responsible as people in developed countries and that a model's feeling does have a marked influence on the helping attitude and behaviour of other individuals. For further study, it is suggested that some valuables (a ten-rupee note, for example) be included in the contents of the envelope along with the diary.

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Robinson first pointed out this paradox and in 1937 put forward a hypothesis which is now known as the Skaggs-Robinson hypothesis (as reported in Osgood 1968). According to Robinson greater facilitation is obtained when similarity of material is greater. Some degree of similarity leads to maximal interference (facilitation decreases). If the two stimuli are different or neutral then facilitation also increases but not as much as the maximal similarity situation.

The studies by Mcgeoch and colleagues (Mcgeoch and Mcgeoch, 1937; Mcgeoch and McDonald 1931), opposed this finding. They found interference gradually increases even with the closest synonym. There has been support for this hypothesis by Davies (1933) (code substitution test), Watson 1938 (card sorting) and by Kolers and Gonzalez (1970). Osgood (1946) reported that in meaningful material, as similarity in meanings increased the interference decreased. This goes against the findings of Mcgeoch et al. Keeping this controversy in view, the present experiment was designed to test the Skaggs-Robinson hypothesis.

METHOD

Sample :

The sample constituted of 24 students of the final year in the department of Applied Psychology. Six experimenters were also chosen from the same class. Each experimenter was assigned three subjects for the three experimental conditions. One subject was tested on items with the greatest similarity with the test list, the second on the somewhat similar items and the third on completely different items.

Apparatus and materials :

Memory drums were employed to control the exposure time for the lists. The lists were prepared in the following manner.

1. A standard list of 10 nonsense syllables of 3 letters each, e.g. NUY.
 2. A test list 'B' of 10 nonsense syllables which had the first 2 letters similar to that of the standard list, e.g. NUH.
 3. A test list 'C' of 10 nonsense syllables which had the first letter similar to the standard list, e.g. NAX.
 4. A list of 3 digit numbers, for maximal difference, e.g. 213.
- The material was exposed using the method of serial presentation.

Procedure :

The subjects were allotted call numbers and were asked to come in when their call number was called out. The experimenters

prepared the lists. After this was done the subjects were called in by each respective experimenter and asked to learn list 'A' upto the level of mastery (2 errorless trials). The lists could be reproduced in any order; there was no penalty for incorrect order. A rest pause of 3 minutes was given, after which the subject was asked to learn the second list (B, C, or D) upto the level of mastery. After this was done the subject was given a rest period of three minutes. The number of trials taken to reach criterion and the number of correct words were noted down for each list. After the rest period of three minutes was over the subjects were asked to recall the items from list 'A' in any order and the number of correct words was noted down.

Results and Discussion :

The mean scores of the correct responses of the subjects belonging to each condition were taken out for comparison. The means for subjects in condition I (maximal similarity) and condition III (maximal difference) was 8.16. The mean correct response for the subjects in condition II (some degree of similarity), was 6.66 (see Table I). The difference between the groups was not significant.

Table 1.

Showing the mean number of trials taken to mastery level (two errorless trials), for the subjects in the three conditions (Maximum similarity, maximum difference and same degree of similarity).

Exp No.	Maximum similarity Sub. No. I	Same similarity Sub. No. II	Maximum difference Sub. No. III
1	9	5	6
2	10	9	10
3	6	8	9
4	10	8	10
5	6	66	8
6	8	4	6
×	8.18	6.66	8.16

The differences between the means was not significant.

prepared the lists. After this was done the subjects were called in by each respective experimenter and asked to learn list 'A' upto the level of mastery (2 errorless trials). The lists could be reproduced in any order; there was no penalty for incorrect order. A rest pause of 3 minutes was given, after which the subject was asked to learn the second list (B, C, or D) upto the level of mastery. After this was done the subject was given a rest period of three minutes. The number of trials taken to reach criterion and the number of correct words were noted down for each list. After the rest period of three minutes was over the subjects were asked to recall the items from list 'A' in any order and the number of correct words was noted down.

Results and Discussion :

The mean scores of the correct responses of the subjects belonging to each condition were taken out for comparison. The means for subjects in condition I (maximal similarity) and condition III (maximal difference) was 8.16. The mean correct response for the subjects in condition II (some degree of similarity), was 6.66 (see Table I). The difference between the groups was not significant.

Table 1.

Showing the mean number of trials taken to mastery level (two errorless trials), for the subjects in the three conditions (Maximum similarity, maximum difference and same degree of similarity).

Exp No.	Maximum similarity Sub. No. I	Same similarity Sub. No. II	Maximum difference Sub. No. III
1	9	5	6
2	10	9	10
3	6	8	9
4	10	8	10
5	6	66	8
6	8	4	6
×	8.18	6.66	8.16

The differences between the means was not significant.

The results do indicate that there is a trend for facilitation effects with maximum similarity and difference (Fig. 1) however this is not a significant trend. The results of the present study could be attributed to several factors. In the present study we took into consideration not the similarity of meaning but the similarity of elements which Mcgeoch conceded could lead to maximal facilitation. However, the non-significance of the trend appears to be due to factors other than the learning process or the tasks. The first factor which stands out is the small number of subjects we used in the experiment. It was not possible at that time to include more subjects because of space and time limitations.

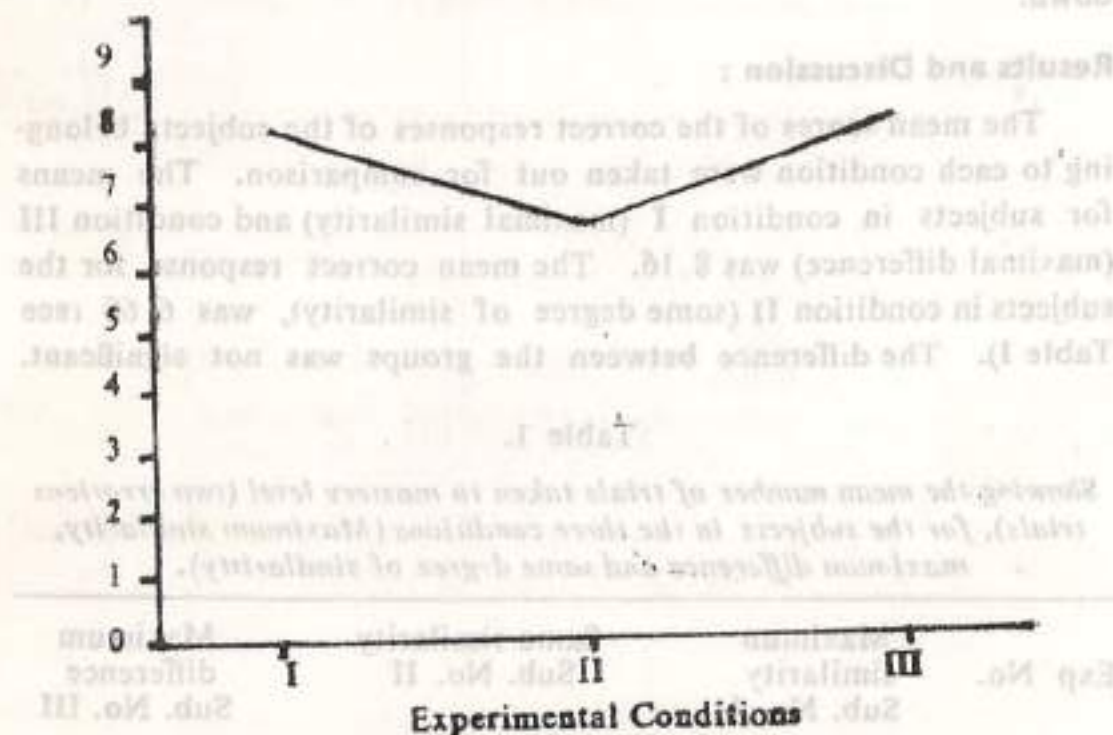


Figure 1

More important than the number of subjects is the socio-cultural context from which the sample was derived. The experiment was conducted on a sample of students who did not use English as their first language. These subjects had a different social, lingual and cultural background as compared to the samples used by Mcgeoch and colleagues in earlier tests. The interesting aspect of the present experiment is that inspite of the differences in the samples quoted above, the results do appear to follow the trend predicted by the Skaggs-Robinson hypothesis.

prepared the lists. After this was done the subjects were called in by each respective experimenter and asked to learn list 'A' upto the level of mastery (2 errorless trials). The lists could be reproduced in any order; there was no penalty for incorrect order. A rest pause of 3 minutes was given, after which the subject was asked to learn the second list (B, C, or D) upto the level of mastery. After this was done the subject was given a rest period of three minutes. The number of trials taken to reach criterion and the number of correct words were noted down for each list. After the rest period of three minutes was over the subjects were asked to recall the items from list 'A' in any order and the number of correct words was noted down.

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2) Both groups rate advancement and security in first and second place and agree that hours of work are least important. 3) The men consider advancement and salary much more important as incentives than the women do. 4) But supervisor relationship is more important for the woman than for the man. 5) Security and hours of work are not statistically different related within these groups.

A further analysis was made on the basis of marital status. Both the married men and the single men attached approximately the same importance to salary, supervisor relationship and hours.

Security is more important to the married men and advancement is more important to the single men. The married women attached greater importance to working few hours than do the single women. The married men emphasize security more than the married women do and security is more important to single women than to single men.

There is also an increasing amount of research being done on Equity Theory. This theory holds that the worker is satisfied with the pay when he perceives that it is equitable or fair. In order to be considered fair, what the worker gets out of the job (pay, fringe benefits, status, etc.) must be in balance with what he puts into the job (hard work, skill, training, education, etc.). An example of the kinds of studies which equity theory produces is the following by Adams and Posenbaum (1962). Students were hired as part-time interviewers. One half of them were told that they did not really have the qualifications for the job but that since the work needed to be done quickly they would be hired. They were also told that because of a technicality they would be paid the same hourly rate as people who were fully qualified for the job. The other half of the students were told that they were fully qualified for the job and were hired. All students then went to conduct interviews for 2½ hours. None of the students suspected they were taking part in an experiment. The results of this study showed that those students who believed that they were not qualified worked harder than the other students. The "inadequate interviewers" conducted significantly more interviews than the "fully qualified" interviewers.

VALUES money as compared to other incentives and the perception of the degree to which a given course of action is seen as a MEANS of attaining this value."

Stagner (1950) reported a study based upon 7000 employees of a nationwide U.S. corporation. He concluded that "neither executives nor workers are concerned about pay as such, except when economically pinched. At other times they prefer ego satisfactions, such as prestige, power, recognition, security and individual treatment.

Dudycha-Naylor (1960) designed a study to examine what job characteristics were of primary importance to college students. They found that the students in their sample gave the following rank order of job traits:

- (1) Pay
- (2) Opportunity for growth and advancement
- (3) Security
- (4) Fellow employees
- (5) Working conditions
- (6) Supervisor-employee relations.

Jurgensen (1947) had a group of 150 female and 1189 male applicants for positions at the Minneapolis Gas Light Company complete a job preference questionnaire. Each subject was asked to rank 10 items in order of preference. He found that job preferences were affected more by extent of education than by most other variables. Advancement became more important and security less important as education increased.

In the mind of an employee a minimum of 5 drives are likely to operate on the job. They are 1) Advancement 2) Hours of work 3) Salary 4) Security and 5) Supervisor Relationship. A study conducted by Blum and Russ (1942) attempted to determine the relative importance of these 5 incentives. The data were obtained from a group of 286 gainfully employed people ranging in age from 17 years to 60 years and in occupations from unskilled manual labour to the professions. There were 181 men, 72 of whom were married and 105 women, 26 of whom were married. All the subjects lived in the New York City area. The purpose of the questionnaire was not discussed with any subject prior to his completing it. The results indicate that 1) the two sexes tend to agree as to the relative importance of the various incentives. The single exception is the women's rating of supervisor

as a means of achieving a goal". (Blum and Naylor, 1968).

A company desires its employees to be more productive, more loyal, and more interested in their work, and it therefore attempts to control the conditions that increase productivity, integration and morale. Broadly, anything that is deliberately done to achieve these ends is an incentive (Smith and Warkley, 1972). Such an incentive, however, may be weak or strong and may or may not gain the desired end. The more we learn about men at work, the more effective incentives we find, and the greater becomes the number that a company may use. Companies have long but mistakenly assumed that financial incentives could satisfactorily achieve all these ends. In using money as a production incentive, companies have generally followed the principles that the more important a man's position and the more productive he is in it, the more money he should get. However, the sharp decline in the number of companies using money as a production incentive reflects the increasing doubts about its value for this purpose. The sharp rise in the number of companies with group life insurance, health insurance, pension systems and private unemployment insurances reflects increasing confidence in money as an integration incentive i.e. as fulfilling a basic desire of the worker for job security. There is no evidence that money has much value as a morale incentive i.e. as a way of increasing the worker's intrinsic interest in the work that he is doing.

The continued preoccupation of many companies with financial incentives has led them to neglect other work conditions that they can deliberately control for the purpose of increasing productivity, integration or morale. In fact, their tendency to increase the number of even simpler mechanically paced jobs with many surface-attention requirements is a negative morale incentive. The industrial psychologist stresses positive morale incentives, for increases in morale lead to both increased productivity and increased integration.

Locke, Bryan and Kendall (1968) recognized that as an incentive money may have many different effects, but they concluded "It must be stressed that whatever the effects of monetary incentives on performance, their ULTIMATE impact should be a function of the degree to which the individual

ATTITUDE OF PAKISTANI EMPLOYEES TOWARDS DIFFERENT INCENTIVES

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ABSTRACT

A study on 445 male employees was conducted to determine the relative importance of various incentives to Pakistani workers. Results indicate that job security is the most preferred incentive. This was true of both age groups tested as well as of both married and unmarried respondents. Salary was consistently rated second and the other incentives i.e., advancement, relationship with supervisor and hours of work were found to be much less important. Consistent attitudes were found in the relative importance given to the incentives by the single and young workers on the one hand as compared to the married and older groups on the other. Avenues for further research in this area have been outlined.

INTRODUCTION

A man works only to satisfy his needs. Some needs are satisfied without work: He needs oxygen to breathe, and he has it. Some needs are satisfied by the work itself: He may like what he is doing so much that he works for the sake of working. The critical conditions for need satisfaction, however, are those that sometimes are and sometimes are not provided. These vary for the same worker from time to time, from one worker to another at the same job and from one job to another. In general, an "incentive" is any condition that will satisfy a need. More specifically, it is any critical condition that causes a man to behave in a certain way. Most specifically, it is any critical condition that is deliberately controlled in order to get a man to behave in a desired way. "Incentive is used for a spurting force that is introduced

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thing should change. Often that "something" is her situation, luck, or critical others, however, rather than herself. Strategies are needed here that can persuade the individual that she should change and not wait for everyone else to do so. Again I would suggest that clinical experience, social psychology and the research literature on therapy contain a multitude of suggestions as to tactical approaches which might be investigated in this regard.

Following the guidelines of an aphorism for self-improvement may not be the most efficient way to proceed at all. There may be other avenues for identifying techniques to strengthen commitment that both rest on firm theoretical grounds and already have established empirical underpinnings. Those investigators who have been concerned with therapy as an influence process (Gillis 1979, 1981; Haley 1978; Strong and Claiborn 1982) have considered very similar strategic issues and we might begin by reviewing their work.

The important goals at the outset are (1) to recognize the key role played by the individual's will or commitment to change, to recognize it as a most powerful force for inducing adaptive behavior; (2) to view the presence or absence of such commitment not as a trait that a client possesses to a greater or lesser degree but rather (3) to see it as a cognitive disposition which is open to change and susceptible to the therapeutic process. Recognizing the importance and malleability of this cognition (4) we should begin to search for specific strategies to effect it. As already noted, nothing that is being called for here is really new. What is being suggested is that this aspect of the therapeutic process has been traditionally overlooked, perhaps even considered naive while all around us dramatic evidence of its importance was available. Such being the case it may be that identifying methods to develop, strengthen, and maintain patients' commitments to change is among the most valuable services we can provide them.

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some critical ways. How does the therapist persuade them otherwise? Again I am not going to suggest specific tactics here. However, if one views the first task of developing the patient's commitment to change as convincing him that such is possible the problem looks less awesome than before. Some tactical possibilities also present themselves. One might, for example, simply present factual evidence that the problem is amenable to therapy. Zev Wanderer (1984) reported in a recent seminar that a follow-up of phobic patients whom he had treated with a variation of implosion therapy indicated virtually a 100% success rate. Needles to say a phobic client coming to Dr. Wanderer might well be expected upon hearing of such results (and we can presume that most of them do hear something like this from previous clients) to be persuaded that she could indeed overcome her fears.

Not all of us unfortunately will be able to cite equally dramatic results of our own efficacy. The point though is that where such evidence exists -- and exists for the particular problem the client is presenting and for this particular professional being visited -- it should be made known in no uncertain terms.

Providing objective evidence that change is possible is just one obvious illustration of a strategy directed to enhance the patient's belief that she can change. Clinical lore, social psychology (which has for decades studied the problem of altering attitudes and beliefs), and available empirical research on therapy will provide other leads. Data already exists, for example, that successful outcomes are associated with increased feelings of internal control (Gillis and Jessor, 1970) and there are suggestions as to how such beliefs in internal control might be strengthened. Feelings of increased control over one's life would seem to be closely allied with the belief that one can change her behavior.

If we thus delineate our task as identifying possible strategies for causing the patient to believe that he can change we have a place -- indeed empirical data -- from which to start. The same is true of determining techniques for building the patient's conviction that she should change. Our task here might indeed seem easier since the patient's appearance in one's office suggests that she is aware some-

The practical problem is one of therapeutic strategies. If we admit that wanting to change sometimes makes it so, our task is that of developing the means by which to induce commitment where it is lacking. I have neither the time nor unfortunately the information at this time to indicate what those strategies should be. Only clinical interactions and ultimately systematic research will allow us to identify them. I do believe there are some hints, however, as to how we might proceed.

to realize this goal one must be convinced that change can take place, that it should take place and that it must take place. I am unsure of the accuracy of the last requirement but the first two might serve as initial guides in our search for techniques that might strengthen (or initiate) commitment to change. The first task is to cause the patient to believe that she can indeed change her behavior; that people with very similar problems have frequently overcome them. Patients are likely to be convinced upon entering treatment either that there is really not much that can be done about a problem such as their own or that, even if others have conquered such difficulties, they are unlike those others in

and that these will ultimately be reflected in the strategies used to develop commitment to change.

The same case I would guess could be made for success

in matters of other addictions, smoking and overeating, were there sufficient data available. That is to say, a personal commitment to change is a powerful vector; it is perhaps the most important item that can be brought to bear on a maladaptive behavior. An instructive piece of supplementary anecdotal evidence here is provided by Cummings' 1977 account of treating young drug addicts in San Francisco's Haight-Ashbury district. Feeling that he could not work effectively with these individuals while they were actively using drugs Cummings required them to discontinue use for various periods of time (three days for heroin addicts, fourteen for alcoholics) before he would accept them for treatment. Before one began the program, to help him get off drugs, that is, he had to get off drugs himself. Cummings reports that those patients he ultimately did treat (four out of every five accepted the abstinence) had already done exactly that. This initial cessation of drugs use, this marked change in the patients' daily lives, was accomplished without the benefit of any treatment. The patients, it appears, stopped because they decided they wanted the program Cummings could offer them. While it is true that the required period of being drug-free was brief and thus perhaps adds minimally to the case being made here, I nevertheless believe it illustrative of the same process: people discontinued a maladaptive behavior pattern because they decided they wanted to do it; they made a commitment to do so.

If then some people can commit themselves to major changes and then accomplish these what does this mean for the psychotherapist? Should not therapy be seen precisely as a resource for those who could not make or carry through on such commitments? This after all is why Schachter could point to "psychiatrogenic" disorders in the first place; therapists simply dealt with those persons whose resolve and resources were fewer than those who didn't need the therapist to make changes. Shouldn't we simply acknowledge then that our clientele for one reason or another lacks the capacity to "do it themselves", that is why they have come to see us and carry on business as usual?

