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ACHIEVEMENT MOTIVATION IN A GROUP OF EDUCATED BLACKS
IN THE MINING INDUSTRY AND ITS IMPLICATIONS ON JOB
PERFORMANCE

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S U M M A R Y

The central purpose of this study was to establish whether there is a positive relationship between a high 'achievement motive' (as measured by the Thematic Apperception Test, using the Arnold's scoring system) in Blacks and Good Job Performance (as measured by good merit and supervisory ratings).

Factors taken into consideration in the study were:

- (i) level of urbanization
- (ii) resistance to change
- (iii) job satisfaction.

An alternative method of scoring the T.A.T. (McClelland) was compared with the Arnold System.

A novel T.A.T. was designed with pictures with which the Blacks could easily identify, so that the writing of stories was facilitated. The level of urbanization and resistance to change were measured on the Urban - Rural Scale. Job satisfaction was measured by means of the Job Satisfaction Index. The measures of job performance were obtained by means of 'man specifications' and merit ratings.

The Achievement Motivation Score was found to be significantly positively correlated at the .05 level with job performance ratings, but a predictive study would have to be carried out before it can be accepted as predictive of job performance.

Level of urbanization had no significant effect on the achievement motivation scores (Arnold System) whereas the 'Resistance to Change' factor was found to be significantly negatively correlated at the .05 level with the achievement motivation scores (Arnold).

Too little information was available to establish the relationship between high achievement motivation scores (Arnold), low

job performance ratings and low job satisfaction scores.

No significant correlation was obtained between the McClelland scores on the T.A.T. and the Arnold scores as well as between the McClelland scores on the T.A.T. and job performance ratings.

The T.A.T., using the Arnold scoring system, proved to be a reliable test (both test - retest and inter-scorer reliabilities).

This study showed that the T.A.T. has strong possibilities of playing a large role in the selection of Blacks for higher level jobs in industry.

O P S O M M I N G

Die hoofdoelwit van die studie was om vas te stel of 'n hoe prestasiemotief soos gemeet deur die Tematiese Appersepsie Toets (Arnold nasienstelsel) beter taakverrigting veroorsaak by Swart werknemers, soos gemeet aan die hand van toesighouer beoordelings.

Faktore wat in aanmerking geneem is by die uitvoering van die studies was:

- i) Die vlak van verstedeliking;
- ii) Weerstand teen verandering; en
- iii) Werktevredenheid;

As alternatiewe nasienstelsel is die McClelland stelsel ook gebruik.

'n Nuwe TAT is vir die Swartes ontwikkel sodat hulle die stories meer geredelik kon skryf en makliker daarmee kon identifiseer. Die vlak van verstedeliking en weerstand teen verandering is met behulp van die Stedelik-Landelike Skaal gemeet. Werktevredenheid is gemeet deur middel van 'n werktevredenheids-indeks. Werkverrigting is gemeet deur middel van werknemerspesifikasies en toesighouer-beoordelings.

Die prestasiemotief-tellings het positief gekorreleer met werkverrigting en dit was beduidend op die 0.05 vlak, maar 'n voorspellingstudie sal eers uitgevoer moet word voordat dit aangeneem kan word dat prestasiemotief werkverrigting voorspel.

Die vlak van verstedeliking het geen beduidende invloed op die prestasiemotief telling, soos gemeet met die Arnold stelsel, getoon nie, maar die weerstand teen verandering faktor het egter beduidend negatief op die 0,05 vlak met die prestasiemotief gekorreleer.

Daar was te min ligting beskikbaar om vas te stel wat die verband tussen 'n hoë prestasie-motief (soos gemeet met die Arnold telling) en werkprestasie andersyds en 'n lae vlak van werkstevredenheid andersyds was.

Geen beduidende korrelasie is tussen die McClelland telling op die TAT en die Arnold telling op die TAT gevind nie. Dit was ook die geval met die McClelland telling en die werktevredenheid beoordelings.

Waar die Arnold nasienstelsel gebruik is, het die TAT 'n betroubare metode geblyk te wees, ten opsigte van toets hertoets betroubaarheid sowel van inter-beoordelaar - betroubaarheid.

Die studie het getoon dat die TAT besliste moontlikhede vir meer intensiewe aanwending ten opsigte van die seleksie van hoëvlak swart werknemers het.

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CHAPTER 1

THE PROCESS OF ACCULTURATION AND AFRICAN ADVANCEMENT IN INDUSTRY TO HIGHER LEVEL JOBS

1.1 Background

In South Africa, at present, changes in the technological, social and political spheres are taking place which require major adjustments from its many population groups. These changes produce expectations amongst the various groups which have far reaching implications. Intervention from abroad (especially from America as a result of the Human Rights Policy) in domestic affairs makes it imperative to solve these problems within as short a time as possible.

The resolution of these problems lies largely with the effectiveness and efficiency of the large organisations in South Africa. These organisations can become more efficient in the utilisation of resources and more effective in the achievement of valid objectives. The main area to be focused on should be the utilisation of people without which many large natural resources could not be developed. The largest labour force is the black worker, who up to now has been involved in largely unskilled work.

The creation of a Black unskilled labour force took place in 1867 with the discovery of diamonds, and soon after the discovery of the world's richest goldbearing reef when the non-existence of a skilled mining and artisan force led to the extensive immigration of skilled Whites

into South Africa. High wages had to be paid to attract these skilled workers from abroad. The remuneration needed to attract Black workers from their traditional agriculture was well above their subsistence earnings but low compared with wages at skilled level. The Blacks were willing to sell their labour (which was unskilled) for very low wages to obtain the finance required for the maintenance of their families in the homelands.

1.2 Need for Black Advancement

With increased mechanization, labour at the lower levels is becoming redundant and so growing unemployment can be predicted amongst unskilled Black workers, which could have serious implications, unless these people become qualified to undertake more advanced work which could become accessible to them.

There has also been a great improvement in Black education. The number of Blacks receiving secondary education for the first time has increased at an average rate of almost 30% per year over the 1971 - 1978 period, which indicates that the quality of the young Blacks coming on the labour market is improving rapidly.

As South Africa becomes increasingly more industrialized it seems likely that its changes in manpower composition/force will not be unlike those which have already taken place in other countries where industrialization is more advanced i.e. as the industrial and agricultural revolutions develop, people move from rural to urban areas. As the agricultural and industrial processes become more mechanised greater skill is needed. Skills become more specialised and new occupations develop.

Shortages of white skilled manpower have been forecasted, for example in 1975 the Minister of Labour stated that within the next few years 5,000 non-whites would have to take over jobs for which Whites could not be found. (S.A. Official Yearbook, 1977) Although trends over the past years indicate an increase in Black workers entering semi-skilled technical jobs and higher level skilled, clerical and supervisory jobs, (see Table 1A and 1B) due to cultural differences the better utilisation of Blacks brings about problems which will have to be solved as they launch into unfamiliar fields. These would involve training, communication, industrial relations and motivational problems which will necessitate special studies to provide solutions. An analogy can be made to the American system.

Wilensky has stated that the civil rights movement and problems of hardcore unemployment remind one that negroes and members of minority groups have responded to their socio-economic and cultural environment where job opportunities have been relatively scarce. They have seen little use in carrying on their education when they would be limited mostly to menial tasks. Consequently, their levels of aspiration have been low for decades. Now an attempt is being made to give them new hope, to raise their levels of aspiration and to make the realities match their hopes.

1.3 Factors to be taken into consideration

The majority of Blacks prior to coming into contact with the Westernised industrial system were engaged in a subsistence economy where work was regulated by the agricultural calendar or the satisfaction of immediate physical needs.

TABLE 1A

ANNUAL RATE OF INCREASE IN CERTAIN OCCUPATIONS BY BLACKS

Occupational Group	1960	1970	Annual rate of increase 1960 - 1970
Engineers	19	80	32,1
Technicians	255	560	12,0
Doctors, Dentists	109	120	1,0
Nurses	13 916	27 800	10,0
Medical Auxiliaries	103	720	59,9
Architects + Quantity Surveyors	2	-	-
Physical Scientists	1	60	590,0
Teachers	23 458	43 960	8,7
Jurists	35	40	1,4
Surveyors	11	100	80,9
Working Proprietors (commerce + trade)	6 202	9 720	5,7

(From S.A. Official Yearbook, 'Labour and Industrial Relations', 1977, P.10)

TABLE 1B

RESULTS OF MANPOWER SURVEY NO. 11 (Manpower (males only) as at 25 April 1975 - except Artisans and Apprentices)

Occupation	Asians	Blacks	Coloured	Whites
Professional, Semi Professional + Technical	7 580	48 139	14 738	161 855
Managerial, Executive + Administrative	3 085	3 731	754	114 461
Clerical	31 402	67 975	20 423	136 468
Sales + Related Work	12 802	25 884	9 859	69 311
Actual Mining + Quarrying Activities	124	428 555	2 707	28 804
Transportation, Delivery + Communication	10 897	167 896	27 261	54 433
Processing of Metal, Plastics etc - operative in motor industry	5 851	125 676	23 099	28 957
Operators + semi skilled in building + or construction	668	48 698	12 166	15 370
Processing of wood, furniture etc.	1 423	25 553	2 389	1 252
Manufacturing of cloths, textiles, washing, dry cleaning etc.	9 187	42 276	9 643	1 769
Food, drink + tobacco	2 477	44 404	7 554	3 172
Leather, shoe process work etc.	10 996	3 855	7 917	271
Glass, fibre glass, cement, bricks etc.	192	30 161	1 845	2 059
Chemical + rubber products, soap etc.	2 017	23 508	5 012	4 046
Printing + paper manufacturing	3 291	4 158	3 360	1 302
Supervision + other skilled + semi skilled	10 206	111 556	20 732	66 977
Public, personal + domestic services	10 692	196 316	21 409	58 699
Labourer	9 774	1 045 512	10 527	10 596
Total no. of employees in Sect. A	132 664	2 443 853	296 139	759 703

1. excluding domestics in private service and persons in Agriculture and farming (survey conducted on sample basis).

(From S.A. Official Yearbook, 1977)

Generally, the structure of contemporary Black society is socio-economically and culturally complex. It is no longer a homogeneous traditional unit but shows varying degrees of modernization. A number of Blacks in the urban areas have adopted the market economy and social value system which characterises the Western urban industry - far removed from the subsistence economy of traditional Black society.

Urban living, with its specific social demands, its insistence on economics, its conflicting cultural demands and environmental pressures calls for many adjustments on the part of the Black. These adjustments involve changes in cultural beliefs, in patterns of social living and changes in what constituted the family unit. The urban Black must evolve a lifestyle which is compatible with the beliefs of his tribal past and the demands of his urban present i.e. according to De Ridder (1961) he must compromise between three societies; the tribal society, the township society and the European society.

Socially and culturally the urban Blacks are still in a marginal position, halfway between a traditional primitive society and a modern industrial technological urban society. According to the South African yearbook (1977) less than 10% of all adult Black South Africans (roughly 20% of all city Blacks) may be classified as predominantly Westernised, in the sense that they have substituted the Western for the traditional life style. Many display the outward trappings of Westernization while still maintaining fairly strong

tribal connections. For example, in Soweto, South Africa's most sophisticated Black residential area, more than 90% of all marriages still include the traditional lobola (dowry system) as part of the marriage contract.

The fact that a Black worker in the city displays all the external and material signs of a Western life style does not necessarily mean that he has fully absorbed the Western value system.

Bieusheuvel (1975) states that when ties with traditional ways of living are broken, changes occur in individual needs and ways of meeting these needs, fundamental changes occur in the individual's personality. For mature personalities to adjust themselves to such a change in life style, some discontinuity and disharmony are inevitable, producing a great deal of conflict within the individual.

"In African cultures in transition, the tradition-directed personality is slowly being replaced by the other directed personality. This involves a radical change in needs, social responsiveness and motivation. This process often includes a transitional stage during which, as a result of social disintegration and lack of formal educational influence, no conformity-compelling mechanism is implanted at all in the individual -- the personality is to all intent 'id directed'." (Bieusheuvel, 1975, p.25)

If the Black man is to improve his position in the Western industrial society and the latter is to cope with the shortage of high level manpower, the Black man will have to be used in higher level jobs. To achieve this so that South Africa's productivity does not suffer, work in general will have to be redesigned. Emphasis will have to be centred on the selection of Blacks who will be able to function within a competitive Westernized system.

Bieusheuvel (1975) has pointed out that the problem of changing the work habits and motivation of people who come from underprivileged families involves variables far more complex than mere supervision and pressure. It is a problem of changing goals, the ambition and the level of cultural and occupational aspiration of the underprivileged worker.

From the above discussion it is obvious that cultural background and related factors should be closely scrutinized.

1.4 The Acculturation Process

1.4.1 Culture

Baran (1971) states that the word culture has two interpretations

- a) as a term which denotes a heritage of shared values transmitted by language (essentially) and moulds the experience of the individual who shares his linguistic bond or
- b) as a term which refers to the members of a cultural or subcultural group of people who are bound by a set of similar conditions and pressures. The bond between the people depends on similar current circumstances and traditions passed down through generations

The second definition is advocated by many researchers for example Peito, Doob and Malinowski who state that culture is much more than a superficial overlay of customs. It is an all pervasive way of life which significantly influences beliefs, perceptions of reality, values, emotions and actions. (Grant, 1969)

Margaret Mead adopts the first definition of culture as she states that the transmission of culture from one generation to the next is a communication process in which many aspects of the growing individual's cultural environment relay the same messages to him. These messages reflect the dominant configurations of his culture. By internalizing the substance of these consistent messages the individual acquires his 'cultural character'.

Roberts, Arth and Bush (1959) advocate that culture should be construed as a complex, interdependent system in which the alteration of one component can result in alteration of others. (Grant, 1969)

Although these definitions may vary in emphasis, the fundamental aspects of culture seem to be as follows:

A culture (whether a primitive or civilised nation) consists of habits that are shared by members of a society.

The sharing of habits has several causes:

- i) The situations under which behaviour is acquired are similar and so conducive to parallel learning.
- ii) Through education, each generation inculcates on the next, the culture habits which it found satisfying and adaptive.
- iii) Through formal and informal means of social control, the members of society exert pressure upon one another to conform to standards of behaviour which are considered right and appropriate.

Silberbauer (1968) has listed six areas as embodying the substance of culture. These are:

- 1) The social organisation of a people which includes
 - a) the tribal organisation
 - b) family life
 - c) the principles of law and order, and the methods of administering justice.
- 2) Customs, etiquette and tradition.
- 3) The mental processes.
- 4) Religion.
- 5) Language.
- 6) Arts and crafts.

These six areas are incorporated in Lindzey's definition of culture. (Lindzey, 1961, P.4)

"I use the term culture to mean an organized body of rules concerning the ways in which individuals in a population should communicate with one another, think about themselves and their environments, and behave toward one another and toward objects in their environments. The rules are not universally or constantly obeyed but they are recognized by all and they ordinarily operate to limit the range of variation in patterns of communication, belief, value, and social behaviour in that population"

Pressure is placed upon individuals in a population to standardise their social performance.

"Norms concerning individual responses to a specific type of situation are governed by larger institutionalized programmes for collective action (institutions) directed toward adaptive goals, for example, economic institutions, religious institutions, political institutions."

The habits that are variously shared within a society and which constitute its culture are generally divided into two classes:

- 1) Customs - readily observable modes of behaviour for example etiquette, ceremonies and techniques of manipulating material objects.

2) Collective ideas - not directly observable but inferred from their expression in language and other overt behaviour for example practical knowledge, religious beliefs and social values. Also included here are rules as to who may perform certain functions, when it is appropriate to perform these functions and social rewards and punishments that can be expected from conformity or deviation.

This implies that when one describes culture one is not giving an account of actual social behaviour but rather the reconstruction of the collective habits which underlie that behaviour.

1.4.2 Cultural Changes

"We know from historical evidence that, however stable culturally distinctive dispositions appear in the individual lifespan, they can and do change in response to environmental conditions over longer periods of time." (Lindzey, 1961, P.21)

Culture is learnt through the same mechanism as that involved in all habit formation. Action is caused by hunger, sex, fear and other basic drives as well as acquired motivations. Action is followed by success or failure. With failure, especially when accompanied by pain or punishment, an action tends to be replaced by another behaviour and the probability of it recurring under similar conditions is diminished. However, with success, responses are established as habits and are progressively adapted to situations in which they are

appropriate.

Whenever a social behaviour deviates from established cultural habits (which are discouraged) it results in modifications of first social expectations then customs, beliefs and rules. Gradually, the collective habits are altered and the culture adapts to the new norms of actual behaviour.

Significant changes in the life conditions of a culture bring about changes in social behaviour leading ultimately to cultural changes. The changes that are influential in bringing about cultural changes are:

- i) increases or decreases of populations
- ii) changes in the geographical environment
- iii) migrations into new environments
- iv) contacts with people of different culture
- v) natural and social catastrophes such as floods, crop failures, wars and economic depressions, accidental discoveries.

There are a number of factors which determine the difficulty of a culture's adaptation. The greater the disparity between the familiar and unfamiliar culture, the more difficult it is to meet these differences. These factors include

- a) language known and used by the members of the new society
- b) its economic structure
- c) the level of technology
- d) the size and complexity of the formal society
- e) the political structure
- f) the specific ceremonies and rituals
- g) the style of primary social relationships.

The greater the differences in these factors listed above, the more difficult the task of coping.

The process of coping with an unfamiliar cultural situation is related to four aspects of the adaptation process (both subjective and objective):

- 1) the cultural adjustment - the functioning of the personality in the changed cultural environment. The subjective viewpoint is manifested by
 - a) emotional comfort
 - b) feeling 'at home' in the society
 - c) satisfaction with the lifestyle.

The objective manifestations are

- a) socially acceptable behaviour
- b) social interaction with host group.

2) Identification:- Changes in the person's reference groups and personal models as well as social identity. The subjective manifestations are:

- a) new reference group
- b) feeling of belonging
- c) feeling of 'sharing' same fate

The objective manifestations are:

- a) citizenship
- b) overt identity
- c) actual common fate.

3) Cultural Competence:- Acquisition of new cultural skills and competence.

Subjective manifestations:

- a) positive attitude about learning, towards the new culture
- b) self - perceived competence in the language and social roles.

Objective manifestations:

- a) Actual knowledge of the language and history of the new culture.
- b) Actual competence in language usage and performance of social roles.

- 4) Role and Acculturation:- Adoption of new culturally defined roles.

Subjective manifestations:

- a) Self-perceived convergence of attitudes and values.
- b) Desire to conform to culturally defined modes.
- c) Culturally monistic view (host culture) versus pluralistic attitudes (own and host cultures i.e. 'split-level' personality).

Objective manifestations:

- a) Actual role behaviour - e.g. gesture, habits, dress.
- b) Active use of host language.
- c) Full integration or assimilation.

At a later stage these four aspects of the adaptation process will be discussed with regard to the Blacks in South Africa.

1.4.3 Acculturation

In South Africa, according to Baran (1971) new adaptive behaviour (shown in the process of acculturation) results when Blacks shift from the rural to the urban area. Therefore, to a large extent, urbanization in South Africa is tantamount to acculturation.

The three main approaches to the study of urbanization are:

- i) social surveys - mainly descriptive investigations which give statistical information about urban areas.
- ii) acculturation anthropology - phenomena of change are judged against a hypothetical "traditional" baseline.
- iii) examination of the urban milieu as a total and complex socio - cultural system - the emphasis being on migration, demographic composition aspects, economic aspects and the relation of urbanization to social structure and social change.

According to Grant (1969) the third approach is the only one which allows for the introduction of some form of order in the study of the complex situation of urbanization.

Thompson (1933) defines urbanization in terms of movement of people from rural areas to urban areas.

"Urbanization is characterized by movements of people from small communities concerned chiefly or solely with agriculture to other communities generally larger whose activities are primarily centred in government, trade, manufacture or allied interests."

(Grant, 1969, P.2)

Beals (1951) defines urbanization from a psycho-sociological or cultural frame of reference. He states that urbanization is the result of the modification of behaviour imposed by the urban way of life.

Redfield, Linton and Herskovitz (1938) describe the meeting of different cultures as acculturation. (Implicit in the psycho-sociological approach is the assumption that town and country life differ in terms of their characteristic cultures.) (Grant 1969)

Generally, then, acculturation can be seen as the contact between two cultural groups which occurs when members of one society interact with the indigenous members of another society. As a result of the contact with a more powerful social system, the weaker culture adjusts its social order and values. The society which is adapting to the dominant one is said to be in the process of acculturization.

The culture undergoing change will be influenced by various factors (see 1.4.2). As stated previously, when differences between the two cultures are great, it is difficult to bridge the gap between them. The differences are apparent if one compares the western culture to the tribal system (or Black culture).

The Western industrial system is characterized by the following factors

- a) the use of machines (i.e. technology)
- b) the organisation of labour based on a wage system producing cash payments for work done
- c) the existence of a managerial group which organises the system
- d) the civil service is characterized by the rise of professional bureaucracy and legal systems.

An attempt is therefore made to control as far as possible and little is left to chance. The emphasis on means - end relationships (goal attainment) is also deeply ingrained in Western thought and thus all behaviour is said to be 'purposeful'.

Within tribal system however

- 1) work is carried out for the satisfaction of immediate needs (i.e. subsistence economy)
- 2) intensity of work is periodic and dependent on seasons, climates etc.
- 3) motivation to perform certain assigned tasks daily is a result of one's membership and status in that society
- 4) the belief in the spirituality of all living and material things and the determination of events by magical forces.

Although the traditional African society adhered to certain set codes of conduct and rules, these were based on the above mentioned beliefs which are the antithesis of the personal responsibility fostered by Western civilisation.

When dealing with the process of urbanisation (especially in the South African context) Grant (1969) states that 'detrribalization should be taken into consideration'. He defines tribalism as being 'the condition of living in a tribal sense'. (Grant, 1969, P.8)

Reader (1966) uses the term tribalism in four ways :-

- i) associates it with ruralism i.e. any form of contact e.g. returning home etc. with the rural areas where the sociopolitical unit of the tribe is normally found.
- ii) structurally - if contact is kept with members of the tribe in the rural area.
- iii) adherence to tribal values and behaviour patterns.
- iv) situational selection - a man even though living in town can actually be alternating between rural and urban modes of behaviour.

The implication of Reader's theory is that rural-oriented people can superficially conform to urban norms without any fundamental change in life outlook at all. (Grant, 1969)

The process of urbanisation is not only difficult as a result of the differences between the two cultural groups (Blacks and Whites) but also as a result of South African politics. If one looks at the four adaptation processes leading to cultural change;

- 1) cultural adjustment
- 2) identification
- 3) cultural competence
- 4) role and acculturation

it can be seen that these processes are not encouraged to take place. The separate development policy does not encourage the acculturating Blacks to become part of the host group (for example citizenship is not given to urban Blacks but they are regarded as temporary workers (homelanders) in White areas - the migratory system), cultural differences are encouraged, separate residential areas are built to prevent social interaction etc. Silberbauer (1968) has stated that one should not overlook the fact that men may work together in the factory, but when they go home they go to the environment created by their own culture. It is for this reason that the White man often does not understand his fellow Black worker, and the Black fails to assimilate the culture of the White man. The Black might learn the Western language, copy the White's mannerisms and learn some of his skills. But this is the very surface of acculturation.

Watts (1970) has listed two phenomena which will have serious implications for the Black urban area as it exists today

- i) rapid population growth - Watts has estimated that the South African population will grow from 2,5 million in 1860 to 42 million by 2000 A.D. with the greater proportion of the population living in urban areas (See table 2). The rapid South African urbanization will have far reaching and irreversible effects, especially on the Blacks, as they have the widest gap to cover.
- ii) between 1936 and 1960 there was a significant movement of non-Whites into White-collar jobs, while between 1/3 and 2/3 of non-Whites lived in poverty. Watts predicts that these phenomena will demand a major improvement in education and careful planning of the rural and urban adjustment, whether this occurs in White areas or in the homelands. (See Table 1A)

In the light of the above discussion it is necessary to look at solutions to the whole problem of rapid urbanization and improving educational levels of urbanized Blacks.

Fiererabend et al. (1973) looking at the effects of urbanization, state.

"Increased educational opportunities are more readily provided and less costly to societies than overhaul or expansion of the economy to meet job and income demands. The situation is comparable for deprived groups within societies or low societies in which the population as a whole experiences a low living standard. Short-term and long-term perspectives must also be borne in mind.

(Fiererabend et al. 1973, P.323)

Their study seemed to indicate that, while the short-term impact of change is disruptive, in the long run the change does meet the human needs. The rate at which change occurs is seen as a key factor in the extent of the disruption.

TABLE 2

Percentage of total
South African population in urban areas

Year	Total	Whites	Coloureds	Indians	Bantu
1904	23,6	53,6	49,2	36,5	10,4
1960	46,7	83,6	68,3	83,2	31,8
Watts estimate 2000	-	90+	80	90+	nearly 50

Dept. of Statistics (1971 - P.14 (Watts 1970)

1.5 The Need for Selection Instruments (in order to
utilise the available manpower resources optimally)

Fitting the worker to the job represents the first and most important step in promoting individual efficiency and adjustment in industry. The effect of an individual being misplaced in work has serious repercussions for the individual as well as the organisation he works for, e.g. low production, labour turnover, bad relations with co-workers and supervisors, high accident rate and wastage.

In the past, Blacks in South Africa have filled jobs which required little education, initiative, motivation and stability. The outstanding feature of the South African labour force has up to now been the differences between the racial groups in terms of the division of labour, the stability of labour as well as wages paid.

Selection for the Black migrant workers was considered of little importance as workers would only stay on the job for one contract and then return to the homelands. Some workers did return to their employers after a few months' absence but the trend was of moving sideways to other employers. As a result it was difficult (and of little value) to keep adequate records on this migratory labour force.

One of the large mining houses recognised the limitations of this system. "The migrant labour system has serious adverse effects on labour productivity and the mining house is now attempting to stabilize the skilled sections of its Bantu (Black) labour force in order to improve productivity." (van der Colf, 1975)

With the surge of technological innovations, the rise of the Black educational level as well as predicted shortages of skilled White labour in South Africa, a radically altered workforce can be predicted. One can expect marked changes in the types and number of jobs existing for Blacks, in the levels at which they are placed, the skills they require and the kinds of Blacks employed.

With the increasing number of Black workseekers, having a high school (or even university) educational level, future entrants in the employment market will bring with them new needs and new expectations.

Although industries have recognised the changing structure of the labour force, and the growing need for scientific selection in order to select Blacks who have the potential to cope successfully with higher level positions, a survey of existing personnel practices (as enumerated in People and Profits) as far as Blacks are concerned shows that much more attention is necessary to iron out the problems of Black Advancement (with special reference to selection).

- i) Van Breda (1972) looked at 110 firms in the Orange Free State and found that
 - a) 0,9% used psychological tests for selection and placement of Black workers.
 - b) 21,8% have formal induction for Black employees.
 - c) 33,6% use job evaluation for remuneration purposes.
 - d) minimum data on Black employees is kept for record systems.
- ii) Langenhoven, Verster and Uys (1974) carried out an extensive survey of companies in South Africa (number of companies studied not stated).

They found that

- a) 15,5% used psychological testing for selection (3,3% only in the public sector)
 - b) 48,3% of the public sector (N = 60) do not carry out any form of selection but 'take people as they come'.
 - c) 46,4% of the firms use systematic job evaluation systems for selection.
 - d) An interesting finding was that in the private sector of organisations studied (N = 26, 421 workers) 14,9% of the workers who terminated their services in 1974 absconded and 23,5% were dismissed i.e. 38,4% should in the first instance not have been employed.
- iii) Blake (1974) in his study (in People and Profits magazine) found that problems in Black employment resulted largely from wage dissatisfaction, poor communication, conflicts between Black workers and White management (White supervisors) as well as poor selection and placement of Black workers.

The mining industry has such a large Black working force which comprises illiterate, semi-literate and literate Blacks, that the whole question of Black selection and advancement is a crucial one. As a result of the neglect of selective recruitment in the past, the Black labour force is a large 'unknown mass'. It is necessary to identify

from this unknown quantity those Blacks who will be able to assume greater responsibility and act as a 'link' between Black employees and management.

On the mines at present, the position of 'middleman' between the Black labour force and the White supervisors is the African Personnel Assistant (A.P.A.) On the A.P.A. rests much of the responsibility for seeing that Black employees understand (and support) the goals adopted by management. He is also responsible for seeing that the employees differences and complaints are transmitted up the line and that these problems get solved. Choosing the wrong person in this position could have severe repercussions e.g. an intelligent but negative A.P.A. has many opportunities to cause harm to industrial relations and production by virtue of his position. A well-balanced and positive personality is essential when acting as 'middleman' between the white supervisor and the Black workers.

Pelz (1952) has postulated a theory of effective influence. He emphasizes the role that the first line supervisor can play on their workforce and certain aspects of his theory are applicable when dealing with a 'mediator' between management and employees (in this case the A.P.A.)

(Argyle, 1972)

- a) any members of a group will think well of a leader (a person in a mediator capacity) who helps them satisfy their needs to achieve their goals.

- b) If a group leader has considerable influence within his organisation; then when he behaves so as to help employees towards their goals, he will achieve concrete benefits from them. (These are of benefit to the organisation he works for.)
- c) A supervisor's power can be used to harm as well as help employees especially if he has considerable influence over the workers.

It is expected that Blacks who are to occupy more senior positions in the near future would be drawn from the ranks of the A.P.A. to a large extent. It is therefore already necessary at this stage to select Blacks for the position of A.P.A. (as well as identify those Blacks in A.P.A. positions) who have the potential for further development (i.e. to assume management positions in the future). As a result of higher investment per Black man as well as his greater potential benefit to the company, selection procedures will have to be applied more carefully (and systematically to provide as much information as possible about the individuals within the ranks of A.P.A.s

C. Heyel (1963) has succinctly defined the aim of personnel testing:

"Ideally then, the end objective of personnel testing is to help in insuring a flow of the right people into the right jobs at the right times." (Heyel, 1963, P.672)

Korman (1968) has carried out an extensive review of the studies in the area of management potential with these two aims: (although this review is of American firms and no information is given as to the race of the employees being assessed, certain areas of interest could be relevant when deciding on which methods to adopt for selecting Blacks for high-level positions):

- i) to gauge the efficiency with which various kinds of methods predict managerial success and
- ii) to ascertain whether these prediction studies throw light on the kinds of psychological constructs which might lead to an adequate theory of leadership behaviour in the industrial situation.

Korman (1968) adopted Meehl's (1954) distinction between

- a) the type of prediction used and
- b) the kinds of instruments used.

His definitions are as follows:-

'Psychometric' Prediction involves the assessing of individuals on an instrument(s) assigning roles as a result of the assessment and relating these scores in a statistical manner to scores on a criterion measure. This arranging of scores for actuarial prediction is used on ability tests, objective personality tests, background biographical data, and certain kinds of interview data.

The 'judgemental' prediction model requires an intermediary who combines a set of scores and/or impressions in some subjective, intuitive way and then makes predictions as to the individual's standings on the criterion variable. The correlation between these predicted standings and actual criterion standings is in actual fact a test of the judgemental model. Subsumed under this heading are executive assessment methods, peer ratings, superior and faculty ratings as well as clinical type of tests of a projective nature for e.g. the TAT and the Rorschach

The conclusions from this extensive review are:-

- i) intelligence, as measured typically by verbal ability tests, is a fair predictor of first-line supervisors' performance but not of high level managerial performance.
- ii) objective personality inventories and 'leadership ability' tests have generally not shown predictive validity in predicting managerial success.
- iii) personal history data as predictors are fair for first line supervisors, but less so for the higher level individuals.
- iv) 'judgemental' prediction methods are generally better predictors than psychometric procedures although allowance must be made for the generally small samples involved.

Korman attributes the success of the 'judgemental predictors' over the psychometric ones to the fact that 'judgemental prediction' is not as 'criterion oriented' as psychometric prediction.

"It could be that judgemental predictors change the meaning of the criterion they are predicting psychologically so that what they are predicting is in fact the general level of adequacy with which the person will be able to function in a complex, demanding environment."

(Korman, 1968, P.317)

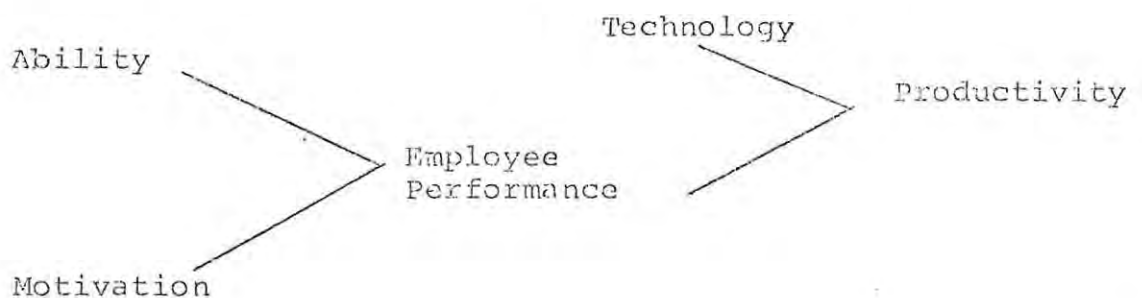
CHAPTER 2

The Concept of Motivation

2.1 Introduction

Argyle (1972) postulates that Effective Performance is a joint product of abilities and motivation. It is not enough for a person to have the necessary abilities for a job, he must also be sufficiently interested and motivated to want to do it, or he will not work effectively nor find it satisfying.

Sutnermeister (1969) also stresses the importance of motivation in the working environment. He postulates that productivity depends on employee performance and technology. Employee performance depends on motivation and the ability of the employee (though motivation alone does not lead to increased productivity). He gives the following diagrammatic representation of productivity:



This then brings us to the problem of motivation and cultural differences.

"By far the greater part of our behaviour at work is the product of cultural factors; through historical processes a society develops certain attitudes to work and ways of working, and these are passed on to children in the course of education and other kinds of socialization." (Argyle, 1972, P.1)

In her studies of the Balinese, Mead (1946) came to the conclusion that the very basis of Western motivational striving i.e. goal-oriented behaviour might not be characteristic of all people. Much of the Western peoples regard 'rational behaviour' as that behaviour which is performed in the aim of achieving some goal, attaining an objective or serving some purpose.

In an achieving-oriented society, very few acts come to possess value in themselves. Meaning is inherent, not in the action itself but in the direction of the action. As a result of a cultural context that emphasises means - end relationships (e.g. competence in music leads to money, prestige etc.) a far greater number of varying kinds of behaviour become dependent upon external reinforcement for their maintenance than would be apparent in a culture that did not emphasise such relationships.

Mead concludes that the very concept of motivation or at least intrinsic motivation, could be an expression of cultural values rather than a statement about the 'immutable' nature of things.

However, Stagner (1956) feels that since one is concerned with the behaviour of man, specifically in industry (and that behaviour leads to successful performance within that system) one must accept competitive impulses towards prestige and power as major considerations.

At this stage it would be of value to enumerate various theories of motivation.

"The psychology of motivation concerns itself with attempting to understand (and predict) the arousal, direction and persistence of behaviour, given the characteristics of the behaving subject at the time and the characteristics of the environment (both real and perceived) at the time." (Korman, 1968 P.2)

2.2 Theories of Motivation before 1900

The knowledge one has of the history of motivation before 1900 is sparse. Philosophers of antiquity, including Aristotle, described 'desire' or 'drive' as a 'mental' force or 'ability' as crucial as other 'mental forces' such as perception, imagination and feeling.

During the Middle Ages, philosophers differentiated between 'sensual desire' and rational 'will'. More recent philosophers (e.g. Descartes, Hobbes, Spinoza) described drives as an important class of psychological variables, as essential as affective and intellectual processes.

The Hedonic Theory (in the 18th and 19th century) postulated that the organism behaves as a function of seeking pleasure and avoiding pain.

The English Empiricists (Locke, Berkeley and Hume) believed that the intellectual variables dominated other kinds of psychological variables. Kant placed cognition, 'emotion' and will on the same level of psychological classification. Motivational variables were divided into two groups 'Emotion' and 'Will'.

Wundt defined 'Will' as a special series of emotions which ends with the feeling of determination spontaneously resulting in action. He thus believed in a close relationship between 'will' and 'emotion'.

The British associationist philosophers established the principle that the content of the mind was a function of experience and learning and this established the principle that thought and the content of the mind were understandable and predictable as a result of the individual's previous experiences.

Influenced by Darwin's theory of evolution psychologists at the end of the 19th century adopted the theory of instincts as the primary motives of behaviour in both men and animals. As a result of Darwin's proposals the theory of dualism was questioned as it was clear that the basic human and animal processes were the same.

The second implication of Darwin's proposals was the adoption of the notion that theoretically, all motivational processes should be studied as a function of their antecedent behaviours.

Some psychologists, negating the concepts of 'will', 'motives', 'wants', developed motivational theories, using only physicalist terms and limited their constructs to hypotheses concerning survival as a rationale for behaviour.

Others, however, adopted the approach that although the antecedents affected both animals and humans, there was no need to use the same concepts for both. Some constructs were therefore developed to signify uniquely human motivational processes. Factors affecting these constructs were ascertained and studied under various conditions.

2.3 Theories of Motivation

On a broad basis, approaches to study motivation can be classified into three categories (traditions):

- 2.3.1 Biological Tradition:- stems from the work of physiologists of the 19th Century as well as the Darwinian influence on scientific thought. Psychologists who are placed in this category are for example Hull, Watson, Spence, Freud. The terms used are drives and instincts in explaining the arousal, direction and persistence of behaviour.
- 2.3.2 Cultural Tradition:- The psychologists use terms such as wishes, feelings, desires, demands, needs and motives in their thinking and writing. Learned experiences and the nature of the psycho-social environment are important for developing explanatory variables for understanding the arousal, direction and persistence of behaviour. The psychologists in this category are for example Tolman, McDougall, Lewis, Murray, McClelland.

2.3.3 Philosophical-Theological Tradition:- The traditional approach that dominated the field prior to the Darwinian theory has been adopted by the 'humanistic' psychologists. However, this approach has not lent itself to the kinds of empirical systematic research necessary in the study of motivational processes. (as included in the context of this particular study) Psychologists in this field are Festinger, Triandis, Kaufman, Maslow and Herzberg. In this study only the second category (the cultural-tradition) shall be discussed in any length. The sub-category which shall be studied in detail is that of the expectancy-value model.

2.4 The Expectancy-Value Model of Motivation

2.4.1 K. Lewin

Lewin was the first psychologist to insist that both the person and the environment had to be considered when looking at behaviour. He proposed that behaviour is the creation of both the person and the environment and gave the following programmatic equation

$$B = F (\text{Person, Environment})$$

This led to the development of motivational theories that included both the person and the environment as influences on the arousal and direction of behaviour.

As a result of Lewin's work, to many psychologists the studying of motivation involves looking at the characteristics of people and the characteristics of the environment where the behaviour takes place. Factors taken into consideration are the person's motives, his perception of the environment, the incentives available and his expectancies of achieving them.

Lewin greatly influenced many psychologists, amongst them McClelland. Although he realised the importance of the practical application of a theory, Lewin did not relate his various psychological variables to specific empirical variables under the experimenter's control which were in need of predictive studies. It was McClelland who first brought the concept of motive under experimental control and studied it for its influence on behaviour.

2.4.2 H. Murray (1937)

McClelland's theory stemmed from Murray's work. The basic assumption underlying Murray's theory is that people have motives which have to be studied as arousers and directors of behaviours. The key to the understanding of human personality does not come from the biological physically based theories e.g. Hull's insistence on using laboratory settings for the verification of his hypotheses.

The important aspects of the human personality would be manifested in everyday situations. Therefore, motivational processes should be seen as a function of individual needs or motives as observed in naturalistic or clinical settings and to a limited degree in a laboratory situation.

A need or drive has both the following properties

- a) a directional aspect that differentiates it from other needs and
- b) an arousal component that actually starts the behaviour off and can be activated in a number of ways.

Murray did not clarify which conditions activate the behaviour. McClelland, however, studied this problem and his findings shall be discussed in a later section.

A need is a hypothetical construct that occurs between a stimulus and a resulting action pattern. It therefore directs behaviour toward certain end effects rather than others. The end states of behaviour are more important than the specific behaviours themselves.

It is important to remember the importance of the end states of behaviour when developing a conceptualization of motivation (on a human level) as:-

- 1) Physical survival depends on achieving certain outcomes (not on behaviours used).
- 2) Certain effects are attained universally but by different behaviours.
- 3) During an individual's life certain effects are regularly attained but the behaviours involved change.
- 4) When an organism is faced with a novel situation it persists to bring about a certain result but will change its methods under frustration.
- 5) Some effects can only be reached by completely novel situations.
- 6) The fact that biologically essential effects may be brought about by another person indicates that specific behaviours are secondary.
- 7) Behaviour ends when a presentation of a desired end state is made which implies that need and desired end state are the crucial determinants of behaviour.
- 8) When a need is not in a state of readiness, responses to specific stimuli do not occur.

- 9) when a particular need is active, common objects in the environment may evoke unusual responses.
- 10) when a need becomes active, characteristic behaviour will usually follow even without the customary stimuli.
- 11) there are conscious correlates of desires.
- 12) one of the most common subjective experiences is the conflict between desires.
- 13) as it is so closely connected to happiness and distress, a need is more important than a behaviour pattern.
- 14) experience indicates that a certain desire could sometimes give rise to a dream or fantasy and at other times promote direct activity. Murray believes that one could not adequately represent the obvious relationship between behaviour and fantasy without the concept of an underlying drive.
- 15) the need may determine the direction of attention and greatly influence the perception and interpretation of external occurrences. As it influences sensory and cognitive processes, a need must be some force in the brain region.

The exposition of Murray's theory leaves a number of questions unanswered:

- a) If there are individual differences in motives on a relatively complex human level, how do they develop?
- b) If one accepts that a motive is a desire to behave in certain ways to achieve pleasure, how do we define pleasure and why is one outcome favourable to one person but not to another?
- c) Is there a common basis for pleasure as a desired outcome of behaviour that can be defined independent of the behaviours designed to achieve it?
- d) Motives such as achievement and affiliation are not necessary for survival so what are they aimed at?

These ignored aspects of Murray's theory were studied and explained by McClelland.

2.4.3 McClelland

McClelland adopted Murray's proposals for a theory of motivation and clarified some of his concepts. To the above questions he supplied the following explanations:

Individuals are motivated to seek pleasant affect and avoid negative affect. The degree to which an environmental situation has a pleasant or negative effect and so generates either an approach or avoidance behaviour is the result of the 'Discrepancy' hypothesis.

The 'Discrepancy' hypothesis states that any moderate discrepancy(ies) along the line of experience(s) will lead to positive affect and so result in approach behaviour. Any large discrepancy(ies) however, will lead to negative affect and so result in avoidance behaviour.

As a result of this discrepancy hypothesis, McClelland postulates that humans are motivated to achieve end states that involve a moderate discrepancy from previous adaptation levels and to avoid end states that involve extreme discrepancies from previous adaptation levels.

A motive is defined as the redintegration (a reminder - a function of previous learning) by a stimulus cue of change in the affect of a situation. His basic assumption is that there is a desire to maximise positive affect and minimise negative affect. (McClelland, 1955)

McClelland postulates that if a cue redintegrated in a certain situation has a positive (or alternately a negative) affect attached to it and the stimulus aspects evoked by the cue suggest moderate (or in the case of negative affect, extreme) discrepancies from one's previous adaptation level, the behaviour of the organism will be aroused and its direction will be to approach (or avoid) the given situation or stay in it (or leave if one is already in it).