Perhaps not. However, perhaps we can find that acknowledging the force of decisions to change leads to enhancing

the past 25 years. Their painstaking analyses, among other advantages, allowed them to combine data from diverse therapies (results from psychoanalysts, client-centered and behavior therapies could be arithmetically averaged) and across a wide range of psychiatric problems. Without detailing their methods and statistics, they determined that the average patient receiving psychotherapy for a given problem was better off at the completion of treatment than 75% of those patients with a similar problem who were not treated. Smith and Glass' conclusion was based on combining various indices of change from the many studies. As Eysenck (1978) noted in an immediate reaction and Landman and Dawes (1982) later documented, Smith and Glass' findings were most impressive for those studies in which the criteria of change were patients' ratings of subjective experience rather than behavioral measures. I believe it is fair to say of these results that they suggest that therapy is most useful in altering perspectives, views, frames of reference or whatever term one finds that best captures the critical cognitive states involved. Therapy is not so impressive at changing what people actually do, the manner in which they behave.

Such an interpretation is I believe consistent with the bulk of data on the outcomes of psychotherapy: it changes people's points of view and thus their feelings about the selves, their situations, their relationships, their future and perhaps even their past histories. Except for very circumscribed symptoms however--specific phobias, depressions, inactivity etc.--it has not proven an especially powerful vehicle for making people act differently than they typically do.

Thus the extraordinary nature of the changes wrought by personal decision. If indeed any of the available therapies for psychiatric problems -- chemical or psychological -- effected the quantity and quality of changes witnessed in the Vietnam drug abusers it would have represented an achievement without precedent in the history of psychiatric health. This observation is not meant to minimize the importance of changing subjective experience. That therapy can induce individual to be more self-accepting, view him- or herself more adequate, more in control of his circumstances and like, is a most significant contribution to the alleviation of human suffering.

majority, literally thousands of men, discontinued use of the drug upon their return to the United States (Peele, 1978). They were not treated for their addictions, they simply stopped. It seems that most of them decided that heroin was too costly, difficult, and dangerous to obtain when they returned home. Compare these success rates with those of early programs for dealing with narcotic addicts; relapse rates at Lexington Hospital, America's major treatment center in the 1950's, are estimated at above 90%. Few of the persons seen there had probably committed themselves to quitting the drug and so they did not. The Vietnam veterans made up their minds to quit and they did.

Traditional therapies, medical and psychological, have also had limited success with alcohol addiction. While there are reasons to question the validity of some of its claims to effectiveness, Alcoholics Anonymous would seem to have done considerably better. And when one examines the substance of the AA programs it appears that the major curative factor is the patient's decision to stop drinking. It is the case that members are required to admit that they are powerless over alcohol, that they cannot quit drinking on their own. Group support, God's help and other resources are needed to support their decision. The basic therapeutic ingredient however seems to be the member's commitment to stop. Having made this commitment the alcoholic has a chance of recovery; without it the best of our treatment, biological or psychological, make little difference. It is the genius of Alcoholics Anonymous that if it doesn't generate, it at least capitalizes on and sustains this commitment.

Eliminating or even controlling addictions to alcohol and narcotics are mighty feats of behavioral change. To appreciate their enormity one needs only to view them against a background of outcome research with the psychotherapies extant. The case for the general efficacy of therapeutic techniques across a range of problems now seems on firm footing (Smith and Glass, 1977; Landman and Daves, 1982). Even this most encouraging data highlights some critical limitations of present methods however. Smith and Glass (1977) struck a major blow for therapy when they applied a new measure -- "effect size" borrowed from medicine -- to virtually all of the outcome studies that had been completed in

In whatever ways individuals in the two groups may differ, however, one characteristic is clear: one group is able to alter their behavior by themselves, the other does not. What the former are saying in effect is that they are committed to making the change. Evidence suggests that the changes begotten by such personal commitments are dramatic indeed. An example is provided by those American soldiers who used heroin regularly in Vietnam. While would have qualified as addicts, using the traditional criteria of tolerance and withdrawal symptoms, the

being demoralized.) If the patient differs from untreated persons primarily change is neither a necessary nor sufficient goal of treatment for other practical reasons among them being that behavior untreated. (The validity of Frank's hypothesis is criticized systematically studied in differentiating the treated and untreated about themselves. This is one dimension which might problems caused them to be less hopeful and feel more negative, differed in that they were "demoralized"; the suggested, differed in that they sought assistance. The former, and symptoms who never sought assistance. The former, difference there were a number of individuals with similar problems pointed out that for every person seeking therapeutic assistance there were a number of individuals with similar problems. Frank (1975), reflecting on epidemiological findings, has these is a problem worthy of empirical attention. Jerome which they differ from those who seek help and identifying themselves? There may be a number of critical dimensions of their behavior change but that they can indeed alter it. But what of those who decide that not only should

seek treatment. likely candidates for change as are their fellows who don't are simply those who on a self-selection basis are not as obvious, those clients whose symptoms seem "psychiatrogenic" than those who trust in their own resources. To repeat the surprising that such individuals are more resistant to change believe they cannot accomplish it on their own. It is not having problem behaviors: those who would like to change but Therapists thus work with a nonrepresentative sample of people become the clients of psychotherapists and other healers. feel they cannot effect the desired change on their own, influences--are relatively less successful. Such persons, who

ENHANCING THE PATIENT'S COMMITMENT TO CHANGE IN

PSYCHOTHERAPY

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ABSTRACT

The author discusses the implications of Stanley Schacter's findings that persons with certain pathological addictions or compulsions are more likely to overcome their symptoms without treatment than with it. In this context he expands on the role of the patient making a "commitment to change" in altering maladaptive behaviors and discusses broad therapeutic goals and strategies that might be adopted if "commitment to change" were recognized as a basic therapeutic ingredient.

In a provocative note to the American Psychologist (1982) Stanley Schacter pointed out that patients with certain pathological addictions or compulsions were more likely to successfully overcome their symptoms if they did not seek professional help. Smokers, for example, who wished to discontinue the habit were more likely to become nonsmokers if they did not seek formal treatment than if they did so. The same was true for individuals addicted to heroin or alcohol who wished to quit: they were more likely to accomplish this if they did not seek professional assistance. Schacter suggested that the term "psychiatrogenic" be applied to this phenomenon of persons being less likely to change if they visited the therapist. The term, of course, was used facetiously. However, the events to which he points are crucial.

What Schacter has identified is the apparent capacity of certain individuals to significantly alter their behavior by deciding to do so, by committing themselves to change. Such individuals who, in a sense, "will" themselves to change some undesirable aspect of their behavior succeed in doing just that. Another group-subjected to "psychiatrogenic"

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therapy settings: the relationship between the desire for social approval and the amount of self disclosure by the patient during therapy, the direction of change in the topics discussed by the patient i.e. from the environment to the self of the patient as a function of the patient's relationship with the therapist, the effect of clear vs. ambiguous or no instructions on the role of the patient during therapy and the degree of direction and authority that can be exercised by the therapist. It is likely that given the sociocultural background of the Pakistani therapist and patient, research findings will be different from those obtained in the United States and elsewhere. Be as it may, a deeper and systematic understanding of the psychotherapeutic process and relationship is an urgent need.

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with considerable emotionality. This was designed to conflict with the experimenter's subsequent reinforcement of the subjects use of EW.

The measure of conditioning was the increase in EW on reinforced as compared to operant trials.

The examiner obtained highly significant conditioning under the ambiguous context but unreliable effects under the structured context of reinforcement. The two types of structuring did not, however, produce differential conditioning.

The researchers think that since the affective tone may reflect situational anxiety the data suggests that ambiguous instructions are associated with heightened situational anxiety and that examiner reinforcement in this context is effective because of reducing the possible anxiety; examiner reinforcement may serve as a means of structuring the situation for the subjects.

We might infer from the brief literature review presented above that the verbal conditioning model of psychotherapy is a useful model with which to conceptualize and understand the psychotherapeutic process, interventions made by therapists and responses to the same by patients. It is the opinion of the author that already, this model and research in the area of verbal conditioning have greatly increased our understanding of psychotherapy and the therapeutic relationship. Perhaps the foremost advantage of such a model is the fact that its concepts easily lend themselves to empirical verification and, in the final analysis, this is the yardstick which will separate the chaff from the grain in psychotherapy.

There is an almost total lack of research in psychotherapy in Pakistan. Aspiring psychotherapy researchers may make a beginning by examining the concepts generated by the verbal conditioning model. Studies may be done in therapy analogue situations or recorded therapy session may be subjected to content analysis so as to evaluate the findings of researches quoted in this paper as well as to generate new findings from different research designs. The following topics may be investigated into in re-

ambiguous conditions. This is in contrast to the low need for approval subjects willingness to disclose regardless of therapist expectations. The results supported the hypothesis. The researchers conclude that it is true that high need for approval subjects are more persuadable in verbal conditioning, yet they terminate psychotherapy prematurely in the absence of a clearly defined or articulated set of expectations with regard to appropriate or approved behavior. They suggest that therapists should be ready at the outset of therapy to provide explicit and clear guidelines for the high need for approval subjects or they might be assigned to the therapists, if possible, who are known to provide structured and clear guidelines for self disclosure.

One interesting finding was that low need for approval subjects characteristically scored lower in the clear expectation condition, although this difference was not statistically significant. They postulate that the low need for approval subjects "rebel" against specific structure from a therapist. If this is so, it would be more appropriate not to provide clear therapist expectations for high rates of self disclosure for low need for approval subjects.

A similar type of study was conducted by Weiss, Ekman, Ullmann and Krasner (1965). They studied the effectiveness of reinforcement in verbal operant conditioning following two types of antecedent experiences. By manipulating instructions prior to conditioning it was possible to create contexts of reinforcement differing primarily in degree of ambiguity. SS told TAT-like stories to emotionally bland drawings and use of emotional words (EW) was the response class studied. During reinforced trials the experimenter said "hm" and nodded his head whenever S used EW, but no consistent reinforcement was given during operant trials. Three groups of SS were tested in three different conditions: Group I was not given any sample stories to read, against which they could compare their own performance. Group II was given 4 sample stories to read. They were told that the stories were written by "other people". Group III was given the same stories but was told that 2 emotional stories were written by "patients" while the other two bland stories were by students. Two of the stories were written

desirability approval motive should be related to self disclosure because it seems that subjects high on the social desirability scale protect their vulnerable self esteem by being conforming, conventional and generally self protective. The are also persuasible in verbal conditioning (Crowne and Marlowe 1964) but terminate psychotherapy prematurely (Strickland and Crowne, 1963). This seems rather contradictory, as Krasner (1958) has observed that the verbal conditioning paradigm can be considered to be an analogue to the process of psychotherapy, in which the psychotherapist reinforces changes in the patient's verbal behavior. "Success" in therapy, then means that these changes generalize to verbal and behavior changes in the patient's life outside of therapy. Thus the greater amenability to verbal reinforcement of the high need for social approval subjects in a verbal conditioning situation and their tendency to terminate therapy poses a real problem for this model (Strickland and Crowne, 1963).

In their investigation, Riley, Cozby, White and Kijos (1983) discuss this problem. Perhaps, high need for approval subjects are more inclined to respond to situational cues that indicate reinforcement contingencies in an attempt to gain approval from significant persons in a specific encounter, while individuals who score low on the need for approval react according to a more generalized and internalized set of standards for appropriate behavior regardless of the situation in which they find themselves. According to the researchers it may be that high need for approval patients who terminate therapy early, view the situation as threatening because it is ambiguous. They are not clear as to what is expected of them by the therapist. It seems to follow that they would be inclined to make more self disclosures in response to self disclosure by the therapist if it were made clear that the therapist expected and approved of a high rate of self disclosure. Perhaps in this case "dyadic effect" might be extremely pronounced in high need for approval subjects.

Riley, Cozby, White and Kijos (1983) conducted a study to test the hypothesis that high need for approval subjects would express a significantly greater willingness to disclose to the therapist in clear expectation conditions than

to talk about someone, one does not know (T responses) and in that person's presence". Success could also be measured by the frequency of a particular response emitted. The data suggests that in therapy E responses precede F responses which in turn precede T responses. This appears in line with Rogers' (1951) consistent finding that as the patients make progress in therapy, they begin to talk more about themselves i.e., F responses increase.

Jourard (1964) emphasizes the importance of the capacity for self disclosure in interpersonal relationships. He argues that self disclosure maintains psychological health and fosters personal growth. He postulated the existence of a "dyadic effect" of self disclosure: self disclosure begets self disclosure i.e. as a therapist is more self disclosing in the therapy setting, the client increases in self disclosing behavior (Jourard and Jaffee 1970).

Simonson investigated this "dyadic effect" hypothesis using a therapy analogue technique (Simonson and Bundza, 1973; Simonson and Bahr, 1974). Subjects participated in one of three therapist disclosure conditions: (1) no disclosure, (2) demographic disclosure and (3) personal disclosure. Results did not prove the "dyadic effect" hypothesis of Jourard. Subjects, however, disclosed more in the demographic than in the no disclosure condition. Simonson postulated that perhaps the subject's expectations about appropriate therapist behavior were violated too greatly by the personal disclosure and what was regarded as comfortable and "human" in the demographic disclosure condition became frightening when the degree of disclosure was raised and the situation became more intimate.

This study leads us to another aspect of these research studies. Most disclosure research has been conducted on heterogeneous S samples of unknown composition. S variables that might be important in understanding reactions to the therapist's disclosure received little attention in these studies. Cravens (1974) believes that one S variable that seems important to investigate in this regard is the need for social approval.

Burhanne and Mirrells (1970) noted that the social

typical defense building type of therapy and the one similar to the analytic or extinction type therapy, could be observed and measured to determine effects of reinforcement. The initial purpose of the study was to "demonstrate the possibility that varying theoretical positions may direct the verbalizations of their subjects into areas in keeping with their own theoretical biases".

If the patient and the therapist concentrated on the environment, this represented the first approach, when emphasis was on the "self" of the subject that was supposed to be a replication of the supportive therapy while focus on patient-therapist relationship represented the third approach. Three subjects were asked to tell eight ten-minute stories including as characters "you", "I" and two other people as their subjects. The examiners were randomly assigned one of the following categories to reinforce: reference by the subject to the environment reference by the subject to himself or reference by the subject to the examiner. The three subjects were randomly assigned one to each examiner. Reinforcement was operationally defined as any form of verbalization such as reflection, remarks or question on the part of the examiner designed to strengthen the particular category he wished his subject to emit. The results of the study were

1. Frequency of responding was significantly increased as predicted in the response categories of Environment Patient and Therapist.

2. It was found that categories of response concerned primarily with the environment, the patient and the therapist can be rated reliably and offer a potential tool for further research in the area of psychotherapy. The authors feel that a most objective way has been developed to score therapeutic verbal responses.]

The main importance of the study lies in the hypothesis it suggests for further research. It seems possible to evaluate the success the therapist is having in establishing relationship with the patient by the speed with which the patient moves along the continuum of E (environmental) to I (therapist) responses, as it is "easier" (patient) to I (therapist) responses, as it is "easier" to talk about the impersonal environment (E responses), the easy to talk about one's self (I responses) and most difficult

generalization of verbally conditioned personality judgments made by children. It was found that generalization of verbal conditioning effects occurs in a selective manner. They conclude that children may see other children of their own age as being more similar to themselves, regardless of sex, than they do adults.

From Freud to Rogers, most authorities have regarded a patient's self exploration as a highly important ingredient of successful therapy. Thus during the process of therapy, the role of the therapist has been to facilitate the client's process of talking about himself and his interpersonal relationships (Truax and Wittmer, 1969). Rottler (1960) states that the characteristic which leads to greatest success is the already built-in tendency for the client to focus internally. He believes that clients who are helped the least are those who deal with their problems as though they were external to themselves. Bratten (1961) found that those clients who talked increasingly about their "private" and "personal selves" were more likely to be rated as successful. Patterson (1966) indicates that clients who avoid talking about their personal "selves" are the least successful clients. Sullivan very early, came to the conclusion that patients needed talking about themselves in their interpersonal relationships in order to benefit from therapy (1953). Increase in the "self" responses is an indication of success of therapy. This is the area where the patient has the greatest room for change (Dinoff, Rickard, Salzberg and Sippelle, 1960). Truax and Wittmer (1969) believe that more techniques should be developed to expedite various learning techniques to help the patient verbalize more personal references, as the patient moves towards the goal of therapy. The success of effective therapy lies in the ability or willingness of the client to talk about himself and others who have meaning for him. They find operant conditioning procedures to be especially appropriate in teaching a client his role or style of emitting personal references during therapy.

Dinoff, Rickard, Salzberg and Sippelle (1960) developed an interesting experimental design in which categories of verbal behavior comparable to three therapeutic approaches i.e., that of social or guidance worker, a non-directive or

but, if there is little positive as contrasted with negative reinforcement of dependency, then the patient will tend to avoid the treatment. "She also postulated that, "if expressions of dependency are approached or positively reinforced by the psychotherapist, the frequency of such expression will be sustained and if such expressions are avoided or negatively reinforced, their frequency will decrease. "Tape recording of the first two interviews of 23 cases treated by 18 psychotherapists were analysed. Patient therapist interaction responses were coded for the number of times the therapist responded with approach or avoidance reactions to the patient's dependency and also for the frequency with which the patients continued to express dependency immediately following the therapists' approach or avoidance interventions.

In this study the therapists' approach responses were taken to be approval reactions, reflection, generalization, support, probing, investigation, interpretation and factual information, while disapproval, ignoring, silence, mislabelling, topical transition and retraction were assumed to have an avoidance effect. The results obtained were as follows: -

1. When the psychotherapist tended to approach the dependency statements in the initial interviews, the patient remained in treatment.
2. When the therapists tended to avoid the patients dependency statements, they terminated treatment.
3. The patients were more likely to continue the discussion of dependency following therapists' approach reactions, than they were following the therapists' avoidance reactions.
4. The personality characteristics of the patients including dependency anxiety, were not found influential on their reactions to the therapists' approach and avoidance of their dependency bids.

Some studies were primarily designed to discover whether conditioning effects generalize outside of the specific response class originally reinforced. The research result for generalization effects have been contradictory (Rogers 1960; Singer, 1961).

Gelfand and Singer (1965) studied stimulus and response

be viewed as an approximation of the verbal conditioning paradigm, whatever else may be involved. One would expect to find that when the response of the psychotherapist is in some sense favourable, the patient would tend to continue the class of verbal behavior.

Two such studies were conducted by Murray (1954, 1955). In the first it was found that when the psychotherapist approved the patient's expression of hostility, this increased in frequency. Defensive statements such as intellectualization and complaints about physical symptoms decreased as the psychotherapist disapproved of them. In the second study, the following patient statement categories were observed: (a) sex, (b) intellectual defense, (c) dependency (d) independence anxiety and (e) general anxiety. The psychotherapist's verbal responses were rated as approval and disapproval. Approval statements increased the expression of the response class, while disapproval decreased expression.

Expression of hostility by patients was studied by Bandura, Lipsker and Miller (1960) and also by Miller (1958). Patient and psychotherapist behavior was coded from tape recordings. If the psychotherapist approached (approved) expressions of hostility, these increased. If the psychotherapist avoided (disapproved) such expressions, hostility statements decreased.

One must recognize that the designation of stimuli as to reinforcement characteristics and definitions of response classes are not entirely rigorous. But, it becomes clear that it is to be expected that if the psychotherapist approaches or approves a certain response class, then there will be further or increased occurrence of that response class. But, if the psychotherapist avoids or disapproves, then the frequency of occurrence of items of a response class will decrease.

Using the response categories of approach and avoidance, Ahmad (1960) tested two hypotheses in a dissertation study. "If the expression of dependency need on the part of the patient are approached or positively reinforced by the psychotherapist, the patient tends to remain in treatment,

paraphrase, agreement and a smile (Verplank, 1955). "Huh - uh" (Mock, 1957) and head shake (Salzinger, 1957) appear to have negative connotations.

A variety of response classes are modified by such reinforcement. Among responses studied are:

Use of pronouns such as "I" and "We" (Cohen, 1954), use of the noun "mother" (Mock, 1957), use of plural nouns (Greenspoon, 1955; Mandler and Kaplan, 1956), statement of opinion (Verplank, 1955), self attitude statements (Rogers, 1960), use of hostile verbs (Ekman, 1958) and references to family (Cairns, 1959).

O'Brien and Holborn (1979) found that all their subjects had increases in amount of complex verbal behavior emitted and in the use of a specific response class i.e., pronouns, when differentially reinforced by other non-verbal and verbal expressions, e.g. contingent eye contact, head nodding and "hm - mm". These changes occurred without the awareness of the subject of the reinforced responses or their contingencies.

Some complications in the verbal conditioning studies should also be noted. Firstly, there are studies reporting failure to obtain the expected results (Dally, 1953; Krasner, 1958). Second, it has become apparent that there may be interaction effects between the response class and reinforcement used. For example, Greenspoon (1955) found that the effect of "huh - uh" was different with a relatively narrow response class than it was with a broad and rather vague response class. Third, there are effects due to individual differences among subjects. Thus Tafel (1955) reported that among schizophrenics amount of learning was related to amount of anxiety. Mandler and Kaplan (1956) showed that some subjects assume that "mm - mm" has the connotation of approval whereas other subjects ascribe a negative connotation to the same verbal sound. Sarason (1958) reported more conditioning among subjects who were high on test anxiety, who answered questionnaire indicating anxiety during development and who were rated low on defensiveness.

As it has been mentioned earlier psychotherapy cou

class will decrease. This characteristic of positive and negative reinforcements can be utilized for strengthening healthy patterns of behavior and reducing unhealthy ones.

Now let us see how verbal conditioning takes place and then we will review some of the research studies that have been done in this area. If one person engages another in conversation and if the first chooses to nod his head and utter an "mm - hm" sound each time another uses the word "I" or "we", the second person will often use these pronouns with increasing frequency or, if in a conversation, the first person repeats or paraphrases every expression of opinion made by the second person, then the second person will tend to make more and more statements of opinion. The procedure can be made more formal. A subject may be instructed to construct sentences using one of two verbs which are printed on a card. A large number of such cards are presented, one at a time, to each subject. One of each pair of verbs has hostile implications and the other is neutral. If the examiner says "good" or "mm - hm" or nods his head each time the subject has selected the hostile verb, then most subjects will tend to select the hostile verb more and more frequently. In general, whatever class of verbal behavior is met by positive reinforcement will tend to become more frequent. There is also evidence that there is decreased use of any class of responses followed by negative reinforcement.

There is a wide range of stimuli that has reinforcement implications. It was Greenspoon (1955) who first demonstrated that if any interviewer said "uh-hum" every time an interviewee used a plural noun, the frequency of plural nouns could be significantly increased ostensibly without the client's awareness of any change. The "Greenspoon effect" was demonstrated over and over again in subsequent experiments on the shaping of verbal behavior (Sundberg, Tyler and Taplin, 1973).

The first review of the literature on verbal conditioning was presented by Krasner in 1958. In general, there is confirmation that the following have a positive reinforcement connotation: "mm - hum" (Greenspoon, 1955), "Good" (Cohen, 1954), "I see" (Salzinger, 1957), head nod (Mock, 1957).

function and assist him in articulating his thoughts and feelings, thus making them more accessible. The therapist's skill lies in the ways he has of facilitating free expression in the client with whom he is working. This is not just a matter of knowing what to say. It consists rather in a sensitive awareness of the way the other person feels, a general perceptiveness that makes it possible for him to pick up faint clues and to grasp meaning in confused and halting attempts to say something, or even in silence for that matter. A sense of being understood acts as a powerful motivating force for a troubled person, encouraging him to try to communicate more of his experiences. Thus psychotherapeutic methods have one thing in common - the fact that they depend almost entirely on communication between patients and doctor, which may be spoken or implied by expression and gestures. (Rees, 1976).

Strupp (1978) describes psychotherapy as an "inter-actional process" designed to bring about modifications of feelings, cognitions, attitudes and behavior which have proven troublesome to the person seeking help from a trained professional. He comes to know that he or she can share feelings, attitudes and experiences with the therapist and the latter will not depreciate, censure or judge, no matter what may be revealed, but will respect the patient's dignity and worth (Noyes, 1977).

According to the verbal conditioning model, psychotherapy is a process in which the therapist reinforces changes in the patient's verbal behavior. Spoken words are viewed on par with action. A verbal response operates on the behavior of another person and the consequences are seen in his interpersonal relationships. It is possible for the therapist to change the class of responses being emitted, extinguish unhealthy responses, control the rate of their emission, etc. Effective therapy involves the manipulation of the verbal behavior of a client through well placed reinforcements. If the psychotherapist approves or approves a certain response class, then there will be further or increased occurrence of that response class. If on the other hand, the therapist avoids, the frequency of occurrence of items of that response

VERBAL CONDITIONING IN PSYCHOTHERAPY

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ABSTRACT

The authors present a description of psychotherapy according to the verbal conditioning model. A literature review of the work done in enunciating and clarifying certain basic principles in this area is also presented. The model is evaluated and suggestions for continued research have been outlined.

"Any psychotherapy is a set of procedures by which a mental health specialist uses language to help a person in psychological difficulty. The underlying assumption is that particular kinds of verbal exchanges in a trusting relationship can achieve specific goals such as reducing anxiety and eliminating self defeating or dangerous behavior" (Davison, 1982).

Sullivan (1953) views an interview as "vocal communication". It includes "intonations, rate of speech, difficulty in enunciation." It is not just the preoccupation with words spoken. "Tonal variations in the voice i.e. changes in all the complex group of things that make up speech are frequently wonderfully dependable clues to shifts in the communicative situation."

Any talking involves communication. It is a way of enabling the patient to establish connections with his own inner and outer worlds. It might be maintained with plausibility that all psychological disorders are essentially communication problems and that treatment consists in repairing or installing lines of communication so that they will connect the patient with the complex human world in which he must

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CONTENTS

Pages	
3	Verbal conditioning in psychotherapy Farukh Z. Ahmad and Sabera Sultana...

21	Enhancing the Patient's Commitment to Change in Psychotherapy John S. Gillis
----	--

31	Attitude of Pakistani Employees Towards Different Incentives Zeenaat Ismail and S. Saleh Jaleel
----	---

45	Social Desirability: Impression Management or Self Deception Iftikhar Ahmad
----	---

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who lives in the corner house is the male friend. At the time when she went to Goa she did not want to as she was quite attached to the boy who lived in the corner house. She even expressed that her parents were not too happy about her attachment to this boy.

One night after she reached Goa she had to go and stay with an unmarried lady cousin of the family because of lack of space in the uncle's house due to many guests who had come from different cities in order to attend a wedding. She was lying down on a mattress and suddenly something like a snake crawled over her legs from one side to the other side of the mattress. She stated that she was dumfounded and could not even call out for help but at once thought "I wish he was here to protect me." She got up and frantically shouted for help. The aunt came running along with a male friend of hers who had apparently come to visit her at that time. The patient continued and related that nothing of significance happened after that event in Goa.

On her return from Goa she was all right for some time but the fit-like states started in March. She reported that she did not remember anything about events which take place during the fit-like condition in spite of the fact that she was told by the parents about the episodes several times in detail. She laughed at the idea of crawling like a snake, making "stupid hissing sounds and lapping milk from a saucer." The author wanted to confirm the diagnosis by hypnotizing the patient and putting her in a trance in order to help her relieve the attack. This was done. The patient was quite suggestible and went under trance and within 15 minutes gave a very vivid demonstration of the attack during hypnosis. She began behaving like a snake and lay down on her abdomen holding her head up and taking her tongue out and making hissing sounds. She even gave slight wiggles to her body as if a snake were crawling. She had already been told that she would be able to answer the author's questions during the hypnotic trance. When asked about her identity she answered that she was a snake and

to Miss Y. She even decided to take back the written evidence from the psychologist as, in her opinion, it was a disgrace to her as well as her family that their daughter should suffer from such an aberration. Given the above and other information her "fits" were diagnosed as being of a hysterical nature.

TREATMENT

The case was presented by the co-author to the senior author for treatment after two days. An appointment was given to the patient and her parents to come to the hospital on the following day but they refused to as they wanted complete confidentiality and hence were seen in a private clinic.

When they came at the appointed time the mother was called in first for a brief interview and while the author was talking to the mother, Miss Y had an attack in the waiting room and began to crawl into the room. The father who was in the waiting room knocked at the door and brought her in that crawling position into the consulting room. When the father was questioned, he said that the patient had dozed off in the waiting room and had then had the attack. The mother became pale and panicked and attempted to pat and shake the girl out of the attack, but in vain. The parents helped the girl on to the couch where she lay on her abdomen and raised her head. She also curled her body slightly, began to frantically make hissing sounds and lapsed into a state of hyperventilation.

At this point the author requested the parents to leave the room. They consented though they were very reluctant to leave the girl alone. After the parents left she continued to be in the same position but her hyperventilation reduced considerably. The author began to talk to the girl and the moment she was questioned she came out of the fit-like condition and sat up on the couch. During the interview she stated that she had been suffering from "black outs" for a few months after her return from Goa. She also communicated that she would play with four friends who live in the same compound. One of them

last three months. She had also been having 'fits' during which she behaved like a snake. She would crawl on her stomach, make a hissing noise, and lap up milk from a saucer. During these attacks which only happened when she seemed to be asleep, Miss Y often attempted strangling herself with her own hands as well as scratching her arms and wrists.

HISTORY OF PROBLEMS

According to her mother, Miss Y had been a normal girl and an average student until the appearance of the fits.

In January 1983 Miss Y and her mother went to Goa for a holiday. One day Miss Y accompanied her cousin to the home of an unmarried lady relative who was living alone. Miss Y spent the night there and while she was sleeping she felt 'something like a snake pass over (her) leg'. She did not see the snake but was panic stricken and became very anxious and fearful at that time. Miss Y was reassured by her family and displayed no ill effects of this traumatic experience until the fits began to occur. The onset of the fitlike attack was only two days before the class nine board examinations were scheduled to start.

Miss Y began complaining of feeling tired. She would lie down and 'suddenly go off to sleep'. Then she would sometimes have an attack. During the attack Miss Y would walk or crawl around the house with her eyes closed. She would also destroy and tear up rosaries and other holy objects. Her behaviour would become unmanageable and she had to be restrained from inflicting injuries upon herself.

On the suggestion of one of Miss Y's parents' relatives, the parents attempted to communicate with Miss Y when she was having an attack. It turned out that Miss Y could write - a childlike scrawl - while she was behaving like a snake. When asked 'Who are you?' Miss Y wrote in reply 'snake, serpent'. When asked 'Where have you come from?' she replied 'Goa'. On Shab-i-Barat (All Souls' Night), during one of her attacks, Miss Y said 'Open the door, something wants to leave me; there is a man who has changed into a snake. He is going to Goa, to the

doctor or healer as opposed to the compliant and submissive attitude of patients, the stronger dependency needs and the apparently greater suggestibility of our people as compared to Westerners all suggest that patients, here, would be more amenable to hypnotherapy. Moreover, many patients are not psychologically sophisticated, are resistant to undergoing psychotherapy and expect instant cures and symptomatic relief. Hypnosis, therefore, could be very effective in creating and cementing rapport between therapist and patient as well as in convincing the patient and his family about the validity of the treatment procedure.

In Pakistan, very few psychologists have been practising hypnosis. The senior author is one of them and has found this intervention very effective and useful either as a major therapeutic tool or as an adjunct to psychotherapy. In addition to its therapeutic use the author has also used hypnosis for diagnostic purposes as well as for the establishment of rapport. Most of the author's patients have responded very well to hypnosis and hypnotherapy and the fact that there have rarely been any relapses reported is also heartening. As such, the future of hypnotherapy in Pakistan appears bright.

Among the many cases that the senior author has treated the following case history is that of a young girl who was suffering from hysterical attacks and her subsequent dramatic cure by means of hypnotherapy.

IDENTIFYING INFORMATION

The patient who will be referred to as Miss Y is a 14 year old Catholic girl. She is a student of class 9 in a local missionary school. She has two siblings, one male and the other female, both younger than her. Her father is about 45 years old and has a clerical job at a local pharmaceutical company. Her mother, a housewife, is 40 years old. Y lives with her parents who belong to a middle class family.

PRESENTING PROBLEMS

Miss Y was brought to a hospital clinic by her mother on June 29, 1983. The mother said that Miss Y had been experiencing severe headaches since the end of March 1983 i.e. for the

HYPNOSIS AS A DIAGNOSTIC AND THERAPEUTIC TECHNIQUE IN PAKISTAN

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ABSTRACT

The paper presents the case history of a girl suffering from hysterical fits who was successfully treated through hypnosis. An historical background to the use of hypnosis is outlined and the application of hypnosis as a potentially valuable intervention in Pakistan is discussed.

The practice of hypnosis as a method of treatment was prevalent in undivided India since ancient times. Priests and fakirs awed their subjects with their abilities to intensify cataleptic states by maintaining strong fixation of the eyes on their subjects. Rattling, repetitive rituals and monotonous chants and prayers were among the feats and practices used. Thus, hypnotherapy, in the form of both waking and sleep suggestion, is among the oldest of the healing arts.

Credit is due to Franz Anton Mesmer for the revival of this ancient healing art and the startling cures he achieved by means of "animal magnetism" (Mesmer, 1779) popularly known as Mesmerism. Mesmer's results were, however, not explainable in logical and scientific terms. Though he was the first to develop and practice hypnosis in Europe, Abbe de Faria of Goa appears to have learnt it from temple priests in India (Sharma, 1974). He arrived in Paris 4 years after the departure of Mesmer and practiced there. His statue hypnotizing a woman can still be seen in Goa. He believed that suggestion was responsible for this condition and denied the existence of magnetic fluid (Zaidi, 1976). James Braid, another important figure in the history of hypnosis, began experimenting with Mesmerism and later evolved a highly original approach to hypnosis which he considered to be based on a neurophysiological phenomenon (Braid, 1899b). He conducted research, developed the optic fixation induction procedure, and was the first to use the term "hypnotism". Dr. Ambroise-

things, house and room orientation, names of teachers and class-fellows, and names of body parts as well as facial features. However it failed to teach more abstract concepts related with "space orientation" (Table 5: $t = 3.79$, $df: 1$, $P < .05$ as well as "time orientation" (Table 6: $t = 4.32$, $df: 1$, $P < .05$)

Analyzing the above-mentioned results it can be concluded that the token economy technique can be used as an effective method of teaching basic concepts to the mentally retarded children. Moreover, knowledge of basic concepts would enrich the subjects awareness of his environment and own self and thus help him become better informed and better adjusted inside as well as outside the institution. This hypothesis is further supported by the researches conducted by Zimmerman, Zimmerman and Russell (1969); Winkler (1970); Heckel, Hursh, and Hiers (1977) and Dalton, Rubino and Hislop (1973).

Referring to the subject's failure to learn more abstract concepts related with space and time, it can be argued that failure could be partly due to a lack of abstract thinking caused by severe mental retardation and partly due to too few teaching sessions in this difficult field; therefore, it does not reflect the ineffectiveness of the token economy technique exclusively. However, this requires further investigation in which more teaching sessions are devoted to such abstract concepts

Moreover, it can be argued that some confounding variables such as verbal or non verbal social rewards (smile, praise, etc.) accompanied with the delivery of the tokens might have enhanced the influence of the independent variable on the dependent variable. Hence, more researches with matched groups, multiple controls and experimental designs and follow-up studies must be carried out to screen out such possibilities. However, this requires very expensive and intensive research programs in this field. Referring to Rousseau it can be concluded: "the training of children is a profession where we must know how to lose time in order to gain it".

TABLE 10

Showing Significance of Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Names of Class-Fellows".

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	DF	t
0	78	6.02	1	12.96

* $P < .05$

TABLE 11

Showing Significance of Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Naming Body Parts".

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	DF	t
2	82	6.02	1	13.29

* $P < .05$

TABLE 12

Showing Significance of Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Naming Facial Features".

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	DF	t
0	88	4.01	1	21.95

* $P < .05$

Table 1 (t: 11.63; df: 1, $P < .05$), Table 2 (t: 11.47, df: 1, $P < .05$), Table 3 (t: 20.95, df: 1, $P < .05$), Table 4 (t: 24.94, df: 1, $P < .05$, Table 7 (t: 12.29, df: 1, $P < .05$), Table 8 (t: 9.23, df: 1, $P > .05$), Table 9 (t: 32.88, df: 1, $P < .01$), Table 10 (t: 12.96, df: 1, $P > .05$), Table 11 (t: 13.29, df: 1, $P < .05$), and Table 12 (t: 21.95, df: 1, $P < .05$) indicate that token economy is very effective as a method of teaching basic concepts such as colour naming, names of toys, name of personally used material, and general

TABLE 6

Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on Time Orientation.

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	df	t
0	26	6.02	1	4.32

* $P > .05$

TABLE 7

Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on "House Orientation".

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	df	t
0	74	6.02	1	12.29

* $P < .05$

TABLE 8

Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Room Orientation".

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	df	t
2	76	8.02	1	9.23

* $P < .05$

TABLE 9

Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on Names of Teachers.

X of Pre-therapeutic Session	X of Post-therapeutic Session	SE	df	t
0	66	2.007	1	32.88

* $P < .01$

TABLE 2
Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Object Naming" (Toys).

$\bar{X}$ of Pre-therapeutic Session	$\bar{X}$ of Post-therapeutic Session	SE	df	t
0	92	8.02	1	11.47

* $P < .05$

TABLE 3
Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Object Naming" (Personally used Material)

$\bar{X}$ of Pre-therapeutic Session	$\bar{X}$ of Post-therapeutic Session	SE	df	t
4	88	4.01	1	20.95

* $P < .05$

TABLE 4
Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on "Names of Generally used Material".

$\bar{X}$ of Pre-therapeutic Session	$\bar{X}$ of Post-therapeutic Session	SE	df	t
4	104	4.01	1	24.94

* $P < .05$

TABLE 5
Showing Significance of the Difference Between Pre-therapeutic and Post-therapeutic Sessions on Space-Orientation.

$\bar{X}$ of Pre-therapeutic Session	$\bar{X}$ of Post-therapeutic Session	SE	df	t
0	38	10.03	1	3.79

* $P < .05$

and time orientation; general house and room orientation; names of teachers and class-fellows; names of body parts and facial features.

Procedure:

The research procedure was divided into two sessions: (1) Pre-therapeutic Session and (2) Therapeutic Session, as discussed below.

1. Pre-therapeutic Session:

It consisted of (a) determination of the subject's base line behaviour on the "Basic Concepts Scales" as well as selection of tokens

and rewards. Moreover, it included an orientation phase during which the subjects were made familiar with the value of the token as medium of back-up reinforcers and their association with the occurrence (or learning) of the desirable responses. The orientation period continued for two weeks, because, it consisted of six one-hour sessions thrice a week.

2. Therapeutic or Teaching Session:

Each subject was given a one hour teaching session three times a week for a period of two months. In each session the subjects were taught a particular category of concepts e.g. colour naming included naming red, green, yellow and blue without any confusion. If the subject failed, he was not given any token. Thus, with step by step progression, teaching of more difficult concepts was introduced and the whole list of basic concepts was taught within twenty-four sessions.

RESULTS AND DISCUSSION

The t-test was used to determine the significance of the difference between pre-therapeutic and post-therapeutic sessions as recorded below:

TABLE I

Showing the Significance of the Difference between Pre-therapeutic and Post-therapeutic Sessions on "Colour Naming".

X of Pre-therapeutic session	X of Post-therapeutic session	SE	df	t
0	70	6.02	1	11.63

* $P < .05$

6. Tokens were to be paid frequently in the early stages of the token economy program. However, their number was gradually decreased afterwards to avoid the satiation factor.
7. Appropriate rooms with few audio-visual distractions were selected to keep, display and dispense the back-up reinforcers as well as for teaching purposes.