To clarify this concept McClelland gives an example of levels of achievement. If one adopts the outlook that people have different levels of achievement motivation then a person with a high degree of achievement motivation is one for whom achievement situations give off cues that suggest moderate discrepancies from his previous adaptation levels. He would, therefore be predicted to be motivated to approach, stay in and theoretically behave more effectively in situations calling for achievement than those individuals with a lower achievement need. The person with a low degree of achievement need is one for whom achievement situations give off cues that suggest extreme discrepancies from his previous adaptation levels and so would therefore be predicted to avoid and behave less effectively in them.

As a result, one can predict, prior to the manifestation of behaviour that individuals with high achievement need, as measured, will react differently to environments presenting opportunities for achievement, than will individuals with low achievement needs. (The implications of this postulate will be discussed at a latter stage.)

When discussing the development of these motives McClelland adopts the contiguity approach of Learning Theory i.e. stimuli that have been previously associated with positive affect come to stimulate approach behaviour and those associated with negative affect come to stimulate avoidance behaviour. If the end goal is reached then reinforcement will occur. However, whether the end goal is reached or not depends on other variables as well such as environmental events.

As a result of McClelland's postulates, it was possible to experimentally manipulate the expectancy - value approach for example

- i) the development of a motive for example, achievement motive, can be controlled by pairing stimulus cues from that outcome with moderate discrepancies from previous adaptation levels.

- ii) one can test whether a motive has developed or not by presenting the cue in a new context.
- iii) one can change motives by pairing the relevant stimulus cues with different discrepancy levels from previous adaptation.

The implications of the manipulation of motives are great. McClelland (1965) reported that the introduction of thoughts or images can, even in the adult alter real life activity patterns to incorporate new motive systems. At the Nebraska Symposium on Motivation (1968) Heckhausen stated

"What psychologist would have taken seriously the idea that we could upgrade the achievement motive of adults by the simple expedient of short training sessions and, in effect, by merely demonstrating the associative network of images and thoughts that are typical of other highly motivated persons; or by describing how individuals high in n Achievement think, feel, and act! Now we find that under-achieving boys from middle and upper class homes improve their grades, according to a follow-up 1.5 years after the training (Kolb, 1965); that middle-level executives receive above average

promotion and raises (Aronoff and Litwin, 1966); or that Indian businessmen show increased entrepreneurial activity in their job careers (McClelland, 1965; Lasker 1966)." (Heckhausen, 1968, P.140)

McClelland has also proposed various training programmes to generate a stronger achievement motive in adults of developing countries. Heckhausen feels that this approach could be broadened further to include training of culturally-disadvantaged children.

According to McClelland n Achievement is universal in human beings in spite of the fact that it is determined by external stimuli, as stimuli may be so common in all cultures (for example in all forms of education) that the motive is learned, just as early as biological motives, and remains just as intense for the rest of the life of the individual as the biologically determined motives.

However, humans differ from one another in the strength of the motive n Achievement. Historically, these differences can be traced to the Protestant Reformation, a period which resulted in a major shift in human, religious, personal and social beliefs. It was the changes in beliefs that led to the rise of modern capitalism, which in turn was sustained

by altered child-rearing practices that produced sons with high achievement motivation. McClelland postulates that the differences in the strength of the motivation to achieve are important, and must be taken into consideration in order to understand the differences in the wealth of nations.

McClelland provided data (supporting Weber's thesis concerning Protestantism and the level of economic development) from a number of Protestant and Catholic countries (1925 and 1950). The measure of economic level used was kilowatt hours of electricity consumed. He showed marked differences in the level of economic development existing in 1950 for the sample of Protestant and Catholic countries used.

McClelland postulates that the changes in religious beliefs, personal values and orientations toward achievement (a personality characteristic which emphasised the continual striving for perfection, for good works and for achievement) resulted in a revolution within the Protestant family. Protestant parents behaved towards their children in a manner which produced sons with internalised values characteristic of people with high achievement motive. It was these achievement-motivated sons who initiated the capitalist movement which brought about the rise of modern capitalism.

M. Winterbottom (1953) measured the achievement motive in twenty-nine boys (8 - 10 years). She found in accordance with McClelland that children with high achievement scores were expected to accomplish these goals (i.e. good work and achievement) at a much earlier age than were children with low achievement scores. Mothers of the high achievement motivated boys generally rewarded such early mastery with physical manifestations of encouragement such as hugs and kisses. Winterbottom concluded that parental expectations and rewards were associated with the level of achievement motivation in sons.

McClelland and associates (1953) showed that the achievement motivation is established during the six to twelve years of age period. As a result of exhortations from parents and teachers, imitations of successful models, and rewards for successful achievement, the child acquires a drive to carry out school tasks with persistence, and to do well at them. Neff (1968) maintains that it is at school that the child learns the difference between work and play and acquires a 'work personality'.

The implications of various studies on aspiration levels (Gould 1939, Gruen 1945, Gebhard 1948, Preston and Bayten 1941, Lipset and Bendix 1952) with regards to motivation are as follows:

Children and adolescents who have had an accumulation of 'success' experiences have higher aspirations than those who have more 'failure' experiences, therefore children from upper class families, with advantages in home background, intelligence, education, characteristically have higher aspirations than those from poorer homes.

McClelland postulated that one would expect more highly motivated people to perform more quickly under certain circumstances, and to learn more efficiently than poorly motivated people i.e. if the achievement motivation score (as measured by the TAT-scoring with the McClelland system which will be outlined later) is an index of the strength of the achievement motive in individuals, one should be able to show that people with high n Ach (achievement motivation) show evidence of better learning and performance.

McClelland gives a profile of a high achiever as tending to have the following characteristics:

- a) they do their best to obtain monetary or other rewards in laboratory games and tasks.
- b) they set themselves high but realistic targets.
- c) they are optimistic about their performance in other work situations.

While they work harder at laboratory tasks and do somewhat better at academic work, little is known about their performance in an industrial setting. However, Birney (1968) found that successful managers are high achievers. There is evidence also that achievement motivation leads to industrial growth due to the activities of entrepreneurs.

Lowell (1950) showed a definite and statistically significant evidence for superior learning in a high versus low n Ach group. Lowell also showed that where learning is possible in a complex task, a highly motivated person will show it, where it is not possible or at least likely in a very simple task, high n Achievement produces faster performance but not learning.

French (1953) found that the ability to solve problems was a function of both intelligence and achievement motivation, the effect of intelligence being greater for more highly motivated people. French thus postulates that the relationship between achievement and performance is multiplicative i.e.

Performance = ability x motivation.

McClelland and Liberman (1949) studied the effect of n Ach on the recognition of need-related words and found that people with high n Ach scores were able to recognise positive achievement words like success and strive faster than people with low n Ach scores. As a result of the study, they thus postulated

- i) as n Ach increased in intensity it tended to orient people first to avoiding failure (decreased sensitivity to failure words) and then to attaining success (increased sensitivity to success words).
- ii) In moderate n Ach, people are security minded and chiefly concerned with avoiding failure or with achieving a minimal level of aspiration whereas
- iii) people with high n Ach are concerned with achieving success or attaining maximum level of aspiration.

Atkinson (1950) confirmed these findings in another study:

- i) people with moderate n Ach are defensive and regard their inability to complete a task as a failure as they become more ego oriented and so attempt to avoid remembering it.
- ii) people with high n Ach tend to regard their incomplete tasks as challenges, which they remember better as the situation becomes more ego oriented. This is probably in order to complete them.

Atkinson (1958) postulated that overall motivation to achieve is a joint function of motivation to succeed x probability of success x incentive value of success or conversely

the overall motivation to avoid failure is a joint function of motivation to avoid failure x probability of failure x negative incentive value of failure.

Atkinson places these two behaviours in equation form:

$$\text{Motivation to achieve} = M_s \times P_s \times I_s$$

$$\text{Motivation to failure} = M_f \times P_f \times I_f$$

Atkinson states that differences will be obvious in individuals who differ in the relative strengths of the motive to achieve success and of the motive to avoid failure, when they are asked to choose and perform one of several tasks in which the probability of success varies as well.

- i) the person high in success motivation but low in motivation to avoid failure will tend to select tasks of moderate probability of success.

- ii) the person high in motivation to avoid failure will tend to select tasks which are in extremely high probability of success (easy tasks) or extremely low probability of success (very difficult tasks). He is willing to minimise the incentive value he receives in order to ensure avoiding failure or he may accomplish his purpose by seeking to minimise the negative incentive value of failure by deliberately seeking extremely difficult tasks (where he could not be blamed for failure).

iii) for the person high in motivation to succeed the overall motivation to achieve is highest when the probability of success and the incentive value of success are moderate. He will voluntarily choose to perform those tasks of moderate probability of success and of moderate incentive value system.

Atkinson's hypotheses were consistent with McClelland's (1958) experiment with kindergarten children.

2.4.4 Criticism of McClelland's Motivational Theory

- 1) One of the major criticisms of McClelland's theory is that the expectancy - value theory is applicable (or useful) only in those situations where the individual has control over his behaviour i.e. internal control.

Internal control is the degree to which an individual believes he can manipulate his environment to get what he wants. The person who believes that his future can be controlled by him is more likely to plan for success, to make sacrifices in order to obtain it, to be more self-confident and trusting.

If an individual does not have 'internal control' then his expectations of values to be obtained are of no consequence as he feels that he cannot behave in order to achieve these values anyway.

This concept of 'internal control' can be extended to whole groups of people (if one looks at Riesman's theory of characterological development as a result of certain population trends), and the implications of high or low achievement need then are of a 'national' importance.

Riesman (1950) has stated that the tradition-directed person (one who is living in a relatively stable, rigidly controlled 'tribal' society) does not really think of himself as an individual nor that he could shape his destiny or that the destiny of his children could be separate from the family group. He is not "sufficiently separated psychologically" to think in these terms.

In transitional growth (characterised by increased mobility, rapid accumulation of capital, immense technological shifts, loose control exerted by society as a result of existing novel situations) however, people of inner-directed character do gain a feeling of control over their own lives and see their children also as individuals with their own lives to make.

- 2) Another major criticism of McClelland's motivational theory lies in the operational problems of testing his 'discrepancy' hypothesis.

McClelland's model predicts maximum behaviour of approach, at one point of the continuum and different behaviours at other points i.e. a U-shaped hypothesis.

For example when one predicts that maximum approach is at one level (i.e. moderate discrepancies) and maximum avoidance at another level (i.e. extreme discrepancies) then one cannot test this hypothesis as one has no prior knowledge of the levels of the measuring operation required to bring in the experiment. Therefore, if the levels of discrepancy are too high or too low, a proper test of the hypothesis cannot be made. This, in part, explains why dramatically opposed results have been obtained by researchers in this field and why these findings can be justified by McClelland i.e. if the results are not in agreement with the predictions made, then they are explained in such a way that the hypothesis is still acceptable.

In actual fact, the moderate discrepancies (source of pleasant affect) are not measurable by any simple physical measure.

Various researchers have tried to relate need achievement to school achievement but have had inconsistent results:

- i) Birney (1968) found low positive relationships between n Ach and school grades when using high school students.

- ii) Cole, Jacobs and Zubok (1962) found
 - a) in one study that when scholastic aptitude was held constant students enrolled in the honours programme had lower need achievement scores than those who exhibited merely average performance (i.e. an inverse relationship was found). (Kagan and Lessen, 1969)
 - b) in another study, they found that the students lowest in need achievement at the start of the first year (freshman's year) actually performed highest by the end of the semester.
- iii) Broverman, Jordan and Phillips (1960) had similar findings. They concluded that rather than showing a direct relationship to overt behaviour, fantasy measures (as used in the TAT - McClelland's scoring system) are compensatory i.e. high n Ach scores are obtained by persons who are unable to express their need for achievement in a real life context. Lazarus (1961) argued that imagery and symbolic behaviour is compensatory, and that the very occurrence of such imagery indicates a deficiency in the area concerned. (Another experiment by De Charms et al. will be discussed in the TAT discussions, seems to have obtained a dramatically opposed findings to the researcher named above. (Kagan and Lessen, 1961)

McClelland argued that academic settings are not conducive to the kinds of achievement striving shown by people with high need achievement. People with a high need achievement prefer to solve problems set by themselves rather than set by others. (This aspect will be discussed further with regards to organisational structure in industry.)

McClelland postulates that actual achievement in an academic setting reflects such behaviours as being able to follow instructions, examination taking skills as well as a willingness to solve problems posed by others. Many of these skills have no value to the person with high need achievement.

However, if this were the case, one should expect a consistent inverse relationship between n Ach scores and performance in academic settings. Certain studies have shown positive relationships between n Ach scores and school achievement (e.g. Krumboltz and Farquar 1957).

iv) Veroff et al (1960) questioned the association of Protestantism and high achievement need. He failed to show a difference in achievement need in favour of the Protestant parents over the Catholic and Jewish parents with regards to parental expectations for early mastery and independence in children.

Veroff found that Catholic and Jewish boys actually scored higher on need achievement (using the same questions used in the Winterbottom (1953) study) than Protestant boys.

- v) Rosen and D'andrade (1959) observed both mothers and fathers interacting with children at home (Winterbottom asked questions to mothers only). They found that mothers' behaviour was in accord with Winterbottom's interview data on mothers' expectations and fathers' behaviour was as follows; Fathers of low-achievement sons appeared domineering and authoritarian in their relationships with their sons which is in accordance with postulate by McClelland that the high achiever's upbringing is not an authoritarian one.

2.4.5 Korman's Theory of Motivation (Achievement)

Korman's theory of achievement motivation shall not be enumerated but only briefly mentioned as he has built up a model of achievement incorporating McClelland's achievement need, authoritarianism as well as self-esteem.

From the literature and research done in these three fields (mentioned above) Korman postulates that the environments proposed by McClelland as leading to high achievement seem to be the same as those which have been proposed as leading to low authoritarianism (Sarason (1967) Adorno et al. (1950)) and the same as those leading to the development of high self-esteem (McClelland (1961) Rehberg, Sinclair and Schaefer (1970))

i.e. these are environments marked by high valuation of independence, low obeisance to authority figures and tradition, and low degrees of control by others.

This model is given diagrammatically in Figure 1.

Korman goes further to postulate that societies that are structured along hierarchical authoritarian dimensions are likely to lead to outcomes of a low achievement and high aggression. Korman has shown (in unpublished research) that nations high in achievement, according to McClelland, were found to be low in aggression, in independent research by Fieraband and Fieraband (1965).

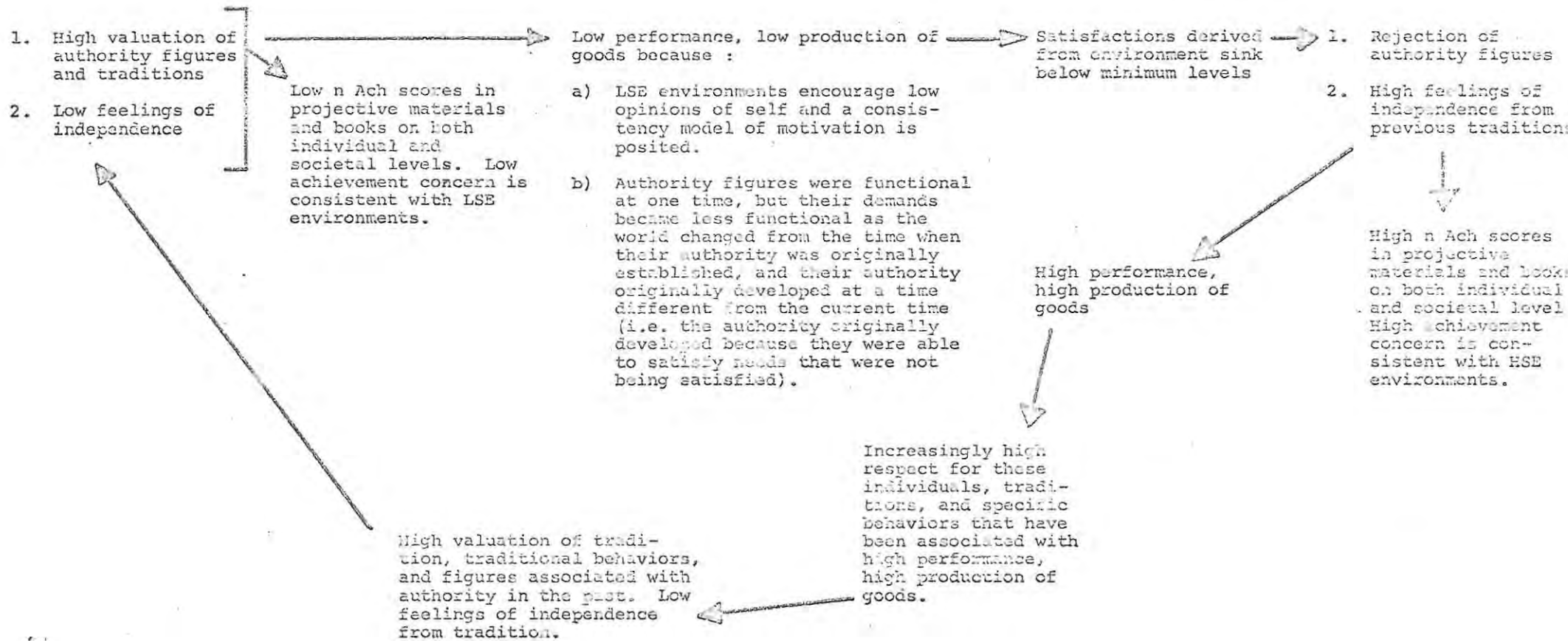
Although not much research has been done in this field, it is certainly an area worth investigating especially when dealing with the concept of achievement need in different cultures.

HYPOTHESISED MODEL OF SOCIETAL ACHIEVEMENT
BASED ON KORMAN'S CONSISTENCY MODEL

(P. 241)

LSE Environment

HSE Environment



EXPLANATION

LSE - Low Self Esteem

HSE - High Self Esteem

CHAPTER 3

The Thematic Apperception Test (TAT) as a measure of Motivation (Achievement)

3.1 Background to the TAT

H.A. Murray described the TAT as "a method for revealing to the trained interpreter some of the dominant drives, emotions, sentiments, complexes and conflicts of a personality". (Winterbottom in Atkinson (ed) 1964, P.56)

Although Murray is known as the father of the TAT, the first emphasis on linking imagination with pictures was made by Brittain (1907) following the earlier methods of Stern. However, it was not until the 1920's that the use of 'fantasy' stories was adopted to study Personality by a psychoanalyst, Clack (1926). (Murstein, 1963)

In 1932 Schwartz devised the thematic method of studying personality, as it is known today. The purpose of his method was to get subjects to project aspects of their personalities (either usual or unusual) in the replies they gave when describing eight clearly structured pictures of moral situations.

3.2 Murray's System

In 1935 Morgan and Murray published an article describing their method of getting at people's unconscious fantasies through story telling. In this way analysis could be speeded up.

Murray's TAT comprised 31 pictures. Each subject tested (subjects came from the Harvard Psychological Unit and varied in age from 14 years to 40 years of age) wrote stories about 20 cards (particular cards used varied as a function of age and sex).

The cards were divided into 2 sets given on two separate occasions (in a period not less than 1½ days). The first set comprised realistic everyday scenes, whereas the second set comprised unusual, dramatic, bizarre scenes.

Subjects were told to tell as dramatic a story as possible for each card, enumerating prior, present and future events (as well as thoughts and emotions).

Prior to testing, the subjects had been studied for a considerable period of time and a final diagnosis made. Each TAT story was analysed and a rating ascribed to the card according to the amount of information contributed to the final diagnosis by the story.

3.2.1 Murray's Scoring System

The scoring system is one of content analysis of the stories. The stories are analysed from the point of view of :

- i) the forces emanating from the hero
- ii) the forces emanating from the environment

Major emphasis is placed on the needs present in the central character of the story (hero) and the presses directed toward him.

Although Murray's motivational theory has been enumerated in Chapter 2.4.2, further clarification of his concepts is necessary.

A need is a construct (a hypothetical concept) which represents a force (its physiochemical nature is not known) in the brain region, a force which organizes perception, apperception, intellection and action in such a way as to transform in a certain direction an existing unsatisfactory situation. (Murray, 1938, P123 - 124)

Press is the term for an environmental force, a patterned meaningful whole which affects or might affect the subject in a certain manner.

Thema:- the interaction of a hero's need (or fusion of needs) and an environmental press (or fusion of press) plus the outcome (success or failure) constitutes a simple thema.

A complex thema is a combination of simple themas interlocked or forming a sequence. When used loosely, the term signifies the plot, motif, theme, principal dramatic feature of the story. (Murray, 1943, P.13)

Murray used 28 needs, the most prevalent being n Aggression, n Achievement and n Dejection. Needs and presses are scored on a 5 point scale according to strength. The criteria for strength are intensity, duration, frequency and general significance in the plot.

Interpretation

There are two assumptions underlying the interpretation

- a) the needs, emotional state and sentiments expressed in the stories represent attributes of the subject's personality (symbolically and literally) e.g. things he has done or wanted to do or attempted to do or will do in the future, consciously or unconsciously.

- b) the press variables represent forces in the subject's apperceived environment, past, present, future. They refer literally and symbolically to the subject's view of the world, the impression he is likely to project into his interpretation of an existing situation and into his anticipation of future situations.

Murray divides behaviour into two areas.

Behaviour consists of

- 1) 1st-level functioning which includes physical and overt behaviour i.e. behaviour actually expressed.
- 2) 2nd-level functioning which includes ideas, wishes and plans about behaviour. These are obtained from the content of TAT stories.

Personality, however, consists of 3 layers

- 1) the inner layer consists of repressed unconscious tendencies.
- 2) the middle layer consists of tendencies which appear in thought but may not necessarily be expressed overtly and
- 3) the outer layer consists of overtly acknowledged and overtly expressed behavioural tendencies.

Murray postulated that the TAT dealt primarily with the inner and middle layer of personality. However, he realised that covertly expressed needs are not always related to overt expression of that need i.e. some needs showed positive correlations to overt behaviour, whereas others showed negative correlations.

Murray, therefore, advocated that one should take into consideration cultural sanctions, sex of tester, prestige of the tester as well as the tester's attitude regarding the subject.

3.2.2 Criticism of Murray's System

The reliability of Murray's system is low e.g. Sanford et al (1943) obtained interjudge reliability (using a group of boys and girls at a private school) of ,57 for the many 'needs' studied whereas the interjudge reliability for the press needs was ,54 (much lower than the more structured scoring systems e.g. McClelland). Split-half reliabilities for needs were ,46 and for press ,42.

Correlations of fantasy to overt behaviour ratings averaged ,11 for the 28 needs studied, the highest correlation being for n - nurturance ,41.

With the exception of Murray's associates or students, few psychologists adopted the system as his theory of personality was insufficiently validated.

The bulk of evidence in Murray's experiments does not support the theory that the TAT taps primarily the inner and middle layers of the personality.

Rotter (1940) felt that too little attention is paid to individual differences and the relations of the stories to the overt attitudes and outlook.

Watson (1949) attributes its lack of usage in the psychiatric field to the theory of personality, which is foreign to psychiatry. The system is a very time consuming one and as a result not practical.

Murray's major contribution lies in the fact that he popularised a little known method and generated (or stimulated) an enormous amount of research in this field.

3.3 Problems in the Application of the TAT (prior to the introduction of McClelland's System)

As a result of Murray's work, numerous research studies were undertaken to explain personality through the medium of fantasy. However, as little consistency or agreement was reached as to the relationship between the two, little credibility in the TAT resulted.

Holt sums it up as

"The TAT is not a test in the same sense that an intelligence scale is, and consequently the usual canons of reliability and validity cannot be applied without considerable qualification. The TAT affords a segment of human behaviour that may be analysed in a tremendous variety of ways and that may serve as the basis for inferences about a myriad of personal characteristics one can almost as well ask:

What is the reliability and validity of everyday behaviour?"

(Anderson and Anderson, 1951, P.221)

These two areas shall be briefly discussed.

3.3.1 Reliability

When dealing with the concept with reference to the TAT one measures the extent to which the stories reflect transient states of a person, e.g. moods, effects of recent events and to what extent the stories reflect the more permanent structural features of the personality.

Coleman (1947) reported that TAT stories of 41 children soon after they had seen a film, showed insignificant evidence of influence by its content. Tomkins (1949) reported that the test - retest reliability of the TAT when scored, according to Murray's system, for need-press showed correlations as high as ,8 or ,9 depending upon the lapse of time between administering the test and also depending upon the fluidity-rigidity of the particular subject concerned. (Anderson and Anderson, 1951)

The simpler and grosser the scoring systems used by raters, the easier it was to obtain significant inter-rater reliability correlations. Therefore the inter-rater reliability of complex and highly differentiated sets of categories was low e.g. Aaron (1949) while the inter-rater reliability for systems using relatively simple categories was acceptable (Garfield (1948) Mayman, Martin and Kutner (1947)). (Anderson and Anderson, 1951)

Murray, by training other raters intensively, obtained inter-rater reliability correlation coefficients consistently around ,9 for his highly differentiated need-pressure categories.

3.3.2 Validity

Holt (1951) has postulated that when studying the validity of the TAT one has to take into consideration the following factors

- 1) the ability and experience of the interpreter.
- 2) the system of scoring and interpretation he uses.
- 3) the particular kinds of statements, predictions or ratings the interpreter is called upon to make.

He stressed that the scorer is inseparable from the test when the validity of the TAT is in question.

The TAT has successfully made inferences about a wide variety of personality traits and abilities (Harrison (1940) and Henry (1947)), about facts of personal history (Combs (1946) and Markman (1943)).

(Murstain, 1963)

It may lead to valid predictions of leadership ability in officer candidates (Murray 1938) or of psycho-therapeutic ability in psychiatric candidates (Luborsky and Holt (unpublished study). In both these studies the predictive ratings correlated above ,6 with the criterion ratings.

Murstein has summed it up as follows:

"The questionable validity of many projective techniques (TAT) is in part the inevitable consequence of the low reliability of these measures whereas the true-false type tests usually involve only random error, reliability estimates of projective techniques must take into consideration the varying stimulus properties within a test, scoring differences, examiner effects, and the motivation of the subject, to mention but four additional sources of error." (Murstein, 1963, P.162 - 163)

3.4 McClelland's System

McClelland and his associates (Atkinson, Clark, Lowell (1953)) have devised a quantitative system of analysing the TAT protocols, with inter-rater reliability consistently as high as ,8 and ,9. The emphasis is to score only overt responses without any inferences beyond that which is written in the story.

3.4.1 The Theory of n Ach

McClelland discussed the effect of increased motive intensity on thought processes which in turn affect the TAT reponse. This is represented by 3 stages

- 1) wish fulfilment.
- 2) push toward reality.
- 3) defence.

He represents it diagrammatically as follows:

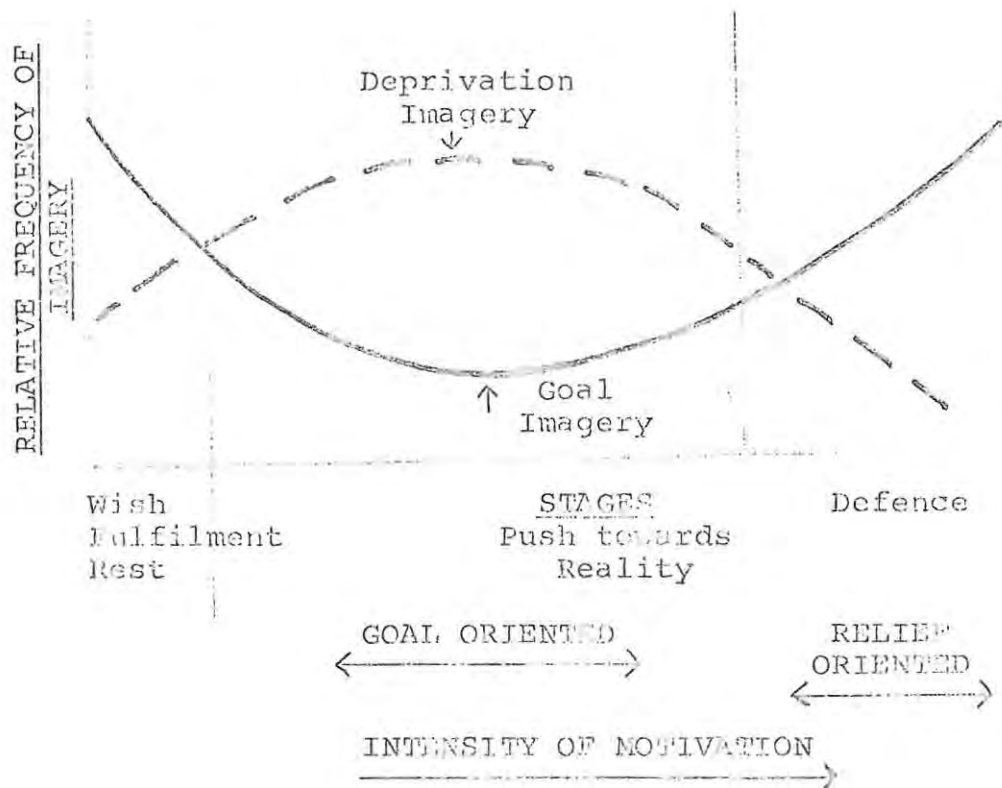


Figure 2

The Hypothetical Effect of Increased Motive Intensity on Thought Processes (from McClelland)

However, his explanation does not account for variations in the type of need, the context in which the need occurs and the kind of person involved. It therefore has little practical application to the TAT.

McClelland postulates that the appearance of n Ach in a TAT story (i.e. in fantasy) is a joint function of three variables:

- 1) cues in the everyday environment and the relatively autonomous thought processes of the individual.
- 2) specific experimentally introduced cues and
- 3) controlled cues in a particular picture.

In a typical testing situation, the pictorial and background cues eliciting the n Ach are controlled i.e. standard pictures given under neutral conditions. The varying strengths of the n Ach in the stories are then said to be the result of individual differences in motive strength. The responses to the pictures are said to be representative of how an individual behaves in similar real-life situations with regard to achievement striving.

The crucial point of McClelland's approach is that if achievement imagery is present in the thematic story, one may conclude that the subject is motivated to achieve rather than engage in wish-fulfilling fantasy. (On this point McClelland has been criticised by a number of psychologists and this shall be briefly discussed in (Section 5.1)

3.5 Evaluation of McClelland's Theory

McClelland found that the inter-rater reliability coefficient of this scoring system was high.

- a) 91% agreement for 2 experimenters working together for related achievement-categories.
- b) correlations of ,95 were obtained when scoring stories for n Ach on different occasions (experimenters working together).
- c) correlations of ,92 were obtained when experimenters scored the stories separately. (Kagan and Lesson, 1961)

The differences produced by the various methods of arousing the n Ach motive were generally large and significant increases in the number of people and the number of stories showing achievement related imagery when the experiences of the person became more achievement-oriented.

McClelland postulated that the number of achievement characteristics (e.g. stated need for achievement, anticipation of success or failure) by people under normal or non-ego involved conditions would indicate the strength of his concern for achievement.

3.5.1 Generality of n Ach

After the initial experiment on college graduates similar experiments were carried out on different populations.

- i) Veroff (1950) to ascertain the generality of n Ach measure tested boys and girls in High School after neutral and ego involvement situations. He also showed a significant over-all increase in mean n Ach scores from the neutral to the ego involvement condition in the boy population but there was no significant change for girls. (Kagan and Lessen, 1961)
- ii) McClelland tested Navaho high-school age males under neutral and ego-involving situations and found the scoring system applicable even in this different culture, as significant increases in n Ach score from a condition of low n Ach arousal to one of higher achievement arousal.

3.5.2 Reliability (Test-Retest)

Reliability of the n Ach, however, proved to be low (for test-retest) ,22 on 3 pictures given and regiven one week apart. However, the two measures did agree significantly (72,5%) in placing the subjects above or below the mean on the two occasions. The split-half reliability for a 6 - 8 picture test runs over ,70 (corrected for half the test).

McClelland postulated that test-retest reliabilities could not be obtained as a person had been 'spoiled' by having done the test once previously. However, he concluded that n Ach measure could be adequately used as a means of classifying individuals into high and low achievement groups and even on some occasions into high, middle and low n Ach groups.

Birney (1968) when he tested subjects with the same form of the test or alternate forms of the test obtained rather low correlations between 0,20 and 0,59.

According to McClelland motivational states such as n Ach are subject to arousal by fluctuating environmental conditions and so one should not expect consistent results. However, this indicates that a measurement of such a state cannot be stable.

3.5.3 Validity

The validity of McClelland's scoring system for n Ach has been questioned as a result of contradictions in the work of the original group (McClelland (1961) McClelland et al (1953)). Contradiction e.g. on the association of n Ach with learning (Birney 1956, Reitman 1960) and scholastic achievement (Krunboltz and Farquar (1957)). Many of the conclusions reached are based on single studies that have never been replicated.

n Ach has little or no relation with other attempts at measuring or evaluating the achievement motive such as the Edwards Personality Preference Schedule Achievement Score, French Insight Test, Self-Ratings, Clinician Ratings. However, according to a study done by De Charms et al (1955) described below (3.5.4) this is to be expected.

3.5.4 v Ach

De Charms reports that studies on the comparison between measurement of n Ach (by the TAT) and a person's self-rating on achievement drive do not correlate significantly. This according to McClelland is the result of the fact that motives are formed early in life and may thus be imperfectly verbalised or symbolically represented in the person's consciousness. McClelland

postulates that those who do verbalise their achievement desires may have developed these conscious needs later in life, possibly in response to adult pressure for becoming successful. McClelland calls this achievement need v Ach as these people have been taught to consciously value achievement.

The difference between v Ach and n Ach shall be discussed here as it is felt to be of relevance to the study when taking into consideration factors such as tribal systems, different methods of child-rearing etc. as well as 'competing' in a westernized - technological environment.

The assumptions underlying the performance of v Ach are:-

- a) People with high v Ach (a self-rating of high achievement drive) should be more responsive to authoritative opinions as to what constitutes 'correctness' or success.
- b) In general they should be more conformist than people with high n Ach (these tend to be individualistic and unwilling to be pressured into conformity).

- c) People who have high n Ach should tend to do better in tasks where they have to compete with an internalised standard of excellence, whereas people high in v Ach should not do significantly better in such situations.
- d) People with high v Ach should be more easily influenced by experts or authority.
- e) People with high v Ach should be more impressed by lack of success in a person whereas people with high n Ach might be more impressed by his successfulness.

Ash tested this and his findings support the hypothesis that for people with high v Ach 'unsuccessful' is an attribute which tends to markedly influence their impressions of a person whereas this is not the case with people with a high n Ach. This is in agreement with the general notion that people who describe themselves as ambitious and achievant may do so for defensive reasons - they have perhaps (according to De Charms) been under some authoritarian pressure from their parents to be ambitious and the resultant motive which has originated in external sources shows itself primarily as a fear of being unsuccessful or at least as a disregard for those who are unsuccessful - similar to Atkinson's model of moderate n Achievers who fear failure.

De Charms used two measures in his experiments

- i) n Ach from TAT stories (6).
- ii) v Ach by summing up a person's response to 9 questions (from a total of 82 questions), all but one of which came from Murray's original study. A rating scale was used for the extent of agreement with each of the 9 questions.

None of the individual v Ach items correlated significantly with the n Ach scores.

Correlations of the v Ach scores with answers to other items on the questionnaire - some of which came from Adorno et al's F Scale (measure of authoritarianism) indicated that there should be a correlation between v Ach and total F Scale. The questions which correlated strongly with v Ach scores showed that people with v Ach scores (significant at 5% level)

- a) Tend to feel 'no sane, normal, decent person could ever think of hurting a close friend or relative'
- b) Feel that young people should settle down and get over rebellious ideas.
- c) Feel that youth needs discipline and should work for family and country.
- d) Tend to prefer the completed and polished to the unfinished and imperfect.

None of these items (or any others in the questionnaire) correlated significantly with the n Ach score.

Brown, (1965) on a group of 30 subjects, using the total F Scale (Adorno's Authoritarian Scale) found an inverse correlation between n Ach and F Scale scores.

Morrison (1954) wanted to find out whether v Ach scorers performed better in certain situations and showed faster learning (as had been shown for n Ach scorers previously) (Atkinson, Clark, Lowell, McClelland). Using the top third and bottom third of n Ach and v Ach distributions, Morrison found that when doing scrambled word tasks, women with the highest n Ach did consistently better than those women who regarded themselves as very ambitious and those who did not.

Morrison also found that women who held offices tended to have significantly higher n Ach scores (biserial $\tau_{bn} = .28$ $p < .01$) whereas the relation for v Ach was insignificant. (McClelland, 1955)

Morrison's finding, that n Ach stories derived from stories written to pictures of career women would not predict performance in the present instant, led him to hypothesise that the picture scores have to be of men or women in non-achievement situations in order to be valid indicators of performance. However, in his first study of arousing different conditions of achievement motive,

McClelland used four work related pictures.

McClelland concludes from findings of a variety of studies that a person's stated achievement motivation or indirect measure of a person's achievement motivation tends to produce two different scores which signify different things as far as the person's behaviour is concerned.

A high need for achievement as measured indirectly (through projected material) tends to be associated with internalised standards of excellence which lead to superior performance in a variety of task situations.

A consciously high desire for achievement tends to be associated with conformity, a high valuation on expert authority and low valuation on unsuccessful people.

It is of interest to note that other psychologists have asked whether high n Ach in fantasy, not in fact, reflects a compensatory mechanism in persons whose achievement drives are frustrated. e.g. Birney (1968) Jordan and Phillips (1960).

3.5.5 Achievement Motivation and Economic Development

To study the relationship between level of n Ach within a given nation and its level of economic development (study enumerated in previous section - McClelland's theory) McClelland used myths,

folktales and educational readers (these are representative of a nation's collective concerns). McClelland used readers of 1925 and 1950 and derived scores for the amount of n Ach reflected in their content. (Sweden, Russia, Chile, Japan, Belgium, Germany, Mexico.) He obtained n Ach scores for these two periods and correlated them with two measures of economic development.

i) kilowat hours of electricity consumed per capita and

ii) international units - IU.

Only one correlation was significant which was a correlation of ,53 between n Ach for the year 1925 and subsequent economic development measured in kilowat hours of electricity consumed per capita.

However, McClelland's method of inferring level of n Ach from readers is not generally accepted, as it should correlate positively with direct measures of n Ach gathered from members of that society from which the readers were used. This does not seem to be the case for e.g. Brazilian readers yield very low n Ach scores but Brazilian students (who had used those readers) when tested scored higher on n Ach than any other German or Indian students - both of which come from countries whose readers yield much higher n Ach scores.

Friedman (1950) however in applying the n Ach scoring system cross-culturally found that the system could apply to folktales collected from 8 different American Indian cultures.

Friedman found a significant relationship (well beyond the 1% level even with only 8 cases) that the severity of independence training in childhood is highly correlated with the amount of achievement imagery in the folktales current in a culture.

McClelland, on the basis of the research studies done in various societies, postulated that there is great potential for n Ach scores based on phantasy as a measure of Achievement motivation of the individual, irrespective of their cultural background.

The achievement motive has been studied extensively cross-culturally. Price-Williams (1969) observed that the concept of Achievement motivation is one of the most culturally pursued ideas in cross-disciplinary research.

"Price-Williams points out, when the concept of achievement is taken outside the context of a competitive culture such as the United States, difficulties arise. The concept of Achievement Motivation is so deeply embedded in the Western way of life that investigators examining it in other cultures are bound to be influenced by preconceptions. Price-Williams has emphasized the importance of determining the relationship between achievement motivation and other socializing processes." (Baran, 1971, P.13)

CHAPTER 4

Studies of Cultural Groups using the TAT and the Urban-Rural Scale

4.1 Adaptation of the TAT

- 1) The first major study using TAT in another culture group was undertaken in 1942 when the United States Office of Indian Affairs and the Committee on Human Development of the University of Chicago started a research programme on Indian education.

The programme was designed to investigate and compare in a number of Indian communities

- a) the development of personality from birth to adulthood.
- b) the relation of the child-training patterns to the social structure.

1,000 children from 6 to 13 years old were tested from 11 Papago, Zuni, Zia, Hopi, Navaho and Sioux communities.

The TAT used, was a series of 12 pictures drawn by an Indian artist, and representing people and social situations presumed to be within the everyday experience of all Indian children (other tests were used as well).

The TAT in this study was found to give information on individual cases as well as information on the communal and role components of personality. The investigators instead of studying the individual's relationship to his general culture demands, investigated what the psychological characteristics were that differentiated the members of one tribe from another.

Other studies using the TAT in its original and adapted form were (no dates available): (Anderson and Anderson, 1951)

- 2) Study of Mexican Indian Groups initiated by the U. S. Office of Indian Affairs under John Collier and by the Mexican Institute of Indian Affairs.
- 3) Study of the Ojibwa, an American Indian group located at Wisconsin by William A. Caudill, of the department of Anthropology, University of Chicago.
- 4) A study of a South West African community by Boris Hund, of the department of Psychology, University of California.
- 5) A study of the Social Organisation, Personality Structure, and Acculturation of the Japanese - American by William A. Caudill and Sebuko Matsunaga Nishi, under the auspices of the University of Chicago.
- 6) Two studies of South Pacific Micronesian groups - one by Francis Mahoney, of the University of Chicago, and one by William A. Lessa, of the University of California, Los Angeles.

For these studies it was felt that the Harvard TAT series was inadequate as the pictures used were representative of a culture that was not sufficiently familiar to the subjects to enable ready identification with the content of the pictures.

These studies showed several criteria to be important in the selection of pictures for such studies:

- a) The test selected should contain a number of pictures that
 - i) represent a number of basic interpersonal relations e.g. mother-child, father-child, person alone, heterosexual scene, group scene, authority scene, a scene representing the usual physical environment, scenes of some characteristic cultural economic activity.
 - ii) One or two pictures represent an illogical arrangement of reality events.
 - iii) One or two pictures represent unreal or bizarre events.
- b) Also additional pictures should be selected to represent special scenes characteristic of the culture or of the particular problem under study: e.g. women's huts in certain groups, caste groups in pictures for India etc..
- c) Such pictures as are selected should be sufficiently stimulating in content to intrigue the subject and demand that he propose some sort of solution to it, but they should be sufficiently ambiguous and flexible to
 - i) permit a full range of emotions that may be attributed to the picture.
 - ii) permit a full range of possible solutions to the emotional problem presented.

- d) Such scenes as are selected should be pictorially appropriate to the emotional problem presented.

These studies, in addition to the data they reveal on the societies under study, have several important findings for the use of the TAT.

From them the following conclusions seem justified

- i) The TAT is of considerable utility in the study of persons in cultures other than our own, both in analysis of the individuals and in the analysis of basic personality characteristics of the culture.
- ii) The adoption of the TAT in the manner described is a useful procedure.
- iii) Adaptation of the TAT to conform better to cultural symbols of the society under study has considerable advantage in heightening the identification of the subject with the story-telling task and in securing useful data. It is probably not essential to have the person in the picture clothed to look exactly like the people in that society or to have the identical physical type. Rather, if the scenes are of fairly basic human interpersonal situations and consist of symbols of dress and physical surroundings that are unrecognisable by the subject or grossly different from his own, then he will be able to identify with them and tell revealing stories.

4.2 TAT's in South Africa for Blacks

In South Africa at present, there are approximately eight series of TATs which have been devised for use among non-literate Blacks, though these are also used for literate Blacks by substituting various pictures (the exact number of TATs for Blacks cannot be accurately enumerated as various organisations have developed and presently use their own TATs within their own organisations).

The TATs which are currently known in South Africa (for the testing of Blacks) are those devised by Henry (1947) Lessa (1954) Gladwin and Sarson (1953) Lee (1953) Sherwood (1957) (for use among Swazi-speaking people) de Ridder (1961) for urban Africans, Baran (1971) (alternate tests for urban and rural blacks) and the Human Sciences Research Council's TATZ.

Baran (1971) has criticised the first six TATS listed as suffering from various problems:

- i) Insufficient attention was paid to methodological issues.
- ii) Little information was supplied as to the development of the tests so that the reader has no knowledge as to what rationale governed the procedure.
- iii) The pictures gave the impression of being the result of the investigator's stereotype regarding the foreign group (as no statements were given regarding the rationale this assumption could not be challenged.)

iv) The concept of 'ambiguity' seems to have been taken too liberally by some of the investigators which resulted in such vagueness that one could not identify the content of the pictures. Although in certain incidents, a test constructor might wish to evoke responses to vague or uncertain experiences and so used vaguely defined pictures, in some instances vagueness characterised the whole test and so Baran attributed the vagueness as an oversimple view of the rationale of the TAT.

Lee (1953) did not use stereotypes of western culture in the scenes of his TAT, as he did not adapt Murray's TAT, but used material from the collection of fantasies of a group of Bantu inmates in a mental hospital. As a result he had other types of bias built-in to his test. At least five of his themes appear to be relevant only to the real life situation of the Bantu inmates.

A further criticism is that no norms are supplied and without the rationale of each card, future test users cannot be certain of the stimulus pull of the pictures.

Baran criticises De Ridder's TAT for a number of reasons:

- i) Despite comments regarding the validity of the test, no validity figures were given.
- ii) The pictures have striking examples of built-in stereotypes which not surprisingly were confirmed in the responses evoked.

- iii) No quantitative data is given as to how the TAT predictions correlated significantly with the objective criteria of accident liability and disciplinary record (in the selection of bus drivers).
- iv) Information regarding the procedure for interpretation of the pictures is minimal.
- v) The interpretations are given in global generalisations.
- vi) The design of the pictures in the test seemed to supply the plots rather than the plots be supplied by the subjects i.e. the design of some pictures contained technical faults (which showed a lack of knowledge of cultural factors) which almost guaranteed the emergence of the story induced.
- vii) De Ridder states that the level of urbanisation reached by any individual African will depend upon his personality factors rather than simply his length of stay in an urban area, and he emphasises that one cannot demarcate accurately when a tribal people becomes an urban people. However, the criteria he used to differentiate between urban and rural Black are; people who are members of a Bantu Group(s), who are resident in the urban areas of Johannesburg, who have adopted European dress, who are literate and speak English or Afrikaans, are over 18 years of age and who have legal authority to seek for work in the urban areas of Johannesburg. It is evident that he only looked at the 'manifestations' of urbanization.

Baran based her TAT on the procedure of Sherwood (1957) whose instrument was governed by basic principles of depth psychology rather than preconceptions concerning the group investigated.

She advocates the use of a novel TAT as, "Almost invariably, one finds that even when a test is adapted in great detail, the basic form is retained. It is argued here that such cultural translations may render new tests literally comparable but not necessarily operationally." (Baran, 1971, P.9)

After extensive pilot studies and research into various topics and the African's attitudes to them, S. Baran found that certain topics were of great relevance to the Black population, e.g.

- a) relation to authority and work situation
- b) relationship to parents
- c) relation to the group
- d) death or violence

It was felt that these themes should be used in a new TAT to be devised in this study as the population on which S. Baran validated her TAT is similar to the one on which this test was to be validated.

However, according to Arnold (whose scoring system was adopted in this study) the content of the picture is not important.

The fact that pictures identifying certain themes relevant to the African way of life were used (i.e. being concerned with the stimulus content of the TAT) may seem like a contradiction but it was done for

the following reason. Although validation studies have been done on Arnold's scoring system (see section 5.3) it does not seem likely (from the literature obtainable) that Black subjects have been used. It seemed therefore, preferable to use pictures which would facilitate the writing of stories rather than produce pictures with which the African is not familiar and so make it difficult for him to write a story. The reason for using relevant themes was therefore a practical one and should in no way have affected the scores obtained by the subjects. Baran's findings were as follows (as relevant to this study) :

- i) Urban groups obtained consistently higher scores on measures of ego identity and n Ach and lower scores on measures of field dependence.
- ii) There was little evidence of McClelland-type achievement themes. Baran suggested that the signs of striving behaviour could be indicative of the desire to actively co-operate with the social structure.
- iii) It was observed that n Ach was limited to
 - a) planning tendencies and
 - b) a 'future component' in the Black's thinking.

Baran's study drew attention to the need to view n Ach in the context of the work environment in general and authority figures in particular.

Baran's study thus highlighted

"The importance of distinguishing between the striving to assimilate the achievement ethos and true personal ambition among acculturated groups." (Baran 1971, P.126)

4.3 Urban Rural Scale

As mentioned previously (section 1.3) there is much speculation as to whether 'achievement' is a quality which is excluded from the African personality. It has been postulated by various Researchers e.g. Bieusheuvel (1975) that with increased urbanization the African should slowly adopt westernized ways of life. Even though Africans might have lived for some period of time in close contact with an urbanized society, this does not necessarily imply that he has the personal ambition characteristics of a European way of life. To quote Bieusheuvel.

"To adopt to his new regiment (economic life) a different type of motivation is required, since the individual must work not because of communal demands and expectations but because of individual needs and goals. A majority of African workers in transitional societies are still in an elementary stage in the evolution of work attitudes. During this period, ties with their traditional way of life have to be broken, and more importantly, changes have to occur in individual needs and in the use of outlets to satisfy these needs, which amount to fundamental changes in the individual's personality." (Baran, 1975, P.269). It therefore seems likely that a high Achievement score should be correlated with a high degree of acculturation.

This was confirmed by Baran who found that acculturated Zulus scored higher than unacculturated Zulus in terms of need for achievement. This was significant beyond the 0,0001 level.

The questionnaire by Grant, the Urban - rural scale was devised specifically for South Africa.

The aim of this test (as stated by Grant) is to briefly and easily identify the level of individual urbanization.

The criteria adopted as indicators of urbanization were classified into four categories :

- i) demographic aspects
- ii) cultural or psycho-sociological aspects
- iii) economic aspects and
- iv) sociological aspects

Grant defined "urban" as all places in South Africa with a total population (Whites and Blacks) of 100,000 or more. Cities and African townships meeting this requirement were : Johannesburg, Pretoria, Germiston, Springs, Benoni, the Vereeniging/Vanderbijlpark Complex, Cape Town, Port Elizabeth, East London, Durban, Pietermaritzburg and Bloemfontein. All other places was regarded as rural.

Some of the items in the questionnaire devised by Grant were derived from popular definitions of urbanization :

a) e.g. place of birth has been seen as an obvious indicator of urbanization. When looking at levels of urbanization within South Africa the place of birth is particularly relevant. As a result of influx control and certain restrictions placed on a Black's mobility, it is likely that a man born in a rural area will be confined largely to that area.

b) the length of exposure of the individual to an urban environment has also been taken into consideration by various investigators. Balandier (1956) states that one should look at the length of residence of the individual in an urban environment, whereas Wilson (1940) adopts the point of view that the proportion of time spent in an urban area should be studied. McCulloch postulates that a continuous period of five years as resident in an urban area should be a satisfactory criterion, whereas Helman (1956) and Glass (1964) feel that a period of ten years (or more) is a satisfactory criterion. (Grant, 1969)

Grant modified Mitchell's (1956) index of stabilization as an indicator of length of exposure. Mitchell defined his index of stabilization as the number of years spent in a town since the individual turned fifteen,

divided by the number of years hired since the individual turned fifteen, multiplied by one hundred. This index was based on the assumption that at fifteen an individual has to decide whether to go to town or not. Grant modified this index of stabilization by re-defining the numerator as the number of years the individual worked after the age of fifteen.

Another indicator of urbanization, postulated by the above named researchers (Balandier, McCulloch, Helman and Glass) (1956) was the familial links of the individual in town. Grant assessed the familial links of the individual by asking the residence of the parents. The residence of the mother was regarded as the most pertinent, so overcoming the situation of the father as a migrant labourer.

The 'pull' of the rural area was assessed by asking whether individuals owned lands in a rural area (and also their parents due to the increasing difficulty in obtaining land).

Another area to be tapped when studying urbanization is the voluntary participation in modernistic groups for e.g. religious associations, sports and social clubs.

Other factors Grant looked at were marital status, possession of driver's licence, ability to ride a bicycle, preference for certain types of alcohol, friendship with Europeans, attitudes and material possessions (i.e. symbols of status as for e.g. motor vehicle, appliances).

Although not many researchers have adopted looking at attitudes as a measure of acculturation, Glass (1964) (after studying the internal consistency of attitude items) listed the individuals evaluations of retirement plans and aspirations as fruitful areas for further study in urbanization. Grant postulated that the inability to conceive of the future is a rural characteristic.

Grant assessed the reliability of the U-R scale by means of an item analysis $r = ,89$. Although 52 items were included in the scale initially, only 17 yielding that reliability were retained.

The standard error of measurement of the U-R scale at the 95% level of confidence for the sample assessed was 3,2. Grant thus classified individuals scoring 5 or less as rural; 12 or more as urban and between 6 and 11 as transitional.

The mean level of urbanization was 7,12 with a standard deviation of 4,88.

As there was no empirical criterion Grant did not assess the empirical validity of the U-R scale.

However, "It has been shown that the U-R scale has intrinsic content validity, that the interitem correlations are high and that as the scale has an acceptably high reliability, it is likely to be stable over a period of time." (Grant, 1969, P.19)

The factorial validity of the U-R scale was also investigated. Grant's study showed that certain demographic, economic and psycho-sociological aspects are part of the process of urbanization with detribalization as well as cultural and structural ties playing a major role in the process of urbanization.

The factor, which was of special interest in this study was 'Resistance to Change'. According to Grant, this factor describes people who, although they have tried and worked in an urban area for a long time, have not become assimilated into the urban lifestyle. (They refuse to do so). Grant compared this factor of Resistance to Change as being comparable to what Mayer terms 'encapsulation'.

"The low level of education of siblings and parents and the adherence to traditional forms of religion suggests that no decisive cultural or structural

shift has taken place although the length of exposure has been optimal." (Grant, 1969, P.32)

In the following chapter a novel way of measuring motivation is discussed, the Arnold System. Positive motivation, according to Arnold, is the adoption of the ethical principles of traditional Western culture. (which leads to the achievement of worthy goals, through the use of altruistic, constructive means).

If one could identify the Black, who lives an urban way of life, but yet is resisting the changes in his environment, and so has a negative outlook on life in general, one might in so doing also identify the Black who has not accepted or internalized the Western beliefs and principles, and as such could not function effectively in a highly Westernized and technologized environment, such as the mining industry. It is thus possible that the person high in resistance to change is low in positive (or constructive) motivation. This is an interesting concept, which the experimenter felt was worthy of further investigation.

"Dissatisfaction with present employment, job instability and a negative view of the social environment all point to the anomie to which Mitchell refers." (Grant, 1969, P.32)

The TAT as a Measure of Motivation according to the System devised by M. Arnold

5.1 Criticism of McClelland's System

Arnold devised her own method of TAT interpretation for motivation (as a means of predicting high and low achievers) as she felt that the system devised by McClelland and his associates was fraught with methodological errors.

She criticises McClelland's system for the following reasons.

Research in achievement motivation by McClelland et al (1953) is extremely confusing. Studies carried out under similar conditions by different examiners did not yield the same results (in fact results were conflicting) (studies mentioned previously e.g. McClelland et al (1953) Lazarus et al (1961) French (1955)).

The scores on the n Ach seem to indicate more a reflection of a person's status in society than achievement motivation (Veroff (1961)) (high status men could be more articulate or more pre-occupied with their work than low status men or women). Arnold feels that the lack of predictive validity of McClelland's n Ach could be a result of his scoring system. After studying McClelland's system she reaches the same conclusion as Lazarus (1961) that the n Ach score indicates a pre-occupation with the problem of success or failure rather than enduring motivation to achieve excellence. For example even expectations of failure are scored under n Ach or withdrawal on meeting obstacles. According to Arnold's system such pre-occupations with success or failure along with lack of constructive action were found in records of low achievers. As Lazarus postulated, Arnold also adopts the point of view that these themes of pre-occupation with achievement do not indicate genuine striving.

The motivation of the individual is in fact shown by the way the story is told and its outcome rather than its theme. As a result, a number of studies (discussed under the section Criticism of McClelland's Theory) showed that the drives and behaviours thought to be projected upon the story characters were not reliable indicators that lead to action in everyday life

She points out that the longer the story the higher the score can be.

Arnold also criticised McClelland's et al's (1953) postulate that 'anxiety' modifies the expression of needs which results in different n Ach scores under different conditions. As a result one can never assume that the TAT themes "accompany behaviour or are an alternative to behaviour; whether themes missing in the TAT indicate lack of the corresponding need, its blocking by ego-defenses, or its being acted out in reality. It almost seems as if we had to agree with Lazarus, who insists that we will never be able to predict behaviour from the TAT alone." (Arnold, 1962, P.12)

Arnold postulates that neither drives nor ego processes are revealed in the stories of the individuals but motivating tendencies which shape the story action and are expressed in story outcome.

5.2 Arnold's Scoring System

Arnold's scoring method is one of content analysis. Each story is seen as an imaginative exploration of various problems and their possible solutions. Each story is reduced to an import which leaves out incidental details but keeps the central train of thought. Each story makes a point or expresses a conviction. It describes an action which may lead to success or failure, shows co-operation or hostility, or an attempt (or no attempt) to cope with adversity.

The story may be about hopes or emotions with no constructive action. The outcome is basically an expression of the person's expectations and convictions. What the person is trying to say is the "moral" of the story though it does not necessarily imply high ethical principles. An example shall be given here to highlight this.

A story about a bank robber being caught and punished says that there are actions that are severely punished and therefore not for the story teller, whereas the man who tells the story of a man robbing a bank and living in affluence afterwards says that one can get away with dishonesty if one is clever enough. The first story reveals positive motivation, whereas the second one negative motives. Arnold has found after extensive studies that positive motivation is found among high achieving elementary, secondary and college students, effective teachers, competent executives etc.. Negative motivation is found in low achievers, ineffective teachers etc..

The stories are all scrutinised and imports written up before the scoring begins.

"The story imports taken in sequence, give us a connected statement of the story teller's principle of action, his motivational pattern. Obviously, this pattern should make it possible for us to gauge how he would react to a situation."
(Arnold, 1962, P.51)

An important factor, when considering the Arnold System is that it was developed from research on normal people and then used in a clinical setting. Arnold feels that it can be a valuable aid in the selection of students for higher institutions of learning or the selection of candidates for responsible positions. The Arnold's system of Story Sequence Analysis can thus be useful in areas where knowledge of prospective levels of performance would be needed.

In the handbook of Clinical Psychology, Wolman (1965) states:

"An invigorating wave of fresh air has come into thematic analysis with the recent publication of the book Story Sequence Analysis (Arnold 1962). Not only are there some appealing novelties in Arnold's approach, but she and her doctoral students have reported some strikingly successful scholastic and vocational predictions and discriminations. Rarely have such criterion groups as achieving and non-achieving high school college students, successful and unsuccessful teachers, federal administrators and navy enlisted men, been distinguished so sharply as they are reported to be by these methods." (Wolman, 1965, P.579)

Arnold's scoring system depends on the following:

- a) A theory of imagination.
- b) A theory of motivation.

Incorporated in these is also a theory of emotion, action and personality.

These are briefly outlined below.

5.2.1 A Theory of Imagination

Any action has its origin in something that is known (sense impression or thought or memory).

One then recalls similar situations and their effects on us (recall is spontaneous and deliberate).

One then appraises the consequences of the action as good or bad. (Here and now) one also imagines alternative actions and consequences and compares resulting success or failure.

When we have judged one of the alternatives - all the others are excluded from consideration.

Cognitive experience always leads to an appraisal of what is experienced and such an appraisal always arouses a tendency to some activity.

Cognitive functions, that are estimative functions (sensation, recognition, recall and imagination, understanding and reasoning) - are followed by automatic understanding and a reflective value judgement.

The automatic appraisal starts as emotional tendency toward what is evaluated as good and away from what is evaluated as bad. One gets the impression that this is similar to McClelland's discrepancy theory of negative and positive reinforcement - congruence theory.

5.2.2. Differences between Dreams and Waking Experience

During waking we usually can recall past happening and so can identify what we encounter while in dreams this is usually not the case.

"During waking, every sense impression brings to mind similar situations and their past effects and so we are able to identify the source of stimulation."
(Arnold, 1962, P.20)

We recall (or actually relive) the satisfaction (pleasure) or annoyance (and pain) we have experienced from certain things and actions and so are able to plan effective action. As a result one not only knows what kind of thing this is but also what it has done to us in the past and so we can plan effective action.

While any cognitive function gives us knowledge (in the sense of experience), it is only when memory recall works together with imagination that one has a knowledge of reality.

Dream reasoning is often fantastic, just as dream actions are often bizarre as one cannot check dream judgement and actions against what we know to be true, possible or expedient.

5.2.3 Directing the Imaginative Process

The imaginative process must be directed in some way (during waking hours and sleep).

The function of "wish fulfilment" by Freud is largely accepted but imagination more often helps one cope with reality.

There are also imaginative processes which run their appointed course without direction e.g. in writing a story the impulse (i.e. picture) supplies the impulse to start imagining; it does not direct the imaginative process.

Instead of working out the plot step by logical step when telling a story, the story "occurs" to us.

Imagination is a cognitive function and so can only form images/reproduce them - it cannot choose them and something else must guide the imagination and sketch the outlines and only something we like can account for pleasure and something we dislike can produce an impulse to imagine what could account for the dislike.

In telling stories one reveals one's attitudes and convictions.

The picture merely reminds one of various situations which are possible story themes. Which one of these possibilities is chosen depends on the storyteller's dominant attitudes and emotions which now direct the story action.

Whenever these judgements (resulting from habitual attitudes to action impulses) have become habitual, such attitudes are revived automatically every time a similar situation is encountered.

"When such an attitude is activated by a TAT picture and the attitude (not the picture) will initiate a train of images that portray situations and actions to justify the emotion. It is the attitude that guides the plot and dictates the outcome, and the attitude that can be inferred from the story as soon as plot and outcome are combined in the import." (Arnold, 1962, P.23)

5.2.4 The Role of Imagination in Personality

In telling a story a normal person, knowing his characters are imaginary, can make them act in any way he pleases, though he himself would never act this way. Still as he is telling the story he will not be able to keep saying what he thinks of their actions e.g. he may indicate his opinion of the characters by the use of revealing adjectives.

Only in a very obvious autobiographical story can we assume that it contains actual personal memories and emotions.

When a strictly biographical story refers to the storyteller's past emotions and actions, it is not safe to infer from it his current attitudes, unless the general quality of the story and outcomes justify it.

The stories a man tells, like dreams, show problems that occupy him, solutions he is working out, convictions he has achieved but also these could have a more important function.

People somehow on sleeping on a problem often find alternatives they did not know existed, the next day. They may not know but they have tried to find a solution in their dreams.

In a series of twenty stories when the complete TAT is given, there is an 'imaginative progression' that almost amounts to a monologue about the most relevant problems in the storyteller's mind. If he has no special problems, he will reveal his attitudes to life in various situations.

5.2.5 Imagination, Creativity and the Unconscious

All our functions work unconsciously. We are not aware of the way they work but only the end product.

All we can do consciously is to direct our functions e.g. we can set ourselves to tell a story, to find a new way of doing or explaining things or we can look for the solution of a mathematical/scientific problem. If we have enough information and have a feeling for what is required, the re-entered facts will fall into a new pattern and we come up with a story, a theory, a new proof.

Arnold and Gasson (1954) suggested that what is called the "unconscious" is really the functioning of the imagination when it is freed from deliberate control (Arnold, 1962, P.4)

When imagination is guided by deliberate intention and also by some emotional preoccupation, it is more likely that it will lead to unintentional expression e.g. a slip of the tongue (wish fulfillment).

Creativity is the working of the imagination when it produces something new and original that often may be of great importance (it is not the product of the unconscious). It is a fortunate rearrangement of images that are preserved in memory and may occur in dreams as well as in waking life.

Whether we call it creativity or creative imagination, the creative process does not work in isolation. A man's initial direction sets it in motion, and his attitudes and emotions guide it.

By themselves, "none of the personality variables usually derived from tests can be used for the prediction of achievement either in school/in life - in testing for various characteristics it is necessary to abstract from a man's activities and break up the natural integration. The integrated pattern is lost for the sake of obtaining scores for the partial factors we believe are contained in it.

Would it not be preferable to try for a sample of a man's motives? These we know, move him to act in distinctive ways. We may then find they reveal creativity, intelligence, aggression, conformity and any number of other qualities. But, in tapping his motives, we have found the way in which they are combined for action ... Thus we will be able, at last, to determine what a person's chances are for achieving excellence." (Arnold, 1962, p.30)

5.2.6 A Theory of Motivation
(Motives, Values and Attitudes)

Arnold points out that it is often said in the literature that a motive is "aroused" by certain stimuli (e.g. n Ach) for example Atkinson suggests that each picture arouses "cognitive expectancies" which can be measured, and represents fairly standard conditions for the measurement of any human motive". (Atkinson, 1964, P.615) But, Arnold says the expectancies aroused by the picture refer only to the topic or design of the picture, not the story. Even a stereotyped picture can initiate stories with totally different plots and outcomes. Though the picture is a cue, it is not a standardised cue as it will produce very different stories indicative of different, even opposed attitudes.

Arnold further states that a motive is not a drive or a need as it (the need or drive) does not necessarily result in action. If a motive is to be such, it must motivate and lead to action. She defines a motive as a want that leads to action. When something is recognised as good or bad for that person, he will want it or will want to avoid it and so will

take appropriate action as soon as possible.

"A motive is active from the moment a man has decided on the appropriate action until his goal is accomplished even though that action may not be continuous. For this reason, a motive need not be "aroused" by a picture before it becomes active." (Arnold, 1962, P.32)

Arnold further states that a motive is similar to an emotion as it will influence action until that goal has been reached after which it will disappear and will not be aroused again in that particular form.

As motives remain active until a goal is reached it is possible to discover how they influence a man's thinking and his actions. A motive, similar to the imaginative process (mentioned previously), also stems from an appraisal of what is good or bad at present, and includes a tendency toward a particular action.

The difference between a motive and an emotion lies in the fact that a motive always leads to action, whereas an emotion does not necessarily do this. Before an emotion can become a motive, there must be an additional reflective evaluation (above the immediate, intuitive, almost automatic behaviour shown in emotion) that an action is good or should be avoided i.e. a decision has to be made as to what action is required and what means are to be used to reach the desired goal. There will always be many motives that influence an individual's action at any particular time.

"Stories betray a man's attitudes (both emotional and intellectual) and the way in which they influence him to act. They reveal his motives and since motives are blue-prints for action, it is possible to infer from them what he will do in real life. The problem he sets himself in the stories he tells, he will resolve in real life according to the way in which he evaluates the story solution."
(Arnold, 1962) P.35)

Arnold then states that her definition of a motive (something appraised as good for a particular action) suggests a connection with value which is a conception explicit or implicit, and distinctive of an individual or groups of individuals which is desirable to the group and "influences the selection from available modes, means and ends of action". (Kluckhohn (1951) in Arnold, 1962, P.395)

The action of a person, however, can be influenced by many factors over and above value judgement. A value is not necessarily a motive as some values are recognised as valuable (or desirable) but do not lead to action. Often a value indicates not what a man wants for himself but more what a man academically thinks is good.

Arnold points out that generally values have been seen as being identical to motives but that most studies done in this area have not shown value-type of questionnaires (tapping value judgements) to be useful for any prediction of action.

Arnold feels that the only difference between a value judgement (i.e. choice of action e.g. in answer to a question what is the "ideal" job for you) and the choice implied in a motive is that the decision made implies action at some future time rather than immediate action. A motive may be active even though there is no immediate action, and a decision made on the basis of an imagined situation does reveal the decisions to be made in reality.

Arnold postulates that values are closer to interests than to motives as both these depend on judgement that something is good and desirable. Motives include both values and interests. A value will become a motive when one decides to possess it. Interests become motives when one decides to get to know what one has judged as good to know.

Values, interests and motives require a deliberate, reflective judgement, whereas emotions follow automatically upon an immediate, almost automatic estimate.

In a study Barton (1960) found that stories which tell actions with which one agrees or disagrees do not guarantee that the story action of which one approves, will be chosen. Arnold found, that giving pictures with four alternatives (2 positive, 2 negative) both low and high achievers chose consistently positive outcomes but when asked to tell stories the low achievers told negative stories. She postulates that although people can identify which outcomes are more positive than others they do not tell stories describing such actions when writing stories themselves. She thus concludes

that values will not enable one to make predictions about someone's actions or behaviour whether one studies them by means of stories or by means of statements to be endorsed by the individual. The prediction of success or failure necessitates information (knowledge) of a man's motives (i.e. those values he has set himself to attain and the way he proposes to meet his objectives).

Arnold then further differentiates between evaluative attitudes and motivating attitudes. Evaluative attitudes are attitudes that may be habitually held but do not influence action e.g. verbal attitudes. A motivating attitude is an habitual readiness for action (or an habitual tendency to engage in overt action).

Arnold and Gasson (1954) have defined personality as the patterned totality of human powers, activities and habits, uniquely organised by the person in the active pursuit of his self-ideal and revealed in his behaviour. This is based upon the fact that emotion influences behaviour, but one's deliberate intention initiates and guides it. This intention is the want that leads to action. Motives are ordered in a hierarchy according to what is, by and large, the most important goal.

"The master goal" (incorporated in beloved people, important causes, deathless aspirations) becomes our master motive, the self-ideal that shapes us as we strive towards it."

(Arnold, 1962) P.44)

One can note here a great amount of similarity to Maslow's hierarchy of needs theory (especially the self-actualisation need).

5.3 Validity Studies

Although a number of validity studies on the Arnold scoring system have been carried out, no reference to these works can be found in any psychological journal or publication lists (with the exception of C.J. Coertze 1974). As the studies were carried out by Arnold's students at Loyola University it can only be assumed that these have not been submitted for publication. Wolman (1965) expressed concern that such a potentially successful method for interpreting TAT protocols was not more widely used. However, it is understandable that if the only allusions to the Arnold system are to be found in "Story Sequence Analysis" few researchers would be aware of its existence.

5.3.1 Successful and unsuccessful federal executives (Steggert, 1961)

Steggert (1961) carried out an extensive testing programme at Chicago University, where an Executive Development Programme for Federal Executives was being offered.

Steggert hypothesized that those executives who participated (voluntarily) in the programme would tend to be high achievers. He used the TAT Sequence Analysis for a sample of 10 participants and 10 non-participants (as closely matched as possible on factors such as age, education, earnings) -- sample 1. On another sample -- sample 2, 15 participants and 15 non-participants, he used the Nelson's Survey of Management Perception (SMP) which is supposedly a projective test depicting pictures of problem situations and issues, typical of everyday management experiences.

The stories told both to the normal TAT pictures (N = 10 participants and 10 non-participants) and the SMP (N = 15 participants and 15 non-participants)

were reduced to imports and scored according to the sequence analysis method.

In both tests, the two groups of participants were equated for civil service grade, years in the Federal Service, type of position held, as well as education.

However, the two samples were not equal in that most of the executives who did the SMP were at lower grade levels in the Federal Service and had fewer years service. Fewer had graduate degrees.

As the men in sample 1. were in senior executive positions and wary of any psychological test which could pry into private matters, only innocuous pictures from the TAT were chosen. "That the stories to these pictures gave as good results as the pictures used in other studies is proof, if proof is needed, that any sequence of stories about general human themes will reveal valid motivational themes." (Arnold, 1962, P.197)

Nineteen out of the twenty executives in sample 1. obtained positive scores. However, those executives who had enrolled in the Executive Development Programme obtained highly positive scores whereas the non-participants all obtained lower scores (though positive ones) than the lowest of the programme participants.

Steggart postulates that since all the men were in executive positions, one would expect them to reveal positive motivation as earlier studies showed that positive motivating attitudes indicate high achievement.

The ten participants, who had been rated in a special assessment and had higher scores on the Language Ability Scale of the American Council on Education Psychological Examination (ACE) and on the Mandell's Administrative Judgement Test, (these two tests had

been given prior the writing of TAT stories to establish the superiority of participants in the programme), also turned out to have a more positive attitude than the best of the lower-rated subjects.

The imports derived from the SMP stories were formulated in the same way as those derived from TAT stories. However, the average of both groups revealed positive motivation. Steggert accounts for this by pointing out that the SMP pictures are limited to job situations and the various attitudes to work, achievement or success were the only motives expressed, whereas the TAT imports range over all 4 scoring categories. It is possible that a man may have positive attitudes to work and achievement and negative attitudes to everything else. (according to Arnold).

If a set of pictures is narrowly confined to one theme, that of work and achievement, one taps a man's attitude in this one area alone. However, his attitudes toward others, toward right and wrong, his habitual reaction to adversity of all kinds will influence even his work-a-day life. These attitudes could have been the cause which prevented them from taking advantage of unusual opportunities as, for instance, the Executive Development Programme.

Steggert's study is certainly not conclusive. The samples used were very small. No logical reason is given as to why sample 1 used the TAT pictures and sample 2 the SMP pictures. There seemed to be very little differentiation scores between the two groups within each sample.

No adequate criteria for successful executives were enumerated with the exception of the Language Ability Scale and the Mandell's Administrative Judgement Test.

The actual course content of the Executive Development course is not taken into consideration. The participation in the course itself could have produced the better results on the abovenamed tests.

The experimental design of Steggert's study is not clearly demarcated and one is not clear as to why the experimenter used two samples rather than one larger sample (incorporating the enrolled and non-participants of the course) who could have then used a single test i.e. either the TAT pictures or the SMP pictures.

5.3.2 Successful and unsuccessful teachers

(Burkard, 1958)

Burkard (1958) attempted to discriminate between effective and ineffective teachers on the basis of the sequence analysis. For her criterion of teacher effectiveness Burkard (1958) accepted the ratings of teachers by pupils, which has been shown to be both consistent and reliable ((Amatora (1954), Beecher (1949) Bush (1954) Tiedeman (1942)). Burkard used the Diagnostic Teacher Rating Scale Form A, developed by Amatora (1950) as the rating instrument for teacher efficiency. (Arnold, 1962)

The concept of motivation was seen as being decisive for success in teaching and this motivation was measured by means of the TAT Sequence Analysis.

300 teachers were drawn from 14 schools staffed by Catholic sisters. To avoid bias, only those schools were chosen where the teaching staff decided to participate as a group.

To assess whether more intelligent teachers were rated more favourably by their pupils, the Otis Intelligence Test was given to the 300 teachers.

The rating scale was given to each class in its own classroom. The class was assured that no one would know how they had answered the rating scale.

In comparing the sequence analysis scores and the ratings several problems had to be solved. Both intelligence and age seemed to be a factor in the ratings. Differences between good and poor teachers had to be sufficiently significant to show up easily.

Burkard decided to select two samples of 50 teachers each, who were paired on the basis of intelligence test scores and age. One sample was selected from the highest third of all teachers rated high by their pupils and the other sample to consist of teachers in the lowest third of the group rated low by their pupils.

From the analysis of the story imports of the two groups, it was found that a certain constructive attitude was running through the sequence analyses of the high-rated group, whereas the low-rated group had attitudes that could be clearly distinguished from their constructive counterparts.

5.3.3 Successful and unsuccessful navy enlisted personnel (Petrauskas 1958)

Petrauskas (1958) investigated the motivational characteristics that distinguished enlisted navy men who had at some time been confined to the brig, from those who had never been so disciplined. Two groups of enlisted men were used. Group I, the experimental group, was made up of 30 men who were awaiting court martial for violations of the Military Code of Justice. All except two were confined for being away without leave. These men had a history of more or less serious delinquency before enlistment. Group II, the control group, was made up of 30 enlisted men attending navy service schools.

None had a history of delinquency before enlistment, and none had been disciplined in any way since joining the navy.

The men in the groups were paired on the basis of age, General Classification Test Score (intelligence test used in the army), place of residence (whether city or country), and length of service.

Petrauskas used a shortened version of the TAT consisting of those cards which facilitated story-telling (i.e. the most dramatic cards). To ensure that there would always be a clear majority of either positive or negative scores, Petrauskas used 13 cards.

After the test, the men in Group I were interviewed to verify the reason for confinement in the brig, and to obtain social histories before enlistment.

After completion of test records, 10 pairs were selected at random to establish the scoring criteria. Petrauskas, felt that a more lenient scoring criteria should be adopted as it requires better motivation and a more constructive attitude to reach a high level of achievement than merely to conform sufficiently to keep out of trouble.

The categories he used were:-

- 1) attitude toward self and others
- 2) attitude toward work and success
- 3) attitude toward problems
- 4) attitude toward external forces
- 5) attitude toward duties and obligations.

After working out the sequence analysis, each story in the sequence was scored according to the above-named categories as either plus or minus. All marks on the ten pairs used to establish the scoring criteria were removed and these were then mixed with the other

twenty pairs. All protocols were coded numerically and scrambled. Sixty records were then analyzed. Interjudge reliability was determined by calculating the percentage of agreement between three raters. Contingency coefficients were calculated to measure the significance and extent of the relation between the ratings of the three judges. All the chi-square values obtained in the computation of the coefficients were significant well beyond the 1 percent level (.54 for raters A and B, .51 for raters A and C, .52 for raters B and C)

The three raters were successful far beyond chance in distinguishing the records of offenders from those of non-offenders. Twenty-seven out of the twenty-nine offenders (one pair had been omitted from the statistical analysis as their protocols had been used as an example of the scoring procedure for two scorers who were unfamiliar with the Arnold System) obtained more negative scores than the non-offenders.

The Wilcoxon matched pairs signed-ranks statistical test yielded a t value of 6, 5 which, when transformed, resulted in a Z score of -4,47. The probability that such an extreme score will occur by chance is ,00003 and so can be disregarded for practical purposes.

5.3.4 Achieving and non-achieving College students (Garvin, 1960)

The TAT sequence analysis had, in previous experiments, yielded predictions of high or low achievement in high schools as well as the effectiveness of teachers in elementary and secondary schools, when the mid-range was excluded.

Garvin (1960) decided to establish whether the scoring criteria, developed on the basis of records from the extreme ends of the distribution were consistent

enough to try out on the total range.

Garvin (1960) tested 50 men (seniors at a men's college) and 50 women (seniors at a women's college). Some of the records were discarded so that the total sample used was 46 men and 45 women. Garvin obtained the Grade Point Average (GPA) for the first semester of the junior year. As a measure of intelligence, Garvin used the American Council of Education Intelligence Test 1952 (ACE) scores for each student.

The Arnold method of scoring the TAT sequence analysis proved highly effective for the prediction of college achievement. The correlation coefficients between grade point average (college achievement) and TAT scores (motivation were ,85 for men and ,83 for women.) These were considerably higher than the correlation between grade point average and intelligence (r ,63 for men, r ,50 for women).

The multiple correlation of grade point average, TAT scores and Intelligence Test (ACE) score added little to the correlation obtained between grade point average and TAT scores (R ,87 for men, R ,84 for women)

By means of a multiple regression equation, the most likely grade point average for any combination of TAT and ACE scores obtained could be predicted. The percentage contributions of TAT scores to the predicted grade point average was calculated as 62,4 for men and 63,9 for women; of the ACE scores as 12,4 for men and 6,8 for women.

5.3.5 Achieving and non-achieving seventh grade children (Arnold, 1961)

Arnold investigated the relation between school achievement, motivation, and intelligence at a lower level of schooling. A sample of 52 sets of protocols were used.

Arnold found that most of the story imports of the seventh graders could be scored on the basis of her scoring system. A few divisions were added and marked with an asterisk in the scoring system as these additions are not found in adult records.

The correlations obtained were comparable with those reported by Garvin (1961). The multiple correlation between grade point average, motivation and intelligence (Otis I.Q.) was ,84 for the seventh grade children.

Arnold postulates that even though the combined influence of motivation and intelligence on school achievement is constant from elementary school to college, the relative influence of motivation increases while the influence of intelligence decreases. When motivation was held constant, the correlation between grade point average and intelligence r ,55 for seventh grade children, dropped to r ,37 for college men and r ,22 for college women. This was accounted for by the fact that the college population is highly selected for intelligence.

Arnold states that it is feasible now that one can test motivation, to select students who are not only intelligent but also highly motivated. This could raise college standards materially and increase the rate of progress in the colleges.

Arnold goes further and postulates that there is a human function that is vitally necessary for answering questions on intelligence tests and for telling stories; namely imagination. To give a logical answer to even a very simple question and to tell even the shortest story with plot and outcome, one needs not only memory but also imagination. While memory can help one in solving a problem (by recalling the answer to similar problems) one needs imagination to solve that particular problem, as each new problem is always a little different from problems one has solved in the past.

According to Arnold it is possible that the common factor in intelligence and motivation could be the facility and control of imagination (which actually includes the ability to recall relevant memory images). She feels that the above postulate could be an interesting and worthwhile field of research.

"If it should be possible to develop a score for facility and control of imagination such a score might suitably complement intelligence test scores, which test imagination only in so far as it is put in the service of problem-solving. Once we have such complementary tests of imagination, we might be able to detect the highly creative as well as the strictly manipulative intelligence measured by our present intelligence tests." (Arnold, 1962, P.187)

5.3.6 Successful and unsuccessful seminarians
(Quinn, 1961)

For a vocation that requires radical changes in one's lifestyle it is important to have selection procedures which can eliminate the potential misfits; those people who are not willing or who do not have the necessary persistence to make the sacrifices necessary in vocations such as a missionary, or a member of religious order.

Quinn (1961) tested 45 young men who had taken preliminary vows in a religious order, but were still studying in the scholasticate. As his outside criteria Quinn used ranking by superiors and ranking by fellow-scholastics. Superiors and fellow-students were asked to evaluate the promise each student (being rated) showed for future success in the Institute. Each scholastic was assured anonymity both in ranking the fellow-scholastics as well as taking the test.

When the average ranks of the scholastics, as given by their fellow-students were correlated with their scores

on the TAT sequence analysis, a coefficient of $.59 \pm .10$ was found; while the average rank as given by the superiors correlated with the TAT scores $.61 \pm .10$.

The correlation between the ranks given by superiors and the ranks given by fellow scholastics ($r .65 \pm .09$) was not much higher than that obtained by correlating the TAT scores with the rankings given by either group.

5.3.7 An evaluation of the relationship between the achievement motive and merit rating
(C.J. Coertze, 1974)

Coertze (1974) investigated the possibility of predicting merit rating by means of the measurement of the achievement motive. He selected employees with outstanding, average and low merit ratings and then correlated each merit rating with the appropriate achievement motive score, as measured by the TAT.

His sample comprised 71 white male employees of a city council on the East Rand, chosen from 42 posts. The employees differed widely with respect to age, salaries, qualifications, years of service as well as in the departments from which they were drawn. The level of employees ranged from senior supervisors down to semi-skilled and unskilled workers.

Four different scoring systems for the analysis of the TAT were used in order to assess which one could predict merit ratings as accurately as possible. The following significant findings at the 0,001 level were made:

- 1) The prediction of merit rating is possible by means of the achievement motive (a correlation coefficient of 0,85 was obtained in respect of employees with either outstandingly high or low merit ratings (when using Arnold system). When

looking at the total sample the correlation coefficient was ,59 whereas using the McClelland system it was ,45.

- 2) Employees with higher achievement motives generally earned higher salaries and obtained higher educational qualifications than employees with lower achievement motives.
- 3) Employees with higher merit ratings generally earned higher salaries and had obtained higher educational qualifications than employees with lower merit ratings. However, the correlation coefficient between merit ratings and educational level was much lower than that between the achievement motive and educational level.

Coertze concludes that the achievement motive (especially using the Arnold Scoring System) could be not only an important aid in merit rating programmes but could also have important uses in the selection of personnel.

5.4 Implications and Criticism of Arnold's Theory and Scoring System

Arnold's scoring categories for use with the sequence analysis were worked out empirically - each statement, scored a plus under any of the categories, was an abstracted import which was found among high achievers; the minus scores were found among low achievers. The imports showed the attitudes and motives of the actual storytellers and were not coloured by subjective interpretations on the part of the scorer. However, Arnold's work should be repeated in a more secular setting, not because of the results obtained but because of differences in the atmosphere of the teaching staff in parochial and public schools (Burkard, 1958); the environment of federal executives against business executives (Steggert, 1961); successful and unsuccessful navy enlisted men, against employees in a business environment (Petrauskas, 1958)

It is possible that different results could be obtained if the above experiments were repeated in a business environment.

The scoring criteria have a high scorer reliability and were found to be adequate for scoring imports derived from normal people. However, the categories have not up to now, been used cross-culturally. Arnold postulates that in any culture there are limited ways in which a situation can be faced. This assumption is supported by research on values carried out by Kluckhohn and Strodtbeck (1961). They postulate that there are a limited number of common human problems for which all people at all times must find a solution. Although there is variability in these solutions, all alternatives of all solutions are present in all societies at all times, but are differentially preferred. (Triandis, 1973) Arnold points out that in the course of collecting additional records, cross-culturally, the scoring criteria would have to be revised and expanded to include certain categories which might be required.

In the postulation of her theory as well as in her scoring criteria, there are many allusions to religion. Arnold's high achievers had imports which revealed the conviction, that, generally, success and happiness follow actions for ethical well-intentioned, rational, religious values while omitting to act for such motives resulted in failure and unhappiness. Positively motivated storytellers reveal a preference for altruistic, ethical, rational, religious values as against material, expedient, irrational values; these are optimistic, act constructively and have an active personal relationship with God. (it must be emphasised that constructive action must be taken as well as having a personal relationship with God; no action and passive dependence on God for help, success etc., will be scored negatively).

The emphasis on religion (as found in the records of high achievers) could be a result of the religious organizations in which the researchers worked (Loyola University is a Church University), as well as the subjects used in the majority of the research carried out (e.g. teachers in Burkard's (1958) study were nuns. Quinn's (1961) study as to what distinguished a successful person from an unsuccessful one in a demanding vocation, was carried out in a scholasticate). It is obvious that to the researchers, as well as the subjects, religion is an integral part of their lives and as such might play a much more important role than is the case for people in a secular environment.

However, Wolman stated;

"Her occasional ethico - religious tone, which is distracting in scientific discourse and is likely to repel more secular psychologists, is not an essential or necessary part of the method and should not be a barrier to the acceptance of her contribution." (Wolman, 1965, P.580)

A major criticism which can be made about Arnold's system is the lack of research information available. When scrutinizing the Psychological Abstracts, in the section covering studies on achievement motives (Vol. 35 - Vol. 59) from 1961 to 1978, it is apparent that her system is virtually unknown.

McClelland's theories, however, have generated over 500 studies in the United States as well as in 18 countries outside it.

In order to justify the use of the little known Arnold System over the McClelland one, it is necessary to highlight the differences of the two theories as well as the nature of the mining organization.