METHOD

Subjects :

Two severely retarded children who were residents (24 hours stay in the institution) were selected from a total residential population of 10 children. The sample was so small partly due to the small population available and basically due to the difficulty of matching them on important variables such as age, intellectual impairment, hospitalization period, socio-economic status and diagnostic evaluation of the Psychologist. Basic characteristics of the sample are summarized below :

Name	Age	Hospitalization	Socio-Economy	Self-care	Psychologists	Evaluation
Jameel	17 yrs.	Low	Poor	Severely retarded		
Subail	15 yrs.	3 yrs.	Low	Poor	Severely retarded	
Time on Seguin Form Board						
Jameel	10					
Subail	8					

Materials :

Case-history, interview data, Adapted Seguin Form Board Test, results, Diagnostic Reports submitted by the Psychologist, and observations were used to match the subjects. Moreover, 'Basic Conceptions Scales' were devised on the pattern of 'Bates Category System' (1950) and related with basic concepts such as : colour naming, object naming : names of toys and material for personal use ; space

techniques such as case history interview, observation, adaptive Seguin Form Board Test, Adaptive Behaviour Clues Scale, Basic Concepts Scale and clinical reports of Psychiatrists, psychologists and social workers were used.

3. Then back-up reinforcements were selected with emphasis on the following points :

(a) It was noticed that the retarded children were rather unresponsive to ordinary social reinforcement like verbal praise, smile expressions of approval etc. However, the primitive reinforcement of food was found to be a very effective incentive, thus food like bread, toffees, biscuits and saunt were used as back up reinforcers.

(b) Verbal and non verbal information was collected from the retarded children to determine the value of the reinforcers for each child.

(c) The Premack Principle according to which a behaviour that occurs frequently can be used to reinforce a behavior that occurs less often was used. (Mitchell, Stoeffel and Mayr, 1973). For example, the "bread eating" behaviour that occurred more frequently in "Chaman" was used to reinforce the less frequent desirable behaviour such as learning of teacher's names, etc.

4. While selecting the most appropriate type of token, it was considered important that the tokens should be attractive, lightweight, and not easy to counterfeit. For this purpose, coloured star shaped cards were devised.

5. With reference to Phillips (1968), amount of reinforcement was made directly proportional to the number of tokens which was contingent upon the degree and the complexity of the specific required behaviour. Thus, the rate of the exchange of tokens for back-up reinforcers was specified as follows :

No. of Tokens

One Token

Two Tokens

Three Tokens

Four Tokens

Bread

Biscuits

Toffees

Saunt

Type of Back-up Reinforcers

3. Once their value has been established, they can be taken away or reduced if a form of punishment seems necessary.
 4. Tokens permit an individual to see his progress in a tangible form which helps him to increase his rate of improvement.
 5. With tokens the amount of any given instance of reinforcement is immediately obvious and can be readily increased or decreased depending on important aspects such as quality and effort involved as well as the probability of the desired behaviour.
 6. A token is always a token and its value does not vary with the mood of the person delivering it. Whereas, the type of praise or social approval delivered can vary greatly depending on the mood of the praiser. Thus, tokens provide the stimuli that control the teacher's or therapist's behaviour.
 7. Tokens function in a manner similar to money in a national economy. Therefore, they can help in teaching simple arithmetic and some of the behaviours involved in working for and dealing with money or currency e.g. buying and selling.
- Considering Allen and Magaro's (1971) and Lloyd and Abel's (1970) research design, the following considerations were kept in mind while designing a Token Economy Program for the severely retarded children of "Chaman".
1. Specification of therapeutically desirable behaviours or the target areas so that they could be readily observed and objectively recorded (Miller and Schneider, 1970). The researcher selected basic concepts (such as, color naming, object naming, names of teachers and class-fellows, names of days of the week, body parts and facial features general house and room orientation, time and space orientation) as target areas because of their importance in every day life situations and because of the mentally retarded person's lack of familiarity of these areas.
 2. Determination of the baseline behaviour of the subjects (in the above mentioned areas). For this purpose Psychological

components and then to regularly reinforce instances of such behaviour whenever they occur (Allen and Magaro, 1971). Thus, the token economy provides new sources of motivation and incentive changes in the patient's behaviour (Ayllon & Kelly, 1972). The types of groups with which token economy technique has been used effectively (abroad) are summarized below:

- (a) Psychotic patients such as chronic schizophrenics in institutions or half-way houses. (Lloyd and Abel, 1970)
- (b) Mentally retarded in day care centres, institutions and sheltered workshops (Zimmerman, Zimmerman and Russell, 1969).

- (c) Juvenile delinquents and pre-delinquents in correctional institutions (Phillips, 1968).

- (d) Criminals and offenders in prison houses, (Bailey, Wolf, and Phillips, 1970).

- (e) Slow learners and emotionally disturbed children in nursery and school (Dalton, Rubino and Hislop, 1973).

Tokens are models of an economic system that govern the lives of individuals inside the institution. Thus, it facilitates generalization of appropriate behaviour from hospital or institution to the community (Winkler, 1970). According to Edlund, 1972; Hecker, Harsh and Hiers, 1977; and Herson, Eisler, Smith and Agran, 1972, this technique is designed to rekindle the patient's interest in himself as well as in the external environment, because, it reduces apathy and dependency induced by chronic institutionalization. Therefore, it was preferred to other techniques in the present research due to the following advantages:

1. Tokens can be delivered quickly, frequently and inexpensively.

2. Since tokens are backed up by a variety of valued objects and opportunities, they are reinforcing to most of the members of the group and are less subject to the adverse effects of satiation.

emotional strains involved in the upbringing of such children. Therefore, we need better ways of educating and rehabilitating such children so that they could be less burdensome.

Remember, educating the handicapped means teaching them speech, dress-up style, toilet training, manners, play and discipline required in everyday life. It also covers vocational education which trains them for various industrial tasks. However, we still have the tradition of sending these children to orphanages or so-called day-care or residential institutions which lack trained and qualified staff the majority of whom are not in the least aware of the ABC's of Psychodynamics, Psychopathology and Psychotherapy. Moreover, hardly any research has been carried out in our country to test the effectiveness of behaviour modification techniques such as TOKEN ECONOMY as a method of teaching self-care, social and basic vocational skills to the mentally retarded. In view of this, the researcher undertook the difficult task of teaching basic concepts to the mentally retarded children of "CHAMAN"—an institution for the residential care of the mentally retarded.

Token Economy is a sort of behaviour modification program based upon the learning principle that states: If the presentation of reinforcement is especially made contingent upon the occurrence of some desirable behaviour, then, even the medium or the token can enhance the probability of repeating that response due to its association with the back-up reinforcer. For instance, if a simple socially desirable behaviour like brushing one's teeth or paying attention in class is followed by a token such as a card or a slip with which the child can buy rewards of his own choice, then the required desirable behaviour will be strengthened and thus, repeated more frequently. Referring to Zimmerman, Zimmerman and Russell (1959) tokens can be exchanged for a wide variety of on ward or off ward activities, privileges and commodities. In fact, tokens are themselves valueless, yet, their value lies in their association with the back-up reinforcers or rewards.

The overall rationale underlying a token economy program is very simple: in order to increase the relevant everyday adaptive behaviour it may be necessary to break the behaviour into small

TOKEN ECONOMY AS A METHOD OF TEACHING BASIC CONCEPTS TO THE MENTALLY RETARDED

YASMIN NILOFER FAROOQI & KAUSER QAYYUM

ABSTRACT

A pilot study was conducted to test the effectiveness of Token Economy Technique as a method of teaching basic concepts to severely retarded children. Two subjects were selected from a population of 10 residential retarded children of "Chaman". Their base line behaviour was determined by "Basic Concepts Scales" devised on the pattern of "Bates Category System". Six one-hour orientation sessions were given to each subject to make them familiar with the value of tokens and their association with back up reinforcers and contingent required responses. Then, twenty four one hour teaching sessions (twice a week) were administered. The results showed a significant difference between pre and post therapeutic sessions on color naming, object naming, general orientation, names of body parts and facial feature, and names of class-fellows and teachers ($P < 0.05$). However, no such difference was found on space and time orientation. ($P > 0.05$). Thus, token economy program was found effective in teaching all basic concepts except very abstract ones.

INTRODUCTION

Despite National and International Seminars on mental retardation, little has been done for the training, education and the rehabilitation of the handicapped on the right track. Such children can be seen wandering around in streets being labelled as "Fagirs", "Sains" or "Mulanis". They are often segregated from the normal children and deprived of the privileges to work or play with normal children and thus, become a sad spectacle of helplessness and despair. At times they are disowned by their parents and looked down upon and ridiculed by the society as if they were an inferior species of the human race. The most painful aspect of their deplorable state is that they are frequently exploited by criminals or delinquent gangs.

Since a child is very much an essential part of a family unit, the tragedy of the mentally handicapped child is always greater for the family than for the child due to the enormous social, financial and

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tend to present themselves in a way so as to be seen as having those characteristics specially on nomothetically developed devices as that of this study wherein centrality & predominance of traits would weight the highest. Edwards (1953) studied the probability of endorsement of traits & their judged desirability and found that social desirability of traits & their judged desirability correlated .871 with the probability of its endorsement. It is just as well possible that individuals or groups of subjects are motivationally biased to give too good an impression of themselves to enhance their public self-image. This predominance of pervasive response style apparently strongly tied to social desirability as appears in this data strikes as being itself a major trait confounding self attribution. This suggests some further research in order to determine the scaled value of the social desirability of the items of this ACL to help gauge response style related to the approval motive and thus to make it a useful device for further investigation. Of the many response styles postulated to account for the results obtained on self report personality measures the social desirability set has been recognized as a very powerful predictor of how an individual would respond and that is why a control-key to this effect in considered as an essential component of every standard personality device to determine the validity of the obtained profile. Till such time as we have the social desirability response style tapped and scaled for the instrument used in this study, we can only accept the present data in line with Bradley's (1978) contention that because of self serving bias, attribution can better be conceptualized as strategic "self-representation" rather than actual self portrayal.

Coming back to the hypothesis of this study it can alternatively be suggested that in the light of results as obtained here there is perhaps nothing as much of a difference of curriculum and the social status between the students of Arts and Science group at school level as could have differentiated them in characteristics. However, this study can be carried out at the college level where the policy of the causative variables would be presumably relatively high and students' interests related to their academic disciplines somewhat developed. Besides, ACL as a tool of investigation may also in the meantime be improved and sharpened, as this study suggests.

Figure 1
Percentage of Endorsement & Differential Response Values
(Between Science & Arts Students) on 150 Items of Adjective Checklist.

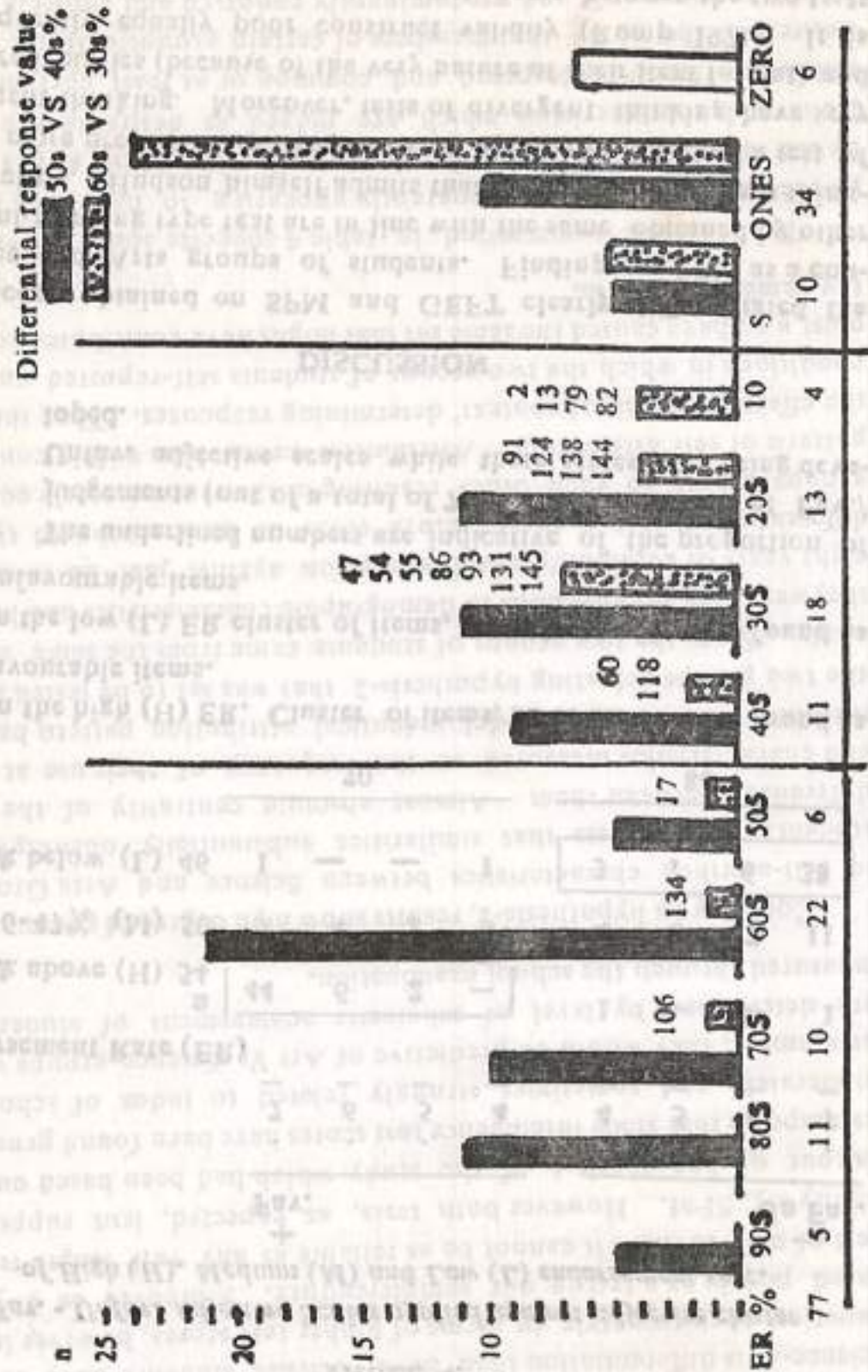


TABLE 3.

Percentage of items on ACL and proportionate percentage of endorsement of Arts (A) and Science (S) group of students.

Item No.	% Choice	S%	A%	Item No.	% Choice	S%	A%
60	47	39	61	90	33	58	42
76	46	52	48	80	32	58	42
22	45	52	48	96	32	43	57
62	45	52	48	92	30	45	55
103	45	48	52	105	30	45	55
58	44	49	53	131	30	62	38
94	44	47	53	42	28	59	41
117	44	52	48	129	28	59	41
88	40	50	50	137	28	59	41
118	40	38	62	91	27	77	23
119	40	46	54	138	27	60	40
54	39	61	39	5	22	47	53
9	37	46	54	19	22	47	53
93	37	32	68	64	22	54	46
145	37	68	32	144	22	77	23
37	35	48	52	15	20	42	58
40	35	58	42	65	20	50	50
47	35	62	38	77	20	50	50
55	35	38	62	124	20	66	33
86	35	72	28	2	18	0	100
43	33	58	42	79	16	40	60
49	33	40	60	82	16	70	30
84	33	58	42	13	16	15	85

TABLE 2.

Percentage of the items on ACL and proportional percentage of endorsement of Arts (A) and Science (S) group of students.

Item No. % Choice S% A% Item No. % Choice S% A%

108	16	50	50	16	05	33	66
75	16	50	50	102	05	33	66
21	15	78	22	146	05	33	66
71	13	50	50	4	03	50	50
111	13	50	50	18	03	100	0
59	11	58	42	114	03	0	100
147	11	72	28	28	03	50	50
107	11	72	28	29	03	100	0
23	10	34	68	35	03	50	50
74	10	66	34	36	03	50	50
69	08	20	80	73	03	50	50
97	08	60	40	121	03	50	50
98	08	80	20	139	03	50	50
122	08	20	80	143	03	50	50
123	08	40	60	57	03	100	0
130	08	40	60	26	01	100	0
133	08	40	60	48	01	100	0
148	08	60	40	116	01	100	0
112	08	50	50	142	01	100	0
132	06	50	50	20	0	0	0
38	06	75	25	24	0	0	0
85	06	75	25	66	0	0	0
99	06	75	25	100	0	0	0
101	06	100	0	110	0	0	0
109	06	50	50	130	0	0	0

TABLE 1,

Percentage of and Proportionate percentage of endorsement of adjectives by Arts (A) and Science (S) group of students :

Commonly Endorsed Adjectives

Item No. % Choice S% A% Item No. % Choice S% A%

10	93	53	47	44	71	50	50
72	93	49	51	89	71	50	50
1	91	46	54	115	71	57	43
12	91	50	50	39	69	49	51
63	91	50	50	78	69	54	46
149	89	55	55	50	67	57	43
150	89	51	49	95	67	48	52
61	88	50	50	113	67	50	50
83	88	49	51	141	67	55	45
45	86	49	51	126	66	49	51
70	84	54	46	140	66	51	49
14	84	50	50	31	64	53	47
32	84	50	50	52	64	55	45
51	84	51	49	56	64	50	50
67	83	50	50	25	62	49	51
135	83	48	52	27	62	49	51
33	79	45	55	34	62	46	54
53	76	53	47	104	62	54	46
6	74	54	46	125	62	57	43
7	74	46	54	127	62	51	49
87	74	45	55	3	61	47	53
106	72	60	40	11	61	55	45
136	71	45	55				

Differentially endorsed Adjectives

8	61	42	58	41	52	52	48
30	61	43	57	68	52	55	45
134	61	61	39	128	52	48	52
17	55	61	39	46	50	44	56
81	54	53	47				

combined frequency of choice by both the groups. The formulae

$$A\% = \frac{A}{A+S} \times 100 \text{ and } S\% = \frac{S}{A+S} \times 100. \text{ Thus } A\% \text{ and } S\% \text{ of an}$$

item summed to 100%.

Since our concern was to obtain modal and group personality profiles, only those items were selected for the analysis which had the highest S% and A%. A set of 50 items were thus identified for each group wherein each item had been endorsed by at least 50 percent of its respective sample. Upon examination 45 items were found common to both the sets. The proportionate percentage of endorsement between the two sets is given in Table I which reads none but 3 items (Nos. 17, 106, 134) as having reasonably differential (60% & above vs. 40% & below) response values.

The measured harmony between the two data sets at the upper end of frequency of item endorsement made us interested in analyzing the data at the lower end also wherein an alike trend was found (Table 2). The set of last 50 items could be endorsed by less than 20 percent of the samples in each group. This provides another substantial endorsement on the similarity between the response style of the two groups of students. Lastly, analyses of differential responsiveness was made on the mid-ranking items (in terms of frequency of choice) also (Table 3). However, indices of differential responsiveness for this set of items was of limited modal value for these items had a general endorsement rate (er) of a minimum of 16 and a maximum of 46 percent only. Nevertheless some adjectives that differentially characterize the profiles of Science and Arts students are listed in Figure 1.

To appreciate the qualitative pattern of attribution so obtained, an examination of items against the general endorsement rate (er) was made by applying favourable/unfavourable item scales of ACL and the commonality/differentiation thus found between the two sets of data is summarized in Table 4.

Profile of Rural Women. Initially, it had about 350 adjectives and adjectival phrases; derived from ACL by Gough, Hellbram and the interpretive manual of 16 P.F. (Cattell). Some adjectives were generated by the professional staff of the Institute also. Free response self description in some local data was another source of a pool of items for this checklist. After doing away the obvious synonyms, some data was collected from school subjects to identify the functionally weak and infrequently checked adjectives. This reduced the list to 150 adjectives which are arranged in alphabetical order on separate male and female forms. Traits are treated as single categories rather than bipolar dimensions. ACL, as administered, reads 70 favourable and 80 unfavourable adjectives. (See footnote).