5.4.1 Differences between the Arnold and McClelland's Systems

From a study of 500 cases, Arnold found a decisive difference in motivation between people who have achieved a 'measure of excellence' from those who have not. However, Arnold's conception of 'a measure of excellence' has very different connotations to McClelland's 'standard of excellence'.

To Arnold, those who have achieved a measure of excellence were those people who revealed a set of principles that are close to the ethical principles of the traditional Western Culture. Those people were sharply opposed to the cut-throat ('dog-eat-dog') ethic which was found to characterize the low achiever.

McClelland et al (1953) defined achievement need as a predisposition to derive satisfaction from successful performance on a task, assumed to be directly related to the probability of success of the task, and the strength of the person's need for achievement.

"The need for achievement seems most likely to be associated with upward mobility, long hours of work, desires to accumulate capital and educate one's children and entrepreneurial activity." (J.N. Morgan, 1964, P.207 in Atkinson (ed) 1964)

It can thus be seen that whereas McClelland's high achiever is one who believes he can control his future by whatever means he deems suitable, Arnold's high achiever is one who is concerned with the ethical implications of his actions or his goals.

One could even go further and call Arnold's high achiever a 'moralist'. Peck, Havighurst, et al. (1960) after extensive research, identified five personality types; (that are desirable and undesirable) the amoral, the expedient, conforming, irrational-conscientious, rational-altruistic. According to Arnold, the rational-altruistic type would correspond to her definition of a high achiever with strongly positive motivation. The method of story sequence analysis provides a continuum from extremely negative to extremely positive motivations, which include the five types at different points. The rational-altruistic character would be at the extreme positive end of the scale so that the amoral character would be at its negative extreme.

Peck and Havighurst's extreme character types will be described as they correspond very closely to Arnold's high and low achiever.

Rational-Altruistic

The rational-altruistic type describes the highest level of moral maturity. Such a person not only has a stable set of moral principles by which he judges and directs his own action but he objectively assesses the results of an act in a given situation, and approves it on the grounds of whether or not it serves others as well as himself.

In the ideal case he is dependably honest, responsible, loyal, etc., because he sees such behaviour is for everyone's well-being. He is "rational" because he assesses each new action and its effects realistically, in the light of internalized moral principles derived from social experience; and he is "altruistic", because he is ultimately interested in the welfare of others, as well as himself. He is not interested in pursuing a principle for its own sake, without regard to its human effects.

He has a strong, firm conscience or superego, but he tests, modifies, and applies its directives in order to achieve the ultimate purpose of the rules it contains. He is as much concerned with assuring the well-being of others as with assuring his own.

He wants to work constructively in some area and produce results useful to everyone. He sees his relations with others as a pleasant, co-operative effort toward mutual goals, whether vocational, social or recreational.

He believes actively in his principles and is neither a passive conformist nor an intolerant "reformer".

He reacts with emotion appropriate to the occasion. He does what is morally right because he wants to, not because it is "the thing to do". His behaviour is spontaneous and rationally oriented. He accepts responsibility for his own acts, and blame if it is deserved.

He knows what is good for himself and others, and acts accordingly. He assesses each situation in its own terms, but follows his principles in deciding what to do.

If he does wrong, he feels guilty; but his response is to take steps to rectify the error. He justifies his actions by their moral effect, not by rationalization or defensive misperception. He is mature, emotionally "well-adjusted", and uses his constructive capacities to the fullest.

This picture of the rational-altruistic person represents an ideal goal, to be sought, but probably never to be perfectly achieved.

Amoral

The amoral character type represents the absence of any self-imposed control, or any concern for adaptation to the moral requirements of social living.

This type corresponds to what is often called clinically the "psychopathic personality". Such a person follows his whims and impulses, without regard for how this affects other people. He considers himself the centre of the universe, and sees other people or objects as means to direct self-gratification.

He has no internalized moral principles, no conscience or superego. He feels no need to control his personal impulses, and exhibits no control. His impulses may or may not be actively immoral, antisocial, or destructive in intent; but in any case he disregards the moral connotations and consequences of his behaviour.

(Peck and Havighurst, 1960).

McClelland's high achiever, has very different characteristics to Arnold's rational-altruistic person. He could be represented by the entrepreneur.

"The essence of entrepreneurial activity is the disruption of existing patterns of production and the initiation of new patterns. In the genesis of entrepreneurship the Weber thesis becomes relevant once again. The attitudes favorable to systematic exploitation of the social and cultural world that emerged from the ascetic Protestantism encouraged, among other things entrepreneurial activity. This complex of Protestantism combined with certain distinctively American values to give this country

an extremely fruitful breeding ground for individualistic entrepreneurial activity and economic growth". (Smelser, 1963, P.91)

This different conception as to what constitutes a high achiever, is strikingly highlighted in Arnold's 'story, sequence analysis'.

"Perhaps if our criterion of success were the amount of money or power a man achieves, the picture would be different. But, as long as our criterion is a judgement of performance by those in a position to know, the outstanding people will be people like our high achievers". (Arnold, 1962, P.213)

According to McClelland's postulates, achievement motivation is theoretically, closely linked to self-reliance and individualism, as personal attributes. Therefore individuals and groups high on achievement motivation should be low on submission to, and dependence on authority. The more a man is disposed to yield to the commands of others, the less he is likely to set his own goals and strive to achieve them. Korman, as mentioned previously, identified McClelland's postulated environment leading to the development of high achievement motivation as similar to the environment which had been postulated as leading to low authoritarianism by Sarason (1967) Adorno et al (1950) viz marked by high evaluation of independence, low obedience to authority figures and tradition as well as low degrees of control by others.

Arnold criticizes the trend of social science, which adheres that 'authoritarianism is always bad'. She postulates that it was found that high achievers make a sharp distinction between legitimate pressure from those in authority, to which they are ready to yield and illegitimate pressure, which they resist. The low achievers on the other hand, believed that lack of

love in childhood or later, leads to failure, difficulties or unhappiness. Low achievers believe that love solves all problems and when this love is lacking, they support blind rebellion against authority. Punishment does no good as it leads to resentment. The high achievers, Arnold found, were uncompromising and said that the right action depends on a man's choice or will and that wrongdoing deserves punishment and should be repented and amended.

Arnold concludes that:

"Perhaps we could help at least some people to keep out of both kinds of institution (mental health clinics and prisons) by providing scientific support for their intuitive knowledge that it is possible to conquer temptation, to strive for excellence and succeed and that goodness and truth are not social conventions but the basic requirements for human achievement and happiness". (Arnold, 1962, P.223)

From the above discussion, it is obvious that Arnold's formulation of achievement motivation is much wider than McClelland's. Some of the characteristics of Arnold's high achievers are similar to those postulated by McClelland e.g. the setting of realistic goals, emphasis on accomplishments, optimistic outlook, confidence about one's own performance, willingness to make some effort to accomplish one's goal (and making sacrifices in the process), continual striving for perfection, failure, seen as a challenge which can be overcome by the individual, through action.

However, Arnold's high achiever also possesses high moral and social values e.g.

- i) preference for immaterial values as against material expedient ones - values that are ethical, religious, altruistic;

- ii) compromise of principles lead to disaster, harm, penalty;
- iii) failure or unhappiness follows upon blind dependence or rebellion - refusing to follow reasonable advice or legitimate authority;
- iv) wrongdoing, ill-intentioned, imprudent action is positively disapproved, it brings punishment, penalty (this is recognized as just and deserved);
- v) temptation is actively resisted;
- vi) revenge is disapproved;
- vii) good relations result in positive actions - acting unselfishly, being considerate and making sacrifices for others etc.

In choosing a system for identifying the good from the poor performers in an organization, it is important to look at the climate in which that individual will be functioning.

5.4.2. The Mining Industry - The Organizational Climate

Schein has defined an organization as:

"The rational co-ordination of the activities of a number of people for the achievement of some common explicit purpose or goal, through division of labour, and function, and through a hierarchy of authority and responsibility." (Schein, 1965, P.8)

As can be seen from the above definition, in a formal organization, the concept of group identity or group loyalty (as well as co-operation) is an important one. However, high achievers, according to McClelland, would not be directly aroused by a climate that emphasized group loyalty and identity. The private needs of the high achiever (McClelland) would be likely to create both conflict with management and competition amongst the workers. McClelland's high achievers prefer to solve problems set by themselves, rather than by others,

prefer to take personal responsibility for their own actions as well as to find solutions to their problems. The high achiever (McClelland), typified by the entrepreneur is thus better suited to a less formal organization where the environment presents greater opportunities for achievement, of a personal nature.

Arnold's high achiever, on the other hand, with his emphasis on success through active effort, co-operation with others, constructive principles and concern with human relationship would not be in a conflict-arousing situation if operating in a formal organization.

According to Jensen (1969) the mining industry (in which this study was carried out) in South Africa places severe constraints on the flexibility of company functions and organizations. If one compares the mining industry with the secondary industry, it is clear that the mines are relatively inflexible. The initial planning or 'blue-print' of the mine determines its scale of operations, its labour force size, its requirements in terms of power, materials and all subsidiary functions, probably for the whole of the mine's duration. In the secondary industry, however, once operative, a company has the ability to expand, or contract according to economic needs, seek new markets, change its standard products for new ones etc.

Jensen makes the following analogy:

"A modern gold mine is thus in some ways like a clock which can only be wound once. It is highly engineered and so geared that it will run for a certain time; it requires constant and careful maintenance if it is to run its full span smoothly and economically."

(Jensen, 1969, P.9)

As the men working on the mines are constantly exposed to danger and mistakes may have very serious results, a degree of organizational rigidity is a necessary condition of stability and efficiency. As a result

- i) concepts relating to development, change and flexibility have limited application in comparison to most other industrial organizations
- ii) managerial actions and attitudes tend to be characterized by relatively short term objectives
- iii) mining communities have many 'in-group' characteristics. There is little movement of individuals between the mining industry and other types of organizations (e.g. secondary industry, commerce and state departments) among most categories of mining personnel

Recreational facilities and social interaction are provided within the mining industry (as well as living areas-compounds for the Black personnel)

"Individual horizons thus become circumscribed and limited to the mould of the mines. A degree of conservatism is consequently part and parcel of the psychological climate of the industry". (Jensen, 1969, P.11)

Although, since Jensen (1969) wrote this article, many changes have occurred as far as Black employees are concerned, the abovementioned organization's rigidity still characterizes the mining industry. (Blacks have received, higher salaries, better working conditions and also progressed from unskilled to skilled work).

As a result of the relatively rigid organizational structure, as well as the 'in-group' characteristics, the mining industry was gauged not to be a suitable environment in which to identify McClelland's high achiever.

The Arnold system, however, with its social and moral implications over and above motivation to reach a particular goal, indicated that it would be able to differentiate between the good and poor performers in the mining environment.

5.5 Cross-Cultural Applicability of Arnold's Scoring System

As McClelland's system of TAT interpretation has been used extensively cross-culturally, it shall not be assessed for its applicability to research in this sphere.

McClelland's research on achievement motivation (e.g. and economic growth) has been based largely on the analysis of collective policies and products e.g. (rituals, institutional structures, folklore, media of mass communication etc.) However, Arnold's research on achievement motivation has been investigated by the psychological investigation of samples of persons (though unfortunately not representative), studied individually. From individual studies, she then generalised to society at large. (i.e. she then outlined a profile of a negative or positive person in a society (i.e. a modal personality).

"In our opinion a national character" ought to be equated with modal personality structure; that is, it should refer to the mode or modes of the distribution of personality variants within a given society The socially required personality (for example, the personalities best suited to a bureaucratic or an assertive-individualistic social structure) deserves the status of an independent though significantly related construct. Given this distinction, the degree of congruence between the modal personality structures and the psychological requirements of the social milieu emerges as an important problem for research".
(Inkeles and Levinson, 1954, P.980 - 981)

"It would be clearly desirable, on both theoretical and methodological grounds, to move toward a standardized analytical scheme in terms of which modal personalities in all societies could be described and compared". (Inkeles and Levinson, 1954, P.969)

5.5.1 The description and comparison of modal personality

Inkeles and Levinson propose the following approach:

One should look at a number of psychological issues that meet the following criteria.

- i) they should be found in adults, universally, as a function of motivational potentials common to man and of socio-cultural characteristics common to human societies.
- ii) the manner in which the psychological issues are handled should have functional significance for the individual personality as well as for the social system - in that the patterning in the individual will affect his readiness to establish, accept, maintain or change a given socio-cultural pattern.
- iii) A set of descriptive categories for the empirical analysis of each issue has to be developed. - If the categories are to be psychologically meaningful, they must be relatively complex, and their assessment will require some interpretive skill. As a result, the bases for interpretation must be clarified and made explicit and adequate inter-rater agreement must be obtained.

"Such an approach makes use of clinical assessment procedures but attempts to formalize the descriptive concepts and to meet minimal requirements of measurement". (Inkeles and Levinson, 1954, P.990)

One should not look at the single most important set of issues (e.g. motivation) as this is extremely difficult to do. (and also limiting as one attempts to define all behaviour by one concept).

5.5.2 Behaviour common to all cultures

The following areas are suggested by Inkeles and Levinson as meeting the three criteria listed above.

a) Relation to authority

This issue meets the criterion of universal psychosocial relevance. (listed above) Within any societal context, all children are dependent on older figures, during development. These persons provide gratifications conditionally, exert impulse-controlling and value-inducing pressures, and through whom, the self and the world acquire increasing meaning. The adult social world contains status, differentiation and authority figures of some sort.

The individual's relation to authority includes at least the following aspects:

- i) his ways of adapting behaviourally when interacting with authority
- ii) his personal ideology - i.e. beliefs, values, attitudes regarding authority and authority - subordinate relationships
- iii) the more central fantasies, defenses and conceptions of authority and self that underline it and are reflected in, his behaviour and ideology viz. every person explicitly distinguishes various kinds of authority

e.g. legitimate-illegitimate, arbitrary-rational etc. The individual's behaviour and motivation-defense involvements are likely to vary considerably from one type of authority to another.

An adequate analysis should consider all of these. However, from a cultural point of view, the value-attitude and gross-behavioural aspects of the relation to authority should be sufficient.

b) Conception of self

Although an individual's conception of himself is usually multi-faceted and internally contradictory, there are pervading over-all conceptions of self which can be investigated. These are the individual's concepts of masculinity and femininity, his values (moral prohibitions and cathected ideas); his modes of dealing with inner-dispositions and with external opportunities and demands; bases for maintaining inner equilibrium i.e. what an individual has to do to maintain anxiety viz the experience of threat (often unconscious to ego structure (in this context, the nature of the expected consequences of value violations e.g. - withdrawal of love; devaluation by loved one; public sharing, aggression against the self as a result of one's own unacceptable impulses e.g. castration, guilt.

c) Primary dilemmas or conflicts and ways of dealing with them

These can include; the individual's conception of what is most problematic in life and ways of attempting to deal with these (Murray, 1938)

The control of aggression and maintenance of self-esteem in the face of familial and communal devaluations. (Kaveliner and Ovesey, 1951);

trust vs mistrust;

autonomy vs shame and doubt;

initiative vs guilt;

industry vs inferiority;

identity vs role diffusion;

intimacy vs isolation. (Erikson, 1950)

(Inkeles and Levinson, 1954)

When scrutinizing the Arnold system, it is apparent that she meets the requirements laid down by Inkeles and Levinson (1954) as being essential in the study of personality cross-culturally.

A few examples from her scoring system is given to substantiate the above postulate.

- a) Relation to authority:- found under categories;
- I - achievement, success, happiness, active effort or lack of it.
e.g. success or happiness follows upon positive reasonable actions - yielding to legitimate pressure
failure or unhappiness follow upon blind dependence or rebellion - refusing to follow legitimate authority
 - II - right and wrong
wrongdoing, ill-intentioned, imprudent action is positively disapproved it brings punishment, penalty (this is recognised as just, deserved)
neglect of duties, obligations leads to punishment.
 - III - human relationships:- reasonable advice is desirable - imports state constructive principles (e.g. discipline is necessary)

b) Conception of self

category II - influence of others
insisting on one's right to choose one's
course in life, and acting accordingly.
this course is accepted by others,
bad influence can be overcome; it can be
prevented or corrected by own determined
effort or avoided by separating from bad
companions

category I - attitudes toward success
- feelings of inadequacy

c) Primary dilemmas or conflicts and ways of
dealing with them

category IV - reaction to adversity -
loss brings resolution to get
professional help

category III - human relationships - influence
of others
- positive decisions are not
influenced by others' negative
attitude: they imply choosing
one's own course in life

category I - means towards success
- despite active effort, failure
follows in the form of despair,
desperation, destruction.

On the basis of the above discussion, it was felt
that the Arnold system could have useful application
in a different cultural group from the one on which
it was devised.

CHAPTER 6

Measures of Job Requirements, Performance and Success

6.1 Job Analysis

"Job and worker analyses are the first step in the development of selection techniques" (Chiselli and Brown, 1958 P.23)

6.1.1 Development of a Selection Device

- i) When dealing with the development of a selection device, one evaluates the requirements of the job description as a profile of psychological factors considered to be predictive of job success. Great emphasis is placed on the establishment of relevant, dependable and reliable criteria for measurement of the task for which the test battery is being used as a predictive tool. Here one applies the principles of scientific research in an industrial situation. The dependent variable(s) is the criterion measure of work production, learning time for instance, and the independent variable is the selection method(s) used.

6.1.2 The Paterson Plan

In 1975 an extensive job evaluation exercise was undertaken in a large mining organization using the Paterson Plan. This method of job evaluation is based on the assumption that decision making is the factor common to all jobs and so should be used as a basis of evaluation.

In order to justify the method adopted in this exercise - that of using groups of workers in different positions to obtain criterion measures for the validation of a selection technique (that is applicable to all the groups) it is necessary to enumerate some of Paterson's (1972) postulates.

A person makes decisions when he reacts to any kind of stimulus. All of these can be placed under the title information. The person then analyses this information,

breaks it down (if necessary) into constituent parts and may then synthesize and categorise it. As a result, he discovers whether a problem has been established. He now has to consider how he must react, or not react. He then looks at possible reactions and their effects and reaches a Conclusion (an assessment of the information) that one or more reactions are possible and whether these are correct or not.

He still has to decide what his reaction should be. He selects one of the alternatives upon which he has decided and commits himself to it. This, as distinct from Conclusion, is the essence of Decision - the commitment to action and the responsibility for the result. He then plans how he will implement the decision and selects one of several ways of doing so, thus deciding on the Execution of the decision.

The decision-process can be reduced to four, broader sequent stages which are of universal application for all systems. (Given diagrammatically in Figure 3)

- 1) INFORMATION - reception and categorisation of stimuli.
- 2) CONCLUSION - assessment of the problem, if any, appreciation of possible courses of actions.
- 3) DECISION - selection of a course of action and the decision to act on it.
- 4) EXECUTION - analysis of the possible methods of carrying out the selected course, and the decision to act in the chosen manner.

In a firm many people are making decisions and the decision of one may become the information for another. It is also possible for each of the four stages to be carried out by different persons.

There are six basic types of decisions which define all jobs in the organization.

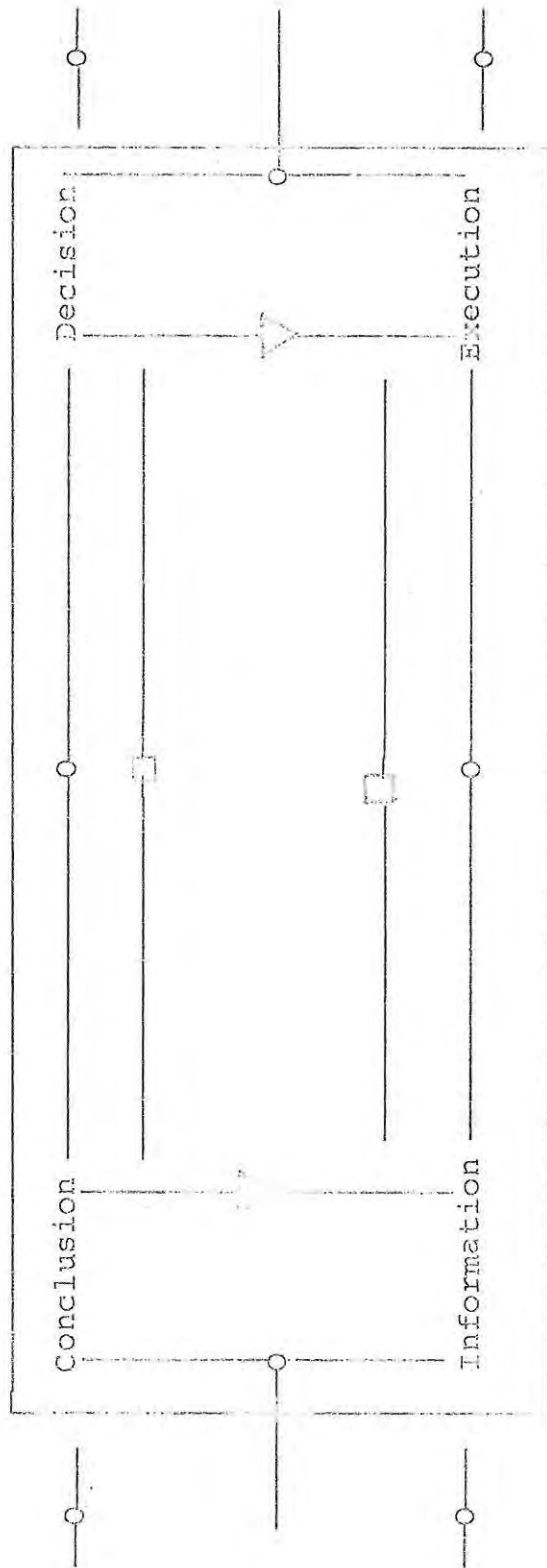


Figure 3. The Decision-Process (Paterson, 1972)

Definition of Bands

Band F - Policy Making Decisions

Decisions framing policy are regarded as being superior to any other decisions. The limits are very wide and in many cases are only specified by the laws of the land.

Band E - Programming Decisions

Within the limits set by the policy the execution is broadly planned or programmed.

Band D - Interpretive Decisions

The limits of interpretive decisions are set by the programme, plan or budget. The interpretive aspect comes from the choice of a best decision out of a spectrum of possible decisions, the limits of the spectrum being set by the programme. These decisions often involve determining the best use of available manpower and machines to achieve the targets agreed on in the programme.

Band C - Routine Decisions

The rule having been set by the interpretive decisions, execution begins. What is to be done has already been decided and the next level of decision - routine - is the choice of the way in which it is to be carried out. People taking these decisions can decide which process to use, they know the operations, 'What' to do, "where" and "when".

Band B - Automatic Decisions

This involves work in which the processes are defined and freedom of choice is restricted to the operations. Within the constraints of the process - the 'how' - the worker can decide 'where' and 'when' he carries out the operations that constitute the process.

Band A - Defined Decisions

The decisions made by the worker can be defined and the worker is left with little choice other than variation in control of the elements of an operation.

FIGURE 4

Six Levels of Decision Making and Eleven Job Grades

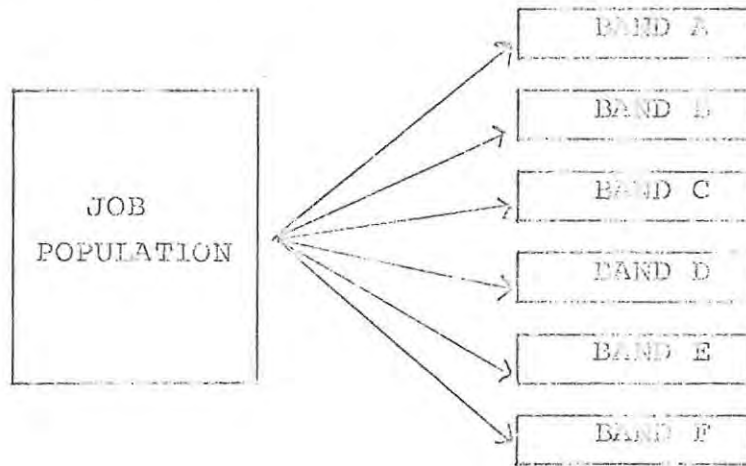
<u>Band</u>	<u>Kind</u>	<u>Title</u>	<u>Grade</u>	<u>Kind</u>
F	Policy	Top Management	10	Co-ordinating
			9	Policy
E	Programming	Senior Management	8	Co-ordinating
			7	Programming
D	Interpretive	Middle Management	6	Co-ordinating
			5	Interpretive
C	Routine	Skilled	4	Co-ordinating
			3	Routine
B	Automatic	Semi-skilled	2	Co-ordinating
			1	Automatic
A	Defined	Unskilled	0	Defined

FIGURE 5

STEPS IN JOB GRADING

1. The following steps are taken in the Grading of Jobs

1.1 Sorting jobs into Skill Bands A, B, C, D, E and F based on the type of decisions made by the workers, in terms of Band Definitions Tasks i.e.



1.2 Sorting the jobs within Skill Bands A, B, C, D, E and F in terms of job group definitions into Job Groups e.g.

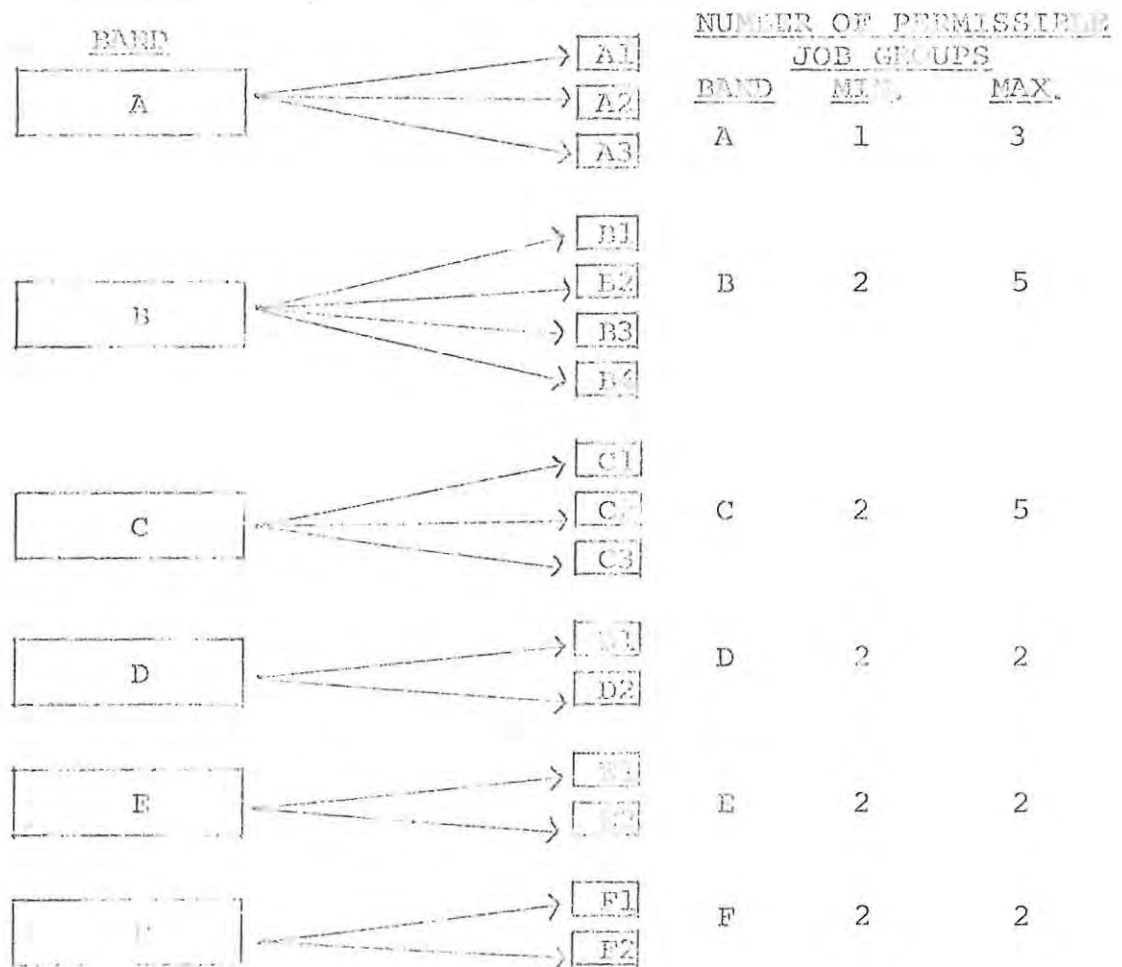


TABLE 3

BAND B (Semi Skilled)

DEFINITION OF SKILL BAND	JOB GROUP	JOB GROUP DEFINITION
<p>Basic skills required for the Band B jobs can be taught, but before an acceptable standard of performance can be obtained additional experiences and practice are necessary. This is because not all possible situations in which the worker will find himself on this job can be envisaged. The trainee cannot experience the whole gamut of skill or decision requirements necessary to perform the job at an acceptable level. Insofar therefore as the worker has to rely upon skills and judgement in situations which can only be experienced, to that extent the skill or judgement required in the job becomes critical to the acceptable standard of performance of the job. The decisions taken are automatic.</p>	B1	<p>a) The cycle of activities is limited and once an acceptable level of basic skill has been reached, the job becomes semi-repetitive.</p> <p>b) No previous related Band B experience is necessary.</p> <p>c) Skills are provided by education and/or training and additional experience is obtained on the job.</p>
	B2	<p>a) The cycle of activities is longer and presents a more varied array of cues for the worker to respond to. Once acceptable standards of performance have been reached, jobs may still become semi-repetitive.</p> <p>b) Previous experience in a related Band B job is required and/or additional training is necessary.</p>
	B3	<p>a) The cycle of activities may be no greater nor the cues more complex than for Group B2 but the tolerances demanded in the operation are very much finer. The worker is working to strict requirements and may be under continued pressure either from the nature of the job itself or from the supervisor.</p> <p>b) Previous experience in Job Group B2 and/or additional training required.</p>
	B4	<p>Co-ordinator of Job Group B3 workers.</p>

Difficulty is related to the kind of decision in the hierarchy of decisions, the higher the band or grade, the greater the difficulty. Hence it takes longer for a person to learn the higher band decisions and almost always a person has to 'go through the mill' of learning to make more difficult decisions by 'working his way up' in the firm. (This is the main reason for including education and experience as a measure of difficulty in the process of job evaluation).

Jobs in Bands C, D and E all require at some time or another decisions of Band A and B (By definition a job in one grade cannot require decisions of a grade above.) For example, a Production Control Manager makes decisions which require calculations. These calculations conform to mathematical processes governed by the rules of mathematics - routine procedures. The process may require arithmetical computations as a sequence of operations, the actual element of the operations being addition, subtraction and multiplication which are themselves Defined Decisions. Of course he could order a clerk to do the arithmetic (Band A) and he might leave the mathematical processes (Band B) to a senior clerk. The would provide him with Information upwards for his Conclusions. But he performs these processes and operations himself, partly because of the economics of and resources, and partly because they have to be integrated in the totality of conclusion-making. The task is the decision-making and the decision made as an end result of the Information from such decisions on processes and operations (Paterson, 1972)

Decisions of the same band or grade would tend to be regarded as relatively of the same order of difficulty to the person capable of handling both definitive systems and indeterminative systems.

This concept is of use in comparing jobs of the same grade. A job with more tasks of the same grade and band is relatively more complex; but complexity requires attention to difficulty of tasks. A job may have fewer tasks than another but these tasks may be more difficult because they involve more of higher decisions. The management services specialist of Band C may need to use more complicated mathematical processes than the departmental production manager (Band C) who may use only arithmetical operations within standardised mathematical processes for say, maintenance scheduling -- but the production manager may have and usually has more tasks to perform in the same unit of time. To balance out number and difficulty is subjective, it does not lend itself to definitive statements. We can say then, that job complexity is determined by the number of the constituent tasks and the range of difficulty of these tasks. Similarly task complexity is determined by the number and range of difficulty of constituent processes and operations. (Peterson, 1972)

"People in Band B are capable of anticipation and prediction in thinking out new kinds of processes for the good of the whole. Indeed, when we are considering people in terms of promotional possibilities, we use the words 'initiative', 'creative', and the like, to pick out those who are capable of using anticipation and prediction. For we are looking for these people for promotion to upper levels, where these capacities are essential in this 'creative-directive' function in the Bands C to E. In the normal process of the functioning of the total group, this creativeness and anticipation-prediction is not necessary in work of Grade O to Band B, but it is necessary in these upper Bands, because the decision-making process requires this." (Peterson, 1972, P.30)

6.2 Measures of Job Success

There are a number of ways of defining and measuring success in most jobs. Success is 'multifaceted' and as a result difficult to measure.

Ideally, the job success of any individual should be gauged by some criterion of his productivity or his contribution to society over the period of his whole working life. This would enable one to compare and rank an entire group of people who had performed the same job. This is obviously not possible and so one has to settle for shorter range performance measures which can be classified as i) immediate and ii) intermediate criteria.

An example of intermediate criterion would be promotion to a higher level job against retention of the old job. In this study intermediate criterion measures were used. An immediate criterion might be grades in a company training course or an employee's measured productivity for a short period for e.g. a week, a month.

The goal of the exercise is to choose the criterion (or criterion combination) which is to have relevancy to the degree that it includes pertinent elements.

When looking at the question of job-success, one has to take into consideration individual differences in job performance. Tests and other selection devices aim at identifying those people likely to be the best performers, though on the whole tests in actual fact identify those likely to fail.

If appropriate selection techniques have been used in placing employees in jobs, the range of individual differences in performance will be considerably limited (to the better performers) as compared with an unselected group. As a result, training periods should be reduced and production output greater. Proper selection can also lead to increased job satisfaction on the part of the employees placed in jobs they can perform adequately.

6.2.1 Types of Job Success Measures

i) Quantity and Quality of Production

These are the criteria most often studied when implementing a testing programme as they seem to reflect the most important aspects of job performance.

One isolates the group of high criterion individuals and another group low on the criterion and then checks to see whether the groups differ significantly on the test(s) being studied (this procedure is adopted for whatever criterion measure one uses). Contamination has to be carefully observed e.g. the output of an individual might depend on factors besides his own speed and accuracy, such as varying availability of raw material, experience on the job, extensive training.

ii) Personnel Records

For many jobs, measures of work output are difficult or impossible to obtain (e.g. a Personnel type position). It is then advisable to use personnel records data such as absenteeism, lateness, accident

rates. It is normally safe to assume that the worker with more detrimental records would be a poorer worker (or more costly) than the more reliable, steady workers. Although Personnel records were collected for Sample (a) these were found to be inaccurate and so were discarded.

iii) Administrative Actions

Administrative actions such as promotions, demotions, resignations, dismissal and salary increases are useful when looking for criterion measures. Usually, the administrative actions are the result of careful consideration of the employee's performance and whether he merits promotion, pay increase, etc.

However, the problem in using administrative actions for criterion measures is that in a small organization it might take a few years for sufficient data to accumulate. Similarly in a large mining group, promotion is also very closely related to which mine one works on, and so this criterion measure was also discarded as there were too many intervening variables which could not be controlled.

iv) Merit Ratings

Merit ratings are written appraisals made by a supervisor on the job performance of his subordinates. However, different systems of

rating and the subjective evaluation done by the supervisor make it very open to bias. As a result, ratings should only be used in the absence of objective records.

Merit ratings can be done for a number of reasons :

- a) to provide a basis for developmental counselling sessions between the subordinates and supervisor in order to improve work performance.
- b) they may provide basic data for decisions in administrative actions of pay adjustment, promotion or transfer.
- c) ratings can be made specifically for the purpose of validating tests when requested by the test administrator. However, it is better to obtain existing merit ratings for validation purposes as supervisors tend to attach much importance to merit ratings for promotion or salary increase purposes whereas test validation exercises are regarded as not important for the individual being rated and so often done superficially.

There are a number of merit rating techniques used but the most common one is the graphic rating scale where the rater checks the position on a "scale" best representing his judgement of the amount of the merit possessed by the person being rated. These graphic methods are, on the whole, subject to rating errors known as 'halo' or 'bias' errors. The 'halo' error is a tendency to rate an individual high or low on all characteristics because he is outstandingly high or low on one or a few. Rater 'bias' is the tendency of raters to concentrate their ratings in such a way that one rater may appear to have no one below average (i.e. he is too lenient) and another rater has no one above average (i.e. he is too harsh). Another rater might restrict his ratings to average (i.e. he is 'playing safe').

Another technique of merit rating is to force raters to allocate their men in certain categories: best 10%, next 20%, middle 40%, next 20%, lowest 10%. Overall job performance ratings are used and the ratings are forced into a quasi-normal distribution spreading over the entire range of scores. However, one has to be able to assume that the quality of over-all job performance is normally distributed in the group being rated.

Merit Ratings for this Study were used for Sample (a) as well as supervisory ratings (See Section 6.3.3)

v) Job Sample

The criterion used here is a representative sample (or portion) of the job, standardized so that all job-participants perform exactly the same task under the same conditions. Their performance may then be compared and ranked.

6.2.2 Adequacy Of Criterion

All criterion measures have their short-comings.

Bellows (1961) proposed six checks on the value of the criterion:

i) the criterion must be reliable.

A reliable criterion is a performance measure which would consistently give one the same rank ordering of individuals if the criterion measurements were made at different intervals over a certain period of time.

ii) the criterion must be realistic and representative

All of the important job duties should be sampled by the criterion chosen for the study i.e. it should be relevant.

iii) The criterion should be related to other criteria

If several criteria are available, one highly related to the others would likely to be more representative of the whole job than one bearing little or negative relationship to others.

- iv) The criterion should be acceptable to the job analyst.
- v) The criterion should be acceptable to management.
- vi) Situation change may alter the criterion. This should always be remembered as jobs and procedures are constantly changing which might make a criterion, appropriate in the past, now inappropriate.

The most important aspect to consider, when using criterion measures, is that a selection procedure (such as a test) should make as sound a decision as possible at the time of hiring, and so be predictive of job success.

6.3 Job Satisfaction

According to Atkinson and Feather (1964) "incentive variable represents the relative attractiveness of a specific goal that is offered in a situation." (Atkinson and Feather, 1964, P.12)

This implies that if the job the person is doing is unattractive it is unlikely that he will be 'motivated' to perform well on the job.

6.3.1 The Relationship between Job Satisfaction and Job Performance

The factual evidence supporting the belief that there is a direct causal link between job satisfaction and other worker attitudes on the one hand and work performance or productivity on the other, is extremely tenuous, so far as both the mining industry and industry in general are concerned.

"The evidence suggests

that there are no real grounds on which to expect an improvement in performance by improving the attitudes of employees. This statement needs immediate clarification. It does not mean (a) that work attitudes are unimportant - they are important in their own right, from several points of view, but not because they are linked with productivity, nor (b) that there are no human factors which influence work performance directly - there are, but in mining at the present time they are not attitudinal factors." (Lawrence, 1974, P.1)

When reviewing the literature on the relationship between job satisfaction and job performance, Lawrence suggests that all the theories can be included in one of four simple models.

(a) Satisfaction - performance models

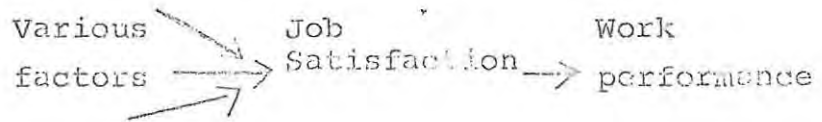


Figure 6

Various factors determine a worker's job satisfaction and work performance is seen as directly related to this satisfaction. The factors are sometimes considered intrinsic to the work itself (e.g. job content, variety, opportunity) or extrinsic (e.g. working conditions, social benefits, remuneration).

Attempts have been made to identify those factors about which management should "do something" to improve job satisfaction and hence work performance. This is the basis of the "human relations" approach to personnel management, which has largely been abandoned but it nevertheless still has strong support. For example, Herzberg's "motivation - hygiene" theory is of this type.

Lawrence (1972) when investigating the possibility of better utilization of human resources in industry, (Sample comprised N = 400 black mine workers; median age = 29 years; median education = 3 years; median, mining experience = 4 years) found that 40% of the variance in an objective measure of work performance could be attributed to a combination of non-attitudinal factors.

Vroom (1962) in an extensive review of the literature on motivation and performance, found only a two percent variance in work performance could be attributable to "job satisfaction".

(b) Performance - satisfaction models

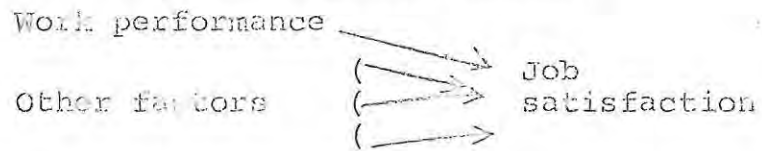


Figure 7

This alternative model which attempts to explain the inconsistency in the relationship between job satisfaction and work performance simply reverses the direction of the link between them. High work performance is seen as one of the factors, but not the only one which leads to job satisfaction.

"This approach permits a neat explanation for the lack of close correlation between measures of job satisfaction and work performance by conveniently contributing low correlations to the presence of the other considerations." (Lawrence, 1974, P.5)

(c) Pressure-for-production model

This approach postulates the presence of one or more intervening variables, and attributes the lack of correlation to variations in an intervening variable. One such model proposed by Triandis, (1959) although not widely known, could have some relevance to the mining industry.

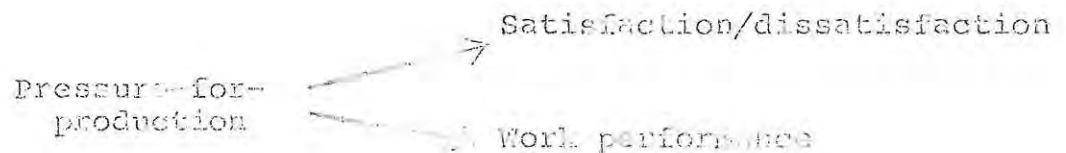


Figure 8

Triandis suggests that the levels of both job satisfaction and work performance are determined by the "pressure for high production" which is

exerted on workers, either by their superiors or by the circumstances in which the work is performed. Satisfaction is greatest when pressure for production is low, it decreases and eventually culminates in increasing dissatisfaction as pressure for production increases. Meanwhile, work performance varies non-linearly with the increasing pressure.

Although no empirical support for this model is revealed in the literature, it seems worthy of further research.

(d) Performance - rewards cyclic models



Figure 9

There is growing support for the view that an important variable which intervenes between work performance and job satisfaction is the one which describes the "reward" which the worker receives for his participation in the work. Reward, in this context includes not only financial incentives in the form of wages, bonuses, but also other more psychological rewards such as feelings of security, self-esteem, belonging, and participation.

Lawler and Porter (1967) suggested that work performance depends on the exertion of effort which results in certain rewards for the worker.

The amount of effort which the worker is prepared to exert depends on his estimation of the likelihood that he will receive the reward, and on the value which he places on the reward if it is received. These feedbacks are denoted, respectively, by A and B in the above diagram. (Lawrence, 1974)

This view suggests that "rewards" are important in the securing of high work performance but only if there is a direct link between the value of the reward and the level of work performance attained and only if the rewards for a given performance are perceived to be equitable.