RESULTS

Mean and standard deviation scores on SPM for Science and Arts groups were 37.73 & 10.18 and 31.00 & 9.11 respectively. These values were 6.53 & 4.41 and 3.65 & 3.72 on GEFT. The difference between the mean scores of the two groups on these tests were found statistically significant at .02 level and .01 level respectively. Thus on SPM and GEFT the science and arts group scored as clearly differentiated groups.

Data on ACL was analysed. Mean number of adjectives checked by Science and Arts group was calculated as 55.5 and 53.17 and the difference between the mean values was found statistically not significant. Moreover to ascertain degree and direction of overall relationship between the two sets of data the frequency of endorsement of items was determined and the association between the two sets of data was found (by product moment method) as .932 which is significant at far ahead of the .001 level.

Next, to ascertain personality characteristics distinctive of the two groups the pooled frequency of data for each item was used to compute the A% scores and S% scores to estimate how frequently an item was endorsed by Arts group and Science group relative to its

Seven Psychologists of the Project of Test Development judged each item of the ACL as it would be generally perceived: favourable/unfavourable. The favourable/unfavourable adjective scale was thus determined when an item had been checked in favour of either direction by at least 4 : 3 proportion of judges.

METHOD

Sample : 59 boy students (30 students of science and 29 students of arts) of matric class of a Federal Govt. Boys' School of Islamabad constitute the sample of this study. The mean age of students of Science and Arts was 15-3 and 15-9 respectively. The school was located in a lower middle class residential colony. By the time data was collected for this study, the students had completed 22 months of differential education in their respective academic disciplines. The educational level of the parents of the majority of students ranged between matric and below primary and most of them were salaried employees in government offices employed as semi-skilled laborers, drivers, peons, dairies, clerks, etc.

Procedure : Students were administered a Demographic Questionnaire, Standard Progressive Matrices (SPM), Group Embedded Figure Test (GEFT) and Adjective Checklist (ACL) in that order, during the class hour. SPM and GEFT were administered according to the standard procedure whereas the following instructions were given for ACL:

"This test consists of 150 adjectives and adjectival phrases which describe characteristics of persons. Everybody has some characteristics of personality. Reading this list check truly the adjectives which describe your self-characteristics. You can check as many or as few adjectives as you need. If you can't understand an adjective you can ask us its meaning".

INSTRUMENT

ACL: ACL has been widely used as an instrument of personality assessment, concepts, social beliefs, etc. As a most simple and economical technique of self report it provides a self evaluative description an individual gives of himself. By virtue of their everyday usage, people have pretty good ideas of where they stand on these traits hence it has become a reliable nomothetic device in investigations tapping actuarial trends and commonalities among people.

An ACL in Urdu was developed in the National Institute of Psychology (Ansari et al 1982) and used in its project: Psychological

Though many researchers have advocated a natural affinity between personality traits and specialization, some have acknowledged the influence of other factors such as sex stereotypes in school subjects, availability of educational opportunities, etc.

Studies done in the West in this area of interest can not be generalized to our conditions because of our highly centralized system of school education which limits a student's choice of subjects and variety of interests that could be related to it.

In Pakistan, we have a common core of education up to middle school and thereafter in the ninth grade students are assigned to Arts & Science groups. The assigning of students to Arts & Science is essentially the decision of the school authorities based on the conventional wisdom that the study of science demands only higher cognitive abilities so students who score comparatively better on end-of-course 8th grade examinations are allocated to science group & the rest go to the Arts. Placement into Science and Arts group thus may not necessarily reflect students' interests.

Secondly, a student's choice of Science Vs. Arts group is highly socially biased in favour of science group. Commonly, students of science are regarded as superior in ability & their profession more rewarding. Thus students of science are socially highly regarded and relatively better & prestigious treatment is accorded to them by the society.

Given the situation as stated, the present study investigates Science-Arts differentiation in our conditions in terms of a set of two hypotheses as follows :

- (1) Science students would score high on intelligence tests and would be superior to students of Arts on cognitive tests of perceptual efficiency.
- (2) As a result of differential education at high school level and better social status as students, Science students would self-ascribe more favourable and enhanced self-percepts and personality characteristics than students of Arts.

A COMPARATIVE STUDY OF THE PERSONALITY PROFILE OF SCIENCE AND ARTS (BOY) STUDENTS OF MATRIC CLASS

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ABSTRACT

This study was conducted as part of research work of the project Test Development. The author, therefore, emphasizes in this investigation, qualities of the tools & test used, by empirically evaluating them. Since the data had been collected primarily to test the tests, conclusions drawn in favour of/against the hypotheses are tentative.

Science-Arts polarity at high school level was investigated by means of ability tests & a tool of personality assessment on 59 (30 science, 29 Arts) boy-students of matric class. Ability tests differentiated the two groups whereas adjective checklist (ACL) could not. This suggested some research work to scale social desirability value of items of ACL in order to make a better use of this instrument of self report.

The existence of polarity between school students of Science and Arts is well known. The two types of students have been found to have yielded somewhat distinct trends and characteristics in several studies using secondary school to university level students. Hudson (1966, 1968) drew a character sketch of a typical member at the scientific pole. He characterizes the Science student as scoring higher on convergent thinking and lower on divergent thinking than the Arts student. Moreover, science students were described as high in self sufficiency, emotional stability, lacking in humour, lacking in interest in people and uninterested in artistic concerns. Many researchers later confirmed Hudson's findings. Employing 16 PF personality scale with secondary school students Smithers and Collings (1981) noted science specialists to be reserved, intelligent, emotionally stable, less trusting, practical, self-assured and relaxed. Entwistle and Wilson (1977) found science students favouring theoretical values and Arts students favouring aesthetic and social values on a study of values test. Moreover, a number of studies suggest science students are poor in language skills.

The above-quoted studies done by different researchers under varying conditions may appear to have somewhat contradictory results. However, there seems to be a tendency to de-emphasize the importance of salary as an incentive compared to other incentives. It also appears that the attitudes of the respondents towards salary is not as simplistic as it may seem at first glance and is determined by a multiplicity of factors including the sex, educational level, marital status as well as cognitions regarding the 'equitability' of the salary. It was with these questions in mind i.e. whether salary was the most preferred incentive and what the relative importance of salary as well as other incentives would be to Pakistani workers that the present study was conducted. Moreover, it was determined to study to what extent the age and marital status of the respondents influence their attitudes towards the various incentives. It was assumed that the Pakistani worker belonging to a traditional, developing society would have different attitudes towards incentives than his counterpart in a developed country.

METHOD

A total of 445 male employees belonging to the Electrical and Mechanical sections of various companies were selected. This group was made up of 2 sub-groups according to age i.e. those between 20-30 years and 50-60 years. There were 301 people belonging to the first group and 144 people from the second group. Out of the total of 445 employees, 254 were married and 191 were single.

A questionnaire was prepared similar to the Blum and Russ one (1942) in which 5 incentives were given in alphabetical order:-1) ADVANCEMENT 2) HOURS OF WORK 3) SALARY 4) SECURITY 5) SUPERVISOR RELATIONSHIP. The subjects were tested individually. Each subject was given the questionnaire and was informed that the present study was being conducted to find out his preferences regarding various incentives at his job. Among the 5 incentives, they were asked to mark the one which they considered as most important to them while choosing a job as No.1 and the least important as No.5 and others accordingly. The subjects were asked to fill in the questionnaire as it applied to their own feelings and pre-

ferences rather than to any general attitude. Before they filled in the questionnaire they were asked to write their age, income, marital status, and title of their present job.

RESULTS

The overall attitude towards various incentives and the percentages of employees endorsing a given incentive are given in Table I. The attitude as affected by age towards various incentives is given in Table II, where the $\chi^2 = 44.789$, $df = 4$ which indicates that the results are significant at the .01 level i.e. there is a significant difference between the attitudes of the two age groups towards the incentives. The attitude towards various incentives according to marital status is given in Table III where the $\chi^2 = 24.809$ and $df = 4$ which indicates that there is a significant difference between the married and unmarried groups at the .01 level of significance. Table IV shows the preferences of workers as affected by age in percentages and Table V shows the preferences of workers as affected by marital status in percentages.

TABLE NO. I

(ORDER OF PREFERENCE)

SECURITY	=	57%	(1)
SALARY	=	26.5%	(2)
ADVANCEMENT	=	6%	(3)
SUPERVISOR RELATIONSHIP	=	5.5%	(4)
HOURS OF WORK	=	5%	(5)

TABLE NO. 11

(ATTITUDE AS AFFECTED BY AGE TOWARDS VARIOUS INCENTIVES)

Age	Salary	Security	Supervisor Relationship	Hours of Work	Advancement	Total
20-30 yrs	114 (fo)	130 (fo)	24 (fo)	6 (fo)	27 (fo)	301
N=301	92 (fe)	157 (fe)	19 (fe)	11 (fe)	22 (fe)	
50-60 yrs.	22 (fo)	102 (fo)	4 (fo)	11 (fo)	5 (fo)	144
N=144	44 (fe)	75 (fe)	9 (fe)	6 (fe)	10 (fe)	
TOTAL	136	232	28	17	32	445

Chi Square = 44.789
 degrees of freedom = 4
 Significant at .01 level of significance.

TABLE NO. III

(ATTITUDE AS AFFECTED BY MARITAL STATUS
TOWARDS VARIOUS INCENTIVES)

	Married N=254	Single N=191	Total
Salary	fo 58 fe 68	fo 61 fe 5.1	119
Security	fo 160 fe 143.8	fo 92 fe 108.1	252
Supervisor	fo 10 fe 13.1	fo 13 fe 9.9	23
Hours of Work	fo 20 fe 14.8	fo 6 fe 11.2	26
Advancement	fo 6 fe 14.3	fo 19 fe 10.7	25
TOTAL	254	191	445

Chi square = 24.809

degrees of freedom = 4

Significant at .01 level.

TABLE NO. IV

(PREFERENCES OF WORKERS AS AFFECTED BY AGE IN PERCENTAGE)

Age	Salary	Security	Supervisor Relationship	Hours of Work	Advancement
20-30 yrs	38%	43%	8%	2%	9%
50-60 yrs.	15%	71%	3%	8%	3%

TABLE NO. V

(PREFERENCES OF WORKERS AS AFFECTED BY MARITAL STATUS IN PERCENTAGES)

	Salary	Security	Supervisor Relationship	Hours of Work	Advancement
Married	23%	63%	4%	8%	2%
Single	32%	48%	7%	3%	10%

DISCUSSION

The general attitude (as is apparent from Table I) is that security is given the first position, salary second, advancement third, supervisor relationships fourth, and hours of work fifth.

Job security is the most important condition probably because if the employee were to lose his job, given the tight job market, it would be difficult for him to get another one. The relative importance given to security is the same for both age groups tested as well as for married and unmarried employees i.e. all these groups considered security the most important incentive. However, the older age group gave security considerably more emphasis than the younger group apparently because the older people are close to retirement age, have fewer marketable skills and may be more attached to their work environs than the younger group. Married people, too, considered security more important than their single colleagues presumably because as a result of having their own families and the added responsibility for their support they were more interested in whatever income they had coming in regularly than the other incentives.

Salary which was rated second was the only other incentive (besides security) that was consistently given the same relative importance by both sexes and age groups. However, here again, differences were observed between age groups and differing marital status with workers who are young and single giving greater importance to the monetary incentive than those who were old and married. The greater importance given to security (as discussed above) appears to be a major reason why older and married groups deemphasize salary.

There appears to be a pattern in the relative weights given to the various incentives by the single and young workers on the one hand as compared to the married and older groups on the other. The former appear to be less concerned with job security and hours of work and more interested in good remuneration, relationship with their supervisors and advancement than the latter. Thus, consistent with the expectations of youth and the condition of being unmarried the

Further research on employee attitudes towards incentives may consider incentives other than those studied here together with attempts to understand the sociocultural determinants of employee preferences. With the increasing induction

An informal survey was conducted by the authors on the same population (as that used in the present study) regarding the relationship between production, supervision and employee morale and the trend noted was that workers were more efficiently motivated when they are given some freedom of action in the way in which to do the work than when every action is prescribed in advance. They appeared to do better when some degree of decision making was possible than when all decisions were made for them. In short if the ego motivation of self determination or self expression or sense of personal worth can be tapped, the individual worker may be effectively energized. These results are necessarily tentative and a properly designed study will be required to reach more definitive conclusions.

The present study was of an exploratory nature in an area where little research has been done in Pakistan. With business and industry rapidly expanding in Pakistan and with greater awareness among employers and managers of the importance of employee attitudes and their critical influence on work performance and satisfaction the need for ongoing research is imperative.

The overall attitude (Table I) towards the conditions of advancement, employee-supervisor relations and hours of work suggests that the employees give these incentives considerably less importance than either security or salary. This tendency may be explained in the context of the Pakistani socio-cultural framework which appears to be characterized by a fatalistic outlook on life with consequent emphasis on accepting the status quo, traditional subservience to authority figures and a flexible time orientation.

members of the former group who have a longer life ahead of them and usually have less responsibilities in the way of supporting a family are more prepared to take risks, put in hard work and are also more desirous of upward mobility.

of females into our work force the elucidation of the differences in their attitudes towards various incentives would also be helpful. So also the possibly different attitudes of different income groups may be investigated into. Needless to say, the practical applications of the findings of such and other research in industrial psychology would be significant in promoting productivity and harmony in business, industrial and governmental organizations.

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SOCIAL DESIRABILITY: IMPRESSION MANAGEMENT OR SELF DECEPTION

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ABSTRACT

The theoretical rationale underlying the "Approval Motive" construct was investigated in this study on 35 college students by means of a bimodal Social Desirability Scale (SDS) of the Urdu Adjective Checklist (UACL). The results were found in the predicted direction, in that approach and avoidance component halves of the SDS correlated $.297(n.s.)$, showing the independence of the two dimensions. Moreover, the pattern of endorsement of UACL items vis-a-vis their social desirability scale values (SDSVs) revealed that the need for approval was more of an avoidance than approach motive. The psychodynamics of the social desirability variable, therefore, are self-deception rather than impression management. The implications of these competing view-points of the social desirability syndrome are discussed with regards to personality assessment.

INTRODUCTION

In most measurement-based personality research the self report method of investigation has been applied wherein a subject's responses are viewed as his self-representation. Truth and honesty in providing self-report data is the prerequisite for the validity and reliability of the assessment; however, truthful self report data have been always wanting. Individuals may, by design or unknowingly sometimes, distort their real responses and report what is not as real as it is held desired to be reported. Sometimes the motive to report the desirable and not to report (however real it may be) what is considered undesirable may be as compelling as to form a response style in an individual or a group of individuals. Generally the motive behind socially desirable responses-

data, using a locally constructed personality instrument to see if some substantial evidence can be found to support this construct.

METHODOLOGY

SAMPLE: The sample for this study consisted of 35 boy-students of the intermediate class of an intermediate college, in Lahore. Their ages ranged from 16½ to 18½ years, with a mean of 17 years.

PROCEDURE: The students were administered the Urdu Adjective Checklist (UACL) under standard instructions for self-description. They were informed that the purpose of this data collection was to make out personality profiles of a sample of students for research purposes. The following section describes the instrument used in this investigation.

INSTRUMENT: UACL was developed after the pattern of Gough's (1952) ACL in the National Institute of Psychology (Ansari et al 1980). It contains a set of 150 adjectives representing behavioral activities, characteristics and traits. Eleven UACL scales have been rationally devised to tap Murray's (needs) salient personality characteristics. Another scale, namely the social desirability (SD) scale, was empirically developed for the UACL largely as a control key to determine the validity of the protocol with regard to a subject's tendency to give socially desirable responses on the UACL. In developing the SD Scale, social desirability scale values (SDSVs) of the items of the UACL had been ascertained on a 5 point rating scale by a group of 35 second year college students (for details see Ahmad, 1984). The mean SDSVs obtained for the items are reproduced below:-

SDSVs	Frequency of items
4.51 - 5.00	04
4.01 - 4.50	33
3.51 - 4.00	24
3.01 - 3.50	11
2.51 - 3.00	18
2.01 - 2.50	26
1.51 - 2.00	25
1.01 - 1.50	09

Since SDSVs of items vary on the social desirability continuum, it indicates that the UACL is appreciably a set of heterogeneous items in terms of its social desirability.

In keeping with the theoretical formulation of the "Approval Motive" that both attribution and denial are ingredients of social desirability, a balanced scale of 30 items, with equal numbers of pro and anti SD item was formed. As a bimodal scale, having both approach and avoidance modes of evaluative dependence it provides an optimal differentiation in SD responding among individuals. The split half reliability coefficient of the full scale, as estimated by the self correlation of the two halves by the Spearman Brown prophecy formula was .89. It is important to note that due care was taken while splitting the scale into halves, so that each half was composed of an almost balanced representation of both attribution and denial contents of the scale.

ANALYSIS OF DATA

Protocols were scored and the rate of endorsement of items of the UACL was calculated. A summarized view of the rate of endorsement of the items and their SDSVs recorded on a 5 point scale is given in Table 1.

Table 1

Rate of endorsement for the items of the UACL and their SDSVs indices.

Items of:	n	m
High SDSVs (23.51)	61	50.31
Neutral SDSVs (2.51-3.50)	29	31.82
Low SDSVs (42.50)	60	17.41
		(18.55)
		(14.23)

*Standard deviations are given in parentheses.
The results show that highly desirable items had a higher mean response rate than others. The rate of endorsement correlated .62 with their SDSVs for the entire set of items

of the UACI. Using data of under matric (Class 10) students from a previous study (Ahmad, 1984) the rate of endorsement was found to correlate .89 with these SDSVs. It is interesting to note that the magnitude of correlation increased with the younger students who appeared to be more inclined to giving socially desirable responses than college students. This observation may be explained in terms of the maturity that comes with age, education, college experience, etc.

Though, the relationship between SDSVs of the items and their rate of endorsement is mostly linear, it is interesting to note (see Table 1) that the anti social desirability items bore an extremely poor probability of endorsement which shows subjects were more defensive in endorsing the negative items than inclined towards checking the positive ones. This corroborates with William (1974) and Evan's (1979) contention that approval motive reflects an excessive defensive concern with negatively evaluative items and has been explained as accounting for avoiding censure.

To see whether the tendency to avoid the undesirable is independent of the same in approaching the desirable, the correlation between the negative and positive adjectives of the SD scale was estimated. The co-efficient so obtained between the attribution and denial components of the SD scale by the Pearson Product Moment Correlation Method was .279, N.S. at .05 level which upheld the relative independence of the two factors as postulated in Marlowe and Crowne's construct of the Approval Motive".

DISCUSSION

This finding has far reaching implications in the study and assessment of personality. In fact the "Approval Motive" theory of social desirability provides information of tremendous theoretical and clinical value i.e. it shows how self-defensive an individual is in guarding against social disapproval. To tap this tendency, needless to say, it would require us to develop a bimodal scale of social desirability having both attribution and denial contents and then to comparatively assess the two kinds of evaluative dependence. It need not be emphasized that an SD measure obtained

ing is considered as the desire to enhance one's public self-image (see Brady, 1978 and Miller and Port, 1978). Recently, House (1980), investigated this hypothesis and added that descriptive distortions were made in the service of public self image, particularly in identity-relevant tasks than when subjects thought their attributions would be seen anonymously. This has been known as the "impression management" view of the social desirability construct.

In their discussion of the K scale of the MMPI, Mehl and Hathaway (1964) observed that giving desirable rather than those responses which actually apply to the person is the motive of the majority of respondents. This pervasive trend of giving socially desirable responses results in over-shadowing individual differences and portraying instead, an over-riding commonality in self description. The rationally constructed scales and tests are considered the most vulnerable in this respect. Truthfulness of self report data therefore, becomes a practical problem in personality measurement.

Crowne and Marlowe (1960) have however presented a more pragmatic view of the phenomenon and called it "approval motive", defined as the tendency to endorse and approach socially desirable responses and to avoid and even deny what appears otherwise. According to this viewpoint, thus, social desirability is a two dimensional tendency and each dimension has its own significance. It has been found as rather more of a tendency to avoid censure than approach socially approved topics (Evans, 1979).

Nunnally (1967) found that the tendency to give socially desirable responses is itself a reliable trait. Scanning the literature, he observes that in many an investigation, social desirability has been found as the major component of reliable variance in many affective measures. This corroborates with Edward's work (1966) in understanding the theoretical significance of the social desirability phenomenon.

Keeping these points in view, the significance of the social desirability syndrome cannot be overemphasized in personality assessment. The purpose of this investigation is to explore the 'need for social approval variable' on local

by a dissimulation technique, as employed in personality inventories, is of limited value in this respect, not only because dissimulation does not necessarily mean the same as faking in an actual situation but also because it is based on the "impression management" construct of social desirability which implies only the conscious and deliberate falsification of responses. The deeper tendency to defend one's self presentation unconsciously and thus to be self-deceptively preoccupied with avoiding censure as implied in "approval motive" is beyond the frontiers of "impression management" theory.

SD as a measure of the approval motive doctrine would be, in short, the more meaningful dimension in personality assessment because it is based on a nearer to natural situation of the individual's personality outfall and would also be a better system of ascertaining meaningful individual differences in the assessment of this trait. However investigations exploring the construct validity of the "approval motive" need to be undertaken in this respect. One paradigm would be that individuals scoring differently on the trait in question should be assessed by other means also to verify whether this theory is worth its contentions.

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CONTENTS

Pages

Behavioural Toxicology: An Important Role for Psychologists in Developing Countries
 Roger W. Russell 3

Endorsement of Ellis' Irrational Beliefs as a Function of Diagnosis
 Zeenat Ismail and S. Haider Abbas Rizvi 17

Relationship of Need Achievement with School Achievement, Intelligence and Socioeconomic Status of Class Nine Urban Students
 Nasim Shaukat & Allah Rakha Saghir 31

Treatment of Heroin Addiction in the United States
 John S. Gillis 49

BEHAVIOURAL TOXICOLOGY: AN IMPORTANT ROLE FOR
PSYCHOLOGISTS IN DEVELOPING COUNTRIES

Roger W. Russell,
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The Flinders University
Australia

ABSTRACT

The recent tragedy resulting from the chemical spill at Bhopal in India brings forcefully to public attention the importance of controlling changes in our chemical environment produced by the introduction of new technologies. To control means to have the capability to monitor the environment. The behaviour of humans and of other living organisms is often the most sensitive indicator that toxic conditions exist. The present paper makes a plea for the involvement of psychologists in programmes designed to minimize the risks of environmental toxicities as developing countries continue to expand their agricultural and industrial technologies.

INTRODUCTION

There is an old proverb that: "A stitch in time saves nine". Recently a colleague from a "developing" country commented to me: "Third World countries are not concerned about pollution at present. They are accepting that some pollution must be tolerated if they are to catch up with industrialized nations". My long-standing concern about environmental quality and behavioural adjustment has compelled me to respond to this statement in the paragraphs that follow.

When does "some pollution" become damaging to the health and quality of life in developing societies? It is

clear that protective steps would have been taken long since had the world's most highly industrialized nations adequately appreciated the very undesirable consequences of changes induced in the chemical environment in which living organisms as we know them today evolved and survived. There are daily references in the world's public media to legislative and other actions introduced to safeguard those who may be exposed at home or at work. Citizens, individually and in organized groups, are demonstrating their concern. Research is being carried out on "The Importance of Indoor Air Pollution to Personal Exposure in Developing Countries" (Berglund et al 1984). Workmen on farms and in factories are no longer sanguine about considering "danger money" as adequate recompense for accepting the risks of toxic exposures. Management is appreciating the fact that working in polluted environments may decrease productivity, increase accident rates and cause incapacitations which result in costly litigation in a nation's courts. Governments are appreciating that attention to matters of environmental management affect national economies and domestic tranquillity.

For many centuries man has possessed the knowledge that his behaviour can be altered -- in a sense, "controlled" -- by the chemical nature of his external environment. Holding a prominent place among more recent developments of this knowledge has been an empirical understanding of how the selective use of chemicals -- drugs -- constitutes a major break-through in the treatment of behaviour disorders. Drugs of other chemical configurations produce, rather than ameliorate disorders of behaviour -- some resulting in the additions, with their characteristics of tolerance development, physical dependence and withdrawal symptoms. But, extending even beyond drugs taken for medical or other purposes is the vast ambient chemical environment upon which, through biochemical evolution (Eccles, 1984), the human and other species have come to depend and in which our technologically-sophisticated society is setting ecological traps by altering its quality (Russell, 1971). Regardless of the routes by which chemical agents enter the body it is a fact that, by interacting with internal biochemical events, they may have adverse effects on behaviour.

These relations become meaningful within a concept

According to his analysis two major interactions are involved: first, the induction of changes in biochemical processes by the introduction of exogenous chemicals into the body; and, second, the consequent alteration of normal

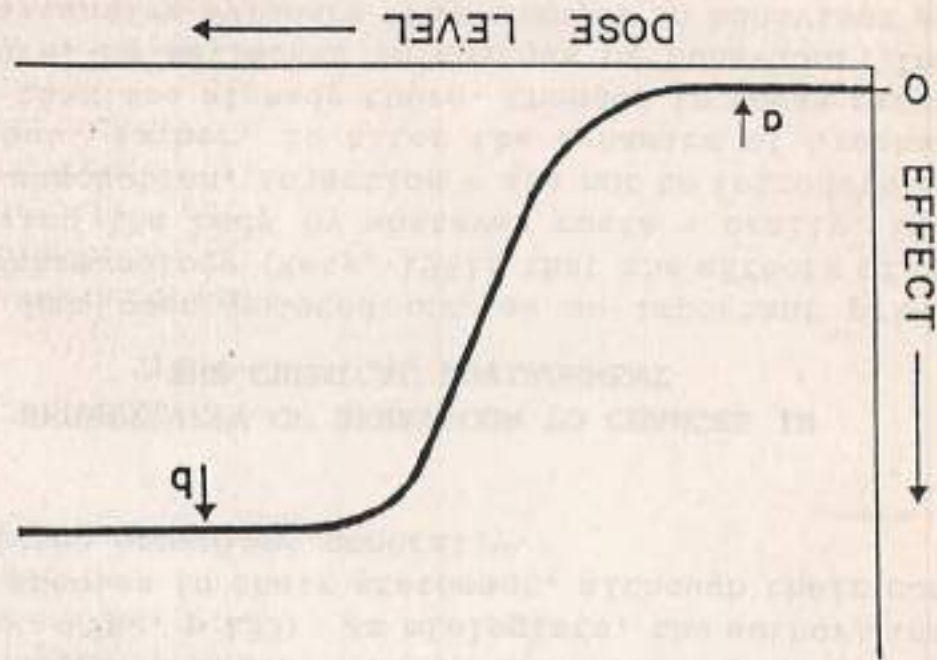
signs. well before effects are detectable in gross pathological there is extensive evidence that changes in behaviour appear may, in turn, be reflected in changes of behaviour. Indeed, processes that are already there. Changes in these processes ing new, but, rather, to alter the dynamics of biochemical piration, absorption, injection - are not to introduce anything entering the body by whatever route - orally, by res- in psychopharmacology (Kety, 1961) that the effects of chemi- It has been pointed out as an important principle

SENSITIVITY OF BEHAVIOUR TO CHANGES IN THE CHEMICAL ENVIRONMENT

is with living organisms generally. the human species in their statement, although their concern and Stanley, 1982, p 133). As biologists, the authors include may exert their influence is on animal behaviour" (Bunyan one of the most important areas where environmental chemicals individual, any aberration in either could be detrimental... on their response to their environment for survival of the gross behavioural patterns for survival of the species and written: "Most vertebrates are heavily dependent on their The authors of a recent review of "toxic mechanisms" have it should be sensitive to changes in one or more of them. among the other three properties, it is not surprising that Because behaviour is some complex function of interactions in the behaviour of the organism as an integrated whole. sites within the body, being evidenced ultimately by changes logical events which take place in a variety of morphological actions involve a myriad of biochemical and electrophysio- ment and produces outputs to the environment. Such inter- system an organism receives inputs from the external environ- its physical and psychosocial environments. Within the total views the total system as the living organism coping with of the "integrated organism" (Russell, 1979). The concept

relations between biochemical processes and behaviour, which is evidenced as changes in the latter. Psychopharmacology has traditionally analyzed effects on behaviour in terms of the dose level of a chemical agent to which individuals are exposed. Figure 1 summarizes the kind of relation commonly found when the sensitivity of behaviour to acute

FIGURE 1



exposures to chemicals that alter neurochemical events within the body are studied. The S-shaped, or ogival curve is typical of behavioural effect as a function of acute dose levels: very low exposures produce no observable effects (a); as the extent of exposure increases, effects on behaviour become more pronounced, until a level is reached (b) when the system is unable to cope and abnormalities of behaviour occur. Fifteen years ago it was commented that in the state of science then existing no morphological or chemical changes could be detectable at a time when behaviour was profoundly disturbed. Knowledge about interactions between bio-chemical events and behaviour has developed considerably since then. The new knowledge has made it even more apparent that measures of behaviour can provide very sensitive indices of adverse environmental conditions.

BEHAVIOURAL PLASTICITY

Despite their sensitivity to acute changes in the chemical environments living organisms show remarkable behavioural plasticity when such changes are chronic. Systematic adjustments in a wide variety of behavioural patterns have been reported when man and other living organisms have been subjected to continuing or repeated exposures to unusual chemical environments. The general sequence of such adjustments is: (a) chronic exposure is evidenced initially as a change, decrement or increment, in the behaviour observed; (b) this acute change is followed by return of behaviour to its pre-exposure state, although there may be some oscillation before it reaches that level; (c) withdrawal from the unusual environment may be followed by new behavioural changes, often in a direction opposite to that initially induced by exposure to the environment. This describes the phenomena of "behavioural tolerance" and of the so-called "withdrawal syndrome". Exposure to unusual conditions even of the natural environment, e.g., low levels of oxygen at high altitudes, provides classical confirmation of the basic features of this phenomenon of adjustment.

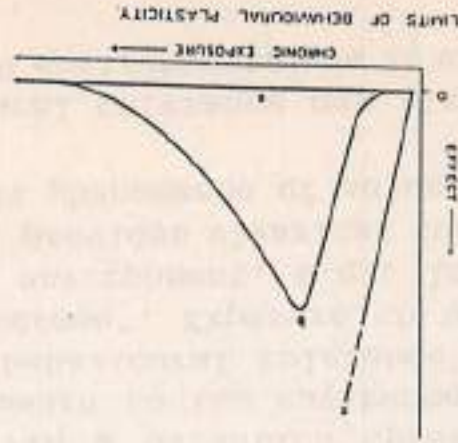
Behavioural tolerance may also develop during exposure to polluted environments, as in urban populations exposed

ed to such atmospheric pollutants, as carbon monoxide and sulphur oxides which induce significant changes in the body's internal chemical milieu. Some very important illustrations of tolerance development are to be found in persons exposed to special industrial and agricultural environments. For example, studies of individuals with varying degrees of exposure to organophosphorus pesticides used extensively in agriculture have shown behavioural abnormalities related to significant reductions in the activities of enzymes important to normal functioning of the nervous system. Clearly recognizable improvement in the symptoms occur with continued contact and the only fatal or near-fatal cases are in instances characterized by acute, massive exposure (Hayes 1969).

LIMITS OF BEHAVIOURAL PLASTICITY

A very important problem in understanding the nature of plasticity in relations between behaviour and the chemical environments is to define its limits. It is not surprising when research results demonstrate that effects on the magnitude of acute changes in behaviour and on the time for tolerance to develop during chronic treatment with chemical agents are systematically related to the severity of the exposures. This general relation is illustrated in Figure 2. The limits of behavioural adjustment are bounded on one side by no observable change (a) and at the other extreme (c), by death. The intermediate curve (b) represents acute effects followed by

FIGURE 2



tolerance development as exposure becomes chronic.

There is another and more subtle kind of "limit" to adjustment. Even when behavioural tolerance has fully developed and there are no observable differences between the behaviours of tolerant subjects still chronically exposed and non exposed subjects, other differences still exist. These appear most dramatically when the two types of subjects encounter other changes in their chemical environments. Tolerant subjects may prove to be much more sensitive than normal subjects to challenges by new chemicals and, in other instances, much more resistant. Which of these states occurs depends upon the chemical characteristics of the substances involved (Russell, 1977). However, the major point here is that adjustment to changes in the chemical environments may place limits on behavioural adjustment to changes of other kinds.

Because behaviour may be so sensitive to environmental pollutants, psychologists with their knowledge about behaviour and their skills in measuring it, can contribute significantly in defining the limits beyond which pollution should not be tolerated (Geller et al, 1979). They can obtain information upon which to base "threshold limit values", the limits to which individuals may be exposed without endangering normal behavioural adjustment. They can participate in monitoring the environment for compliance with such standards (Russell, in press). They can assist in the treatment of those suffering from toxic exposures and with their rehabilitation once the crisis is over.

Whatever behavioural effects a chemical may produce must be due to a physico-chemical interaction between the chemical and a functionally important molecule in the living organism. By occupying "receptor sites" on such a molecule a series of biochemical and electrophysiological events is set into motion. One outcome may be an effect(s) upon behaviour. Recent developments in neurochemistry have made it possible to study certain of these interactions at the molecular level and how they are related to subsequent changes in behaviour, including the development of tolerance. For example, our present knowledge about "mechanisms of action"

in behavioural effects of chemicals (e.g. organophosphorus and carbamate insecticides) which affect the cholinergic neurotransmitter system has been summarized in a 1982 review (Russell, 1982). The cholinergic system provides the psychologists with a good example of neurochemical mechanisms involved in behavioural adjustment because of the world-wide use of chemical compounds that affect its normal functioning and because, as one expert has stated (Myers, 1974): "Most impressive is the singular fact that Ach (the transmitter molecule) is the only substance that can influence every physiological or behavioural response thus far examined".

TWO EXAMPLES

Brief descriptions of two classical examples of exposures to chemicals that produced tragic effects may help to make my earlier comments more cohesive. One involved the inhabitants of a village in Japan. The term, "Minamata disease" has become familiar to neurobehavioural toxicologists since, in 1956, signs of mercuric poisoning began to be recognized among villagers who had eaten marine products taken from waters into which had drained the effluent of a chemical plant. The effects were evidenced in extensive psychobiological symptoms: severe disturbance of speech and of gait, loss of normal hearing, narrowing of the visual field and other sensory disturbances, and occasional hallucinations (Harvey, 1970). The effluent contained mercury.

Conditions in the work place provided other examples. Workers in certain departments of viscose rayon factories are exposed to carbon disulphide through inhalation. The extreme risks of such exposure are manifest in the development of mental illness and other changes in social behaviour, with the ultimate action of suicide (Mancuso and Locke, 1972). Research at the Institute of Occupational Health in Finland has led to the following conclusions (Hanninen, 1971): "Clinically manifested poisoning is characterized by lowered vigilance, diminished intellectual activity, diminished rational control, retarded speech, and motor disturbance, whereas traits indicative of depressive mood, slight motor disturbances and intellectual impairment are characteristic of latent poisoning. This syndrome is probably much more common than

Available knowledge must be put to work. Despite the urgency for action on environmental factors affecting

To alert the general public is not enough. It is all too easy to frighten those who listen to horror stories and to predictions of what lies ahead if a lack of adequate environmental management continues unchanged. A strategy is needed for coming to grips with the problems and here behavioural toxicology has a significant role to play. Requirements of a systematic programme in behavioural toxicology may be summarized under five general headings.

There are roles for psychologists from both the biological and the social sciences traditions in the process of "environmental management". Environmental management is a process of "trade-offs" between the biological limits within which organisms can adjust to changes in the external environment, on the one hand, and, on the other, the social cost-benefits which are perceived by a society as desirable to the quality of life. Danger of effluents from the internal combustion engine may be accepted in exchange for the convenience of the automobile. Workers may consider that the risks of a workplace are outweighed by the work opportunities it generates. The urban dweller may put up with annoyances of odours and noise in exchange for the way of life the city provides. But - quite properly - there is a growing restlessness in the highly industrialized countries about such trade-offs. Developing nations have the big advantage of devising systematic programmes to avert the state of affairs that elsewhere have resulted from the lack of knowledge and of foresight.

ROLES FOR PSYCHOLOGISTS

The number of specific examples involving toxic effects of chemicals on behaviour grows annually. Each of them attests to the need for psychologists to develop expertise in behavioural toxicology (Fein et al, 1983; Russell 1981a; Weiss, 1983; Weiss and Lattis, 1975; Zenick and Reiter, 1977).

was hitherto believed."

man's health and his behaviour, a frequent response to questions about what can be accomplished now is that "more work needs to be done" or "there are more pressing needs". Surely this is so, but it is also likely that little use will be made of what is already known unless deliberate steps are taken to translate present knowledge into usable forms. Significant amounts of valuable knowledge lie unused because of the traditionally poor job psychologists have done in translating them from the forms in which they were collected to forms with relevance to the practical problems they may help to solve.

Gaps in present knowledge must be discovered and plugged. This area of needs follows closely on the first. For example, we know relatively little about behavioural effects of even the major air pollutants. Yet, from a practical view, impairment of behaviour, since it can occur at relatively low concentrations of pollutants or small changes in the nature of air constituents, may be a most subtle and, hence, serious threat to the capability of individuals and populations to cope adequately with the environment.

A strategy for creating necessary new knowledge should be established. The obtaining of systematic knowledge calls for careful planning and for dedicated implementation of plans once they are accepted. The major advantages of scientific, rather than ad hoc approaches lie in the power they provide for maximizing the meaningfulness of empirical observations. It is this kind of power that should constitute the guidelines in the search for necessary new knowledge. It will be a sad commentary on those who hold to-day's responsibilities for action if what is done proves to be too little, too late and too haphazard.

Competent professionals must be trained. Behavioural toxicology is not yet recognized generally as an area of professional specialization. There are relatively few educational institutions anywhere in the world to which students may go for training. As is the case with many fields in psychology, behavioural toxicology is interdisciplinary in its base. Its emergence owes much to developments during

How are such decisions being made to-day? A recent survey suggests that decisions are taking place on several fronts and by several means. These include: international co-operation, exemplified by the 1972 U.N. Conference on the Human Environment and the International Labor Organization's convention for the protection of workers against air pollution, noise and vibration in the workplace; national legislation, e.g., passage in the United States of the National Environmental Policy Act; group action where community awareness produces local legislation, e.g., the "Offensive Odor Control Law" in Tokyo; employee-employer accord, e.g., the "Working Environment Agreement" negotiated by the Swedish Employer's Confederation, the Swedish Confederation of Trade Unions, and the Swedish Federation of Salaried Employees in industry and service; and, citizen-initiated legal actions available to individual citizens or groups wishing

The general public and its legislative representatives must be made aware of the need for actions. Who is listening to the concerns which seem so clear and to be so vital to human well-being - indeed, to survival? One of the major contributions psychologists can make is in bringing the concerns of behavioural toxicology more clearly into the view of the general public and of its legislative representatives. The rules of the trade-offs I have been discussing are not laid down by ecologists. They are determined by societies. Fortunately societies are becoming increasingly aware of the importance of such decisions and of the fact that the major flexibility in decision-making resides among the social cost-benefits. The biological limits of environmental quality are ultimately fixed at levels consistent with survival.

the past quarter century in what is now the recognized disciplines of "psychopharmacology" and "neuropsychology". That it has been recognized as an emerging area of career opportunities is evidenced in an effort by the American Psychological Association "... to broaden the horizons for prospective psychologists and to contribute to changes in professional preparation (Woods, 1976)". This effort included "Ecology/Environment/Population" as one of its six major areas for consideration.

to contest specific acts of pollution or proposals deemed threatening to the environment.

Basic to the success of applied behavioural toxicology is the most difficult task of all: modifying attitudes and other human behaviours. This is perhaps the most crucial question of our time. It is in this area that expert assistance should be expected from the social psychologist. Some time ago we were warned by the insight of Bertrand Russell: "Not only will men of science have to grapple with the sciences that deal with man, but - and this is a far more difficult matter - they will have to persuade the world to listen to what they have discovered. If they cannot succeed in this difficult enterprise, man will destroy himself by his halfway cleverness."