"Consideration of the research evidence leads inevitably to the conclusion that if the focus of importance is work performance, then job satisfaction is not a determining factor but is more in the nature of a necessary byproduct." (Lawrence, 1974, p.8)

6.3.2 Job Satisfaction Index

"Few and far between are studies which suggest that morale or happiness or job satisfaction are worthy ends in and of themselves. The passion of the day is to prove that high morale does in fact lead to productivity". (Ferguson, 1958, P.246, in Vroom, 1962)

As the Arnold system emphasizes co-operativeness, the overcoming of obstacles, the adaptability of goals and means due to changing circumstances etc. i.e. a construction approach to dealing with problems and life in general, it was decided that only if there were great discrepancies between the TAT scores, job performance index and the job performance rating would a more indepth study of job satisfaction be done. Only 4 cases were identified as having some discrepancies (e.g. high TAT score (Arnold) low job performance ratings, high job satisfaction index score). No further research was then carried out as $N = 4$ represents only 5% of the total sample. However, the anomalies were due to rater inconsistencies rather than lack of satisfaction in the job situation. (Ratings of the subject at the first session was considerably lower for the 4 subjects than at the second session).

Brayfield and Rothe (1951) list the following factors as being the desirable attributes of an attitude scale.

1. It should give an index to 'over-all' job satisfaction rather than to specific aspects of the job satisfaction.
2. It should be applicable to a wide variety of jobs.
3. It should be sensitive to variations in attitude.

4. The items should be of such a nature that the scale should evoke co-operation from both management and employees.
5. It should yield a reliable index.
6. It should yield a valid index.
7. It should be brief and easily scored.

Items were selected for the index on the basis of Q values, ($Q < 2$) lack of reference to specific aspects of a job (i.e. had to be generally applicable) and lack of social desirability.

Out of 255 items 18 items were selected for the final scale. Likert scoring was applied to these 18 items, using the Thurstone scale value to indicate scoring direction. Items at the satisfied end of the scale received 5 points for strongly agree, 4 points for agree 3 points for undecided 2 points for disagree and 1 point for strongly disagree.

Items at the dissatisfied end received 5 points for strongly disagree, 4 for disagree and so on. Scores were then totalled.

The range of score is thus between 18 points to 90 points. The 'neutral' point is at 54 and a high score represents 'satisfaction'.

Several samples were used during the study

- i) Reliability and homogeneity - a split-half coefficient of ,87 was obtained for a sample of 231 clerical female employees.

- ii) Validity - the index was able to discriminate between groups who were differentially satisfied with their jobs. The satisfied group in mean score was 76,9 (S.D. = 8,6) and the non-satisfied group's mean score was 65,4 (S.D. = 14,02) The difference in means was significantly different at the 1% level.

The Job Satisfaction Index correlated ,92 with the Hoppeck blank on the same population as discussed above.

Although this test was not devised for the population groups used in this study, nor was it validated for purposes of the study, the Job Satisfaction Index was used as only a superficial estimate of job satisfaction. Even though scores tended to be slightly positively distributed the distribution was acceptably normal (frequency distribution of scores given in Appendix B - Figure 7).

CHAPTER 7

Aim and Method

7.1 Aim of Study - Hypotheses

1. The Central purposes of this study was to establish whether there is a positive relationship between a high 'achievement motive' (as measured by the Thematic Apperception Test, using the Arnold scoring system) in Blacks and good job performance. (As measured by good merit and supervisory ratings).

According to the literature covered, the following hypotheses were postulated:

2. There is a positive correlation between higher level of acculturation (as measured by the U-R scale) and higher achievement scores.
3. There is a negative correlation between high scores on the "Resistance to Change factor" on the U-R scale and high Achievement motive scores on the TAT (using the Arnold system).
4. A higher correlation is predicted between Achievement motive and job performance when using the Arnold scoring system than when the McClelland system is used.
5. People with a high achievement motive score but poor job performance ratings will obtain low scores on the job-satisfaction index.

7.2 The Sample

Included in the study were two samples:

For ease of presentation a comparative table of Samples (a) and (b) is given below.

Table 4

Comparative Table of Samples (a) and (b)

Factors	Sample (a)	Sample (b)
Size	N = 92	N = 200
Race	Blacks	Blacks
Sex	Males	Males
Educational Level	Stds. 8 - 10	Stds. 8 - 10
Subject's Origins	Homelands (Rural)	Tembisa Township (Urban)
Living Conditions	Mine Compounds	Township
Length of Employment	Minimum 1 year, mean length of employment 8,6 years	Prospective employees
Area of Employment	Mining Personnel at B4 level	Applying for Mining personnel posts at B4 level

7.2.1 Sample (a)

SAMPLE SELECTION

Subjects were not randomly selected. They were selected

in the following way on the basis of job performance:-

Subjects were rated "Good", "Average" or "Poor" on a semantic differential scale administered independently by 3 raters, using a set questionnaire.

Each rater wrote a confidential report as to the reasons for his categorization. Subjects who obtained corresponding category ratings - e.g. each rater rated his performance as "Good" - were then included in Sample (a) i.e. 100% agreement on the rating of the subject.

SAMPLE SIZE

The initial size of sample (a) was $N = 104$. One year later $N = 94$, as some subjects had left, were promoted or on leave. Two subjects were further excluded as they did not meet the sample educational requirements (minimum = Std 8) Therefore $N = 92$.

SAMPLE COMPOSITION

Sample (a) was composed of subjects recruited from various homelands, who lived in mine compounds. They had little contact with Whites other than in the limited scope of their work.

EMPLOYMENT

The mean length of employment on the mines for Sample (a) was 8,6 years. All subjects were employed within Personnel Departments at the B4 level

METHODOLOGY

Testers had no information as to which job performance categories Sample (a) subjects fell prior to test administration, scoring and write-up. Test scores and job performance ratings were then compared.

One year later, with the size of Sample (a) N = 92 sample subjects were re-rated on job performance, and re-tested using the TAT. Test scores and job performance ratings were again compared.

7.2.2 Sample (b)

RATIONALE BEHIND FORMATION OF SAMPLE (b)

Sample (a) was composed of rural Blacks. In order to include urban Blacks in the study, it was decided to administer the TAT and U-R scale to a further sample. The test administration to this sample would further define the relationship between the TAT score (Arnold), the urban-rural scale and resistance to change.

SAMPLE SELECTION

Sample (b) subjects were randomly selected from 2,000 Blacks applying for Upper B level positions in a mining concern in Johannesburg.

SAMPLE SIZE

The size of sample (b) was N = 200.

SAMPLE COMPOSTION

Sample (b) was composed of subjects from Tembisa Township outside Brakpan.

7.2.3 SAMPLE (a) and SAMPLE (b)

The samples were selected without any controlling of tribal distributions. According to G. Grant (1969) the U-R scale should be applicable to any tribal group irrespective of the different tribal heritages.

TABLE 5

The tribal composition of the sample:

Tribal Group	Number			Percentage of Sample
	(a)	(b)	Total	
Xhosa	42	34	76	26,0
Sotho (North + South)	38	46	84	28,8
Tswana	8	20	28	9,6
Swazi	1	37	38	13,0
Zulu	0	43	43	14,7
Ndebele	0	10	10	3,4
Other (includes Shangaan, Venda, Pedi, Pondo)	3	10	13	4,5
Total	92	200	292	100,0

As the positions in which Sample (a) are employed require a certain amount of literacy, as well as those for which Sample (b) was applying, education level in both groups was limited to between Standard 8 and Standard 10. (2 subjects in Sample (a) had a Standard 6 and Standard 7 educational level respectively, and so their scores were omitted from the study.) The majority of subjects in both groups fell in the Standard 8 category.

TABLE 6

Educational level	Number			Percentage of Sample
	(a)	(b)	Total	
Standard 8	58	126	184	63,0
Standard 9	19	28	47	16,1
Standard 10	15	46	61	20,9
Total	92	200	292	100,0

The large proportion of matriculants in (b) Sample could be attributed to two factors :

- i) the urban area provides greater opportunities for schooling (e.g. availability of schools, no land to be worked on)
- ii) the age group of Sample (b) was lower than that of Sample (a).

TABLE 7 (Age Distribution)

Sample	Range	Mean	Standard Deviation
Sample (a)	23-50	36,62	7,63
Sample (b)	18-50	26,89	7,60
Total	18-50	29,94	7,6

Samples (a) and (b) were combined to N = 292 to test hypothesis (2). viz: Blacks with a higher level of acculturation should obtain higher achievement scores than those with low levels of acculturation.

Sample (a) and Sample (b) were also treated seperately to establish whether the Urban Black did in fact score higher on the U-R scale than the Black employed on the mines (and so consequently on the TAT).

As Sample (a) assumed that they were being assessed for promotional reasons (though not on the basis of the TAT) and Sample (b) were being assessed for selection (not on the basis of the TAT) the condition under which both groups were tested could be said to be similar.

7.3 Job Analysis

Ghiselli and Brown (1958) in "Personnel and Industrial Psychology" refer to the eliciting of information from job-descriptions as "estimated worker characteristics". Job descriptions are studied and specific traits are elicited and related to specific behaviours on the job.

7.3.1 'Man Specification'

In order to elicit the 'man requirements' of a number of senior black positions on the mines, the job descriptions were scrutinized and a questionnaire was devised which put forward a number of characteristics which were considered applicable to Blacks at that level (as elicited from the job descriptions).

In this questionnaire one concentrated on discovering critical incidents which were uncovered in interviews with individuals on the job, supervisors, subordinates and associates. Questions were asked in such a way that both effective and ineffective behaviours were revealed. (as advocated by Ghiselli and Brown (1958)) Interviews were conducted in the following way :

- a) The first stage was unstructured, viz. the interviewee was asked to name characteristics which he felt were important for a man to be successful in the positions being discussed. Incidents and examples of the behaviour named were required for each characteristic postulated.
- b) Once the man had verbalized freely, he was then asked to rate various dimensions on a questionnaire which had been elicited from the job descriptions. The rating was on a 7-point scale ranging from very important to undesirable. When a particular attribute was rated as important or undesirable, examples of that behaviour had to be given. (See Appendix A)

From the information collected through the interviews and the job descriptions a "Semantic Differential" was drawn up.

According to Anastasi (1968) the Semantic Differential represents "a standardized and quantified procedure for measuring the connotations of any given concept for the individual." (Anastasi, 1968, P.2)

The most frequently required attributes for the positions being studied were extracted and also the least desirable. These were reduced to 23 single or compound word categories and placed in a semantic differential format (both in English and Afrikaans). Each item had an antonym as is applicable to that particular position for e.g. forthright - tactful. These are not opposites in the true sense of the word, but in the positions being studied they are in antithesis to each other. Between these words is a rating scale which goes from 1 - critical: extremely important, to 4 - not important, i.e. not necessary. The scale is, therefore, as follows:

Forthright - 1 2 3 4 3 2 1 tactful.

If a man feels that a person in the position being rated should be forthright and it is of crucial relevance to his job that he should be, he would mark the 1 next to forthright. If he is rather unconcerned about either of these two characteristics, he would mark 4 i.e. both these characteristics are of no relevance to the position being rated.

(See Appendix A)

The jobs which were initially being considered for this study (these are 'Senior Black' positions on the mines) were the following:-

Aptitude Test Supervisor
Assistant Recreation Officer
African Personnel Assistant (Surface and Underground)
Bar Supervisor
Black Training Supervisor and
Chief and Head Hostel Clerk.

These jobs all entail a certain degree of autonomy and supervision of staff.

Although these positions are quite different from each other (in terms of work done), according to the Paterson grading method they are comparable in that they fall in the Upper B Decision Bands.

The Semantic Differential was given to a large cross-section of people who are associated with the jobs being rated. The forms were then analysed, (the method adopted was one of weighting scores in order of importance and then tallying the scores for each attribute and placing them in rank order). The important and least important characteristics were then elicited for the positions being studied. Below are the characteristics which were found to be important for these positions (not in rank order):

- 1) alert, resourceful
- 2) calm under pressure, commands respect
- 3) determined, independent, flexible
- 4) steadfast, cautious, impartial.

The above named characteristics were then reduced into components and tests constructed to tap these components :

- 1) alert, resourceful - insight
- 2) calm under pressure, impartial, commands respect, flexible - leadership potential
- 3) determined, independent - motivation (achievement)
- 4) impartial, steadfast, cautious - responsibility.

A series of tests were devised which would measure the components listed above (the TAT forming only one test of the battery). The requirements of the tests included in the battery were that they should be group tests and that people who are not qualified Psychologists should be able to administer them and that they should be applicable at all levels (obviously using different norms, cut-off points). These shall be enumerated but do not form part of this study and so shall not be discussed.

The battery comprised the:

- 1) I.T.B. (Insight Test Battery)
- 2) Responsibility Test

- 3) T.A.T. (Thematic Apperception Test)
(The test being studied in this exercise)
- 4) L.G.D. (Leaderless Group Discussion)

For the concurrent study, it was decided to use one position for those named above - the African Personnel Assistant. This was done for the following reasons: Owing to the large manpower on the mines and the distances between the various sections of the mines, organizing a venue and time that is mutually suitable for all the people to be tested was not possible.

The African Personnel Assistant is representative of the 'Senior Black' positions listed above in that he has undergone a general training in these areas prior to his present position.

For the purposes of merit ratings it was also deemed preferable to use only the A.P.A.s in the study. The supervisors, being in personnel departments, had a greater knowledge about what was required and realised the implications of not doing the ratings accurately. The experimenter had the assurance of their commitment to the exercise whereas this was not the case with the other sections.

The T.A.T. is not a job content - related test, in that it does not measure the technical skills or aptitudes required to do a particular job, but rather a "general level of adequacy with which the person will be able to function in a complex, demanding environment" (Korman, 1968, , P.317)

This implies that the T.A.T. is applicable for the selection of a prospective applicant in any sphere which has a 'complex, demanding environment, irrespective of the actual job content (obviously aptitudes, experience etc. would also have to be taken into consideration).

The following graphs will give an indication of the effectiveness of the old system used in a large mining house, as well as that of the new system of selection (on the basis of the tests discussed above): (A correlation coefficient of .66 was obtained using total test battery.)

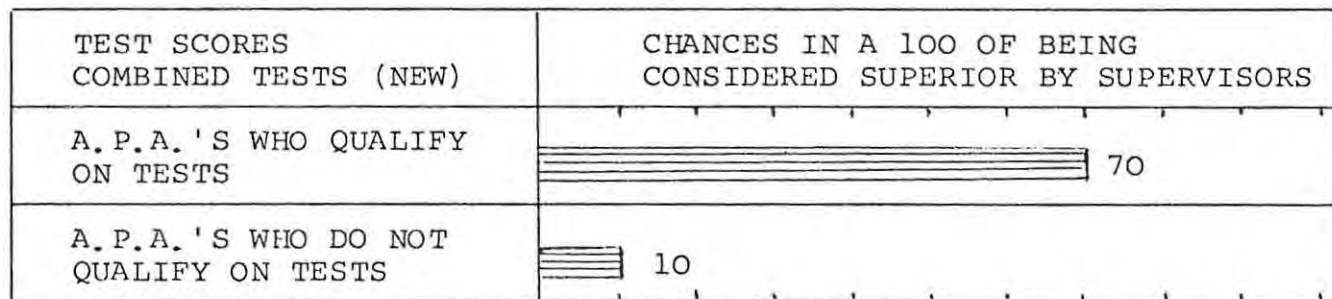
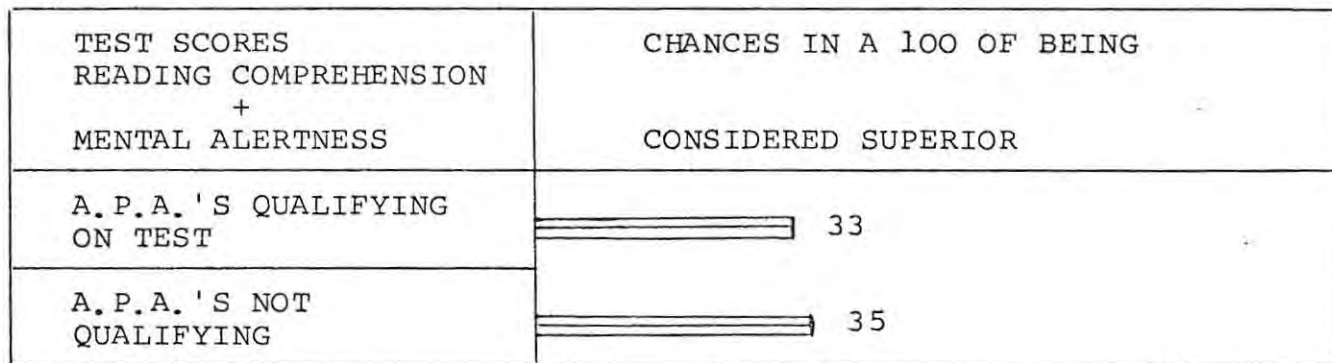
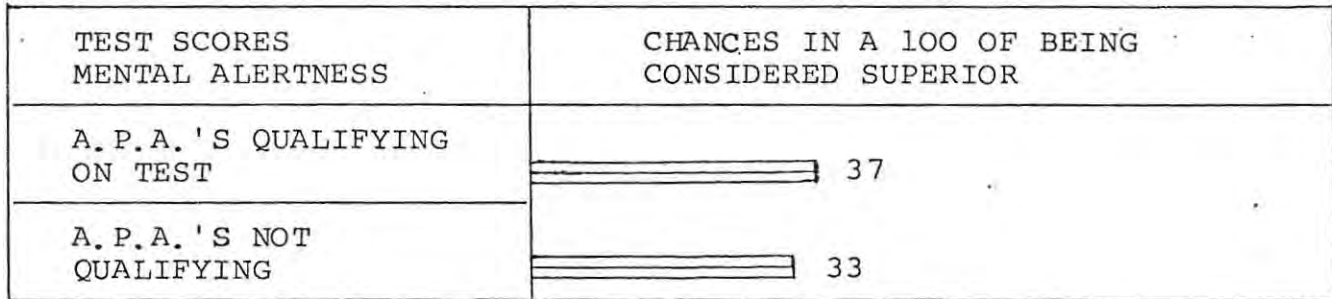


Figure 5

7.4 Development Of A New T.A.T.

The aim of this exercise was to design a set of 9 pictures which depict scenes familiar to the Blacks in both an industrial and semi-rural environment. As a minimum education level of standard 8 was required for the positions being studied, it was assumed that the Blacks from rural areas would have undergone a certain degree of Westernization (through schooling) and so would be familiar with the semi-urban pictures depicted.

A completely novel T.A.T. was devised as was done by Baran (1971)

She advocates the use of a novel T.A.T. as "Almost invariably, one finds that even when a test is adapted in great detail, the basic form is retained. It is argued here that such cultural translations may render new tests literally comparable but not necessarily operationally." (Baran, 1971, P.2)

After extensive pilot studies and research into various topics and the African's attitudes to them, S. Baran found that certain topics were of great relevance to the Black population,

- e.g. a) relation to authority and work situation
b) relationship to parents
c) relation to the group
d) death or violence.

It was decided to use pictures depicting these types of topics, purely for the facilitation of story telling (As Baran had already found these topics to be relevant to Blacks). It was not felt to be of any value to carry out further studies in this direction especially in the light of Arnold's criticism of Atkinson's statement that "each picture (in the TAT) arouses "cognitive expectancies" which can be measured, and

represents "fairly standard conditions for the measurements of any human motive. (Atkinson 1958, P.615)

Arnold argues that the expectancies aroused by the picture refer to the topic or motif of the picture, not to the story. Even a very stereotyped picture can be the starting point of stories with very different plot and outcome.

Since it is the play of imagination that is the important factor in a story, the action, plot and outcome matter, not the picture about which the picture is told or even the characters appearing in the picture. .

Arnold states that any general kind of picture can be used and that good imports and sequences have been obtained when using pictures from magazines or when people are asked to tell a story. e.g. "Tell me a story about a boy and a violin."

However, in order to tell a story easily with no picture or with very general pictures, such as those found in magazines, a fertile imagination is required. Pictures illustrating a dramatic situation certainly do help the person to generate stories. It is thus for practical reasons that Baran's themes were adopted, i.e. to facilitate the story telling.

The experimenter obtained a variety of illustrated books pertaining to African cultures as well as magazines aimed at the black population e.g. Drum, Bona, Fide. A number of pictures were drawn which were representative of the Baran themes. (The pictures and photographs in the books and magazines were used as guide lines e.g. how people dress, shapes, body size, settings, etc.)

An attempt was made to draw pictures which would be applicable to both urban and semi-urban Blacks. i.e. people who have undergone a certain degree of Westernization.

This was done by alternating pictures of an urban and rural nature but not giving details in the picture which would require an intimate knowledge of either rural or urban living (or lifestyle)

Initially fifteen pictures were drawn. These 15 pictures were then given to a number of senior blacks (in the upper B band) on mines which were not to participate in the study. (N = 50)

The testees were asked to write stories about each picture. After the exercise, testees were asked to identify those pictures which caused difficulty in generating stories and to state their reasons as to why they found them difficult. Some pictures were felt to be too vague and the testees could not make out the actual picture and so were eliminated. Some pictures tended to elicit extremely stereotyped stories such as parables and so were not generating novel stories but rather eliciting well-known ones.

A final set of nine pictures was used in the study. After the exercise it is suggested that should the TAT be used in the future, card no. 5 and card no. 7 should be replaced by pictures that are more dynamic (or dramatic). These two cards elicited a general description of the cards or a stereotyped story e.g. the sheperd who left his 99 sheep to find the missing one. Card no. 7 is felt to be too rural in content to be relevant to a Black who has a standard 8 (or above) education level.

Examples of the TAT pictures are included in Appendix B

7.4.1 The Administration of the TAT

The test instructions drawn up were based on Arnold's instructions which were similar to those used in the Murray test. These were used so that it was possible to score the protocols according to the Arnold System as well as the McClelland System. These instructions were given to the subject before the pictures were placed in front of him. (Instructions given in Appendix B).

The T.A.T. pictures were again administered to sample (a) a year later and the protocols were scored by the same method as described above (i.e. two independent Raters). In this way it was endeavoured to establish the constancy of the Arnold Scoring system as a measure of the personality predictor, achievement motivation.

Descriptions of scoring procedures used:-

Arnold

McClelland

7.5 Scoring System For The TAT (M.B. Arnold)

7.5.1 The Import

When using the Arnold System it is the story imports that are scored and not the story elements. An import is a statement of what the story is actually saying; a statement which abstracts from the concrete details of the story, those elements applicable to the storyteller's life.

What the storyteller writes about the picture will, according to Arnold, reveal his convictions (what she terms the 'moral' of the story). When the moral is applied to the storyteller's subjective circumstances, one gets the import - which is the meaning or significance of the story.

Imports are formulated 'blindly' (i.e. no information about the person is given to the scorer other than the protocols) so as to eliminate reading into the stories what one knows about the person whose stories are being scored.

"The only thing necessary is to formulate the import so that it expresses what is implied in the story from the point of view of the storyteller. This means suspending judgement, foregoing interpretations based on some personality theory, however plausible, and simply listening to what the storyteller is saying. Such an attempt at abstracting the essential meaning of the story is akin to the effort of the non-directive counsellor to get at the "feeling" behind the client's morals without projecting his own." (Arnold, 1962, p.65)

All the imports are formulated prior to allocating scores so that imports can be linked whenever possible to what came before and what follows. This is necessary as a given problem is often explored in several stories and if the stories are not linked important clues may be missed.

Though it is important to link imports when they do belong together, one should not force a linkage when stories obviously refer to different trends of thought. In the clinical situation a sequence is often very easy to identify as a central problem is so transparent that it is stated in every story. However, with normal groups this is not always the case.

It is also easy to score the imports of extreme high achievers, even without well worked-out scoring criteria. The difficult imports to score are those derived from the stories of people whose motivation is neither consistently positive nor strongly negative. It is for these middle-range imports that the scoring criteria must be as concise and complete as possible.

7.5.2 Significance Of The Import

According to Arnold, the storyteller says something about a particular situation in every story. He talks about possible ways of coping with the particular set of circumstances he imagines, and shows whether the action taken in the story is successful or unsuccessful. Successful action seems to imply that this is the correct way to act if one wishes to achieve success. He could also imply whether the kind of success achieved is desirable or undesirable. The import which emphasizes the intention of the storyteller and frees it from the incidental details (i.e. story elements not crucial to the 'moral' of the story)

highlights the positive or negative aspect of the story. A few examples will illustrate this point. (Protocols typed exactly as written by subject)

PROTOCOL 8 (A.P.A. rated as good in the test and re-test sessions)

When I was a child my ambition was to become a policeman, I used to see the police on horse back dressed in an onefull uniform which made them important to me. I said I will wear this uniform one day and also become important.

When starting my career of working I was a watchguard. I looked after the place with great vigilance and in three occasions I proved myself to be trustworthy. One day the police van stopped at my working. The seargeant driving the van called me. He asked me whether I do not like to join the police. I said yes. He told me to report at the Charge Office the following day. Thus I did. I was signed on. Today I am a police looking after the security of my people. My ambitions have come true.

Import

When one has ambition and is prepared to work hard and prove oneself, one's ambition will be realised.

This story shows that dreams sometimes do lead to achievement but that they must be realistic and require work and effort.

Below is another protocol which also shows a desire for achievement, but no realization that a great deal of effort must be put into striving to attain one's goal (achievement) is manifested.

PROTOCOL 9 (A.P.A. rated as poor in the first test session and was no longer in employment in the re-test session)

A family with friends and relatives were at a celebration party for the graduation of their son. Attendants were having drinks. The waiters were also invited to give help at a party. Each student dreams for success.

Import

When one sees others achieving success one dreams of doing likewise.

Arnold postulates that if it does not occur to a person in telling a story that dreams must be supplemented by work and effort, it will not occur to him in the real life situation either. She bases this postulate on the fact that this was found to be the case in hundreds of records of high achievers in various occupations.

"Good teachers, high achievers in elementary and secondary schools as well as in college, well adjusted navy men, successful executives, all of them do tell stories in which success is achieved by personal effort or initiative, by adapting means to ends. The inadequate or unsuccessful member of these categories in contrast, do tell stories in which success is achieved as a result of dreams or resolutions without indicating personal effort. It is from the records of these groups of high and low achievers that our notions of positive and negative motivations were derived."

(Arnold, 1962, P.69)

A number of protocols, imports and their scoring are given in Appendix D.

7.5.3 The Hero In The Import

Usually, the story is told from the point of view of the storyteller, and the import should be formulated accordingly. However, if there is a choice between two characters, either will do, as both imports if formulated accurately, will turn out to be either positive or negative. However, one should take the sequence into consideration if the stories switch from one character to another as this would identify the point of view of the particular character, which is adopted by the storyteller.

7.5.4 Stories Without Outcome

Arnold postulates that every import is either negative or positive as no indifferent attitudes exist when action of any kind is present (with the exception of imports describing rest, e.g. "after work you rest." (0,IB(i))

When there is no outcome it is advisable to look at the sequence which often helps to infer the import. However in this study, from the extensive analysis of protocols, the experimenter decided to allocate 0 to stories which were descriptive and had no outcome rather than the score of -2 (I A 6 -no goal is indicated) as so many pictures were described that it was felt to be a tendency of the Blacks tested, rather than a lack of motivation on their part. Had the score of -2 been allocated for descriptive stories, scores would generally have been significantly lower.

7.5.5 Incomplete Imports

Sometimes an incomplete import will be carried out and completed in the import of the next story, e.g.:

1. The death of an old lady's companion:

Import

Sometimes, a life-long companionship may suddenly come to an end,

2. A boy leaving his mother to go to a better job:

Import

But the separation may mean the opportunity to advance. If you act in spite of the pain, it will be the best thing in the end.

The import for story 1 would usually be scored negative; but the combined import (for stories 1 and 2) is obviously positive and as such renders them both acceptable.

FOR SCORING PURPOSES DIALOGUE MUST BE AVOIDED - The story must be straightforward, have a plot and outcome and be free of dialogue.

7.5.6 Clinical Evaluation Of The Sequence Analysis

"The storyteller's preoccupation betrays his problems, and the import sequence lets us see them in the correct perspective. The import strips the story of its embellishments and lays bare the kernel of personal truth. The sequence provides the thread that links the imports together and reveals the various alternatives of action available to the storyteller. He can deal with his problem in a positive, constructive way, or in a way that betrays aggression, resignation, anxiety or despair." (Arnold, 1962, P. 80)

However, positive attitudes will enable a man to succeed only if the work he has chosen is within his range of intelligence. Positive attitudes cannot, however, guarantee either success or contentment in the vocation a man has chosen.

Arnold states that the sequence analysis can identify potential misfits before they enter some highly demanding vocations like the ministry or convent life. Although the experimenter concedes that this could be useful in a selection procedure, the clinical interpretation is outside the realm of this particular study as the unemployed Blacks (Urban sample) as well as the APA's were not required to make a radical change in their lifestyle as is the case for people entering the vocations Arnold enumerates e.g. ministry, convent life, missions.

However, the sequence of imports should always be studied as it does identify vocational problems, the identification of positively motivated people who are in difficulties and as such, cannot function effectively; it also provides valuable clues to factors that may impair a man's effectiveness, as well as a person's preoccupations with conflicts and difficulties.

(The experimenter was successfully able to identify a man as being involved in subversive activities on the border (training of Black guerilla soldiers) from his protocols although his employers were not aware of these activities until after his arrest).

7.5.7 Learning The Arnold Scoring System

As it is the import and not the story that is scored, Arnold stipulates that it is essential to formulate the imports in such a way as to include the story aspects that are needed for scoring.

The method for learning the Arnold system is as follows:

- i) . Beginners must score a minimum of 20 sets of protocols (in this exercise each set comprised of 9 protocols) whose imports have been formulated by experts (in this exercise these had been formulated by C.J. Coertze who has used the Arnold system extensively) to familiarize themselves with the scoring categories before trying to abstract an import.
- ii) Before being able to derive imports correctly from the stories, the scorer must be familiar with the scoring categories as well as remember which story situations are important for scoring.
- iii) To keep the import objective, it is essential that the interpreter includes all the nuances of the story. This can only come with practice

formulation of imports is a group exercise where agreement is reached as to which import is the most precisely formulated.

Once trained however, different scorers formulate imports that are highly reliable and placed in the same scoring categories.

- iv) Each import should be scored by consulting the scoring categories until the scorer can remember the main categories, the headings and main sub-divisions. The categories and headings are ordered according to their importance for scoring.

There are four scoring categories:

- I Achievement, Success, Happiness, Active Effort (or lack of it)
- II Right and Wrong
- III Human Relationships
- IV Reaction to Adversity

7.6. Using The Scoring Criteria

- I. Achievement, success, happiness, active effort (or lack of it)

This category includes success and failure in its widest sense. It incorporates financial success, success in work, effort of every kind, happiness and other kinds of favourable outcomes. Also included is lack of success i.e. failure of every kind: failure in business or profession, unhappiness and any kind of unfavourable outcome.

One condition has to be met for an import to be placed in category I : A goal has to be contemplated or reached, even if the goal is vague and the means of attaining the goal, ineffective.

This category also includes active effort of every kind which does not lead to success or failure and has no antecedent that would fit in any other category.

II. Right and wrong

Imports can be scored in this category when they include well intentioned, reasonable, constructive or responsible action or alternatively, ill-intentioned, impulsive, destructive or irresponsible action. Also included are actions that carry out or omit carrying out duties and obligations.

Intentions and actions as well as their consequences are included in this category. Stories can be scored under this category when the ethical significance of an action or its personal consequences are the theme.

III. Human Relationships

This category includes actions and attitudes concerning other people and things when these actions cannot readily be found under the previous two categories.

The relationship in which other people influence the hero and that in which the hero influences other people are sub-divided into two other categories; viz C. Influence of others
E. Influence on others

IV. Reaction to Adversity

This category includes the main possible reactions to various different kinds of adversity. Loss, harm, separation, disappointment, difficulties, all of which need some attempt to cope with adversity. The only kind of adversity which is not included here is failure which is included in category I.E. consequences of success (failure).

Adversity may be overcome or simply accepted. A statement can be made that adversity is the result of some event or personal action.

7.6.1 Sub-headings

Each category has various sub-divisions designed to indicate the general lines that should be followed in scoring. Once a category has been determined (i.e. the category under which the import falls) the conditions of action should be looked up under the headings and sub-headings.

The headings of the categories are as follows:

- I. Achievement, Success, Happiness, Active Effort (or Lack of it)
 - A. Goals, purposes,
 - B. Means taken toward goal,
 - C. Adaptability as to goals and means
 - D. Influence of others on success, achievement,
 - E. Consequences of success (or failure)
 - F. Attitudes connected with success (or failure)

- II. Right and Wrong (Well-intentioned, reasonable, responsible action versus ill-intentioned, impulsive, harmful, irresponsible action)
 - A. Actions
 - B. Intentions, attitudes, emotions
 - C. Effects (consequences) of punishment

- III. Human Relationships
 - A. Good (friendly) relations (including friendship, love, marriage)

- B. Bad relations (including quarrels, enmity)
- C. Influence of others,
- D. Influence of others on success, achievement,
- E. Influence on others
- F. Attitudes (toward people and things, God, nature, life, etc.)
- G. Attitudes connected with success, achievement, or lack of it.

IV. Reaction to Adversity

- A. Loss, harm, danger, terror, separation, disappointment, difficulties.

7.6.2 Allocation Of Scores

Each category contains headings and sub-headings under four possible scores; from very positive to extremely negative: +2, +1, -1 and -2.

- +2 = overt and positive behaviour
- +1 = activity that may not be very overt (planning, positive attitudes) or very positive (there is failure along the way but success is finally reached).
- 1 = lack of positive action (e.g. success is the result of passive dependence on others; failure comes because nobody helps or advises.
- 2 = indicates extremely negative, impulsive or malicious actions or attitudes (e.g. failure leads to desperate action, wrong doing succeeds; success comes in spite of refusal to take reasonable advice.)

Arnold states that the scoring criteria makes it possible to locate any import within the category and heading (although it is not possible to provide a sub-heading for every import found in stories) However, by comparison with the listed sub-headings one can determine what score should be assigned to imports not in sub-categories.

The scoring categories and headings are listed in order of priority for scoring stories that have plot and outcome. To determine the score the import is initially examined to assess whether it indicates success or failure of any kind. If so, it is placed under Category I.

If no hint of success or failure is contained in the import or if punishment is mentioned, one then looks at Category II. Right and Wrong. Imports which are included in this category are concerned with reward or recognition for a well-intentioned action (rather than successful achievement) and punishment for an ill-intentioned action.

If an import is neither concerned with a goal and means of achieving it nor with the right and wrong of action it could be placed in Category III, Human Relationships. These imports would then describe some confrontation of person with person or of a person with his environment.

If the import is not concerned with any of the issues enumerated in the abovenamed categories, it may fit into Category IV, Reaction to Adversity, which includes any statement of how adversity is faced (whether there is any action or not).

A few examples of imports and their scoring will be given to illustrate the above discussion.

1. Import

One must realise that everything comes to an end and there is nothing one can do about it.

Scoring

-2 III F 2(b)

III Human Relationships

F Attitudes, -2

2. Pessimistic Imports

(b) time, war, nature etc. produce destruction
(e.g. eat and be eaten is the law of nature)

2. Import

When one does wrong and is caught one tries to escape punishment by pretending to be ignorant.

Scoring

-2 II A 1(a)

3. II. Right and Wrong

A. Actions, -2

1. Wrong-doing does not have undesirable consequences, it

a) is followed neither by punishment nor repentance and restitution.

4. Import

When one is told of a tragedy one is in agony, cries and wonders about the future.

Scoring

-2 IV A 5(b)

IV Reaction to Adversity

A. Loss, -2

5 Adversity leads to undesirable actions or attitudes; it

b) ends in emotion, despair or destruction.

5. Import

People must be taught the way to live peacefully and harmoniously as problems, if not solved peacefully, can result in death.

Scoring

+1 I A (2)

I Achievement, success

A. Goals, +1

(2) Imports embodying (constructive) principles (e.g. freedom must not be sacrificed for strength.

6. Import

With the changing times one adapts in order to be successful in a technological age and so reap the benefits.

Scoring

+2 I C 1(b)

I. Achievement, success

C. Adaptability as to goals and means, +2

1. Success follows when goals or means are readily adaptable.

b) When goals are modified according to circumstances

7. Import

When one loves one's companions, good relations are continued throughout one's lifetime and one passes down one's love to one's children.

Scoring

+1 III A (4)

III Human Relationships

A. Good

4) Positive attitudes toward implied human relationships.

8. Import

When one is unemployed one takes a decision to find work. When work is found, one is productive and so can provide for a better future and serve as an example to others.

Scoring

+2 I B 4(a) or (c)

I. Achievement, success

B. Means taken toward goal, +2

4) Positive attitude toward work

a) Is seen as valuable

b) Brings reward

9. Import

As costs are increasing, it seems as if everyone will be forced to work instead of spending time with one's family (and so neglect the family)

Scoring

-1 B 6

I Achievement, success

B Means, -1

6) Negative attitude toward work

Examples of Protocols, Imports and Scoring are contained in Appendix D.

7.6.3 The Intensity Scale

The scores from +2 to -2 represent a five point scale (+2, +1, 0, -1, -2) which measures the direction and intensity of motivation.

According to Arnold's system in the intensity scale, a score of 0 means that no motivation is revealed, as a story was not completed or description of the picture.

7.6.4 The Consistency Score

To obtain a final score for a set of stories one can add the plus and minus scores in a record algebraically and use these as the final score. This score indicates how many more positive than negative scores a record contains and vice versa.

For a person to be completely consistent in his motivation, he would reveal only positive or only negative attitudes of the same strength. In a 20-story sequence, his final score would be +40 for strongly positive motivation or -40 for strongly negative motivation.

However, a man who is so inconsistent that he is just as likely to reveal negative as positive attitudes in a story, and reveal the one in the same strength as the other, would have a final score of 0 as the positive and negative intensity scores would cancel out. However, between these two extremes outlined above, are various degrees of consistency.

The final score is a measure of the consistency with which the individual reveals either positive or negative attitudes viz. the consistency score. (i.e. whether an individual consistently shows positive or negative attitudes or alternates between the two attitudes (i.e. has no consistency)).

The consistency score indicates both the direction and the consistency of motivation.

7.6.5 The Motivation Index (M.I.)

To make the two scores comparable, one must use a linear transformation which will not change the nature of the raw scores but will give their equivalent in units of the two different scales. One can transform the raw scores into a proportion, the ratio of actual scale units obtained over the maximum units obtainable and express it in decimals. With 20 stories, the final (consistency) score can range from -40 to +40, which means a total range of 80 units.

To facilitate calculations, one must multiply the values for each possible ration (units obtained over units obtainable) by 200. This gives 100 as the arbitrary zero point for consistency, that is, the point at which an individual obtains half the possible units on this scale. All negative consistency scores will give index values below 100, all positive consistency scores will give values above 100, up to the scale limit of 200. All index values below 100 indicate negative motivation of increasing consistency as they approach zero. All index values above 100 indicate positive motivation of increasing consistency as the upper limit of this continuum is reached, namely, an index value of 200.

The formula for calculating the index value for any score in a 20-story record is

$$\frac{n}{80}200$$

where n is the number of units of the total scale actually obtained; this number can be derived from the final (consistency) score.

Since the M.I. is a ratio between the number of units actually obtained and the maximum units possible on a given consistency scale, it is in principle roughly comparable even though the final scores of the records (consistency scores) may be derived from story sequences of different length.

7.6.6 Reliability of the Motivation Index

According to Arnold, since every story is scored by reference to the same scoring criteria, and since the import derived from the story is scored and not the picture about which the story is told, every "item" in the test must be equal to every other "item". H.J. Fagot (1961) found that the two positive and two negative scores were evenly distributed among all the cards used in a sample of 252 records of twelve stories each.

Given perfect scorer reliability, the consistency of these measurements would be a direct indication of the storyteller's motivational consistency.

"To gauge a storyteller's consistency, we must make repeated measurements; in other words, we must ask him to tell several stories. Instead of measuring various dimensions of the quality we want to measure, as we do in intelligence tests and in most personality tests, we are actually taking many measures of one and the same dimension, which is the storyteller's motivation, positive or negative". (Arnold, 1962, P.151).

The motivational index was not used in this study as

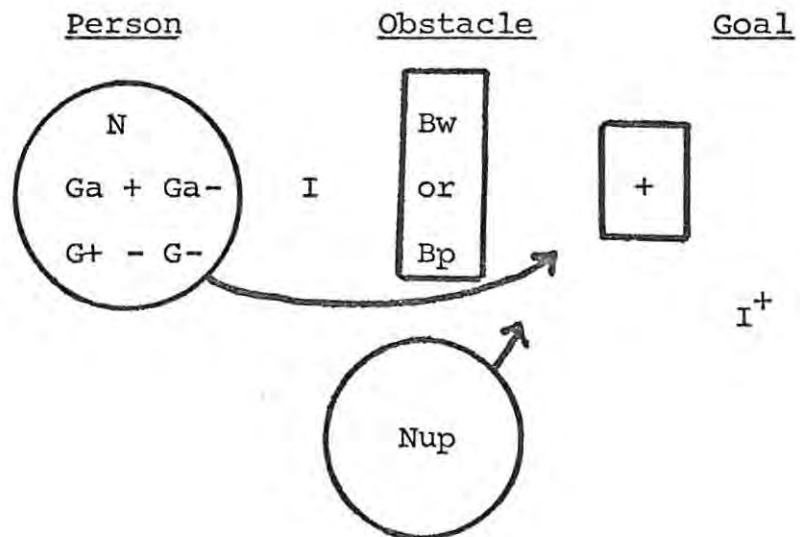
- 1) the experimenter was of the opinion that the consistency score was an adequate measure of achievement motivation's direction (i.e. whether positive or negative) and
- 2) Arnold stipulates that more than 10 cards must be used before one can calculate the Motivation Index (only 9 cards were used in the study). The scoring system was slightly adapted and more scores of 0 were allocated than is the case with Arnold's system and thus it would have been of no benefit to calculate the M.I. values as no tables are given in Arnold's book for the M.I. of less than 10 stories.

7.7 Scoring Procedure - McClelland

Scoring is by content analysis, following a modification of the method developed by McClelland et al. (1958). They see the behavioural sequence as a person experiencing a state of need (N) striving toward a goal which has a positive valency (as illustrated in the following diagram). The person may experience :

FIGURE 10

Schematic Diagram Of Behavioural Sequence,
Showing Scoring Categories (McClelland et al. (1958))



an affective state (G) in his striving toward a goal. This state will have a positive or negative valency (G^+ or G^-). He may expect to attain the goal or possibly, not to attain it (this is represented by the symbols $G_a +$ or $G_a -$). In his striving toward a goal, the person may be involved in activity which is instrumental to his striving. The outcome of this activity will be stated as successful ($I+$) or unsuccessful ($I-$). An obstacle, either internal to the person, or external (B_p or B_w) can prevent the attainment of the goal. Finally it may happen that somebody helps or sympathizes with a person in goal-directed activity i.e. nurturant press (Nup).

The goal defines whether or not the scoring categories shown in the diagram are achievement-related. Therefore one must concentrate on what in fact constitutes an achievement goal.

7.7.1 Achievement Imagery (AI)

McClelland et al. (1958) defines need Achievement as :

"success in competition with a standard of excellence."

If a goal is identified as an achievement goal the scoring category termed "Achievement Imagery" (AI) may be scored. In order to ensure that AI is correctly identified, certain criteria must be met. These criteria are described in detail by McClelland et al and will be shortly summarized here.