SOME CONCLUDING COMMENTS

It must now be clear to a reader that what I have written is appropriate for colleagues in all areas of the world. Yet developing countries have a special opportunity to avert the tragedies occurring in other places by planning now to prevent the mistakes made elsewhere. Actions now will be much less expensive economically and in terms of the quality of life, than will be actions taken later to correct unacceptable conditions. Psychologists can contribute significantly to such actions for, as the World Health Organization has stated:

"Health does not mean only the absence of disease but also optimum physical, mental and social well-being... It not only means freedom from pain and disease, but also freedom to develop and maintain one's functional capabilities."

Behaviour constitutes the ultimate "functional capabilities" by which individuals cope with their physical and psychosocial environments.

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ENDORSEMENT OF ELLIS' IRRATIONAL BELIEFS AS A FUNCTION OF DIAGNOSIS

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ABSTRACT

Normal Ss (N=100) as well as patients (N=100) diagnosed as having depressive (N=50) and schizophrenic (N=50) disorders were asked to give their opinions with regard to Ellis' 11 irrational beliefs. The schizophrenic and depressive groups were noted to endorse at least 6 and 4 of the irrational beliefs, respectively, in striking contrast with the normal group who endorsed only one of the beliefs. Thus the data with regard to the two abnormal groups are consistent with rational-emotive theory.

INTRODUCTION

Rational Emotive Therapy (RET) was developed by Albert Ellis, a clinical psychologist and psychotherapist, during the year 1955. Over the past 25 years RET has evolved to the point where today it is considered one of the most popular schools of psychotherapy (Garfield and Kurtz, 1978; Smith, 1982) and represents an essential component of the cognitive-behavior therapy movement.

It is the central theme of rational-emotive theory that several basic irrational ideas, and many correlations to which they normally lead, cause most emotional disturbances. So RET approaches neurotic problems, in a direct and straightforward way by convincing the patient of their irrationality.

Emotional disturbances, according to Ellis, are the result of illogical thinking. Without being clearly aware

of it, the patient indoctrinates himself repeatedly with "self talk" that governs his behavior. For once humans believe the kind of nonsense included in these notions, they will tend to become inhibited, hostile, defensive, guilty, anxious, ineffective, inert, uncontrolled or unhappy. As Albert Ellis has remarked, "it is not so much what has happened to oneself that is important but what one chooses to tell oneself about what has happened to oneself that is crucial" (Ellis, 1970).

According to Ellis, if thoughts are the cause of emotional upsets, then thinking is the means by which disturbance is perpetuated. The theory holds that regardless of where an irrational belief comes from or how it was learned, it is maintained only by use: people disturb themselves and perpetuate their own misery through habitual internal verbalizations of their irrational beliefs. Thus, while people tend by nature to be happiest when their interpersonal relationships are best, most emotional disturbances result from caring too much about the opinions of others and from holding catastrophic expectations about the consequences of breached relationships.

Rational beliefs according to Ellis are matters of personal significance which are non-absolute in nature. They indicate desire, preference, want and wish. When humans get what they desire they experience emotions which indicate pleasure and when they do not get what they want they experience emotions which indicate displeasure, such as sadness, annoyance, concern and responsibility. These are emotions that Ellis considers to be negative but appropriate to negative activating events in that they do not significantly interfere with the pursuit of established personal goals or if these are for ever blocked, the selection and pursuit of new goals. These rational emotions then stem from rational beliefs which are non-absolute statements of personal significance.

Irrational beliefs are matters of personal significance which are stated in absolute terms such as "must", "should" and "ought" and "have to". Thus emotions which stem from adherence to irrational beliefs include depression,

anger, anxiety and guilt - emotions that Ellis considers to be negative and inappropriate to negative activating events. These emotions can be deemed to be irrational in that they generally impede the pursuit of basic goals. Even if people get what they deem they "must" they are not happy because of the prospect of losing it. Ellis (1982) further claims that rational beliefs underlie functional behaviors while irrational beliefs underpin dysfunctional behaviors, such as withdrawal, procrastination, substance abuse, alcoholism, etc.

There is substantial evidence, both clinical and empirical, to support Ellis' (1962) proposition that adherence to a system of irrational beliefs results in psychopathological behavior (Forman and Forman, 1978; Tobacyk and Millford, 1982). Several investigations have reported the existence of relationships between irrational beliefs and diagnostic categories (Laughridge, 1975; Newmark, Frexking, Cook and Newmark, 1973) and measures of psychopathology (Goldfried and Sobocinsky, 1975; Kassirer, Crisci, and Tiegerman, 1977). None of the subjects, however, in these investigations was diagnosed as psychotic.

Newmark and Witt (1983) first conducted an investigation to evaluate patient opinions with regard to Ellis' irrational beliefs by using a well-defined group of psychotic psychiatric patients. They asked 120 normal subjects and 150 patients diagnosed as manic, major depressive disorder and schizophrenic to give their opinions with regard to these beliefs. The schizophrenia group and major depressive group were noted to endorse at least 3 and 4 of the irrational beliefs, respectively, a striking contrast to both the normal and the manic groups, who did not endorse any of these ideas. Thus, the data with regard to two of the three psychotic groups were found to be consistent with rational emotive theory.

While Ellis (1962) believes that most psychoses are basically biological in origin and that they do not merely originate in the early experiences of the afflicted individual, he nevertheless assumes a somewhat optimistic view that psychotics can be helped significantly with rational-

emotive psychotherapy. There is, however, a lack of empirical data on this issue. Before we investigate whether rational emotive psychotherapy is a feasible approach with psychotic patients, it should first be documented to what extent such patients endorse Ellis' irrational beliefs. The present study is an attempt at continuing this line of investigation.

METHOD

Subjects: The patient sample consisted of first admissions to different psychiatric clinics of Karachi city who were between the ages of 17 and 40 years and had a level of education that ranged from 8th grade to graduate level. Patients were added to the sample until there were 50 males in each of the two psychiatric diagnostic categories, namely Schizophrenia and Major Depression. DSM III criteria diagnoses were established during the first admission to the psychiatric clinics based on a clinical interview, social history and a review of all available clinical information. Patients with a concomitant diagnosis of cerebral dysfunction or limited intellectual abilities were excluded. The Normal group consisted of students from 1st year level courses to the post-graduate level of the University of Karachi and were between the ages of 18 and 35. Normal subjects were added to the sample until there were 100 (50 per sex). These Ss had no known history of emotional disturbances.

Procedure:

A revision of the questionnaire developed by Macdonald and Games (1972) was used. This contained a slight reformulation of Ellis' 11 irrational ideas in which each idea was placed in a properly stated true-false proposition. Since the English Language was not the first language of the respondents, an Urdu version of the questionnaire was used. For this purpose, the Urdu version was also given to a panel of judges who were asked to back translate it into English following which the original questionnaire was compared with the translated one. No difference was found in meaning and understanding between the two. These propositions are as follows:-

1. It is essential that one be loved or approved by virtually everyone in his community.
2. One must be perfectly competent, adequate, and achieving to consider oneself worthwhile.
3. Some people are bad, wicked, or villainous and therefore should be blamed and punished.
4. It is a terrible catastrophe when things are not as one wants them to be.
5. Unhappiness is caused by outside circumstances and the individual has no control over it.
6. Dangerous of fearsome things are causes for great concern, and their possibility must be continually dwell upon.
7. It is easier to avoid than to face certain life difficulties and responsibilities.
8. One should be dependent on others and must have someone stronger on whom to rely.
9. Past experiences and events are the determiners of present behavior; the influence of the past cannot be eradicated.
10. One should be quite upset over other people's problems and disturbances.
11. There is always a right or perfect solution to every problem, and it is catastrophic if it is not found.

When the questionnaire was administered to the normal subjects and the patients, they were reminded that there were no right or wrong answers to these statements and that the purpose was to attempt to assess their own beliefs with regards to these statements.

RESULTS and DISCUSSION

Table I presents the percentage of item endorsement of each irrational belief as a function of diagnosis. The total chi square obtained for all the 3 groups at 20 df is 115.8 which is significant at the .001 level. The results, therefore, suggest that normal subjects, major depressives and schizophrenic patients are markedly different in their overall endorsements of the irrational beliefs. However, there was generally no consensus on irrational beliefs 2, 3 and 9 for the normals; irrational beliefs 3, 4, 5, 7, 8, and 10 for the depressives and irrational beliefs 3, 5, 7,

TABLE 1

PERCENT ITEM ENDORSEMENT AS A FUNCTION OF DIAGNOSIS

Beliefs	Irrational	Normals %	Depressives %	Schizophrenics %	Total
1	13	72	93	178	178
2	37	68	95	200	200
3	35	45	58	138	138
4	13	63	86	162	162
5	5	40	60	105	105
6	29	70	86	185	185
7	30	43	51	124	124
8	2	49	62	113	113
9	67	75	76	218	218
10	18	60	55	133	133
11	5	80	97	182	182
Total	254	665	819	1738	1738
	Chi Square =91.28	Chi Square =7.59	Chi Square =17.0	Chi Square =115.87	

df=20

Significant at .001 level

TABLE II
THE INDIVIDUAL CHI SQUARE OBTAINED
FOR EACH BELIEF FOR THE 3 GROUPS

Belief No.	Chi Square for 3 groups
1	142.58
2	75.79
3	10.69
4	112.14
5	68.10
6	73.10
7	9.24
8	84.85
9	2.42
10	42.62
11	200.84

df = 2

All beliefs, except No. 9 significant at .01 level

TABLE III

THE TOTAL CHI SQUARE OBTAINED BY COMPARING THE PERCENT ITEM ENDORSEMENT OF
 NORMALS AND DEPRESSIVES AND CHI SQUARES OF ENDORSEMENT OF
 INDIVIDUAL BELIEFS BY BOTH GROUPS

Belief	Irrational	Normals	Depressives	Total	Individual	Chi Squares
1	13(23.49)	72(61.5)	85	105	71.20	
2	37 (29)	68(75.9)	105	80	19.24	
3	35(22.1)	45(57.88)	80	76	2.06	
4	13 (21)	63(54.99)	76	45	53.04	
5	5 (12.4)	40(32.56)	45	99	35.12	
6	29(27.36)	70(71.63)	99	73	33.60	
7	30 (20.1)	43(52.82)	73	51	3.62	
8	2(14.0)	49(36.90)	51	142	58.12	
9	67 (39.24)	75(102.75)	142	78	1.54	
10	18(21.55)	60(56.44)	78	85	37.04	
11	5(23.49)	80(61.50)	85	919	115.06	
Total	254	665	919			

Chi Square = 69.42 + Chi Square = 27.69 = 97.11
 df = 10

Significant at .001 level

THE TOTAL CHI SQUARE OBTAINED BY COMPARING THE PERCENT ITEM ENDORSEMENT OF NORMALS AND SCHIZOPHRENICS AND CHI SQUARES OF ENDORSEMENT OF INDIVIDUAL BELIEFS BY BOTH GROUPS

Irrational Beliefs	Normals	Schizophrenics	Total	Individual Chi Square
1	13 (25)	93 (80.9)	106	128.44
2	37 (31.24)	95 (100)	132	74.94
3	35 (22)	58 (70.9)	93	10.62
4	13 (23.4)	86 (75.56)	99	106.58
5	5 (15.3)	60 (49.6)	65	68.92
6	29 (27.22)	86 (87.77)	115	66.46
7	30 (19.11)	51 (61.8)	81	9.14
8	2 (15.1)	62 (48.8)	64	82.70
9	67 (33.85)	76 (109.1)	143	1.98
10	18 (17.28)	55 (55.71)	73	29.50
11	5 (24.1)	97 (77.85)	102	169.34
Total	254	819	1073	df=1

Chi Square = 61
df = 10
Chi Square = 24.98 = 85.98
Significant t .001 level

TABLE IV

TABLE V

THE TOTAL CHI SQUARE OBTAINED BY COMPARING THE PERCENT ITEM ENDORSEMENT OF DEPRESSIVES AND SCHIZOPHRENICS AND CHI SQUARES OF ENDORSEMENT OF INDIVIDUAL BELIEFS BY BOTH GROUPS

Irrational Beliefs	Depressives	Schizophrenics	Total	Individual Chi Squares
1	72(61.5)	93(91)	165	15.26
2	68(75.9)	95(85.95)	163	24.16
3	45(57.88)	58(56.84)	103	3.38
4	63(54.99)	86(82.23)	149	13.90
5	40(32.56)	60(55.1)	100	8.00
6	70(71.63)	86(86)	156	7.44
7	43(52.82)	51(51.87)	94	1.28
8	49(36.90)	62(61.25)	111	3.40
9	75(102.75)	76(83.33)	151	0.02
10	60(56.44)	55(63.46)	115	0.48
11	80(61.50)	97(97.68)	177	14.18
Total	665	819	1484	df = 1

Chi Square = 27.69 + Chi Square = 2.71 = 30.40
df = 10

Significant at .001 level

8 and 10 for the schizophrenics as the endorsement frequency was comparable to the rejection frequency of these items.

Table II indicates the chi square obtained for each irrational belief when the 3 groups are compared with $df=2$. It is observed that there is an insignificant difference obtained on Belief 9 when the 3 groups are compared whereas all other beliefs are significant in differentiating groups. Belief 9 was thus the only irrational belief which was commonly endorsed by all the 3 groups. This was because the normal subjects displayed a high endorsement consensus with regard to Belief 9 and may be understood in the light of our socio-cultural and religious orientations which tend to foster a sense of fatalism in response to life's experiences.

Table III indicates the chi square of 97.11 at 10 df that was obtained by comparing the percent item endorsement of Normals and Depressives with Depressives having significantly higher endorsement rates ($p < .001$). In computing the chi square for each of the beliefs it was found that all the beliefs except Nos. 3, 7 and 9 significantly differentiate between Normals and Depressives at the .001 level (Table III).

Table IV shows a significant difference (chi square = 85.98, $df = 10$) at .001 level between Normals and Schizophrenics with the schizophrenics obtaining higher endorsement percentages of the irrational beliefs. Chi square for each belief across the two groups indicate that belief No. 9 was the only one not significant at the .01 level. Of the others, belief Nos. 1, 2, 4, 5, 6, 8, 10 and 11 were all highly significant at the .001 level.

Schizophrenics' rates of endorsement were also found to be significantly higher (chi square = 30.40, $df = 10$, significant at .001 level) than those of Depressives (see Table V). Chi square computed for each belief across these two groups indicate that all beliefs except Nos. 3, 7, 8, 9 and 10 were significant in differentiating the groups. Belief Nos. 5 and 6 were significant at the .01 level and belief Nos. 1, 2, 4 and 11 at the .001 level.

It is quite apparent from the overall result that the schizophrenic group endorsed more irrational beliefs as compared to the depressive group, and the depressive group had higher endorsement frequencies as compared to the normal group which seems consistent with the rational emotive theory (Ellis 1962). Both the schizophrenic and the major depressive patients displayed a remarkably high endorsement consensus with regard to several of the irrational beliefs. One possible explanation for their relatively high endorsement frequencies is that Ellis' irrational beliefs may be an indirect measure of chronic anxiety that is not usually prevalent among the normal group. Support for this hypothesis is provided by Macdonald and Games' (1972) Scale for Irrational Ideas, which was noted to correlate .56 with manifest anxiety.

Thus, with regard to both the patient samples used in the present investigation, there is evidence to support Ellis' proposition that individuals are disturbed to the extent that they endorse irrational beliefs. Both the schizophrenic and depressive patients possibly could be appropriate candidates for rational-emotive psychotherapy.

Further research on the above topic could be undertaken by taking into consideration other diagnostic categories as well as normal populations other than students to obtain information on the nature and prevalence of irrational beliefs in general as well as in special populations in Pakistan. The irrational beliefs of parents and how they affect their child rearing practices might be profitably explored into. There is very little in RET literature which describes how RET can be used by teachers to resolve their own emotional problems as well as those of their children (Bernard and Joyce, 1984) and this is another potentially useful area of research.

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RELATIONSHIP OF NEED ACHIEVEMENT WITH
SCHOOL ACHIEVEMENT, INTELLIGENCE AND
SOCIOECONOMIC STATUS OF CLASS
NINE URBAN STUDENTS

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INTRODUCTION

It is an admitted fact that the manifestation of an individual's potentialities is closely related to the driving force underlying his actions generally designated as motivation. The term motivation refers to the 'why' of behaviour. Such terms as desires, wants, wishes, needs, motives etc. are used to denote it.

One of the earliest psychologists who had emphasized the driving force in the individual was William James (1890). He thought of such a force as 'instinct'. In his 'Principles of Psychology' he defined instinct as "the faculty of acting in such a way as to produce certain ends, without foresight of the ends, and without previous education in the performance". James did not feel that the human is always consciously rational. He thought that much of human behaviour is instinctively based.

McDougall (1948), another social psychologist, further developed the theory of human behaviour. He interpreted motivation in terms of primary drives which he called 'instincts'. In 'An Introduction to Social Psychology' he defined instinct as an innate disposition which determines the organism to perceive or to pay attention to any subject. McDougall maintained that directly or indirectly the instincts, later on termed as 'native propensities', are the prime movers of all human activity. "If we take away these instinctive dispositions with their powerful impulses, the organism would become incapable of activity of any kind".

He was of the view that it was the 'hormes' or 'will to live' of the organism which manifested itself in a number of specific tendencies, the instincts.

Freud viewed motivation as a manifestation of 'libidinal energy'. To him, there is one motive, the 'Libido', which accounts for nearly all strivings. He thought of man as instinctual in nature and in this way gave a biological interpretation of motivation. For Freud, motivation is unconscious by nature. Each person has less control over his day to day actions than he might wish to acknowledge because conscious activity is determined by an unconscious, inborn hedonistic process.

Murray (1938) interpreted motivation in terms of needs. In his 'Explorations in Personality', he defined need as a construct standing for a force in the brain region. This force "organizes perception, apperception, intellection, conation and action" in order to transform an existing, unsatisfying situation in a certain direction. According to Murray (1938) a need is "sometimes provoked directly by an internal process" and mostly by an effective press when it is in a state of readiness. Each need is accompanied by a particular feeling or emotion. "It may be weak or intense, momentary or enduring. But usually it persists and gives rise to a certain course of overt behavior". Murray (1938) classified needs from many angles as, for example, viscerogenic needs versus psychogenic needs, positive needs versus negative needs, manifest needs versus latent needs, and conscious needs versus unconscious needs.

Maslow (1970) in 'Motivation and Personality', described motivation in terms of needs. According to him, "needs that are usually taken as the starting point for motivation theory are the so-called physiological drives." To him, on the whole, in an average man, needs are more unconscious than conscious in character. He further maintained that needs must be understood not to be the exclusive or single determinants of certain kinds of behaviour. In certain situations external stimuli, associations of ideas, or certain conditioned reflexes may also determine one's behaviour. Maslow (1943) classified needs on the basis of his

concept of hierarchy of needs which motivate one's behaviour at different levels. He gave the following categories of needs from the most basic to the least basic: (1) physiological needs (2) physical security or safety needs (3) needs for affection and belongingness (4) self-esteem needs and the need for independence (5) self-actualization needs. Maslow held that in the hierarchy of needs, the relatively potent needs must be satisfied before the satisfaction of higher ones. The hierarchy is, however, a kind of ideal description of the way needs emerge. From a practical standpoint, as gratification at one level occurs, the importance shifts to the next levels. The order is not necessarily rigid and in some instance the levels may be reversed.

McClelland (1967) interpreted motivation in terms of motives. In 'Personality', he defined a motive as an affective association manifesting itself as purposive behaviour and determined by previous association between signals of pleasure and pain. According to the definition, "all motives are acquired and all motivation is based upon emotions, not identical with emotions but rather an expectation of change in the affective condition". Corresponding to the feelings of pleasure and pain, McClelland (1967) divides motives into two categories viz positive or approaching motives symbolized by "n" (need) and negative or avoiding motives symbolized by "f" (fear). To him there is no such classification of motives as primary or innate motives and secondary or acquired motives; in his view, rather, all motives are acquired as a result of pleasure or annoyance.