AI may be scored for a protocol provided that :

- i) competition with a standard of excellence is explicitly stated e.g. when a subject actually states doing as well as or better than others as a primary concern. If a character in the story is engaged in some competitive activity, but where competition with a standard of excellence is not explicitly stated, AI may be scored if there is evidence of affective concern over goal attainment or if there is instrumental activity which indicates a desire to compete successfully. In this event competition with a standard of excellence is considered to be implicit

It should be noted that the expressed or implied competition need not be with others - it can be competition with a self-imposed requirement of good performance.

7.7.2 Achievement Thema

Achievement Thema (Ach. Th.) is scored when achievement forms the central plot of the story. Even if the plot eventually does not succeed, it is nevertheless scored for Ach. Th. as long as the story revolves around the achievement behaviour sequence. If there is any doubt about achievement being central to the plot, Ach. Th. is not scored.

7.7.3 Stated Need For Achievement

A clearly stated desire by a character in the story to reach an achievement goal is scored Need for Achievement (N). This statement must be explicit and may not be merely inferred from Instrumental Acitivity, no matter how obvious it may seem to the investigator that a character is struggling to reach a goal. Not all statements of desire in a story are indicative of need for Achievement. Clear statements of N would be e.g. 'he wants to become a miner, or 'he wishes that he would pass his exams.'

7.7.4 Instrumental Activity

If a character is engaged in mental or physical activity indicating that something is being done about attaining an achievement goal then Instrumental Activity (I) is scored. It is not essential that the outcome of the activity should be successful for I to be scored - what is essential is that the activity should be related to achievement. A further condition is that the Instrumental Activity be independent of both an opening statement describing the situation, and the outcome of the story.

7.7.5 Doubtful Achievement Imagery (T.I.)

Stories scored TI are those which contain some reference to achievement but fail to satisfy any of the criteria mentioned previously. In a case where there is doubt about whether one of the criteria can be met, the story is still scored TI. A story which is scored TI is not scored further for any of the above mentioned categories.

7.7.6 Unrelated Imagery (UI)

A story which fails to have any reference to achievement imagery at all, is scored UI, and is not scored further for any sub-categories.

However, when applying a 'European' scoring system to the Blacks it is imperative to be cautious for :

In scoring the stories of other cultures without knowledge of the culture, McClelland stated it would be necessary to adhere to the criterion of an explicit statement of concern over successful competition with a standard in order to define the achievement goals of that culture. Only with growing knowledge of the culture could other criteria be added which involve the inference that competition with a standard of excellence is inherent in certain cultural activities.

7.7.7 Quantification Of Score

Following the lead of McClelland et al. (1958) stories scored for UI received a point of -1, and were not scored further. Stories scored TI received no points. If a protocol was found to satisfy the requirements for a score of AI, one point (+1) was awarded. A protocol scored AI of course qualified for sub-category scoring. One point was given for each sub-category scored. (McClelland scoring system is included in Appendix C).

7.7.8 Scoring Of The TAT

Scorer bias was avoided by ensuring that the Scorer did not know to which sample group each protocol belonged while the scoring was in progress.

In sample (a) the Scorer had no information as to which category the subject had been placed (i.e. good, average, poor). Each subject was allocated a number, and received the same number a year later at the first retest session. At the test - retest session protocols were scored independently of those marked a year prior and only when 92 protocols had been scored were these then matched up to the scored protocols of the previous year.

Each protocol i.e. for both Sample (a) and (b) were scored by two raters independently of each other and only at the end of the scoring of all the protocols were those scores matched. Inter-Rater Reliability Correlation Coefficients were calculated for both the first session of TATs in Sample (a) TAT A1 and A2 as well as the second session TAT (B1 and B2) and in Sample (b) TAT (A1 and A2)

Inter Rater Reliability Coefficient for Sample (a) was ,89

Inter Rater Reliability Coefficient for Sample (b) was ,86. (Using Pearsons' Product Moment Correlation Coefficient.

Using an analysis of variance (ANOVA) it was found that there was no significant difference between TAT A1 and TAT A2 (both Sample (a) and (b)); between TAT (A1 and B1) and between TAT (A2 and B2) i.e. the scores obtained on one TAT were not significantly different when scored by another trained scorer, nor did the protocols differ when the same TAT pictures were given a year later under the same conditions. (If value <1 on each variable). (For statistical discussions refer to section 8).

When scoring the protocols using the McClelland system, the same procedure as outlined, was followed. (50 protocols were selected randomly from Sample (a) Session 1 and scored by 2 scorers independently of each other).

Inter Rater Reliability Correlation Coefficient was higher than that of the Arnold Scoring Procedure $r = ,98$. (Spearman Rank correlation coefficient as McClelland TAT scores were not normally distributed).

7.8 The Urban-Rural Scale

Administration of the test - U-R Scale

Subjects in sample (a) and (b) were given the questionnaire, as all people in the samples were literate. Any words needing clarification were explained.

It was emphasized that the questionnaire would in no way jeopardize the jobs of sample (a) nor would it be used as a selection tool for sample (b).

There was no set time limit for the test.

7.8.1 Scoring System for the U-R Scale

Scoring was carried out by hand adhering to the method laid down by Grant (1959).

Rural responses were assigned a zero and urban responses a one. Those people who scored below 5 were categorized as rural, those who scored between 6 - 11 were transitional, and those who scored above 11 were categorized as urban.

Although Grant confined his study to a Zulu sample he postulates that the scale should prove to be as valid when applied to other African groups with their own tribal heritages.

7.9 Job Satisfaction Index

Administration of the test (sample (a))

The Job Satisfaction Index is self-administering and takes about 10 minutes to complete.

Once again it was stressed that the questionnaire's content was confidential and would not be divulged to employees. To ensure that the subjects were not placed in a stressful situation, the questionnaire was not filled in during the testing session proper, but just a few days before the session. Each subject received a number so that no questionnaire could be identified except by the experimenter (who had allocated those numbers)

As the unemployment figures were rising (1977) all precautions were taken not to make the subjects feel threatened, to ensure that they answered the questionnaire as accurately as possible.

7.9.1 Scoring the Job Satisfaction Index

The scoring method followed, was that laid down by Brayfield and Rothe (1951) which was described in 6.3.7. (a) (Job Satisfaction Index in Appendix B

TABLE 8

Explanation of Abbreviations used for the TAT

Rater	Testing Session	System Used and Sample	Abbreviation
Rater 1	1st	Arnold Sample (a+b)	TAT A1
	2nd	Arnold Sample (a)	TAT B1
Rater 2	1st	Arnold Sample (a)	TAT A2
	2nd	Arnold Sample (a)	TAT B2
Rater 1 and Rater 2	1st	Arnold Sample (a+b)	TAT (A1 + A2)
Rater 1 and Rater 2	2nd	Arnold Sample (a)	TAT (B1 + B2)
3	1st	McClelland Sample (a)	TAT Mc1
4	1st	McClelland Sample (a)	TAT Mc2
3 + 4	1st	McClelland Sample (a)	TAT (Mc1 + Mc2)

CHAPTER 8

Results and Discussions

The first half of this section will deal with the reliability of the measure(s) and the second with the inter-correlations between them. In the second section one will investigate the extent to which the findings substantiated the hypotheses stated for the study.

For ease of presentation the results for each section will be given in tabular form, with the relevant page numbering, prior to that section.

8.1 Reliability of the Measures

8.1.1 The T.A.T.

Scoring: Inter Rater agreement was determined by intercorrelational procedures (product moment); high correlations were found among the ratings of the 4 judges used for 3 different exercises.

Raters 1 and 2 scored the TATs in both samples (a) and (b) according to the Arnold Scoring System. Both raters had received thorough training and had scored over one thousand sets of protocols, (formulating the imports, as well as scoring according to the scoring criteria) prior to this exercise.

Raters 3 and 4 scored the TATs (according to McClelland's system (N = 50 randomly selected in sample (a))). Both raters were experienced scorers and had used the McClelland System for many years.

In order to ensure that the scoring systems were accurately being adhered to, cross-checks on a random sample of scored sets of protocols were made (N = 30 for the Arnold System and N = 15 for the

McClelland System). None of the protocols had any marks on them which could have influenced the score of the additional rater in any way. The third rater had used both the Arnold and McClelland Systems extensively. (C.J. Coertze, 1974). No difference was found in the scores the additional rater obtained on both scoring systems with those obtained by raters 1, 2, 3 and 4. (No correlations were computed to include the additional rater, as his function was purely a monitoring one).

TABLES PERTAINING TO 8.1

RELIABILITY OF THE MEASURES

8.1.1 The T.A.T

TABLE 9

a) Reliability of the TAT scoring methods used in the study

SAMPLE	TESTING SESSION	SCORING METHOD	RATERS	TYPE OF RELIABILITY	CORRELATION COEFFICIENT (PEARSONS)
Sample (a)	1st	Arnold	1 and 2	Inter-Rater	r = ,89
	2nd	Arnold	1 and 2	Inter-Rater	r = ,89
	1st and 2nd	Arnold	1 and 2	test-retest	r = ,90
N = 50 Randomly selected from sample (a)	1st	McClelland	3 and 4	Inter-Rater	r = ,98
Sample (b)	Only one testing session	Arnold	1 and 2	Inter-Rater	r = ,86

On the basis of this high agreement it was decided to combine TAT (A1 and A2) as well as TAT (B1 and B2). According to J.M. Schepers this method (which was adopted by Baran) would minimize the danger of chance error. (pooling the 2 sets of data)

However, high scorer reliability does not tell us about the reliability of the test itself so TEST-RETEST RELIABILITY was investigated. The first testing sessions' TAT (A1 and A2) were correlated with those done a year later at the second testing session TAT (B1 and B2) Test-reliability correlation was ,90.

As an added check to ensure that there was no difference between TAT (A1, B1),(A2, B2), an analysis of variance was carried out. There was no significant difference between the scores. (N = 60 randomly selected from sample (a) N = 92) i.e. F ratio values are not significant and range between 0,202 and 0,18797 (Appendix E)

"The analysis of variance should prove to be an extremely useful tool in the problems which involve a "test of technique" i.e. where the experimenter is not sure that he can reproduce his results. Such failures may be the result of inability to standardize and thus control the conditions of the experiment. They may also be due to unreliable observers or unreliable measuring devices or other factors. (Anastasi, 1968, P.133)

TABLE 10

8.1.2 b) Means and Standard Deviations of the U-R Scale and the Resistance to Change Factor for Samples (a) and (b)

Sample	U-R Score		Resistance to Change	
	Mean	S.D.	Mean	S.D.
Sample (a)	8,01	3,02	1,51	0,92
Sample (b)	10,82	2,43	1,71	1,00
Sample (a + b)	9,96	2,98	1,65	0,98

TABLE 11

8.1.3 c) Job Performance Means and Standard Deviations for Sample (a)

Sample (a)	Rating 1		Rating 2	
	Mean	S.D.	Mean	S.D.
	3,17	0,80	3,43	0,91

8.1.2 The Urban - Rural Scale And Resistance To Change

The reliability of this questionnaire was not examined, it is not a research tool but according to Grant (1969) a validated method of assessing the degree of urbanization.

The frequency distribution for this variable can be found in Appendix E. Although both Sample (a) and Sample (b) fell in relatively normal distributions they are two distinct population groups. In Sample (a) the mean urban score was 8,01 and whereas in Sample (b) the mean urban score was 10,82 (frequency distribution given in Appendix E)

8.1.3 The Job Performance Ratings

Job rating categories	5 - Good
	4 - Above Average
	3 - Average
	2 - Below Average
	1 - Poor

Subjects had been preselected by supervisors so that they were distributed in the following way :

N = 26 - would be above average
(i.e. categories 4 and 5)

N = 52 - would be average
(i.e. category 3)
would be below average

N = 26 - (i.e. categories 1 and 2)

These were relatively normally distributed. The twelve subjects who were not available for the second testing session (and so discarded from the study) were evenly distributed amongst the categories and so did not affect the distribution in any way.

Job performance rating is a very difficult criterion to measure. The experimenter had intended to compare the performance ratings with other factors (obtained from the record systems) such as accident rate, absence without leave, demotion, promotion, assaults. As the records were found to be completely inaccurate it was decided to establish the reliability of the supervisory ratings by comparing the ratings done a year later with those done at the first session. Mention must be made that the first merit rating system was carried out according to the procedure set out in section 6.3 whereas the following year the assessments done by the supervisors (though using exactly the same form) were done prior to the testing

(This was done to ensure that the supervisors did not connect it with the merit rating given the previous year.

Supervisory ratings were found to correlate ,61 with each other, the second rating mean being slightly higher than the first rating. Rating one's mean = 3,17 rating two's mean = 3,43. This was considered satisfactory.

8.1.4 Job Satisfaction Index

As this scale was used purely to assess whether a high TAT score and a low job rating might be correlated with a low job satisfaction index, this scale was not examined for reliability. The scale was used as a very 'rough' guide and the questionnaire scores on the whole tended to be at the upper end of the scale, though still in a relatively normal distribution. (Appendix E) This could have been due to the fact that the people tested were all currently employed and did not want to jeopardize their jobs by criticising the organization. (This was in 1977 when unemployment was rising considerably).

8.2 Intercorrelations between the measures

This section deals with the intercorrelations between the measures and the extent to which the findings substantiate the hypotheses.

8.2.1 Introduction

In this study it was not advantageous to restate the hypotheses in terms of the null hypothesis. It was felt that this would make the statistical discussion over-lengthy and cumbersome.

Prior to stating each hypothesis and the statistical treatment of the data, the following areas shall be briefly covered:

- 7.2.2 significance level and sample size
- 7.2.3 the region of rejection
- 7.2.4 the choice of Statistical tests

8.2.2 Significance level and sample size

In this study, for the five hypotheses, the level of significance $\alpha = .05$ was used. For ease of presentation the sample size, used to test each hypothesis, is given in tabular form

TABLE 12

Sample size used to test each hypothesis

Hypothesis	Sample (a)	Sample (b)	Total
1	N = 92		N = 92
2	N = 92	N = 200	N = 292
3	N = 92	N = 200	N = 292
4	Random N = 50 (out of 92)		N = 50
5	N = 92		N = 92

8.2.3 Region of Rejection

As the level of significance $\alpha = .05$ was used, the region of rejection (i.e. the probability of the occurrence being by chance alone) consists of all the values of Z which are so large or so small that the possibility of their occurrence is equal to or less than 5% (or .05).

Although the hypotheses in this study could be said to be directional (and so one could have used a one tailed test) it was decided to adopt the more conventional method of using a two tailed test.

8.2.4 Choice of Statistical Test

The following factors were taken into consideration when deciding which tests were the most appropriate for the analysis of the particular set of research data.

- i) the manner in which the sample scores were drawn,
- ii) the nature of the population from which the sample was drawn.
- iii) the level of measurement used for the sample. Parametric Tests, which are the most powerful or 'robust' in accepting or rejecting the hypothesis (null or alternate) have the following assumptions underlying their usage.

- i) the observations must be independent
- ii) the observations must be drawn from normally distributed populations
- iii) the variables must be measured in at least an interval scale, so that one can use the operations of arithmetic.
- iv) the populations must have the same variance.

However, there seems to be a considerable amount of disagreement amongst researchers over iii) the majority of statisticians do not mention iii) as an assumption of parametric statistics.

S.S. Stevens (1946) distinguished between four possible scales of measurement: nominal, ordinal, interval and ratio. He postulated that parametric techniques require at least interval scales (statistics is only appropriate for a given scale when it remains invariant under transformations which leave that scale invariant).

Gaito (1960) argues that the scale of the data is not the important consideration in using parametric methods but rather the extent to which the data conforms to the mathematical assumptions (i.e. normality, independence) of parametric statistics.

Gaito (1966) examined the consequences of violating the undisputed assumptions of parametric statistics and concludes that parametric statistics are relatively insensitive with regard to violating the assumptions of normality and homogeneity of variance. He suggests that the two main uses of non-parametric tests are:

- a) as a 'screener' to determine if it is worthwhile to conduct a more thorough parametric test and
- b) in situations where deviations from parametric assumptions are extreme.

Sawrey (1958) observed that non-parametric methods make a variety of assumptions depending on the technique and, like parametric tests it is important that these assumptions be met. Non parametric tests may generally be 'distribution free' but they are not 'assumption free' and if their assumptions are violated erroneous conclusions may result.

In conclusion, the main arguments advanced in the literature for the use of non-parametric methods in place of parametric methods are not very compelling. Most investigators generally agree that scale type is of no importance to

the choice of a statistical tool and even though the use of parametric methods requires more assumptions than non-parametric methods, if one fails to meet these assumptions, it does not appear to have serious consequences in most instances.

It was decided, in the light of the above discussions, to use parametric tests rather than non-parametric ones. The distributions of the various measures used were investigated and these are given in Appendix E. With the exception of the TAT scores (using the McClelland system) the frequency distributions were adequately 'normal'. This distribution was then normalized by logarithmic transformations and parametric statistics used.

Although, the measures used on the different tests were in interval scale, it has been postulated that scores obtained on a semantic Differential would not be in an interval scale. According to Siegel (1956)

"Most behavioural scientists aspire to create interval scales, and on infrequent occasions they succeed. Usually, however, what is taken for success comes because of the untested assumptions the scale maker is willing to make. One frequent assumption is that the variable

being scaled is normally distributed in the individuals being tested. Having made this assumption, the scale maker manipulates the units of the scale until the assumed normal distribution is recovered from the individual score."

(P. 27, 55)

However, adopting Gaito's (1960) argument that normalcy is the important assumption to make when deciding on what statistics to use, the Experimenter decided to treat the data by parametric methods.

The following statistics were used and the results will be discussed for each of the five hypotheses.

- a) Inter-scorer reliability correlation co-efficients (discussed in section 8.1)
- b) Test-Retest correlation coefficient (discussed in section 8.1)
- c) Analysis of Variance (discussed in section 8.1)
- d) Multiple correlation coefficients (i.e. correlation matrices - given in tabular form in Appendix E)
- e) Regression analysis

TABLES PERTAINING TO 8.3 - HYPOTHESES

TABLE 13

8.3.1 a) The Correlation Between Job Performance Ratings and T,A,T. Scores

Job Performance Ratings	TAT Score Results	Correlation* Coefficient (Pearsons)
Rating 1	TAT (A1 + A2)	r = 0,48
Rating 2	TAT (A1 + A2)	r = 0,70
Rating 1	TAT (B1 + B2)	r = 0,53
Rating 2	TAT (B1 + B2)	r = 0,77
Job Performance Ratings		
Rating 1	Rating 2	r = 0,61
TAT Score Results		
TAT (A1 + A2)	TAT (B1 + B2)	r = 0,90

Significant at the 0,05 level

EXPLANATION

Rating 1 - Rating done at the first testing session.

Rating 2 - Rating done at the second testing session

TAT(A1 + A2) - Combined Arnold scores at first testing session obtained by rater 1 and rater 2

TAT(B1 + B2) - Combined Arnold scores at second testing session obtained by rater 1 and rater 2

8.3 Hypotheses

8.3.1 Hypothesis (1)

There is a positive relationship between a high 'achievement motive' (as measured by the TAT, using the Arnold System) in Blacks and good job performance rating. (Results given in table 13)

The T.A.T. which was done at the first testing session (scored by 2 raters, see section 8.1 - scores were then combined in a method advocated by Schepers) was correlated with job performance rating 1 (method outlined in section 7.3.1) as well as with job performance rating 2 which was done a year later. The correlations obtained were significant at the 0,05 level.

T.A.T. (A1 + A2) correlated ,48 with job performance rating 1.

T.A.T. (A1 + A2) correlated ,70 with job performance rating 2.

As the aim of the exercise was the prediction of job performance more emphasis was placed on the second performance rating.

When one correlated the second T.A.T. scores (done a year later by the same subjects) the correlations were also significant at the 0,05 level.

T.A.T. B (1 + 2) correlated ,53 with the job performance rating 1 done the previous year.

T.A.T. B (1 + 2) correlated ,77 with the job performance rating done at approximately the same time as the testing.

As T.A.T. (A1 + A2) and T.A.T. (B1 + B2) were highly correlated with each other ,90 (as well as showing no significant difference when being compared, using an analysis of variance $F < 1$) one can state that the T.A.T. is a reliable

TABLE 14

8.3.2 Hypothesis 1 (Regression Analysis)

b) Prediction of Job Performance Ratings from the TAT Scores (Arnold)

Independent Variable	Dependent Variable	Significance Level	Accountable Variance
TAT (A1 + A2)	Rating 2	0,005 > P > 0,001	23%
TAT (A1 + A2) + (B1 + B2)	Rating 2	0,005 > P > 0,001	28%

measure of the achievement motivation in an individual when using the Arnold system. If one looks at the T.A.T. (A1 + A2) and Job Performance 2 one obtains a correlation coefficient of ,70 whereas when one compares the Job Performance rating 1 and Job Performance rating 2 one obtains a lower, though still significant correlation of ,61.

As the time lapse between T.A.T. A and T.A.T. B, as well as Job Performance Rating and Job Performance 2 was one year, any changes in the individuals' environment which could have affected his motivation on job performance should have accounted for any variance between the two measures used. For the T.A.T., however, there was very little variance between T.A.T. (A1 + A2) and T.A.T. (B1 + B2).

However, although one is able to categorically state that there is a positive relationship between the T.A.T. scores (using the Arnold System) and job performance, the correlation coefficient does not specify the prediction one can assume between the T.A.T. and job performance. To establish this a regression analysis was done. When using the T.A.T. (A1 + A2) as the independent variable and its effect on the dependent variable job performance rating 2 one finds that P is significant at the ,05 level. In fact $,005 > P > ,001$. When one looks at the variance in job performance accounted by the T.A.T. score one finds that there is a 23% variance i.e. the T.A.T. score can account for 23% of variance in job performance.

There seems to be no cut off point when one can accept a test as being predictive of a particular criterion but for practical reasons most researchers accept a test as being predictive if P is significant.

When the T.A.T. (A1 + A2) + (B1 + B2) are used as independent variables and job performance 2 as the dependent variable, $P < ,05$ and the accountable variance is 28%.

As these findings are indicative of a relationship (positive) between T.A.T. scores (using the Arnold System) and job performance ratings one can state that the Hypothesis (1) has been accepted. However, if one enters into the realm of the age old 'cause-effect' controversy, it is obvious that one could see the independent variable (T.A.T. scores) and the dependent variable (job performance ratings) as being interchangeable. It could thus be argued that higher job performance ratings result in higher T.A.T. scores as one has only results from a concurrent study.

If one compares the mean of sample (a)'s T.A.T. scores (7,26) with that of sample (b) $\bar{x} = 0$ one can see that the unemployed Blacks' T.A.T. scores are much lower than the employed sample (a). It could thus be argued that T.A.T. scores could be a consequence of being employed or unemployed and if sample (b) were employed and tested a year later, the T.A.T. scores might differ significantly.

However, although a predictive study is necessary before the Arnold's system can be used for selection purposes, nevertheless, a definite positive relationship was identified between the T.A.T. scores (using the Arnold System) and job performance ratings. The T.A.T. scores showed high test - retest reliability as well as interscorer reliability and as such the Arnold method could be adopted as a selection tool, if it is used as part of a battery of validated tests. However, it is suggested that a predictive study be carried out so that the Arnold system can be implemented in the mining industry without any hesitation.

TABLE 15

8.3.2 Hypothesis 2

a) Mean of TAT Scores (Arnold) and Standard Deviations of Samples (a) and (b)

Samples	TAT Scores	
	Mean	S.D.
Sample (a)	7,26	5,78
Sample (b)	0	5,76

TABLE 16

8.3.2 Hypothesis 2

b) Correlation Between the U-R Scale and the TAT (Arnold)

Sample	Urbanization Score	TAT Score Results	Correlation* Coefficient (Pearsons)
Sample (a)	Urbanization Score	TAT(A1 + A2)	No significant r
Sample (a)	Urbanization Score	TAT(B1 + B2)	No significant r
Sample (b)	Urbanization Score	TAT(A1 + A2)	r = 0,15
Sample (a + b)	Urbanization Score	TAT(A1 + A2)	No significant r

* Significant at the 0,05 level

8.3.2 Hypothesis (2)

Blacks with a higher level of acculturation (as measured by the U-R scale) will obtain higher achievement scores (Arnold) than those with lower levels of acculturation.

To test this hypothesis it was decided to use both sample (a) and sample (b) separately and then to combine them into sample (a + b). This was done as sample (a)'s mean on the U-R scale was 8,01, which places that sample in the lower end of the transitional stage of urbanization (transitional stage being from 5- 11 (according to Grant (1971)). On the other hand the mean of sample (b)'s U-R scale was 10,82 which would place that sample at the upper end of the transitional stage of urbanization. As both samples fell in acceptably normal distributions, it was felt that one could combine the two samples without violating the assumptions of parametric statistics.

When looking at sample (a)'s urbanization score and the T.A.T. (A1 + A2) no significant correlation was found as well as with T.A.T. (B1 + B2) (at the ,05 level). However, when looking at sample (b)'s urbanization score and the T.A.T. (A1 + A2) a low but significant correlation is found $r = ,150$. When combining sample (a + b) a non-significant correlation was found. On the basis of these poor results it was decided that it would be of no value to study the relationship between the two measures any further. It can thus be accepted that at this stage one must reject Hypothesis (2) and state that there is no significant difference between the T.A.T. scores (using the Arnold System) and the level of urbanization as measured by the U-R scale. However, it must be pointed out that both samples had means in the transitional stage and so could be said not to be sufficiently differentiated (in the level of urbanization) to be able to establish a relationship between the T.A.T. scores (Arnold) and the level of urbanization (U-R scale). Further investigation could be done if

one ensured that the two extreme ends of the U-R scale were truly representative in the samples under consideration.

TABLE 17

8.3.3 Hypothesis 3

a) Correlation Between the Resistance to Change Factor and the TAT (Arnold)

Resistance to Change Factor	TAT Score	Correlation* Coefficient (Pearsons)
Sample (a)	TAT (A1 + A2)	r = 0,19
Sample (a)	TAT (B1 + B2)	r = 0,22
Sample (b)	TAT (A1 + A2)	r = 0,31

* Significant at the 0,05 level

TABLE 18

8.3.3 Hypothesis 3

b) The effect of the Resistance to Change Factor on the TAT Scores (Arnold)

Sample	Independent	Dependent Variable	Significance Level	Accountabl Variance
Sample (a)	Resistance to change	TAT Scores	0,05	4,7%
Sample (b)	Resistance to change	TAT Scores	0,05>P<0,001	9,8%
Sample (a + b)	Resistance to change	TAT Scores	0,05	8.4%

8.3.3 Hypothesis (3)

Blacks with a high score on the 'Resistance to Change' factor in the U-R scale will score lower on the achievement motive score (as measured by the T.A.T. using the Arnold System) than those who have a lower score on this factor.

Initially, it had been decided to look at the 'Resistance to Change' in conjunction with the overall U-R scale. However, as no consistent significant correlation was found between the T.A.T. scores and the U-R scores it was felt that more relevant information could be obtained by looking at the 'Resistance to Change' factor alone.

As in Hypothesis (2) sample (a) and sample (b) were treated separately and then combined to sample (a + b).

The mean score for the 'Resistance to Change' factor for sample (a) was 1,5 and a significant negative correlation was obtained between the T.A.T. (A1 + A2) scores, $r = -,19$ as well as between the T.A.T. (B1 + B2) $r = -,22$, when looking at the 'Resistance to Change' factor in sample (b) (mean = 1,7) a significant negative correlation is also obtained $-,306$.

A multiple regression analysis was thus carried out. When one investigates the effect of 'Resistance to Change' on the T.A.T. scores P is significant at the 5% level. If one takes the variance into consideration one finds that 'Resistance to Change' can account for only 4,7% of the variance on the T.A.T. scores.

When investigating the 'Resistance to Change' factor as the independent Variable and the T.A.T. scores as the dependent variable for sample (b) $0,05 > P < ,001$ but can account for only 9,8% of the variance.

When sample (a) and (b) are combined P is again significant at the 5% level and 8,4% of the variance on the T.A.T. scores

TABLE 19

8.3.3 Hypothesis 3 Page

c) The Effect of the Resistance to Change Factor on the Job Satisfaction Index

Sample	Independent Variable	Dependent Variable	Significance Level	Correlation* Coefficient (Pearsons)
Sample (a)	Resistance to Change	Job Satisfaction	0,01	0,25

* Significant at the 0,05 level

can be explained by the 'Resistance to Change' factor.

From the above discussion it can be seen that there is a significant negative correlation between the 'Resistance to Change' factor. One can thus accept Hypothesis (3).

It is of interest to note that the 'Resistance to Change' factor is significantly (negatively) correlated with job satisfaction as measured by the job satisfaction index (in sample (a)) $r = -.245$ which is significant at the ,01 level. (This is in accordance with Grant's postulate that the person high in the 'Resistance to Change' factor would be dissatisfied with his present employment.) A low but significant correlation was obtained when looking at the 'Resistance to Change' factor and the job performance rating 1 but not with job performance 2.

The significant negative correlations (at the ,05 level) between the 'Resistance to Change' factor and the T.A.T. scores (Arnold System), job satisfaction and, to a lower degree, job performance rating indicate to the experimenter that this factor is a stronger measure of the level of urbanization (or acceptance of urbanization) than the U-R scale in total. It is postulated that the U-R scale could in fact be measuring the outward trappings of urbanization whereas the 'Resistance to Change' factor is measuring the acceptance of these changes (or more accurately the rejection of these changes). The U-R scale could be measuring only the 'surface' of acculturation and so a very superficial view of urbanization is achieved. A few examples of the type of questions included in the Resistance to Change Factor are given below:

- i) Do you have or have you ever had a White friend?
- ii) Do you belong to a religious organization?
If yes, which?
- iii) The world is a dangerous place in which men are evil or dangerous.

TABLE 20

8.3.4 Hypothesis 4

Correlation Between TAT Scores - Arnold and TAT Scores - McClelland and Job Performance Ratings

Sample (a)	TAT Scores	Job Performance	Correlation * Coefficient (Pearsons)
random N = 50	TAT(A1 + A2)	Job Performance Rating 1	,48
random N = 50	TAT(Mc1 + Mc2)	Job Performance Rating 1	Not significant

* Significant at 0,05 level

EXPLANATION

TAT (Mc1 + Mc2). TAT scored according to the McClelland system scored by rater 3 and rater 4

8.3.4 Hypothesis (4)

A higher correlation is predicted between achievement motive and job performance when using the Arnold Scoring System than when the McClelland System is used.

As the scores obtained on the T.A.T. (using the McClelland System) did not fall in a normal distribution curve (frequency distribution is in Appendix E), these were normalised by logarithmic transformations. No significant correlation was found between T.A.T. (A1 + A2) and T.A.T. (MC1 + MC2). The McClelland scoring system was used only in the 1st testing session N = 50. Although a high inter-rater correlation coefficient was found between T.A.T. MC1 and T.A.T. MC2 $r = ,98$ no test - retest reliability study was carried out.

No significant correlation was found between job performance ratings and the T.A.T. using the McClelland scoring system, whereas a correlation of ,40 was found when using the Arnold System (N = 50). (When N = 92 correlation between T.A.T. (A1 + A2) and job performance rating 1 is ,48.)

As no significant correlations were obtained no further analysis of the data was carried out. The Hypothesis (4) is thus accepted at the ,05 level of significance,

It is postulated, at this stage, that by 'achievement motive' Arnold and McClelland are measuring totally different dimensions and this could account for the insignificant correlation between the two measures. This postulate shall be further outlined in the discussion (section 8.3.4).

TABLE 21

8.3.5 Hypothesis 5

Correlation between Job Performance Ratings, TAT Scores (Arnold) and the Job Satisfaction Index (Sample (a))

Sample	Ratings/Test Scores	Job Satisfaction	Correlation * Coefficient (Pearsons)
Sample (a)	Rating One	Job Satisfaction	r = 0,29
Sample (a)	Rating Two	Job Satisfaction	r = 0,29
Sample (a)	TAT (A1 + A2)	Job Satisfaction	r = 0,27
Sample ((a)	TAT (B1 + B2)	Job Satisfaction	r = 0,38

* Significant at 0,05 level

8.3.5 Hypothesis (5)

People with a high achievement motive score (Arnold System) but poor job performance ratings will score low on the job satisfaction index.

As was stated (in 6.3.7) the job satisfaction index was used as a gross measure of overall job satisfaction. As it was used on this basis the test was not validated for the sample on which it was used. As a result any inferences made from these findings are to be viewed with caution. A significant correlation of ,29 was obtained when looking at the relationship between job satisfaction and job performance rating 1 as well as between job satisfaction and job-rating 2 (sample (a) N = 92).

A significant correlation was found between T.A.T. (A1 + A2) and job satisfaction ,27 and between T.A.T. (B1 + B2) and job satisfaction ,38.

To test the above Hypothesis it was necessary to identify those people who had high achievement motivation scores, low job performance ratings and then identify whether the job satisfaction index yielded consistently low scores. Out of a sample of 92 only 4 subjects obtained above average T.A.T. scores, and below average job performance ratings 1. However, the job satisfaction index scores were not below average (66 being the mean score - so below average would be any points below that). When taking job performance rating 2 it was found that the 4 subjects were placed in a higher category i.e. had above average ratings. It seems possible, though no deductions are possible from 4 cases, that the inconsistencies found between the T.A.T. scores and the job performance ratings are a result of inter-rater inconsistencies.

As a result of the small sample N = 4 it was not possible to investigate the Hypothesis (5) and so it can at this stage neither be accepted nor rejected.

8.4 Discussion, Critique of Present Study and Suggestion for Future Research

8.4.1 The statistical findings of this study confirm the following hypotheses:

- (i) There is a significant positive relationship between T.A.T. scores (using the Arnold System) and job performance ratings.
- (ii) Blacks with high scores on the 'Resistance to Change' factor on the U-R scale will obtain low scores on the T.A.T. (using the Arnold System).
- (iii) A higher correlation is found between achievement motive and job performance when using the Arnold System than when the McClelland System is used.

8.4.2 The statistical findings of the present study do not confirm the following hypotheses as additional information is necessary.

- (i) A higher achievement motive (as measured by the T.A.T. using the Arnold Scoring System) in Blacks results in better job performance ratings.
- (ii) People with high achievement motive scores (Arnold) but poor job performance ratings will score low on the job satisfaction index.

8.4.3 The statistical findings of the present study do not confirm the following hypothesis:

Blacks with a higher level of acculturation (as measured by the U-R scale) should obtain higher achievement scores (Arnold) than those with low levels of acculturation.

8.4.4 Limitations of the study.

The T.A.T., which was devised was capable of differen-

tiating between the poor and good job performers (as measured by job performance ratings 1 and 2, using the Arnold Scoring System). The scoring technique devised by Arnold was found to have high inter-scorer reliability as well as high test-retest reliability. It can thus be stated to be a reliable technique. However, it is suggested that a change be introduced in the scoring system when using it on a Black population. It was found that many of the stories were descriptions of the picture rather than narrations. According to the Arnold System the story would be seen as having no outcome and allocated a score of -1. It was decided, after the pilot study to allocate 0 and not -1 when a picture was described as this was a general trend amongst the people tested and had the -1 been allocated, scores would have been significantly lower.

Should the T.A.T. be used in future, it is suggested that card no. 5 and card no. 7 be replaced by pictures that are more dynamic as these two cards elicited a general description of the card rather than a story. It could be that the cards are too rural in content to be relevant to a black who has a Std. 8 or above education level.

However, it must be stressed that even though the T.A.T. has been found to be reliable and predictive of job performance when the subject is already employed, it is necessary to carry out a predictive study before one can state the validity of the T.A.T. (using the Arnold System) as a predictor of job performance. As was stated previously, this had been the intention of the experimenter but as this was not possible due to unforeseen circumstances: Job applicants were tested from May 1977 to July, 1977. (N = 2,000) A random sample of N = 200 was selected, and TAT's were scored by both raters (rater 1 and rater 2) as well as the U-R scale. However, the applicants were

not informed until December 1977 as to whether their application for employment had been successful, due to personnel problems within the mining concern. It is obvious that after a \pm 6 month period many of the prospective applicants would have found employment elsewhere or could not be reached (change of address, lack of postal facilities etc.). Out of the 200 applicants (who made up the random sample from $N = 2,000$) only a small number were employed. (\pm 5 people). As it was not then possible to test another 200 applicants, the experimenter decided to use this sample to further define the relationship between the TAT score (Arnold), the U-R scale and the resistance to change factor.

The sample was also not adequately differentiated to establish the relationship between the level of urbanization and achievement motivation scores.

The job performance ratings although adequate, should have been supplemented by accurate information on factors such as promotions, accidents, assaults, absence without leave, spells of sick leave etc. Unfortunately, as these records were found to be unreliable the experimenter decided that they could not be used. (e.g. a well known alcoholic, who was away every week for a minimum of one full working day for \pm 2 years, had "no sick leave" on his record form)

The study comprised African Personnel Assistants in the mining industry (at B4 level) who represent only a small sector of educated blacks. Although it is postulated that the Arnold system should identify the successful job performer in different fields of employment, at different levels, this postulate will have to be investigated.

8.4.5 Discussion

Bethlehem (1975) from a survey of experimental work on the effect of cultural differences and co-operative behaviour, concludes that the related factors of westernization belonging to the middle class and urban dwelling are associated with competitive behaviour whereas traditionalism or co-operative cultural ethos, a poor (materially) background, and rural dwelling are associated with more co-operative behaviour.

Meeker (1970) showed that men of the lepelle tribe in Liberia, living in a traditional way are more co-operative in a 'Prisoner's Dilema game' than men who are relatively highly educated or who pursue modern occupation. (Bethlehem, 1975)

Bethlehem (1975) hypothesized that the more westernized adults are, as a result of either education or by being engaged in a western occupation, or living in an urban area, the less co-operatively they will play in the 'Prisoner's Dilema game'. (Tonga male and female students, both urban and rural; Asian male and females, traditional and westernized).

His hypothesis received firm support from his experimental results: people untouched by westernization are much more co-operative and trusting than people who are westernized. No differences were found between degrees of westernization. Bethlehem is of the opinion that this result reflects the conflict of traditional co-operative and western competitive norms, which (Dawson, 1969) found to exist in other parts of Africa. (Dawson 1969) as well as (Dawson, Law, Leving, and Whitney 1971)

Wrightsmann (1966) and Deutsch (1962) found that untrustworthy behaviour was related to a cynical view of human nature and high scores on the F scale.

Bethlehem (1975) postulates that living in urban areas or acquiring western education engenders a less charitable view of human nature than living all one's life among family and friends.

Bethlehem's findings could have important implications when using Arnold's system cross-culturally. As mentioned previously no significant correlation was found between high TAT scores (Arnold) and high scores on the U-R scale. The mean score on the U-R scale was higher in the sample (b) than in sample (a) whereas the TAT mean scores were much lower. If Arnold's system has a tendency to emphasize 'co-operativeness' then, according to Bethlehem's findings one would expect the more traditional (more rural) Blacks to be more co-operative than the more urban blacks, and consequently obtain higher scores on their TAT.

Bieusheuvel (1957) also throws light on the value, which could be derived from cross-cultural application of the Arnold system. Bieusheuvel (1957) examined the moral judgements of Africans and Europeans and although, he found a remarkable overall acceptance of Western ethical and social values, being characteristic of an urban, South African Black sample, he also indentified the following factors as being a result of the South African situation. (apartheid)

"African subjects indicated that since discrimination in legislation and the administration of justice deprives both laws and social conventions of their moral foundations, they would not have to observe normal, civic duties. They argued that Africans are justified in not paying taxes; they rejected the idea that it is a disgrace to go to prison; and they were in favour of irregular working habits (since employers do not pay them enough). Thus, a person's evaluations are made to conform within a broader value system that includes his orientation toward the society in which he lives." (Bieusheuvel, 1957, P.33).

If the above quotation is indicative of the Blacks' attitudes in the urban areas, then if one looks at some of Arnold's scoring criteria, it is obvious that the abovenamed attitudes would result in negative scores.

- e.g. 1) - 2-wrongdoing is caused by extraneous factors; by bad environment.
- 2) - 2-bad relations are caused by external circumstances; they are caused by differences in race, heritage, interest etc.
- 3) - 2-undesirable attitudes are justified : depending on circumstances.
- 4) - 2-adversity leads to undesirable actions or attitude.

The Blacks in sample (a) (Black employees) who come from various homelands, live on the mine premises and feel very few consequences of apartheid, might not display the attitudes outlined by Bieusheuvel (1957) and would not generally enumerate these in their stories, and as a consequence would not obtain such negative scores as the urban sample (b). These Blacks, who fell in the lower end of the transitional scale on the U-R scale (i.e. were nearly rural) return to the homelands once a year (on vacation) as the majority of senior blacks still live in hostels while at work, and their families stay on their land in the homelands i.e. they still have a strong link with the rural way of life. It could thus be that these people still exhibit the characteristics typical of Riesman (1950) terms tradition-directed i.e. a social character whose conformity is insured by his tendency to follow traditions.

However, by virtue of his contact with whites in the work situation, the Black employee (in sample (a)) must have undergone a certain degree of change (though possibly not as rapid or as devastating as the change of the traditional man, removed from his environment, altogether, and placed in an urban setting). Bieusheuvel, (1959) postulates the following:

"In African cultures in transition, the tradition-directed personality is slowly being replaced by the other directed personality. This process, often includes a transitional stage during which as a result of social disintegration and lack of formative educational influences, no conformity-compelling mechanism is implanted at all in the individual - the personality is to all intent id-directed."
Bieusheuvel, 1959, P.264)

Riesman (1950) attempted to describe the character types or basic personalities that develop in various societies and helps to maintain the order and stability of these societies. These characterological types were derived from the bases of social controls to which they responded - these social controls are tradition orientation, inner orientation and other orientation.

Social control based on tradition is achieved by reference to values and directives that have existed in the history of that society. Inner orientation achieves social control through standards, guidelines or values that exist in each individual (the McClelland's high achiever tends, in general, to be inner-directed). Other-direction achieves social control by conformity to standards that exist in other persons or groups. Each of these creates a different character type in society.

A significant point that Riesman makes is that an entire society at a given point in its development may have its mechanism of social control centred on one or another of the three character type (i.e. tradition-directed, inner-directed, other-directed)

Kassarjin (1962) developed a test to measure Riesman's character types and correlated scores with activities thought to reflect inner-or-other-directedness, including hobbies, sport preference and social activities. The analyses of his data showed that neither sex, age year in school, race religion nor father's occupation was correlated with a person's inner-or-other-directedness. (Sampson, 1971)

Centers (1962) using the same scale reported an age trend, with younger persons being more other-directed than older persons.

De Charms and Moeller (1962) scored children's readers for achievement imagery, which they assumed to be an index of inner-direction, as well as other-direction, assumed to be an index of other-directed - from 1800 to 1950. They report a rise in achievement imagery from 1800 to 1900 and a drop from 1900 to the present, and a tentative increase in affiliation.

Several other studies using a similar methodology confirmed the decline of achievement imagery, though not the increase in affiliation imagery. (Henley, 1967, Strauss and Houghton, 1960). (Sampson, 1971)

Riesman's work has been outlined as it is felt that the study of group character is an interesting one in the light of the findings of this study. If inner-direction is manifested by high achievement need, could one not use the TAT as a measure of inner-direction

On the other hand when using the Arnold system to obtain achievement motivation scores could we not in actual fact be trying to identify the other-directed person. In the type of organizational climate which the mining industry provides, would one in actual fact not be trying to select the other-directed character?

"If success in a bureaucracy demands a concern with good front and smooth inter-personal relationships, in contrast with the more inner-directed qualities demanded of the entrepreneur, then to the extent to which a social system moves toward increasing bureaucratization, we would expect an increase in overall other-directedness." (Sampson, 1971, P.208)

It would certainly be an area worth investigating to look at McClelland's high achiever, Arnold's high achiever as well as identifying how the above two people fit into one of the character types, inner-directed and other-directed, as well as which character type would function most efficiently in the organizational climate of the mining industry.

It is of interest to note that McClelland (1961) looked at the possibility of high motivation achievement bringing about a level of social disruption. He suggests that strife particularly characterises the impact of a high achievement motivation among the deprived or oppressed groups. It is when such groups seek to fulfill their achievement aspirations that the ensuing pressures for social change leads to conflict with the dormant groups in power. McClelland points out that high achievement and greater opportunity to achieve must go together if violence is to be avoided.

Fierabend et al.(1969) found that the set of conditions most conducive to violence in transitional states, was a high rate of increase in population,

attending primary schools, increased education of a group or population to a higher level of participation in society. It is through education that they hope to achieve a better life. Increased education without increased opportunity is the worst possible combination.

The low scores obtained on the TAT's (Arnold system) by sample (b) (unemployed, urban Blacks) could, in actual fact, have resulted from the frustration felt by this particular group to the lack of opportunities available to them.

(as outlined by Fiererabend et al.1969). It is possible that had sample (b)'s TAT been scored, using the McClelland system, one would have been able to identify many more high achievers than was the case using the Arnold system or than was the case when using the McClelland system for sample (a).

However, that was beyond the scope of this particular study, but should certainly be investigated further, especially when looking at the negative correlation obtained between the resistance to change factor and TAT scores (Arnold's system).

The lack of significant results in support of increased urbanization and achievement motivation (McClelland) as well as job performance ratings support Baran's observation that:

"There was little evidence of actual achievement themes or of any tendencies to compete with standards of excellence in the sense that McClelland formulated it. It was inferred from this that the achievement motive as is understood by McClelland and his colleagues is not well developed even among the urban (Zulu) population". (Baran, 1971, P121)

Baran postulates that the signs of striving behaviour found in the Black protocols were indicative of the desire to actively co-operate with the social structure. As, in her urban sample, indices of acceptance of authority, were higher than achievement motivation indices, Baran suggests that this could be indicative of a greater capacity to conform to the demands of western society, one of which is the ability to provide evidence of striving tendencies and not necessarily of achievement motivation. (as McClelland conceived it.)

The fact that sample (a) (Black employees) obtained higher scores on the TAT (Arnold system) than sample (b) (unemployed Blacks) could be consistent with Baran's speculation that her findings that the urban males in her sample (in this context, the differentiations would not be urban-rural but employed-unemployed) showed greater tendency to co-operate with authority figures, could be due to the fact that they more frequently find themselves in situations where co-operation is required. This certainly could have been the case with the employed Blacks who were older than the unemployed Blacks (sample (a) Mean age = 26, 89 years; sample (b) Mean age = 36, 62 years), and had been employed for a mean period of 8,6 years of employment.

Baran's findings, as well as those in this study, indicate that one should not assume a unidimensional approach to behaviour. It is necessary to look at not only motivational factors but also attitude towards authority and self-concept (according to Inkeles and Levinson, 1954) in order to study behaviour (in its widest sense) (or what the above researchers termed the modal personality) cross culturally.

It is also of interest to note that Korman (1974) when postulating his theory of achievement motivation, also identifies the three behaviours enumerated above as being important concepts to investigate. He outlined the similarity between the environments leading to low authoritarianism (Sarason, 1967) (Adorno et al., 1950,) and the development of high self esteem (Rehberg, Sinclair and Schaefer, 1970) and high achievement need (McClelland, 1955).

7.4.6 Suggestions for Future Research

It has been suggested that future investigators, interested in applying the Arnold scoring system, cross-culturally, as well as for selection purposes, should concern themselves with the interrelationships between;

- i) achievement motivation (Arnold system) and the other-directed personality
- ii) achievement motivation (Arnold system) and measures of conformity, authoritarianism, self-concept, co-operativeness
- iii) achievement motivation (Arnold system) and organizational climates
- iv) achievement motivation (Arnold system) in highly competitive positions (or environment) in comparison to achievement motivation (McClelland)

It could be argued at this point that Arnold's scoring system is not one for measuring motivation, per se but rather it is a measure of 'total personality' - the outlook on life, the attitudes and values of the individual as well as motivational tendencies. Although predictive studies will have to be carried out before people could be selected,

using this method (both Blacks and Whites at different levels) the experimenter is of the opinion (on the basis of this exercise) that, after proper validation, the Arnold system will emerge as a valuable tool in the identification of Blacks (and Europeans) who have the potential (an the positive, constructive attitude necessary) to assume higher level positions in the industrial world.

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A P P E N D I X A:

Forms Used For 'Man-Specifications'

APPENDIX A (i)

FORM USED FOR STRUCTURED INTERVIEW

STATE THE DEGREE OF IMPORTANCE YOU ATTACH TO THE FOLLOWING CHARACTERISTICS AS IN THE POSITION OF:-

	Not at all Important	Not Important	Preferable not Essential	Essential	Important	Very Important	Critical
	1	2	3	4	5	6	7
1. Good Eyesight							
2. Good hearing							
3. Ability to make himself understood i.e. good communication skill							
4. Stress tolerance							
5. Leadership qualities							
a. Commands respect							
b. sensitivity							
c. persuasive							
d. supportive							
e. Calm-under pressure							
f. development of sub-ordinates							
6. Organizing & planning ability							
7. Initiative/Decision making							
8. Insightful							
9. Quick-thinking							
10. Versatile							
11. Mental Stability							
12. Adaptibility							
13. Detail-conscious							
14. Ability to learn							
<u>Name any other factors that may be of importance</u>							
15.							
16.							
17.							

APPENDIX A (ii)

RATING FORMS (SEMANTIC DIFFERENTIALS)

Name: Date:
 Position: Home Language:
 Age: Education:
 Mining Experience (no. of yrs.)

Please rate (by means of a cross (x)) how important the following characteristics are for a man to be successful in the below-named position. (N.B. only one cross per line), for example,

1 2 3 4 3 2 1
 good X — — — — — bad

1 = very important
 3 = necessary

2 = important
 4 = not important

SENIOR BLACK POSITIONS

NAME OF POSITION RATED:

	1	2	3	4	3	2	1	
Tactful	—	:	—	:	—	:	—	: Forthright
Impartial	—	:	—	:	—	:	—	: Prejudiced
Inattentive	—	:	—	:	—	:	—	: Alert
Outgoing	—	:	—	:	—	:	—	: Withdrawn
Commanding	—	:	—	:	—	:	—	: Persuasive
Resourceful	—	:	—	:	—	:	—	: Unimaginative
Commonplace	—	:	—	:	—	:	—	: Commands respect
Steadfast	—	:	—	:	—	:	—	: Temperamental
Strict	—	:	—	:	—	:	—	: Lenient
Calm-under-pressure	—	:	—	:	—	:	—	: Excitable
Cautious	—	:	—	:	—	:	—	: Impulsive
Fluent speaker	—	:	—	:	—	:	—	: Hesitant
Sensitive	—	:	—	:	—	:	—	: Unfeeling
Independent	—	:	—	:	—	:	—	: Easily influenced
Hardened	—	:	—	:	—	:	—	: Yielding
Flexible	—	:	—	:	—	:	—	: Unbending
Ambiguous	—	:	—	:	—	:	—	: Explicit
Sympathetic	—	:	—	:	—	:	—	: Hard
Moody	—	:	—	:	—	:	—	: Predictable
Dominant	—	:	—	:	—	:	—	: Unassuming
Determined	—	:	—	:	—	:	—	: Indecisive
Energetic	—	:	—	:	—	:	—	: Quiet
Self-assertive	—	:	—	:	—	:	—	: Humble

A P P E N D I X B:

Tests Used In Study

APPENDIX B (i)

U - R SCALE

Name: _____

Position: _____

Tribe: _____

Education: _____

Co. Number: _____

Age: _____

1. Where were you born? 0 1

2. Do you own fields or land in a rural area? 0 1
Yes () No ()

3. Where do your parents live? 0 1

(If they are deceased, where did they live?)

4. Do your parents own fields or land in a rural area? 0 1
Yes () No ()

(If they are deceased, did they own fields or land in a rural area when they were alive?)

Yes () No ()

5. a. What tribe does your father belong to? 0 1

b. Your mother? 0 1

c. Your wife (if married)? 0 1

APPENDIX B (i), continued..

6. What grade or standard did your brothers and sisters pass at school?

Brother 1.	()	Sister 1.	()
2.	()	2.	()
3.	()	3.	()
4.	()	4.	()
5.	()	5.	()
6.	()	6.	()

7. Do you attend bioscopes?

Yes () No ()

0 1

8. If you were to hold a party would you

- a) pay for it yourself?(),
- b) expect a contribution in the form of money, food or drink from your guests?().

0 1

9. If you were given R500 and told to spend it within a week how would you spend it?

- 1. Buy cattle or other farm animals ().
- 2. Buy a motor vehicle ().
- 3. Marry additional wives ().
- 4. Buy electrical appliances e.g.
 - a) radiogram (),
 - b) transistor radio (),
 - c) washing machine ().
- 5. Buy agricultural implements ().
- 6. Lounge or dining room suite ().
- 7. Buy a bicycle ().
- 8. Kitchen scheme ().
- 9. Get an iron roof for the house.
- 10. Curtains ().
- 11. Buy window panes ().
- 12. Cannot imagine what to spend it on on ().
- 13. Buy seed ().
- 14. Bank what is over ().
- 15. Buy a tractor ().

0 1

APPENDIX B (i), continued...

10. What would you like to do during your lifetime that would make you happy and proud of yourself?
1. Raise a large herd of cattle ().
 2. Open own business ().
 3. Attain higher status in the tribe ().
 4. Do something appreciated by the tribe ().
 5. Be my own boss ().
 6. Make bricks for houses ().
 7. Educate myself ().
 8. Educate my children ().
 9. Become a woodworker or carpenter ().
 10. Make a lot of money ().
 11. Weaver ().
 12. Be a salesman ().
 13. Sharpen blunt tools ().
 14. Agricultural demonstrator ().
 15. Become a machine operator in a factory ().
 16. Become a Christian ().
11. What do you think you will be doing regarding a job five years from now?
1. Staying and working in the homeland ().
 2. Continuing to work or going to work in the town (or mine) ().
 3. Going back to the homeland ().
 4. Working for family in town ().
 5. Retiring to the homeland ().
 6. Opening own business ().
 7. Do not know ().

0

1

0

1

22.	How do you feel about your present job or if you are not working now, why did you leave your last job? -----	0	1
23.	How many years of schooling do/did your parents have? -----	0	1
24.	The threat of punishment is usually more painful than the punishment itself. Agree () Disagree ()	0	1
25.	Are you able to ride a bicycle? Yes () No ()	0	1
26.	Ability is more important than luck in determining success. Agree () Disagree ()	0	1
27.	How old were you when you started working for money? -----	0	1
28.	Will you educate your children? Boys only or girls only or both? -----	0	1
29.	It is usually a waste of time to plan for the future because too many unforeseen events can interfere with the plan. Agree () Disagree ()	0	1

APPENDIX B (ii)

ANGLO AMERICAN CORPORATION OF SOUTH AFRICA LIMITED

BLACK T.A.T. INSTRUCTIONS

Before the applicants enter the testing room, place a few sheets of fullscap paper (± 5) a pencil and a rubber on the tables. Once they are all seated begin.

"You have all been given some writing paper, a pencil and a rubber" (they can check this). Please write down the following on the top of your writing paper (first page)."

- 1) Name
- 2) Age
- 3) Education
- 4) Tribe
- 5) Position Applying For

Walk around to ensure that this is being done. When this is completed you may begin with the test.

"I am going to give you some pictures to look at. I want you to write a story about each picture. The story must not be less than 1/2 page long and you should try to do it in 10 minutes for each picture. Please label each picture with a number 1 to 9."

The story must have 3 things :

- 1) a past - i.e. what happened before
- 2) a present - i.e. what is happening in the picture now
- 3) a future - i.e. what is the outcome or the result of the story.

Please stick to one story per picture.

Are there any questions (if YES - repeat instructions if necessary, if NO - continue).

"I am now going to give you the first picture. Please do not turn it over until I tell you to do so."

Give out the picture face downwards.

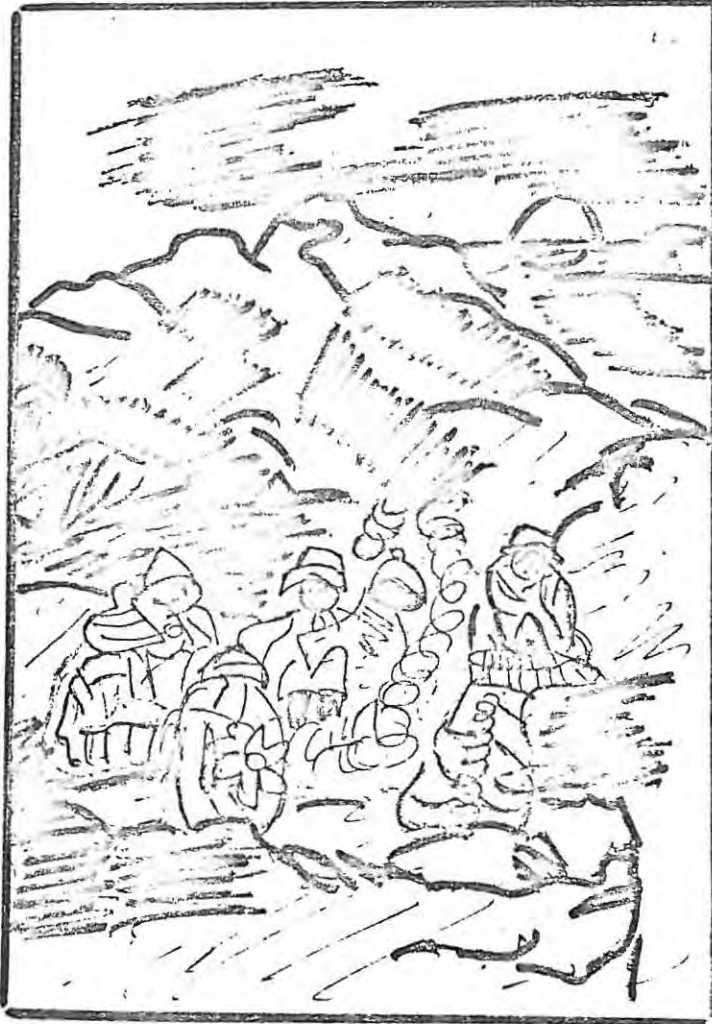
"You may now begin. Please try and finish in 10 minutes but if not, you can carry on in your own time."

Walk around and see that they are following instructions. After ± 8-10 minutes give out the following card. It is important to be flexible as far as time is concerned to let them finish a story. If necessary let the candidate work at his own pace.

When the time is up.

"Please put your pens down. Make sure that your stories are numbered correctly from number 1 to 9."

APPENDIX B (iii)



CARD I

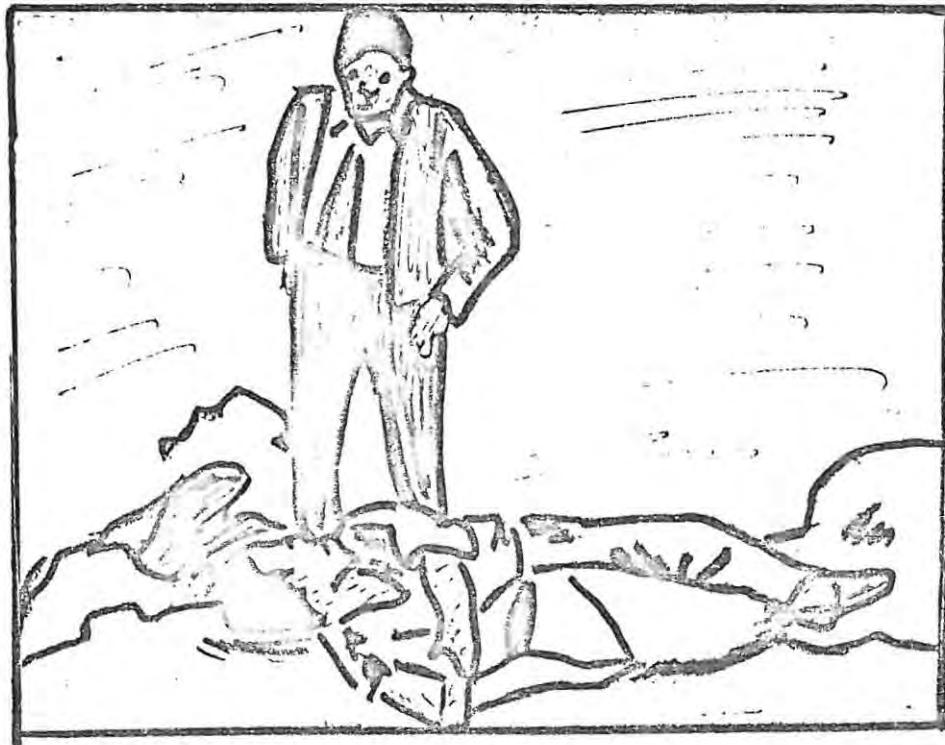
CARD II





CARD III

CARD IV





CARD V

CARD VI





CARD VII

CARD IX

CARD VIII



APPENDIX B (iv)

JOB SATISFACTION INDEX

JOB QUESTIONNAIRE

Name: _____

Tribe: _____

Co. Number: _____

Age: _____

Education: _____

Some jobs are more interesting and satisfying than others. We want to know how people feel about different jobs. This questionnaire contains 18 statements about jobs. Please cross out the word(s) below each statement which best describes how you feel about your present job.

There are no right and wrong answers. We should like your honest opinion in each one of the statements. Your answers to this questionnaire will not affect you on your job in any way.

Work out the example.

Example

There are some conditions concerning my job that could be improved.

1. My job is like a hobby to me.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

2. My job is usually interesting enough to keep me from getting bored.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

3. It seems that my friends are more interested in their jobs than I am.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

4. I consider my job rather unpleasant.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

5. I enjoy my work more than my leisure time.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

6. I am often bored with my job.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
7. I feel fairly well-satisfied with my present job.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
8. Most of the time I have to force myself to work.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
9. I am satisfied with my job for the time being.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
10. I feel that my job is more interesting than others I
could get.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
11. I definitely dislike my work.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
12. I feel that I am happier in my work than most other people.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
13. Most days I am enthusiastic about my work.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
14. Each day of work seems like it will never end.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE
15. I like my job better than the average worker does.
STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

APPENDIX B (iv)

16. My job is pretty uninteresting.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

17. I find real enjoyment in my work.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

18. I am disappointed that I ever took this work.

STRONGLY AGREE AGREE UNDECIDED DISAGREE STRONGLY DISAGREE

A P P E N D I X C:

Scoring Systems For The TAT

APPENDIX C (i)

MCCLELLAND'S SCORING SYSTEM

Mc Clelland and his associates scoring method

Different symbols are used and marks are allocated for each aspect.

<u>Symbol</u>	<u>Meaning/Significance</u>	<u>Marks allocated</u>
U1	Unrelated concepts	- 1
T1	Questionable/doubtful (achievement) performance concepts	0
A1	(achievement) performance concepts	+ 1

To be classified as A1 the T.A.T. story has to satisfy at least one of the following three criteria.

a) Actual hypothesis with regard to a standard of excellence.

i.e. One of the characters in the story is involved in a competitive action where it is of the utmost importance to do better than others, or to do well.

b) Unique performance (Achievement)

One of the characters is doing an extraordinary task which makes him some kind of unique or heroic figure. Actions like inventions, artistic creations etc. are included here.

c) Long term involvement

Long term performance (achievement) objectives e.g. where the person studies over a long period or tries to complete a difficult task.

If the symbol A1 is allocated, one must note whether 10 other factors are also possibly present.

<u>Symbol</u>	<u>Meaning</u>	<u>Allocation of Marks</u>
<u>N</u>	<u>Need for Achievement</u> A need or desire to obtain a performance objective is stated.	+ 1
<u>Ga-</u>	<u>Pass or Failure expectations</u> Failure is expected and anxiety about this is present	+ 1
<u>Ga+</u>	Success is expected	+ 1

<u>I</u>	<u>Instrumental Actions</u> Perceptible or mental actions which point out that something has to be done to achieve the objective. The degree of instrumental action can be:- I+ success I? doubtful I- failure The instrumental activity must be independent of the original statement of the situation or the story's ending.	+ 1 + 1 + 1
<u>Bp or Bw</u>	<u>Obstructions or obstacles</u>	
Bp	Interpersonal obstructions prevent achieving objectives - lack of self-confidence, inferiority complex etc.	+ 1
Bw	Environmental obstacles, family influences, mechanical faults etc.	+ 1
<u>Nup</u>	<u>Active help</u> People help the person who is trying to achieve his objectives actively.	+ 1
<u>G+ or G-</u>	<u>State of mind</u>	+ 1
G+	Pleasant or	
G-	Unpleasant emotional moods are related to goal achievement or active gain.	
	<u>Meaning</u>	
G+	A pleasant emotional mood	+ 1
G-	An unpleasant emotional mood	+ 1
<u>Ach Th</u>	<u>Evaluation of the Theme</u> The whole story is developed around an achievement theme (even when that is only described as a daydream).	+ 1

APPENDIX C (ii)

ARNOLD'S SCORING SYSTEM

SCORING SYSTEM : Categories and Headings

I. ACHIEVEMENT, SUCCESS, HAPPINESS, ACTIVE EFFORT
(OR LACK OF IT)

- A. goals, purposes
- B. means taken toward goal
- C. adaptability as to goals and means
- D. influence of others on success, achievement
- E. consequences of success (failure)
- F. attitudes connected with success (failure)

II. RIGHT AND WRONG (Well-intentioned, reasonable,
responsible action versus ill-intentioned,
impulsive, harmful, irresponsible action)

- A. actions
- B. intentions, attitudes, emotions
- C. effects (consequences) of punishment

III. HUMAN RELATIONSHIPS

- A. good (friendly) relations (including friendship,
love, marriage)
- B. bad relations (including quarrels, enmity, etc.)
- C. influence of others
- D. influence of others on success, achievement, etc.

III. HUMAN RELATIONSHIPS, continued...

- E. influence on other
- F. attitudes (toward people and things, God, nature, life, etc.)
- G. attitudes connected with success, achievement, or lack of it

IV REACTION TO ADVERSITY

- A. Loss, harm, danger, terror, separation, disappointment

SCORING SYSTEM : Individual Scores

I. ACHIEVEMENT, SUCCESS, HAPPINESS, ACTIVE EFFORT

(OR LACK OF IT)

A. Goals, purposes

+2

- 1. Success is reached when goals are reasonable; it follows upon
 - a. action for ethical, religious, well-intentioned motives
 - b. action dictated by prudence, experience, etc.
- 2. Failure, no achievement, when goals are unreasonable or self-centered; it follows upon
 - a. action for ill-intentioned, imprudent motives
 - b. failure to act for ethical, religious, well-intentioned, prudent motives
 - c. action undertaken to impress others

When the import indicates neither success nor failure,
look for evidence of:

3. Preference for immaterial values, as against material, expedient, irrational values; preferences for values that are
 - a. ethical
 - b. religious
 - c. spiritual
 - d. altruistic

4. Optimism, implying
 - a. constructive action (e.g., life is responsible, constructive, worthwhile; compromise on principles leads to disaster, harm, penalty, etc.

5. Imports exemplifying an active personal relation to God.
 - a. God is seen as creator, father, sustainer of life.
 - b. Readiness is expressed to do His will.

I. ACHIEVEMENT, SUCCESS A. Goals, +1, -1

+1

1. Goals are minor, or achievement is yet uncertain :
 - a. success when goals are modest (e.g., you may not become famous but you'll do well)
 - b. success with some failure along the way
 - c. * goals striven for but outcome not certain

When the import indicates neither success nor failure,
score for :

2. Import embodying (constructive) principles (e.g., freedom must not be sacrificed for strength)
3. Optimistic imports :
 - a. with reasons given, but not implying action (e.g., in nature, good times follow after hard times)
 - b. implying that pessimism is undesirable (e.g., a dim outlook makes things seem worse)
4. Imports appreciating immaterial values (e.g., education, learning, etc., is valuable)

1. Lesser goals are preferable; because they
 - a. require less effort
 - b. do not affect personal worth
 - c. are best

2. Two conflicting goals can be reached :
 - a. with the help of others
 - b. by chance, fate

3. Success follows action for extraneous motives :
 - a. for the approval of others
 - i. simply to please others
 - ii. to please others by delaying one's action
 - b. for fame or recognition
 - c. for the sake of conformity
 - d. for self-centered motives (e.g., you succeed if you look after your own interests)

4. Success is foretold if character should try, persevere, etc.

When no indication of success or failure, score for evidence of :

5. Optimism without good reason ("Pollyanna" stories)

a. success comes as eternal reward
(no action)

6. Heroics, phoniness of every kind

I. ACHIEVEMENT, SUCCESS A. Goals,

-2

1. Success follows upon action for negative motives
 - a. involving ill-intentioned or self-seeking goals
 - b. failing to act for ethical or well-intentioned motives
 - c. delaying when immediate action is called for
 - d. acting to impress others (e.g., showing off)
2. Success is possible :
 - a. is uncertain, a mirage
 - b. is hoped for oneself or others
 - c. is dreamed about or thought about
 - d. comes in unexpected guises (e.g., you dream of one thing, become another)
 - e. is expected but failure is experienced instead
3. Success is foretold from the manner or look of the character (e.g., I can tell he'll be successful from his determined look)

4. Failure as outcome; failure is :
 - a. expected
 - b. experienced, just happens, etc.
 - c. not admitted (e.g., everything will turn out well - when story indicates failure)
 - d. caused by other people or things
 - e. result of chance, fate, etc.

When the import indicates neither success nor failure,
score for evidence that

5. Goal is not firmly pursued :
 - a. it seems foolish, unrealistic
 - b. is relinquished because of pain, danger, etc.
 - c. becomes more difficult to reach
 - d. is wondered about
6. No goal is indicated
7. Pessimistic imports (e.g., when destruction is general, you may just be able to save yourself, but there is no help even for the man next to you)

B. Means taken toward goal

+2

1. Success comes through active effort or adequate means; through

I. ACHIEVEMENT, SUCCESS (continued..)

- a. personal effort, work
 - b. personal initiative
 - c. positive attitudes (e.g., persistence, perseverance, courage, etc.)
 - d. control of emotion, and reasonable action
 - e. altruism (facing danger, making sacrifices for others)
 - i because it is the right thing to do
 - ii for ethical, religious reasons
 - iii for love of someone
2. No achievement or failure follows neglect of active effort, or adequate means; lack of
- a. personal effort, work (e.g., refusal to work results in loss of job)
 - b. personal initiative
 - c. positive attitudes (e.g., perseverance, courage, etc.)
 - d. emotional control
 - e. reasonable action
3. No achievement or failure follows ineffective action :
- a. impulsive, imprudent action
 - b. lack of application

I. ACHIEVEMENT, SUCCESS continued..

When there is no indication of success or failure
score for :

4. Positive attitude toward work; it
 - a. is liked, is seen as valuable
 - b. creates new interest
 - c. brings reward
 - d. brings only moderate success when done mechanically, or out of sheer obedience

 - e. is continued †
 - f. is done cheerfully †
 - g. is done to get back to play †

I. ACHIEVEMENT, SUCCESS B. Means, +1

+1

1. Success follows when fairly adequate means are chosen :
 - a. planning rather than acting
 - b. good management (e.g., sufficient sleep, appropriate work schedule)
 - c. taking risks
 - d. work or active effort with some undesirable side effects (e.g., you succeed but regret missing childhood play)
 - e. eternal reward despite present failure if appropriate action is taken

2. No success, or failure, follows upon omitting fairly adequate means. Failure follows :
 - a. lack of planning
 - b. poor management of affairs (e.g., insufficient sleep)
 - c. negative attitudes (e.g., carelessness, laziness, etc.)
 - d. making the wrong choice
 - e. putting off work or active effort

When the import indicates neither success nor failure,
score for evidence of :

3. Possibility of success; import shows
 - a. resolution to achieve
 - i. with recognition of difficulties
 - ii with deliberation and planning
 - b. active effort
 - i with the hope of achievement
 - ii because there is nothing to do †
 - c. there is no use wondering about the future

4. Mildly positive attitude toward work; it is
 - a. done reluctantly, mechanically
 - b. difficult but is done
 - c. difficult but brings reward
 - d. done because it is right but with reluctance

 - e. rewarded but has bad side effects or consequences

 - f. advantageous; idleness has disadvantages

I. ACHIEVEMENT, SUCCESS B. Means, +1, continued..

5. Positive attitudes toward rest, recreation,
sleep; they are :

- a. deserved after work
- b. a prelude to more work
- c. accompanied by vigilance
- d. important for success

I. ACHIEVEMENT, SUCCESS B. Means, O, -1

O

1. Rest after work (e.g., after work, you rest)

-1

1. Success because of extraneous factors :

- a. fate, chance, miracle
- b. passage of time without evident cause
- c. external circumstance (e.g. race, nationality, heredity, possessions, etc.)
- d. ability, aptitude, type of person
- e. passive dependence on the help of others
- f. change of circumstances (e.g., leaving home)

2. Success follows upon vague means toward goal without indication of active effort :

- a. wishing, hoping, thinking of goal
- b. dream becoming reality
- c. prayer
- d. weeping, wondering, worrying and similar emotions

I. ACHIEVEMENT, SUCCESS B. Means, 0, -1,
continued...

- e. positive but passive attitudes (e.g.,
patience, tolerance of frustrations, etc.)
 - f. decision or resolution without action or
planning
3. Low achievement, no achievement, or outright
failure follows reasonable or thoughtful
approach; upon :
- a. constructive planning)
 - b. thinking and planning) without action
 - c. prudent management
 - d. positive attitudes
 - e. not putting off work or active effort
4. Low achievement, no achievement, failure or
unhappiness are caused by extraneous factors;
by :
- a. accident, frustration by God, life, fate,
etc.
 - b. unavoidable circumstances (e.g., sickness)
 - c. lack of ability, aptitude, opportunities
 - d. habit

I. ACHIEVEMENT, SUCCESS B. Means, -1, continued...

When the import indicates neither success nor failure,
score for evidence of :

5. Possibility of success; import indicates
 - a. thinking or hoping to do or achieve something
 - b. resolving to achieve (no planning, no active effort)
 - c. giving thought to problem
 - d. hoping or knowing dreams of success will come true

6. Negative attitude toward work; work is
 - a. difficult, boring, exhausting, depressing
 - b. done under constraint
 - c. distasteful when work is hard and rewards are slight
 - d. increased after temporary escape
 - e. put off

7. Undesirable attitude toward rest, recreation :
 - a. rest is made necessary by exhausting work
 - b. rest, recreation, sleep, are indulged in or enjoyed for their own sake

I. ACHIEVEMENT, SUCCESS B. Means, -1, continued..

8. Action without reason; it is

a. predicted because of type of person one is

b. taken out of curiosity

9. Heroics, phoniness of every kind (e.g., in bravely facing a necessary task you make a heroic contribution to the well-being of others)

I. ACHIEVEMENT, SUCCESS B. Means, -2.

1. Success when fantasy and emotion is substituted for active effort; import indicates success
 - a. by magic or highly unlikely means
 - b. by pretending reality is not as it is, to avoid meeting its demands
 - c. when there is "love" (e.g., love solves everything; love substitutes for achievement)
 - d. by planning, only when given the means
 - e. as heavenly reward satisfying earthly wishes (no action)

2. Success despite antisocial or ineffective means :
 - a. by using force or the threat of force
 - b. by dishonest means, or the manipulation of others
 - c. despite lack of interest
 - d. despite playing, sleeping, dreaming, etc., instead of active effort

3. Despite active effort, failure follows in the form of :
 - a. giving up
 - b. frustration by others, God, life, fate
 - c. despair, desperation, destruction
 - d. disappointment, unhappiness

I. ACHIEVEMENT, SUCCESS B. Means, -2, continued..

4. Failure is met by negative attitudes :
 - a. is blamed on other people or things
 - b. is not admitted (e.g., everything will turn out well in spite of failure)
 - c. just happens, does not matter
 - d. is expected

When the import indicates neither success nor failure,
score for evidence of :

5. Absence of active effort because of personal preference or external circumstances; because of :
 - a. laziness, daydreaming, etc.
 - b. difficulties or unpleasantness
 - c. opportunity for rest or play
6. Negative attitude toward work; work is
 - a. distasteful, harmful, degrading
 - b. too much; no reason to work so hard
 - c. for some people, not others
 - d. not necessary and can be avaded by fussing, moping, sulking, etc.
7. Negative attitude toward recreation, play;
play is :
 - a. exhausting, harmful
 - b. not worth the effort

I. ACHIEVEMENT, SUCCESS B. Means, -2, continued..

8. Imports embodying non-constructive principles :

a. overconfidence beings harm

b. favours must be repaid by favours

c. undesirable attitudes

i are overcome by circumstances, chance,
fate, etc.

ii produce withdrawl

9. Wondering

a. what will happen †

b. what to do †

I. ACHIEVEMENT, SUCCESS continued...

C. Adaptability as to goals and means

+2

1. Success follows when goals or means are readily adaptable :
 - a. when unrealistic goals or means are modified realistically
 - b. when goals are modified according to circumstances

2. failure follows when goals or means are not adaptable; they are :
 - a. not adapted to reality
 - b. not modified according to circumstances

+1

1. Success follows when goals or means are modified conditionally :
 - a. with increasing maturity
 - b. when biding one's time until circumstances are right

2. Failure follows upon refusing to defer action until circumstances are right

-1

1. Success follows when goals or means are not adaptable;

I. ACHIEVEMENT, SUCCESS continued..

- a. modified unrealistically
- b. practically unchanged despite changing circumstances

-2

1. Success follows upon rigidly refusing to modify (unrealistic) goals to fit circumstances
2. Failure follows when goals are modified in accordance with circumstances

I. ACHIEVEMENT, SUCCESS continued...

D. Influence of others on achievement, success, etc.

+2

1. Success or happiness follows upon positive reasonable actions :
 - a. acting positively with the help of others after having done all one can
 - b. actively seeking professional help for problems that need it.
 - c. actively listening to the advice of another (even though it was not actively sought)
 - d. insisting on the right to determine one's own course of action and doing so (e.g., work, profession, marriage, etc.)
 - e. yielding to legitimate pressure but also doing other work that is interesting

2. Failure or unhappiness follows upon blind dependence or rebellion
 - a. acting blindly on the advice of others without judging it on its own merits

I. ACHIEVEMENT, SUCCESS continued..

b. refusing to follow reasonable advice
or legitimate authority

3. Failure in spite of effort can be corrected
or prevented by special (professional) help

1. ACHIEVEMENT, SUCCESS D. Influence, +1

+1

1. Success follows reasonable action with some dependence on others; upon
 - a. actively seeking (professional) help as a substitute for doing one's own thinking
 - b. seeking advice before having done all one can, but judging advice on its merits and then acting
 - c. acting positively when stimulated by
 - i understanding and sympathy from others
 - ii thought of loved ones
 - d. acting positively at the legitimate command or influence of another
 - e. trying to think things out, finding it difficult, and actively seeking help
 - f. determining one's own reasonable work or course in life
 - i with misgivings and hesitations
 - ii by deciding or planning
 - iii by making use of a fortunate chance
2. No success, failure or difficulties follow because of exaggerated independence :
 - a refusing to pay attention to reasonable advice

1. ACHIEVEMENT, SUCCESS D. Influence, +1

When import indicates neither success nor failure, score
for evidence of :

3. Active effort which is undertaken despite

- a. lack of appreciation by others
- b. negative attitude of others

I. ACHIEVEMENT, SUCCESS D. Influence, -1

-1

1. Success follows upon reluctant action, upon
 - a. waiting for another's approval or permission for doing something one has the right to do
 - b. doing what one is legitimately commanded but resentfully or reluctantly
 - c. refraining from ill-intentioned actions only because another intervenes
 - d. passively depending on
 - i advice or help from others
 - ii others' acceptance and understanding
 - e. help coming from others while remaining inert oneself
 - f. acting constructively when forced by another's pleading
 - g. making use of chance occurrences instigated by another
2. Success or self-satisfaction though one has taken no positive action; when

I. ACHIEVEMENT, SUCCESS D. Influence, -1

- a. accepting advice passively
- b. belonging to a successful group
- c. another achieves something which
one approves

3. No success, failure, or unhappiness follows
through others' fault; when they

- a. do not help, advise, cooperate
- b. have made a mistake

When the import indicates neither success nor failure,
score for evidence of :

4. Lack of regard for others :

- a. decision to follow own work or course in life
 - i puts burden on others
 - ii harms others

5. Work brings commendation

- a. because it is the first attempt
- b. because of good intention, despite lack
of success or mediocre success

6. Heroics, phoniness of every kind

I. ACHIEVEMENT, SUCCESS D. Influence, -2

-2

1. Success follows upon blind dependence or rebellion;
upon :
 - a. "love" which solves everything or is romanticized as escape, inspiration
 - b. refusal to listen to another's reasonable advice
 - c. refusal to seek advice for problems that require it
 - d. blind following of others' advice to work or achieve (e.g., others suggest you make something of yourself, and you do)
 - e. humiliation by others (for failure, etc.)
2. Through the fault of others, positive action results in failure, unhappiness, lack of success :
 - a. when one's best efforts are misunderstood by others
 - b. when active effort is frustrated by others and so wasted
 - c. upon actively seeking (professional) help for problems that need it

I. ACHIEVEMENT, SUCCESS D. Influence, -2, continued..

- d. when obeying legitimate commands
 - e. when one has experienced lack of love either
in the past or the present
3. No success, failure, or unhappiness follows
positive action
- a. which has the help or cooperation of others
 - b. which is intended to help others
 - c. when helping others
 - d. as a result of helping others
 - e. when actively determining one's work or
course in life

When the import indicates neither success nor failure,
score for evidence of :

4. Passive dependence on others :
- a. asking for help (no action either by
others or self)
 - b. getting help, advice
 - c. being reminded of things to be done
5. Hoping for others' success

E. Consequences of success or failure

+2

1. Failure is overcome by active effort or
adequate means, implying

I. ACHIEVEMENT, SUCCESS continued....

- a. personal effort
- b. personal initiative
- c. positive attitudes (persistence, courage, etc.)
- d. emotional control
- e. reasonable action

+1

1. Failure is overcome by active effort, aided by incidental factors :
 - a. with another chance
 - b. by changing to another (more realistic) goal
 - c. through learning from mistakes
 - d. by drawing good from evil
 - e. for the sake of others or with their help
2. Failure brings punishment and increased work
 - a. but some encouragement for having done the right thing
3. Work is appreciated but has undesirable side effects; it
 - a. is rewarded
 - b. has advantages; idleness has disadvantages

I. ACHIEVEMENT, SUCCESS E. Consequences, -1

-1

1. Failure is overcome with little or no positive action :
 - a. by the efforts or prayers of others
 - b. by making less than the required effort

2. Failure is not overcome; but is tolerated by
 - a. making the best of it, being resigned to it, doing nothing

 - b. just hoping; hoping to do better
 - c. consoling oneself with having tried
 - d. quickly forgetting failure
 - e. trying to be happy in spite of failure
 - f. superiors who decide one is failing
(though one feels he is improving)

3. Success is followed by undesirable attitudes or events :
 - a. worries continue
 - b. success is hollow, it fails to bring satisfaction
 - c. failure or loss recurs
 - d. others are culpably neglected

I. ACHIEVEMENT, SUCCESS E. Consequences, -2

-2

1. Failure is overcome by unlikely and/or harmful means; by
 - a. a long shot, accident, providence, etc.
 - b. awakening to find it was only a dream
 - c. finding it was not real because of mistaken judgment
 - d. positive action which leads to harm

2. Failure is not overcome and leads to undesirable consequences; it
 - a. leads to despair, desperate action
 - b. ends in emotion (dejection, worry, tears, etc.)
 - c. results in pretense, deceit
 - d. leads to escape, actually or in dreams, sleep, etc.
 - e. paralyzes all action or hinders it

3. Failure is followed by negative attitudes; it is
 - a. not admitted
 - b. blamed on others
 - c. met with indifference
 - d. a prelude to more failure

I. ACHIEVEMENT, SUCCESS E. Consequences, -2
continued...

4. Success, achievement, work routine, etc., is undesirable or of little importance; it
 - a. leads to fatigue, boredom, harm, impulsive action
 - b. is relinquished for "love"

5. Failure, lack of effort, has desirable consequences :
 - a. refusal to work brings rewards
 - b. failure brings comfort from others

I. ACHIEVEMENT, SUCCESS continued...

F. Attitudes connected with success or failure (See also III. F. Attitudes toward people and things)

+2

1. Negative attitudes lead to harm:
 - a. though coupled with competence, they lead to failure, punishment, etc.
 - b. though coupled with success, they are punished (e.g., bragging, gloating)

2. Interest in work is approved; it leads to
 - a. success
 - b. failure or little achievement if interest is lacking

3. Blaming own failure on others is disapproved; it
 - a. leads to punishment

+1

1. Disapproving attitudes of others have mild and temporary effects on oneself; they
 - a. make one sad, depressed, etc., but work goes on
2. Success compensates for difficulties; it
 - a. makes one forget minor annoyances

I. ACHIEVEMENT, SUCCESS F. Attitudes, -1, -2

-1

1. Negative attitudes can lead to achievement :
 - a. lackluster performance can inspire others
 - b. success is achieved despite lack of interest

2. Success or active effort is not really desirable:
 - a. success, etc., bring negative attitudes
(e.g., gloating, bragging, etc.)

 - b. negative attitudes can be prevented by omitting active effort, by avoiding work, achievement, etc. (e.g. dissension connected with work is avoided by not working)

-2

1. Attitudes that belittle success or successful people :
 - a. success comes to unworthy men (e.g. bad men can be great; mean, contriving people succeed)

 - b. men of superior achievement are impractical, gullible, etc. (e.g., great men are easily duped)

I. ACHIEVEMENT, SUCCESS F. Attitudes, -1, -2
continued...

-2, continued...

2. Success, achievement serve antisocial or unethical purposes; they

a. can be used to annoy others

3. Feelings of inadequacy :

a. knowledge, preparation, etc., are not adequate, or no longer adequate

I. ACHIEVEMENT, SUCCESS, HAPPINESS, ACTIVE EFFORT
(OR LACK OF IT), continued..

3. Preference for immaterial values, as against material, expedient, irrational values; preferences for values that are :
 - a. ethical
 - b. religious
 - c. spiritual
 - d. altruistic

4. Optimism, implying
 - a. constructive action (e.g., life is responsible, constructive, worthwhile; compromise on principles leads to disaster, harm, penalty, etc.