A close analysis of the foregoing approaches to the concepts of motivation reveals that they can be grouped into two broad categories. The instinct approach looks at man as an agent of predispositions and native impulses. This approach takes into account just one side of the picture and altogether ignores the other. It negates the possibility of subsequent learning as a determining factor in one's behaviour.

The need-approach, on the other hand, takes a dynamic

view of the individual and hence of his behaviour patterns. This approach does recognize the importance of the basic biological needs of the individual in determining his actions and reactions. It, however, does not consider it to be the only driving force in the individual. This approach also takes into account much of the environmental and psychosocial stimuli shaping one's behaviour patterns. In this approach, the individual also determines the priorities of his need satisfaction. It takes a dynamic view of overall behaviour wherein the individual may shift emphasis from one need to the other.

Modern psychologists generally combine these two approaches and conclude that there are some motives called primary motives which are unlearned and physiologically based, whereas there are also secondary or acquired motives, which in certain situations may predominate over our primary motives.

Description of acquired motives as put forth by different psychologists includes among others, of course, the motive for achievement. This motive for achievement, generally designated as 'need for achievement', is also known as 'need achievement', 'achievement', or 'n Ach', 'achieve-ment need', 'achievement motive' and 'achievement motiva-tion'. Need for achievement or an achievement refers to an urge on the part of the individual to accomplish something, rise higher in life, attempt to surpass others in various fields of life. Definitions of need achievement as put forth by different psychologists are given as under:

Murray (1938) defined need achievement:

"To accomplish something difficult. To master, manipulate, or organize physical objects, human beings, or ideas. To do this as rapidly and as independently as possible. To overcome obstacles and attain high standards. To increase self-regard by the successful exercise of talent."

Edwards enumerated the following as characteristic of need achievement: "To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than

others, to write a great novel or play." McClelland (1967) viewed 'need achievement' as an inference as to the extent to which the person's behaviour is guided by anticipation or past achievement satisfactions and dissatisfactions with reference to specific kinds of experiences and situations. In the 'Achievement Motive', however, McClelland and Atkinson defined need achievement in highly terse terms as "concern with success in competition with some standards of excellence."

Educational Significance of n Ach:

In education, our main concern is to help the children of today i.e. the citizens of tomorrow develop desirable behaviour patterns through motivating them to inculcate specific kinds of attitudes and values while retaining from others. The entire educative process is focused on the development of the individual as a contributory figure towards the betterment of the society. So the nature of the task educators are engaged in enhances the importance of achievement motivation even more greatly. It becomes imperative for teachers to be skilful enough to recognize and assess the specific needs motivating the behaviour of the students and then give them necessary guidance. Roberts (1975) has rightly stated that as educators we have to consider the motivational level of the students. Alongwith their basic needs, of course, we should consider their higher needs too and plan our individual courses and overall curriculum to meet the same. It is only through meeting their general as well as specific needs that the teacher can help the children develop a balanced personality in each case.

Further, knowledge of the diversified motives amongst the students helps the teachers in predicting their behaviour to a great extent. According to McClelland (1967), "knowledge of need achievement scores, for example, will enable us to predict how well a group of pupils will do in a laboratory task." In the light of such useful information about the future performance of the students, the teacher can make necessary modifications in the whole educative process and come up with better results than would have been possible

otherwise.

The foregoing discussion on the significance of motivation can be summed up with the remark that motivation is of great importance in all spheres of human enterprise. In the domain of education its importance becomes all the more greater because it is a necessary prerequisite for successful learning on the part of students. Consequently, the present study is designed so as to explore the relationship of achievement motivation with some of its other correlates and then offer suggestions in the light of our findings in the best interest of the students. These correlates were selected from those indicated in different researches regarding need achievement.

Statement of the problem:

In the present study the problem was to investigate the direction as well as the extent of the relationship of need achievement with school achievement, intelligence and the socioeconomic status of class IX male urban students.

METHODOLOGY

Need achievement was measured with a projective technique. Five pictures were especially developed after McCelland's pattern. The subjects were required to interpret these pictures in the form of stories which were scored for achievement imagery. Congruent validity of this tool was determined with reference to the subject's performance on the need achievement related items taken from the translated and adapted version of the Edwards Personal Preference Schedule (EPPS) by Anwar (1964). School achievement was taken in terms of marks obtained by the students in compulsory subjects viz. English, Urdu, Mathematics, and Islamiyat in the annual school examination held in March, 1979.

Intelligence was measured with the Intelligence Test for classes IX and X developed by Azad (1972). Socioeconomic status (SES) of each subject was determined with the help of a questionnaire. The questionnaire comprised: (1) father's occupation, (2) father's education, and (3) average monthly family income. Each factor was rated

on a five-point scale. The sum of ratings on these scales was taken as an index of the socioeconomic status of each subject.

Sample: The sample consisted of 286 students taken from class IX of the Government Pilot Secondary School (for Boys), Wahdat Colony, Lahore. Mean age of the sample was 14.29 years. The monthly family income ranged between Rs.250.00 and Rs.2000.00.

Statistics: Seven null hypotheses were formulated and tested at .01 level of significance.

The null hypotheses from No.1 to No.3 were tested through the product moment correlation.

The null hypothesis No.4 was tested through one-way ANOVA and the results were verified by t-test of significance. Need achievement was treated as an independent variable and school marks was a dependent variable in this hypothesis.

The null hypotheses No.5 and No.6 were tested through one-way ANOVAS and the results were verified by t-test of significance. In these hypotheses need achievement was treated as a dependent variable, whereas intelligence and socioeconomic status were treated as independent variables.

The null hypotheses No.5 to No.7 were tested through a 2x2 factorial design, wherein the frequencies were equalized in the four cells by dropping the case at random.

RESULTS

Ho.1. There is no correlation between need achievement scores and school achievement of the subjects.

The correlation (.599) between need achievement scores and school marks was significant at .01 level.

The null hypothesis No.1 was, therefore, rejected and it was concluded that high achievement orientation is associated with better performance at school. The present study in this way, confirms the results obtained by Lowell (1950), Atkinson (1950), McClelland (1949), Weiss, Wertheimer and Grossbeck (1962), Demos and Spolyer (1962), and Mujzuddin (1971).

Ho.2. There is no correlation between need achievement

TABLE 1
MEASURES OF CENTRAL TENDENCY AND DISPERSION OF THE VARIABLES, N=286

Variables	Total Scores	Mean	Range	SD	SEM
n Ach	10	4.91	0-9	1.87	.11
EPPS Scores	20	12.67	4-18	2.41	.14
School Marks	500	266.79	120-411	61.17	3.62
Intelligence	108	67.80	38-95	11.72	.70
SES	15	8.29	3-15	2.89	.17

TABLE 2

INTERCORRELATIONS OF THE VARIABLES, N=286

Variables	n	EPPS SCORES		SCHOOL MARKS		INTELLIGENCE		SES	
		r	p	r	p	r	p	r	p
n Ach	—	.178	*	.599	*	.603	*	.540	*
Epps Scores	-	-	-	.189	*	.129	NS	.160	*
School Marks	-	-	-	-	-	.656	*	.435	*
Intelligence	-	-	-	-	-	-	-	.375	*
SES	-	-	-	-	-	-	-	-	-

* significant at .01 level.

TABLE 3
ANOVA (TWO-WAY) ON NEED ACHIEVEMENT OF HIGH AND LOW INTELLIGENCE
AND SES GROUPS, N=172

Source of Variation	df	SS	MS	F	P
Rows (Intelligence)	1.	134.325581	134.325581	15.9999	.01
Columns (SES)	1.	67.813953	67.813953	8.0775	.01
Rows X Columns (Interaction)	1.	8.39535	8.39535	5.238	N.S.
Within Cells	168.	269.255814	1.602713178		

scores and intelligence scores of the subjects. The correlation (.603) between need achievement scores and intelligence scores was significant at .01 level. The null hypothesis No.2 was, therefore, rejected and it was concluded that need achievement was positively related with intelligence.

Ho.3. There is no correlation between need achievement scores and SES scores of the subjects.

The correlation (.540) between need achievement scores and SES was significant at .01 level. The null hypothesis No.3 was, therefore, rejected and it was concluded that high socioeconomic standing is associated with being more achievement-oriented, whereas low socioeconomic standing is associated with being less achievement-oriented. This study supports the conclusions drawn by Bruckman (1966).

Ho.4. There is no difference between the mean school marks of the high and the low need achievers. The F-ratio (86.198) as well as the t-ratio (9.45) were significant at .01 level. The null hypothesis No.4 was, therefore, rejected and it was concluded that high need-achievers had higher mean school marks as compared to the low need achievers. Findings of the present study in this way, correspond with the results obtained by Shaw (1961) and Schneider (1963).

Ho.5. There is no difference between the mean need achievement scores of the high and the low intelligence groups.

The F-ratio (66.1003) in one-way ANOVA, the F-ratio (15.999) in two-way ANOVA, and the t-ratio (8.179) were significant at .01 level. The null hypothesis No.5 was, therefore, rejected and it was concluded that the subjects in the high intelligence group had greater mean need achievement scores as compared to those in the low intelligence group. The present study, thus, confirms the findings of Robinson (1965) Bruckman (1966) and another study reported by Musgrave (1972).

Ho.6. There is no difference between the mean need

Need achievement in the high SES group: Almost all the studies conducted with trichotomized data on socio-economic status reveal that middle class subjects are more achievement oriented as compared to their lower class as well as upper class counterparts. In the present study, the data on SES were dichotomized at the median to yield just two SES groups viz. the high and the low. It, therefore, did not provide for any comparison of need achievement levels in the middle and the upper or lower social classes. But the high achievement level found in the high SES group in the present study suggests that this high SES group in fact represents the middle class of the society at large.

RECOMMENDATIONS

The following recommendations are made on the basis of the results obtained in the study:

1. Institutions, educational as well as professional, should make arrangements to assess the need achievement levels of children at the time of their enrolment and then capitalize upon them while offering courses of studies.
2. Teachers should take steps to explore the relative suitability of different instructional methodologies for raising the level of need achievement in pupils after periodic evaluations.
3. Proper guidance and counselling services may be provided for overcoming the educational problems faced by high as well as low need-achievers showing poor performance at school.
4. Challenging tasks may be provided to pupils with high need achievement levels showing high performance at school.
5. Teachers should give special attention to pupils with low need-achievement by encouraging them to develop higher need achievement levels so that they may show better academic performance.
6. Low need-achievers showing satisfactory performance may be involved in such types of activities which are conducive to the development of a high level of need achievement.

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- Recommendations having implications for further research:
7. Tools used in this study may be validated upon considerably larger rural as well as urban samples comprising both the sexes.
 8. Studies may be taken up to include a broad spectrum of correlates of need achievement at more than two levels where possible e.g. birth order, sex, family size, housing facilities, father separation, mother separation, entrepreneurial and nonentrepreneurial occupations of father and mother, parent-child interaction, child rearing practices, involvement in different types of socio-cultural activities, etc.
 9. Studies may be conducted on the educational problems of high as well as low need achievers.
 10. Curricula of different stages be evaluated in respect of their achievement oriented contents and necessary changes may be made in them for generating need achievement in pupils.
 11. Experimental researches may be conducted to study the magnitude of need achievement aroused under differently manipulated situations.
 12. Questionnaires may be constructed and validated for measuring need achievement.
 13. Keeping in view the needs, interests, and aspirations of pupils at different stages, some more pictures may be developed, validated and used for research purposes in addition to the ones used in the present study.
 14. Scoring system of picture-stories 0, 1 and 2 may be modified, say for example, raised to 5 or 10. This will give a more sophisticated picture of need achievement on a longer continuum.
 15. Follow up studies of high as well as low need achievers may be conducted and their findings may be kept in view while framing curricula at different educational levels.

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TREATMENT OF HEROIN ADDICTION IN
THE UNITED STATES

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8

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ABSTRACT

The author reviews the three most important strategies of the treatment of heroin addiction in the United States. These are Methadone Maintenance, Therapeutic Communities and Drug-Free Outpatient Programs. Each one of these modalities is briefly described and evaluated and the possibility of adapting them to other cultures is considered.

Although drug abuse continues as a major social problem in the United States there have been notable gains in understanding its origins and its treatment. Perhaps the most dramatic progress has been in the treatment of heroin addiction. Whereas earlier large-scale therapeutic efforts - such as that of Lexington Hospital - were successful with only a small percentage of patients, programs in recent years have been able to cite convincing data of effectiveness with the majority of addicts. Not only do we now have practicable models of how to organize heroin treatment efforts, Research has also suggested those factors, common to all effective drug treatments, which appear to be the critical ingredients of such programs.

It is recognized that the approaches developed in one culture may not be equally valuable in another; indeed they may be totally inappropriate in some societies. Nevertheless it is probably useful for those concerned with common psychiatric problems to learn of what's being done in other nations and to what extent these efforts seem to be effective. While it may not be desirable to transfer

entire treatment philosophies from one culture to another, it may indeed be possible to borrow some ideas from others' successful programs, modifying and adapting these as necessary.

For this reason we will attempt in the paper to describe briefly the treatment strategies being used in the United States at present and note some recent data on their effectiveness.

At present there are three major treatment modalities for heroin addiction in the United States - methadone maintenance, therapeutic communities, and drug-free outpatient programs. It is neither appropriate nor necessary to describe these fully here, detailed descriptions being available elsewhere. We will rather note the principal features of each approach.

A. METHADONE MAINTENANCE (MM)

1. These are outpatient programs, patients reporting for daily oral medication. MM is typically prescribed for addicts who have failed in other types of programs. For example, in Los Angeles County only addicts with two prior treatment failures are admitted to MM.

2. There is some belief that patients remain on MM for many years but this is rarely the case. Average duration of treatment in the early 1970's was 15 months although a few patients continued for as many as 10 years. Duration of treatment has been steadily declining since that time. As long ago as 1976 for example, fewer than 25% of MM patients remained on the program for one year or longer.

3. Methadone, although a substitute for heroin, is an addictive, synthetic opioid itself. Its advantage is that it does not lead to the extreme mood swings and accompanying psychological deterioration that heroin does. (In fact trained observers are unable to distinguish individuals tolerant for methadone from non-addicts.) Its dispensation through legal medical channels also frees the addict from dependence on the drug culture. Since length of time in treatment

- is a significant factor in the success of all types of programs, it would seem that this separation from the drug subculture is critical to MM's success.
4. Diversion of methadone to street use does not appear to be a major problem - at least in California where this has been investigated. Diversion seems even less likely with LAAM considered below.
5. Levo-alpha-acetylmethadol (LAAM), a long acting synthetic opioid, has impressed some psychiatrists as an alternative to methadone. The duration of action being 48-72 hours, it relieves the patient of the need for daily visits to the clinic (although such visits may be important for psychological reasons). LAAM also has little appeal as a drug of abuse.
6. In the United States methadone is almost always given as part of a more general therapy-rehabilitation effort. One reason for the success of MM programs may be that they keep patients in treatment for a longer time so that the adjunct therapies-psychotherapy, group sessions, sometimes job and family counseling - have time to exert an influence.

B. THERAPEUTIC COMMUNITIES (TC).

1. These are full-time, drug-free residential programs which may be the most effective approaches we have if patients are sufficiently motivated to join them. While there are variations in how TC's are organized and operate, certain principles characterize all of them. Patient self-government is emphasized. The major therapeutic technique is group pressure which is used not only in frequently scheduled therapy or encounter sessions but in every aspect of TC life. The goal is to socialize patients to more mature, responsible, adaptive ways of living. They are taught to rely on themselves and on social supports rather than drugs. Personal responsibility and obligations to others and to society are stressed. The goal may be nothing less than changing the basic character of the addict, eliminating those personal vulnerabilities which led him to drugs.
2. At the same time patients are being urged to give up their previous ways of behaving they are provided
3. At the same time patients are being urged to give up their previous ways of behaving they are provided

models - by staff and other rehabilitated addicts - of persistent effort and realistic self-appraisal. Most important they observe that such characteristics "work"; that is, that self-esteem can be based on one's coping with life and need not be dependent on narcotics.

4. TC's, their advocates believe, create a unique society in which patients can mature to be responsible adults and can learn to satisfy biological and psychological needs without drugs.

5. Duration of treatment varies. Traditional programs such as Phoenix House require patients to remain a year or longer. Several programs now are of much shorter duration, one month in some cases (such one month residential programs have been useful with alcoholics as well.) They are very successful if patients complete the programs staying for the full duration. Recent evidence indicates that TC's may also have marked benefits even if patients drop out after spending some time with the communities.

6. Since TC's are administered and operated almost entirely by ex-addicts and paraprofessionals they are often cited as being inexpensive. Unless they become self-supporting however, by members holding jobs outside the TC or by marketing a commercial product or service (as some have done successfully both within and outside of the USA), these communities require support for accommodation, food, etc. and could become quite costly. Furthermore in societies in which self-help groups are less traditional, one suspects that professional supervision of such programs would be essential, at least the outset.

C. DRUG-FREE OUTPATIENT PROGRAMS (DF)

1. As the label suggests, these programs are not residential as are TC's. Patients live and work in the community and are seen by appointment at the clinic or DF center. "Drug-free" means that, as with TC's, patients commit to not using any drugs including alcohol.
2. Until very recently DF programs were considered to be the treatment of choice for young polydrug abusers

but not heroin addicts. Recent evidence, however, indicates that such programs can also be effective for some heroin addicts (again probably the younger addicts with shorter histories of addiction).

3. DF programs vary in specific features but commonly include the design by therapist and patient of a structured treatment plan with concrete goals; periodic urinalysis; supportive psychotherapy and counseling quite different from the confrontive encounters of TC's; practical help with problems of employment, housing and family relationships. As with both TC's and MM the success of these efforts relies partly on separating the patient from the drug subculture and providing a new network of interpersonal contacts. The variety of DF approaches now being employed in the United States ranges from structured "Daycare" programs in which patients spend their full days at the center (although returning to their homes at night), through clinics where patients report for individual or group therapy sessions for a few hours each day, to highly informal "RAP" centers where interested persons drop in at any time for counseling or information. Obviously these approaches are intended for very different types of drug abusers.

Because of the urgency of the problem and its costs to society and the addicts themselves, major research efforts have been underway for some years now concerning the outcomes of these and other treatment strategies. Data is now available from hundreds of programs and thousands of patients. While the purpose of this paper is not to present, detailed statistical documentation of such findings, it should be noted that the results have been very encouraging indeed. One can now speak of one-half of the treated patients being significantly improved one year after having completed treatment. We are here referring to all three of the modalities (MM, TC, DF) described above. "Significantly improved" means that patients have either abstained entirely from drugs or have reduced their use considerably. Outcome measures typically examine employment and criminal involvement as well as drug use and these indices improve to the extent that drug use diminishes.

Recent data suggest that after 6 years outcomes are even better, over 60% of patients now reporting that they have been wholly drug abstinent for a year or more. Proportional improvements in employment and criminal involvement accompany these gains. Perhaps the most impressive outcome statistics come from a 1982 follow-up of 370 patients from Phoenix House in New York. Three years after completing that TC program only 2% of the former addicts were using opiates (compared with 84% reporting such use prior to treatment). Daily use of opiates had gone from 75% before treatment to 1% three years after termination. This is but one study, of course, and the results appear so dramatic as to perhaps make us skeptical. But the evidence of success from large-scale investigations - the 50 and 60% effectiveness figures cited above - seems to stand on firm ground.

It would appear then that we have learned something about the nature of heroin addiction and the factors which sustain it - at least in the United States - during the last couple of decades. In so far as we have been able to incorporate such knowledge into our treatment efforts these have become more successful, indeed dramatically successful when compared with earlier efforts. The programs by which such gains were realized were designed within a specific cultural context and have been demonstrated effective only within that context. Whether they can be adapted to other cultures remains to be seen. It might be hoped however that the experience of the United States with the increasingly international epidemic of heroin addiction may at least provide some useful starting points for dealing with the problem in other societies.