5. Imports exemplifying an active personal relation to God
 - a. God is seen as creator, father, sustainer of life
 - b. readiness is expressed to do His will

II. RIGHT AND WRONG (Well-intentioned, reasonable, responsible action versus ill-intentioned, impulsive, harmful, irresponsible action)

A. Actions

+2

1. Wrongdoing, ill-intentioned, imprudent action is positively disapproved it:
 - a. brings punishment, penalty (the import indicates that this is recognized as just, deserved)
 - b. ends in destruction
 - c. is followed by a resolve to give oneself up
 - d. results in repentance, amendment, restitution
 - e. is followed by forgiveness (with position action)

2. Injustice is overcome by positive action; by
 - a. fighting for freedom
 - b. demanding and working for justice
 - c. escaping from injustice

3. Injustice is suffered by positive action; by
 - a. consulting professionals (e.g., lawyer, clergy, etc.)
 - b. overcoming resentment and other negative emotions

4. Well-intentioned, prudent, responsible action is approved and chosen; it
 - a. brings commendation, recognition, etc.
 - b. depends on own choice, self-determination

5. Neglect of duties, obligations leads to punishment, penalty :
 - a. refusal to work leads to loss of job, demotion, etc.

6. Accidentally harmful action is corrected by
 - a. giving help, going for help, etc.
 - b. attempting to give relief to others

(Ordinarily, well-intentioned, reasonable, responsible)
(action will be found under Category I. It is scored in)
(Category II, only when the import is concerned with the)
(ethical or social aspect of action or its personal)
(consequences rather than the goal, the means to the)
(goal, or possible success.)

II. RIGHT AND WRONG, A. Actions, +1

+1

1. Wrongdoing is disapproved for extraneous reasons: it
 - a. leads to satiation, boredom
 - b. makes others mad, breaks their heart †
 - c. leads to restitution, but
 - i. only at the insistence of others
 - ii. is followed by quarrels, litigation, etc.
 - d. is forbidden
2. Right action (duty) is done for extraneous reasons: it is
 - a. done out of obedience, loyalty, etc.
 - b. done without conviction
 - c. made easy by others' compliance
3. Injustice is suffered by positive attitudes; with
 - a. hope and resignation
 - b. prayer, etc.
4. Accidentally harmful action is regretted; it
 - a. is not punished (if no evidence of careless action)
 - b. is corrected by others' help, skill, etc.
 - c. arouses sorrow, concern, etc., when help is not possible

II. RIGHT AND WRONG, A. Actions, -1

-1

1. Wrongdoing is a matter of personal relations or social conventions; it
 - a. is prevented by others' suspicion or vigilance
 - b. is followed by forgiveness out of "love" (no repentance, restitution, etc.)
 - c. is forgiven when culprit becomes great
 - d. is compensated by admission or apology
 - e. is covered up by others
 - f. gets culprit into trouble (no realization that punishment is deserved or just)
 - g. brings scolding +
2. Wrongdoing is followed by inappropriate reactions; by
 - a. platitudinous resolutions
 - b. despair
3. Right action is done for extraneous reasons :
 - a. it brings reward
 - b. admitting it brings discomfort
 - c. others insist that it be done
4. Right action is of doubtful value; it
 - a. is suspect
 - b. brings harm, penalty, which is turned aside by "love" prayer, etc.

5. Punishment is disproportionate :
 - a. neglect of small obligation leads to big penalty
 - b. accidentally harmful action is imputed to the doer; it is
 - i punished (no evidence of careless action)
 - ii punished as crime (evidence of some carelessness)

II. RIGHT AND WRONG, A Actions, -2

-2

1. Wrongdoing does not have undesirable consequences; it
 - a. is followed neither by punishment nor repentance and restitution
 - b. is not admitted, or is covered up
 - c. is not punished when offender is important (e.g., big scoundrels escape)
 - d. succeeds if one is clever; fails if one is inept
 - e. escapes penalty, which is turned aside by "love"
2. Wrongdoing is caused by extraneous factors; by
 - a. bad environment, poor upbringing, bad heredity, etc.
 - b. another's wrongdoing which must be avenged
3. Wrongdoing or impulsive action is justified; it
 - a. is worth it
 - b. provides means for good actions
 - c. can turn out well if others do their share
 - d. brings desirable results (freedom, friends, etc.)
 - e. is justified in fantasy
 - f. is defended when right action conflicts with self-interest

II. RIGHT AND WRONG, A. Actions, -2

5. Wrongdoer is "straightened out"
 - a. by punishment (no evidence of repentance)
 - b. by prayers of others

6. Injustice is inescapable;
 - a. defense against it brings harm

II. RIGHT AND WRONG , continued....

B. Intentions, attitudes, emotions

+2

1. Ill-intentions are prevented by :
 - a. fate (e.g., in pursuing revenge, you come to harm)
 - b. other people (e.g., discovering your plot, others jail you)
 - c. goodness or innocence of another

2. Vices, negative emotions and attitudes are harmful; they
 - a. make men impotent, helpless
 - b. harm self or others

3. Wrong attitudes are disapproved;
 - a. though coupled with competence, they lead to failure, harm, punishment
 - b. though coupled with success, they are punished (e.g., bragging, gloating brings disapproval, ridicule)

4. Temptation is actively resisted when
 - a. one realizes that contemplated action is wrong
 - b. ill intent is conquered through love

5. Revenge is disapproved; it
 - a. should not be planned
 - b. is not right (e.g., revenge is not the way to combat injustice)

II. RIGHT AND WRONG, B. Intentions, +1, -1, -2

+1

1. Wrong intentions are not carried out because
 - a. consequences are realized in time
 - b. other's prayer or pleas are answered
 - c. one becomes disgusted

2. Temptation is resisted but some disturbance continues

-1

1. Wrong intentions are not carried out for extraneous reasons; because of
 - a. reluctance to cause incidental harm to loved ones

2. Temptation is overcome for extraneous reasons :
 - a. when opportunity is gone
 - b. because of "love" which is romanticized
 - c. because reason for it was unfounded

3. Unacceptable intentions turn out to be acceptable
 - a. through fortuitous circumstances

4. Unethical attitudes accompany something desirable; they
 - a. can lead to achievement
 - b. are the result of success

II. RIGHT AND WRONG, B. Intentions, +1, -1, -2, continued..

-2

1. Wrong intentions are not carried out for extraneous reasons; because
 - a. one lacks courage
 - b. something or somebody interfered
 - c. the opportunity is gone
 - d. the intentions are discovered by others
 - (e.g., your victim discovers your plot and gets away)
 - e. an accident serves the purpose (e.g., before you can take revenge an accident destroys your enemy)
2. Resistance to temptation, etc. is predicted from "look" of person
3. Right action is predicted because of extraneous factors:
 - a. good upbringing (e.g. high ideals taught in childhood)
 - b. nationality, race, sex, heredity, etc.

II. RIGHT AND WRONG, continued...

C. Effects (consequences) of punishment (includes penalties, legal punishment, scolding, etc.)

+2

1. Punishment has desirable effects; it
 - a. is accepted (either immediately or after consideration)
 - b. can profit the culprit
 - c. can help others
 - d. will prevent further wrongdoing if taken in right spirit

+1

1. Unjust punishment is revoked
 - a. immediately or later
 - b. with the help of others
2. Just punishment is accepted, though slowly;
 - a. with the hope that it will be revoked

II. RIGHT AND WRONG, C. Effects, -1, -2

-1

1. Punishment has undesirable consequences; it
 - a. is resented
 - b. is followed by disgrace
 - c. brings disappointment to friends

2. Punishment arouses irrelevant or inappropriate reactions; it
 - a. brings respect, esteem for good men
 - b. leads to exaggerated promises (e.g., culprit resolves to lead blameless life and so will his children)
 - c. leads to worry on the part of others (e.g., culprit sulks and later finds that others are worried about him)

3. Punishment cannot be avoided; escape
 - a. is frustrated
 - b. brings additional punishment

-2

1. Punishment has very undesirable consequences; it
 - a. does no good
 - b. leads to despair
 - c. results in negative attitudes
(sulking, brooding, etc.)
 - d. arouses the intention not to be caught again

II. RIGHT AND WRONG, C. Effects, -1, -2, continued...

2. Punishment is considered unjust because

a. wrongdoer is a good man (e.g., culprit tries to live a good life but is caught and sentenced)

3. Punishment has exaggerated effects:

a. it "straightens out" the wrongdoer (without his doing anything)

4. Phony, goody-goody reactions (e.g., unjust punishment, if met with a smile, leads to happiness)

III. HUMAN RELATIONSHIPS

A. Good (friendly) relations (including friendship, love, marriage)

+2

1. Good relations result (or are expressed) in positive action; in
 - a. acting unselfishly
 - b. cooperating with others
 - c. resisting impulsive action
 - d. being considerate and making sacrifices for others
 - e. overcoming one's feelings
 - f. rejoicing over another's success or good fortune
 - g. giving gifts
2. Good relations are enduring, helpful; they are
 - a. proved in adversity (e.g., standing by friends; praying for them if no other action is possible)
 - b. a mainstay in work and hardship (e.g., hard work with love is better than easy work without love)

III. HUMAN RELATIONSHIPS

3. Good relations are deepened through a common enterprise; through
 - a. common work, effort
 - b. life in common
 - c. common suffering

4. Good relations are subordinated to duty; they must be
 - a. sacrificed for a higher motive
(e.g., you must leave those you love when your country needs you)

 - b. subordinated to conscience (e.g., you may have to hurt those you love for the sake of conscience)

5. Deliberately endangering good relations is condemned; it
 - a. results in difficulties
 - b. brings harm, punishment

III. HUMAN RELATIONSHIPS, A. Good, +1

+1

1. Good relations are desirable; they endure; they
 - a. are not upset or disturbed by small imperfections, mishaps, jokes, hardships
 - b. withstand separation
 - c. allow for individual interests
 - d. make hardships bearable (e.g., love consoles the exile)
 - e. are valuable

2. Good relations are deepened by positive attitudes
 - a. during enforced absence
 - b. by understanding of others' mistakes

3. Good relations are disturbed but later restored by positive actions or attitudes; by
 - a. friendly action
 - b. common suffering
 - c. repentance
 - d. positive emotions (e.g., pity, sympathy, etc.)
 - e. making use of a chance happening

When import indicates no outcome, look for evidence of :

4. Positive attitudes toward implied human relationships (e.g., good training is valuable, brings reward, recognition; a home is valuable, even when love is lacking)

For Positive Attitudes toward others see III F.5. (score -

III. HUMAN RELATIONSHIPS, A Good, -1

-1

1. Good relations are not established or maintained by outgoing affection or good will. They are
 - a. developed from subservient, fearful motives
 - b. the result of fortuitous happenings
 - c. the result of waiting and praying
 - d. based on platitudinous resolves with no real action
 - e. the result of gifts, parties, etc. †
 - f. dependent on reward (e.g., devotion requires recompense)

2. Good relations are not very durable; they are
 - a. Upset by rumor, interference from others
 - b. disturbed without good cause
 - c. superficial, sentimental, or romanticized as "love"

3. Good relations are disturbed but later restored without taking positive action :
 - a. by sheer passage of time, chance or fate
 - b. by prayer alone

4. People and things bring pleasure :
 - a. love, friendship, thought of loved ones, innocence, etc., are beautiful, pleasant

III. HUMAN RELATIONSHIPS, A Good, -1, continued...

- b. thought or expectation of marriage or a child is pleasant †
 - c. love, etc., brings happiness (e.g., happiness proves one's love)
 - d. sudden reunion (by accident, chance, or after legitimate punishment) brings joy
 - e. separation is hard, sad; is avoided because hard
 - f. lack of love, friendship, etc., is sad †
5. Good relations are expressed in emotions, not actions; by
- a. assurances of loyalty
 - b. displays of affection
 - c. professions of devotion
6. Heroics, phoniness of every kind

III. HUMAN RELATIONSHIPS, A. Good, -2

-2

1. Good relations have undesirable consequences
 - a. love overrides principles
 - b. love overrides urgent and legitimate self-interest
 - c. love overrides legitimate interests of others
 - d. ' good relations mean giving in to another; or mean another's giving in to one's wishes
 - e. good relations are accompanied by undesirable attitudes
 - f. good relations are established or maintained for selfish reasons (e.g., people are liked for what you can get out of them)
2. Good relations are not durable; they
 - a. end in separation, serious disagreement, disaster
 - i because of own fault
 - ii by fate, chance, accident
 - iii for no reason
 - b. are broken by independent action
 - i without any reason (e.g., because it is better so)
 - ii without any effort at reconciliation
 - iii for selfish reasons

III. HUMAN RELATIONSHIPS, A. Good, -2, continued..

- c. are broken because of own fault
 - i without apology or effort at reconciliation
 - ii with apology possible or in the future

3. Good relations improve or deteriorate capriciously:

- a. separation
 - i ends love
 - ii increases love (no reason given)
 - iii increases love because separation brings physical discomfort (e.g., man comes to appreciate wife during her absence because he has nobody to cook for him)
 - iv gives inspiration, perfects understanding (without saying how)
- b. near-tragedy increases love (e.g., serious accident makes you care)
- c. love comes and goes capriciously

III. HUMAN RELATIONSHIPS, A. Good, -2, continued...

B. Bad, +2, +1, -1

4. Good relations have exaggerated effects:

a. lack of love leads to later failure,
unhappiness

b. sheer presence of others produces
unselfishness

5. Good relations bring assurance of favourable
outcome :

a. hoping or knowing that loved ones will
do well

B. Bad relations (includes quarrels, enmity, etc.)

+2

1. Bad relations are condemned: they

a. end in disaster

b. lead to difficulties or punishment

c. can be prevented or corrected by
positive action

2. Undesirable emotions and attitudes (e.g.,
disloyalty, infidelity, anger, vindictiveness)
mar human relations

+1

1. Bad relations can be corrected; they are

a. prevented or corrected by others (e.g.,
others clear up a misunderstanding)

III. HUMAN RELATIONSHIPS, B. Bad, +2, +1, -1, continued..

- b. resolved by separation when no obligation is involved (e.g., friends separate when not good for each other)

-1

1. Bad relations have prolonged ill effects; they
 - a. poison others' lives indefinitely
2. Bad relations can be corrected by extraneous factors; they are bettered
 - a. just by passage of time, by fate, by chance
 - b. suddenly, and shortcomings are suddenly conquered
 - c. suddenly, by conquering emotions (anger, etc.) offhand
 - d. by others' pleading
 - e. when being advised to talk things over
 - f. after a close shave
3. Pollyanna endings (e.g., everything ends well)

III. HUMAN RELATIONSHIPS, B. Bad, -2

-2

1. Bad relations have no ill effects: they
 - a. go unpunished
 - b. lead to no real problems or difficulties
 - c. end in separation (when obligations are involved) without ill effects (e.g., marital quarrels end in walking out)
 - d. end in conflict with no attempt at resolution

2. Bad relations are caused by undesirable actions or attitudes (no outcome); by
 - a. neglect
 - b. aggressive action (not punished)
 - c. negative emotions (anger, suspicion, etc.)
 - d. envy of others' achievement, success, etc.
 - e. fate, circumstances, etc., (e.g., some nice people can't get along)

3. Bad relations are expressed in undesirable ways; in
 - a. insults which must be avenged
 - b. angry words or actions (unpunished)

4. Bad relations are caused by external circumstances; they
 - a. are caused by differences in race, heritage, interest, etc. (e.g., people who are different cannot understand each other)

III. HUMAN RELATIONSHIPS, B, Bad, -2

-2

1. Bad relations have no ill effects: they
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 - b. lead to no real problems or difficulties
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 - a. are caused by differences in race, heritage, interest, etc. (e.g., people who are different cannot understand each other)

III. HUMAN RELATIONSHIPS, B, Bad, -2

- b. can be prevented or corrected by change
in external circumstances (e.g., familiar
places prevent misunderstanding)
5. Bad relations have exaggerated effects :
- a. lack of love, affection, understanding, etc.,
leads later to failure, unhappiness

For Negative Attitudes Toward Others see III. F. 1. (score -1)

III. HUMAN RELATIONSHIPS, continued...

C. Influence of others

+2

1. Reasonable actions are not unduly influenced by others' opinions :
 - a. carrying out reasonable actions despite others' objections, disagreements, etc.
 - b. resisting illegitimate pressure leads to difficulties, penalties, etc.
 - d. insisting on one's right to choose one's course in life, and acting accordingly; this choice is accepted by others
 - i immediately
 - ii after some time but without anger or persisting conflict
2. Others serve as example or warning; this is
 - a. followed resolutely
 - b. not followed and leads to difficulties
3. Bad influence can be overcome; it can be
 - a. prevented or corrected by own determined effort
 - b. avoided by separating from bad companions

III. HUMAN RELATIONSHIPS, continued...

4. Reasonable advice (warning) is desirable;
it is
 - a. asked for and heeded
 - b. not asked for but is heeded
 - c. not heeded; this results in harm,
punishment, etc.

5. Others help when one's own effort is not
sufficient :
 - a. professional help is sought for
problems that require it

 - b. failure in spite of effort is corrected
(prevented) by professional help

6. Imports state constructive principles (e.g.,
discipline is necessary)

7. Imports acknowledge a positive relationship to
God:
 - a. God is seen as creator, father, sustainer of
life

 - b. readiness is expressed to do His will

 - c. God is seen as merciful and pardoning

III. HUMAN RELATIONSHIPS, C. Influence of Others, +1
+1

1. Positive actions are somewhat influenced by others' opinion, etc.; such actions
 - a. require cooperation, sympathy, understanding
 - b. depend on following reasonable advice or commands
 - c. imply resisting illegitimate pressure
 - i slowly
 - ii with misgivings
 - iii by passive waiting
 - d. succeed when done upon legitimate commands
 - e. mean taking some risk in following one's course in life (e.g., job might bring temptation)
 - f. when emotional, are restrained by others' influence
 - g. when reasonable, may be hindered but not prevented by negative attitude of others
2. Others are helpful :
 - a. their (good or warning) example is followed
 - b. their help succeeds (when one is unable to act oneself)
 - c. bad influence can be overcome or corrected through effort of others (e.g., when bad

III. HUMAN RELATIONSHIPS, C. Influence of Others, +1

2. Others are helpful:, continued..

companions persuade a boy to join in wrongdoing, parents help him find other friends)

3. Reasonable advice is followed with hesitation or misgivings; it is

- a. . neither admitted nor acknowledged
- b. considered, taking action later
- c. resented, but one is grateful later

4. Positive decisions are not influenced by others' negative attitude; they imply

- a. choosing one's own work or course
in life

III. HUMAN RELATIONSHIPS, C. Influence of Others, -1

-1

1. Heavy reliance on outside influence for one's opinions and actions; they
 - a. depend on understanding, acceptance, sympathy
 - b. are put off to please others
 - c. are influenced by others (no reason given)

2. Refusal to depend on or comply with others :
 - a. acting in complete disregard of others
 - i despite others' opposition
 - ii without any attempt at reasoning
 - b. refusing to comply until compliance is forced by one's need
 - c. feeling that others interfere (e.g., others' suspicious or criticism spoils best intentions)

3. Blind dependence on others :
 - a. help from others saves from despair
 - b. others are good example or warning (no action)
 - c. others compensate for one's defects (e.g., exhaustion, incompetence, poverty, loneliness)

III. HUMAN RELATIONSHIPS, C Influence of Others, -1
continued....

3. Blind dependence on others:

- d. resisting illegitimate pressure
leads to enduring difficulties
- e. insisting on the right to choose one's
course in life leads to failure or
difficulties

4. Heroics, phoniness of every kind

III. HUMAN RELATIONSHIPS, C. Influence of Others, -2

-2

1. Actions are dictated by others' opinion:
 - a. illegitimate pressure is yielded to
 - i for the sake of peace
 - ii for social reasons
 - iii for selfish reasons

2. Negative attitude of others toward self has exaggerated effects:
 - a. lack of understanding or love causes failure

 - b. rejection by others results in own failure

 - c. rejection is cause for revenge

 - d. refusal of help results in failure

3. Help from others is ineffective; it
 - a. is not offered

 - b. does not succeed

 - c. is impossible

 - d. harms the helper

 - e. is not appreciated though successful

 - f. is refused by others, which dooms to failure

III. HUMAN RELATIONSHIPS, C. Influence of others, -2

-2

4. Bad influence prevails
 - a. in spite of active effort (e.g., you try to break away from bad company but they won't let you)
 - b. unless stopped by desperate action
5. Advice or commands from others are not heeded:
 - a. reasonable advice is disregarded without penalty
 - b. obeying legitimate commands leads to
 - i. wrong action (e.g. fighting one's own people)
 - ii failure, unhappiness

III. HUMAN RELATIONSHIPS, continued..

D. Influence of others on success,
achievement, etc.

See I.D. Influence of others on success,
achievement, etc.

E. Influence on others

+2

1. Exerting positive influence on others;
one is successful in
 - a. amusing, or inspiring others
 - b. persuading others to be reasonable
 - c. persuading others to correct
undesirable attitudes
2. Contributing to others' happiness, success,
etc.; by
 - a. work or active effort
 - b. encouragement, help, etc.
3. Enlisting others' cooperation
 - a. by acting for well-intentioned, ethical,
religious motives (e.g., goodness,
generosity, etc., bring out the best
in people)

III. HUMAN RELATIONSHIPS, continued...

4. Reconciling others to one's course in life;
their distrust, disappointment is conquered
by

- a. success, happiness
- b. friendly action

+1

1. Attempt at exerting positive influence on others
is fairly successful; it is

- a. successful in amusing, inspiring others,
with undesirable side effects
- b. unsuccessful in making others see reason,
but effort continues
- c. successful by making use of a fortunate
chance

When the import indicates neither success nor failure, score
for evidence of :

2. Attempt at exerting positive influence on
others; by

- a. imparting information

III. HUMAN RELATIONSHIPS, E. Influence on others, -1, -2

-1

1. Attempt at exerting positive influence on others is at least partially unsuccessful; the attempt to inspire, amuse, comfort, warn others
 - a. fails
 - b. succeeds
 - i only after a long time (no reason given)
 - ii only after disaster strikes
2. Exerting negative influence on others:
 - a. fooling others
 - b. trying to fool others (no outcome)
3. Failure to help others:
 - a. resolving to help others (no action)
 - b. giving advice which turns out to be wrong
4. Negative attitude toward others:
 - a. their action is approved only after one's advice turns out to be wrong
 - b. others appreciate us only after we help them
 - c. one is surprised over the incompetence of others

III. HUMAN RELATIONSHIPS, E. Influence on others,
-1, -2, continued...

5. Heroics, phoniness of every kind (e.g., you experience vicariously other people's feelings and so can help them and improve yourself)

-2

1. Attempt at exerting positive influence on others in unsuccessful; it fails to
 - a. keep others from wrongdoing
 - b. persuade others to see reason
 - c. persuade others to change undesirable attitudes
2. Exerting very negative influence : by
 - a. manipulating others (even for a good cause)
 - b. becoming emotional until others give in (e.g., when you fuss or mope, others will let you off work)
 - c. deceiving others
 - d. destroying others
3. Failure to help others:
 - a. refusing to help or procure help
 - b. being unwilling to take care of others who need it

III. HUMAN RELATIONSHIPS, continued

F. Attitudes (toward people and things, God, nature, life, etc.)

+2

1. Imports acknowledging man's active personal relation to God:
 - a. God is seen as creator, father, sustainer of life
 - b. God is seen as merciful, pardoning
 - c. readiness to do His will is expressed

2. Optimistic imports implying constructive action:
 - a. life must be responsible, constructive
 - b. life is worthwhile
 - c. life is seen realistically
 - d. material values are subordinate to immaterial values

 - e. compromise on principles leads to disaster, harm, etc.

+1

1. Optimistic imports
 - a. giving reasons but not implying action (e.g., in nature, good times follow after hard times)

III. HUMAN RELATIONSHIPS, continued..

2. Imports embodying constructive principles
(e.g., freedom must not be sacrificed for strength)
3. Imports appreciating immaterial values (e.g., education, learning, etc. is valuable)
4. Negative attitudes toward others are undesirable:
 - a. impatience, snobbery, bigotry, etc.,
deserve a penalty
 - b. withdrawing from people leads to difficulties
5. Positive attitudes toward others; people are
 - a. good, helpful
 - b. forgiving (after repentance, restitution, etc.)
 - c. trustful when one repents after having done something wrong
 - d. loyal and true
 - e. upright; they act according to principles

III. HUMAN RELATIONSHIPS, F. Attitudes, -1

-1

1. Negative attitudes toward others; they
 - a. are inept, incompetent
 - b. appreciate us only after we help them
 - c. can be bought
 - d. have undesirable attitudes from which one withdraws

2. Optimism without reason; sheer enjoyment of nature, God, religion, children, etc; they
 - a. God is seen as creator, father, sustainer of life

 - b. God is seen as merciful, pardoning
 - c. readiness to do His will is expressed

2. Optimistic imports implying constructive action :
 - a. life must be responsible, constructive
 - b. life is worthwhile
 - c. life is seen realistically
 - d. material values are subordinate to immaterial values

 - e. compromise on principles leads to disaster, harm, etc.

+1

III. HUMAN RELATIONSHIPS, F. Attitudes, -1

1. Optimistic imports
 - a. giving reasons but not implying action
(e.g., in nature, good times follow
after hard times)
 - b. implying that pessimism is undesirable (e.g.,
a dim outlook makes things seem worse)
2. Imports embodying constructive principles (e.g.,
freedom must not be sacrificed for strength)
3. Imports appreciating immaterial values (e.g.,
education, learning, etc., is valuable)
4. Negative attitudes toward others are undesirable:
 - a. impatience, snobbery, bigotry, etc.,
deserve a penalty
 - b. withdrawing from people leads to difficulties
5. Positive attitudes toward others; people are
 - a. good, helpful
 - b. forgiving (after repentance, restitution, etc.)
 - c. trustful when one repents after having done
something wrong
 - d. loyal and true
 - e. upright; they act according to principles

III. HUMAN RELATIONSHIPS, F. Attitudes, -1

-1

1. Negative attitudes toward others; they
 - a. are inept, incompetent
 - b. appreciate us only after we help them
 - c. can be bought
 - d. have undesirable attitudes from which one withdraws

2. Optimism without reason; sheer enjoyment of nature, God, religion, children, etc; they
 - a. are beautiful
 - b. are appreciated, cause elation
 - c. should be kept beautiful, innocent, etc.

3. Imports embodying (non-constructive) principles:
 - a. overconfidence brings harm
 - b. laziness, intolerance, etc., can be overcome by fortuitous circumstances
 - c. self-will leads to success

4. Heroics, phoniness of all kinds (e.g. though everybody else rests after exertion, your work is to carry the torch, to hold it high)

III. HUMAN RELATIONSHIPS, F. Attitudes, -2

-2

1. Negative attitudes toward others :
 - a. others are troublesome, malicious, self-seeking
 - b. self and one's group are the most important factors
 - c. others can be tolerated if things go your way
 - d. only the weak live by convention

2. Pessimistic imports :
 - a. life, people, things, are sources of worry, bewilderment, annoyance, etc.
 - b. time, war, nature, etc., produce destruction (e.g., eat and be eaten is the law of nature)
 - c. life, nature, is insensitive (e.g., you live and die alone)
 - d. when expecting something nice, something bad happens instead

3. Undesirable attitudes are justified:
 - a. bragging, intolerance, cavalier disregard, etc., are normal under certain circumstances (e.g., when you succeed you have reason to gloat over your rival)

III. HUMAN RELATIONSHIPS, F. Attitudes, -2

-2

4. Passive dependence on extraneous factors; on
 - a. routine (e.g., routine brings happiness)
 - b. the support of others
 - c. environment, training, etc. (e.g., you become what your environment has made you)

5. Sheer passivity:
 - a. waiting^x
 - i for somebody
 - ii for somebody
 - iii for love ones †
 - iv for food †

 - b. remembering the past
 - c. wondering
 - i about things
 - ii what will happen

 - d. being uncertain about the future

- G. Attitudes connected with success, achievement, or lack of it. See under I.F. Attitudes connected with success, achievement, etc., or lack of it

^xWhen waiting is successful, look under success by positive but passive attitudes (score -1, I.B. 2.e.)

IV. REACTION TO ADVERSITY, A. Loss +2

A. Loss, harm, danger, terror, separation, disappointment, difficulties

+2

1. Adversity is overcome by self-determined action;
by
 - a. positive action (either now or in the past)
 - b. action that is helped by thought of others, happy emotion, etc.

2. Adversity is not overcome but faced by positive action or attitude:
 - a. suffered by positive action (e.g., working, helping others, overcoming negative emotions, etc.)
 - b. suffered by positive attitude or prayer when action impossible (e.g., seeing constructive effects)
 - c. avoided by positive action

+1

1. Adversity is overcome by positive action or attitude; by
 - a. forced action
 - b. decision not to give in (no action)
 - c. some positive action after sudden decision to resist

IV. REACTION TO ADVERSITY, A. Loss +1

- d. positive attitudes though not by positive action
 - e. some positive action
 - i but emphasis on worry or waiting
 - ii but followed by regret
 - iii though impeded by negative attitude of others
 - f. seeking professional help
2. Adversity is not overcome, but faced by positive action or attitude :
- a. accepted with hope and resignation (no depression)
 - b. avoided rather than actively overcome (when problem is relatively unimportant and does not involve obligations, responsibility)
 - c. remains a source of worry despite success or adequacy
 - d. brings resolution to get professional help
 - e. arouses emotion together with constructive intention

IV. REACTION TO ADVERSITY, A Loss -1

-1

1. Adversity is overcome through external circumstances:
 - a. through other people or things (e.g., other rescue you; you are saved because sheltered in a safe place)
 - b. by fate, chance, coincidence (no action)
 - c. by passage of time
 - d. without evident cause

2. Adversity is overcome despite failure to act when action is possible; by
 - a. prayer alone
 - b. prayer and others' efforts

3. Adversity is overcome through ineffective response; by
 - a. deciding it was bad dream, had not really happened
 - b. clowning or joking
 - c. becoming indifferent
 - d. imitating others' behavior
 - e. compensating others through a sense of remorse

IV. REACTION TO ADVERSITY, A Loss -1

4. Adversity is not overcome but tolerated with the help of others; by
 - a. people or things compensating for it
(without acting oneself)
 - b. appealing to others for help if help is possible (no action by self or others)
 - c. receiving help from others

5. Adversity is not overcome but avoided or fled:
it is
 - a. avoided
 - i. either passively or with undue emotion, though responsibility demands positive action
 - ii by refusal to believe it has happened
 - b. escaped through dream, sleep, fantasy

6. Adversity is accepted:
 - a. passively, though action is possible
 - b. with vague hope for good outcome
 - c. after prayer, sleep, passage of time, talk to friends; these make you feel better

IV. REACTION TO ADVERSITY, A Loss -1

7. Adversity cannot be overcome; it

a. pursues into dream, sleep

b. is never forgotten

8. Heroics, phoniness of every kind

IV. REACTION TO ADVERSITY, A Loss -2

-2

1. Adversity is overcome because it was unreal:
 - a. awakening to find it was only a dream
 - b. finding it was not real because of a mistaken judgment

2. Adversity is overcome by accidental, unlikely means or harmful action; by
 - a. altogether unlikely means, a long shot
 - b. accident, providence, vow, etc.
 - c. positive action which leads to harm
(e.g., you escape from danger but hurt yourself doing so)

3. Adversity is not overcome but avoided; by
 - a. escape
 - b. cavalier disregard (e.g., you can go back to your earlier love because your wife doesn't care anyway)
 - c. giving in to impulses that led to original harm

4. Adversity cannot be overcome; action is
 - a. useless
 - b. impossible (e.g., because shock paralyzes)
 - c. hindered
 - d. followed by greater adversity
 - e. incomplete and has no outcome

IV. REACTION TO ADVERSITY, A Loss -2, continued...

5. Adversity leads to undesirable actions or attitudes; it
 - a. arouses impulsive or desperate action
 - b. ends in emotion, despair or destruction (whether adversity is real or not)
 - c. is blamed on others
 - d. has no outcome but a good one is wished, prayed for
 - e. leads to avoidance of harmless action that had caused adversity

6. Adversity is caused or accompanied by
 - a. harmless action
 - b. virtuous action
 - c. supernatural action
 - d. legitimate pleasure or recreation
 - e. accident
 - f. malice (no reason or outcome)

7. Adversity is imagined or relived in memory; by
 - a. thinking about it
 - b. remembering it
 - c. being relieved or grateful that it is over

A P P E N D I X D:

Examples of Protocols

PICTURE 1 - PROTOCOL

I could see in the picture that before people were settling peacefully. They did all the work they intended doing. Ploughing their fields, collecting some food for their children, fetching wood for cooking. Children used to play around peacefully. Sooner the weather became cloudy. Rain fell. All the family gathered together in their shelter. Nothing had to be done. The following day streams were full of water. No fetching of wood was done. Ploughing became difficult because of water. Starvation started. They lived miserably. Children cried for food and it became difficult to collect food. People are dying of hunger. All work in a standstill. This is what I observe from the picture.

Import

Man is at the mercy of nature which brings despair.

Scoring

-2 III F 2(b)

III Human Relationships,

F Attitudes, -2

b) time, war, nature etc. produce destruction (e.g. eat and be eaten is the law of nature)

PICTURE 4 - PROTOCOL

The picture shown a man who had fallen down and probably hurt his arm, and next to him a man standing on his side for first aid attendance as normally a good Samaritan should do as it is written even in Bible that we do unto others as you should like them do unto you. He will make arrangement to give necessary help to send the injured to the nearest possible Hospital or the nearest place where the injured may be medically attended to.

Import

Do unto others as you wish it to be done unto you.

Scoring

+1 III F 5 or 2

III Human Relationships

F. Attitudes (toward people and things, God, Nature, Life etc.) + 1

5 Positive attitude towards others

2 Imports embodying constructive principles (e.g. freedom must not be sacrificed for strength.)

PICTURE 5 - PROTOCOL

This young boy was grazing his father's flock of sheep in the veld. One of the sheep was lying down for a long time. The young boy approached that sheep and he found that it had given birth to a lamb. He realised that the lamb was exposed to disasters in the veld such as wind and the heat of the sun. Then he carried it home.

He is now seen carrying it on his shoulder, travelling homewards with his hound. He is talking to himself saying that his father's flock is multiplying and he wants to take more care of it so that his father should love him the more.

He will get home and report to his father what happened when he was grazing the sheep in the veld. His father will pat him on the shoulder and say to him "sonny, - you are growing into a reliable man". When the flock has multiplied, the whole of this boy's family will live nicely for they will share the sheep and sell wool. They will then have money on which to live.

Import

When one works constructively one will reap the benefits and be acknowledged.

Scoring

+2 II A 4(a)

II Right and wrong (well - intentioned, reasonable, responsible action versus ill-intentioned, impulsive, harmful, irresponsible action)

A Action +2

4 Well intentioned, prudent, responsible action is approved and chosen : it

a) brings commendation, recognition etc.

PICTURE 6 - PROTOCOL

This lady here sat brooding over her future problems, she was hungry, thin and immaciated. Dressed in tarters not knowing what to do. Her husband joined the mining industry.

The lady is now happy, she has money, food, clothes and everything in abundance. Their children attend school and they are also happy in the family. The furniture is nice and buildings also. So her worry is over.

Import

When one is faced with adversity, others rescue one and so one is happy.

Scoring

-1 IV A 1(a)

IV Reaction to adversity

A Loss, -1

1 Adversity is overcome through external circumstances:

a) through other people or things (e.g. others rescue you; you are saved because sheltered in a safe place etc.)

PICTURE 9 - PROTOCOL

Here I could see everybody is happy. Somebody is being celebrated for obtaining his degree. This man came from a poor family who struggled to educate him. After passing J.C. his parents did not have any more money to educate him. He went to work where he kept his money to go back to school after the coming years. Meanwhile he was corresponding matriculation and passed. After 4 years he went back to the University where he obtained his B.A. Degree. He celebrated his degree with parents and friends after a long struggle but he persevered. After that he was employed as a high school Teacher where he earned good money. He lived in luxury and it never seemed he was the man who used to struggle in life, but through perseverance he achieved his goal. This is what I see in this picture

Import

Through perseverance one achieves one's goal.

Scoring

+2 IB 1(c)

B means taken toward goal, +2

1. Success comes through active effort or adequate means: through

c) positive attitudes (e.g. persistence, perseverance, courage etc.)

A P P E N D I X E:

Statistical Material

FIGURE 11

FREQUENCY DISTRIBUTIONS OF THE URBANIZATION SCORES

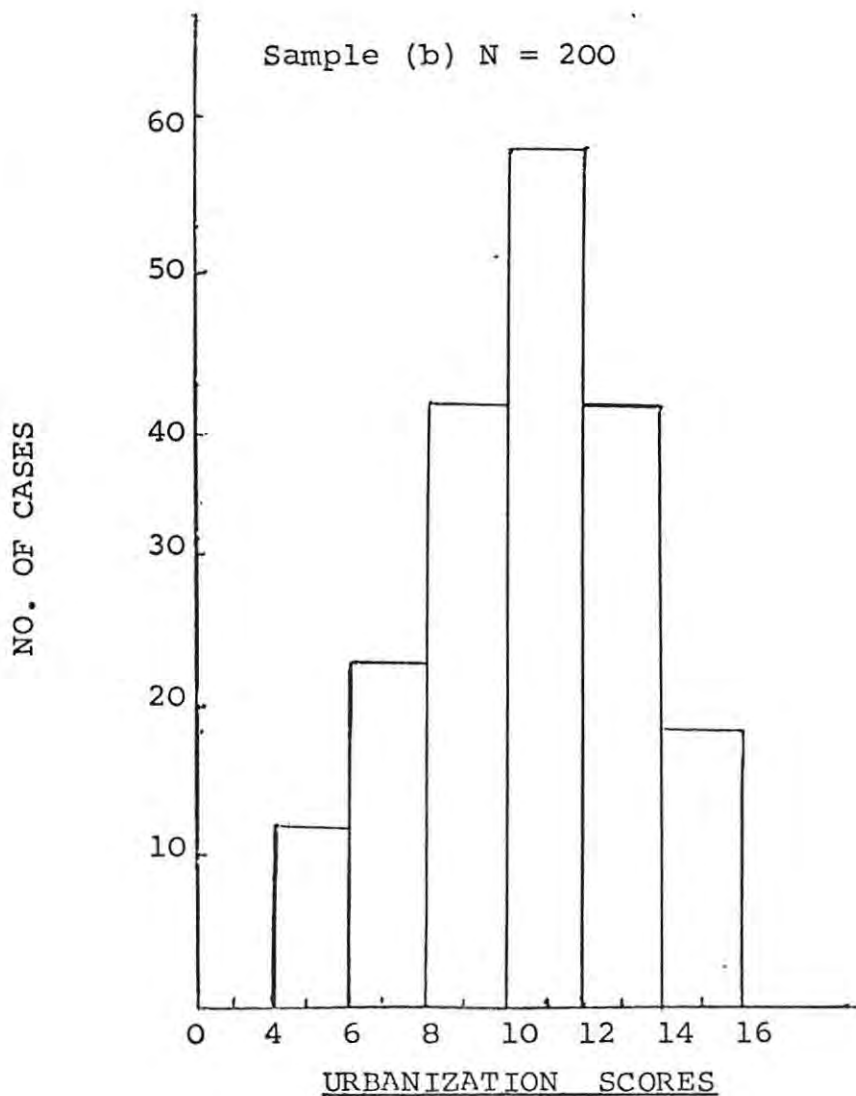
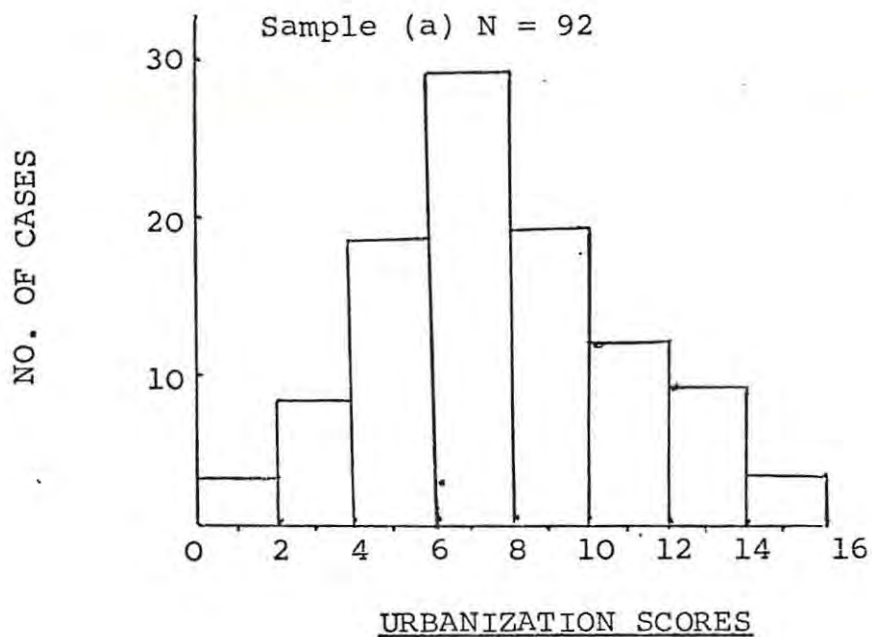


FIGURE 12

FREQUENCY DISTRIBUTIONS OF THE TAT SCORES (ARNOLD)

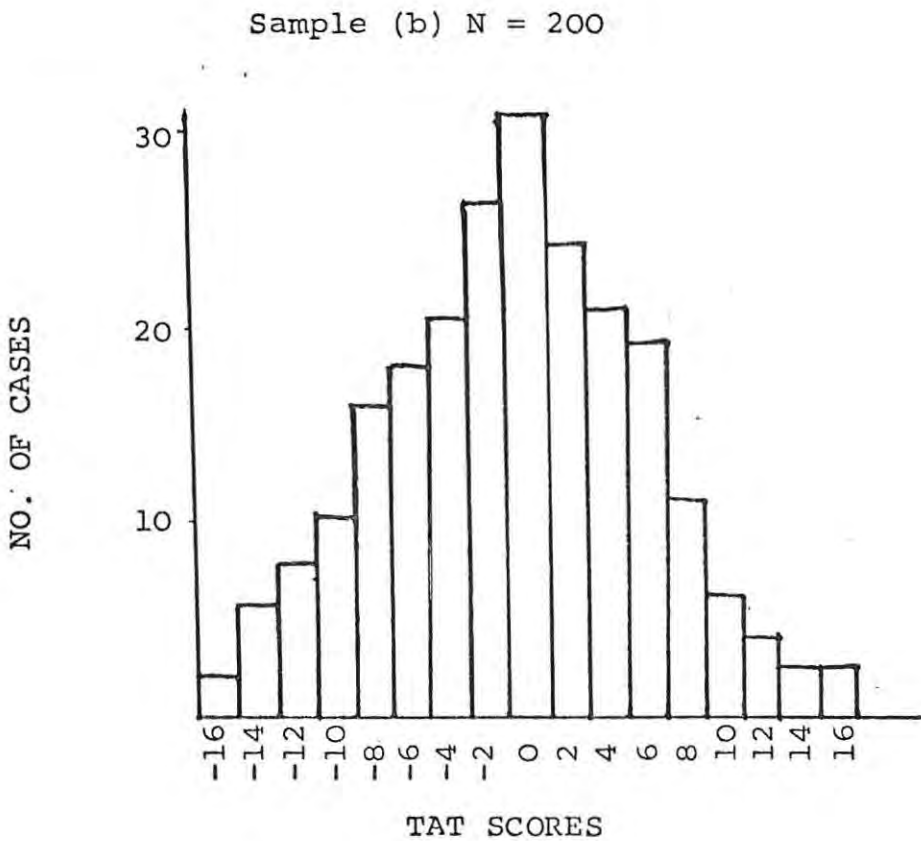
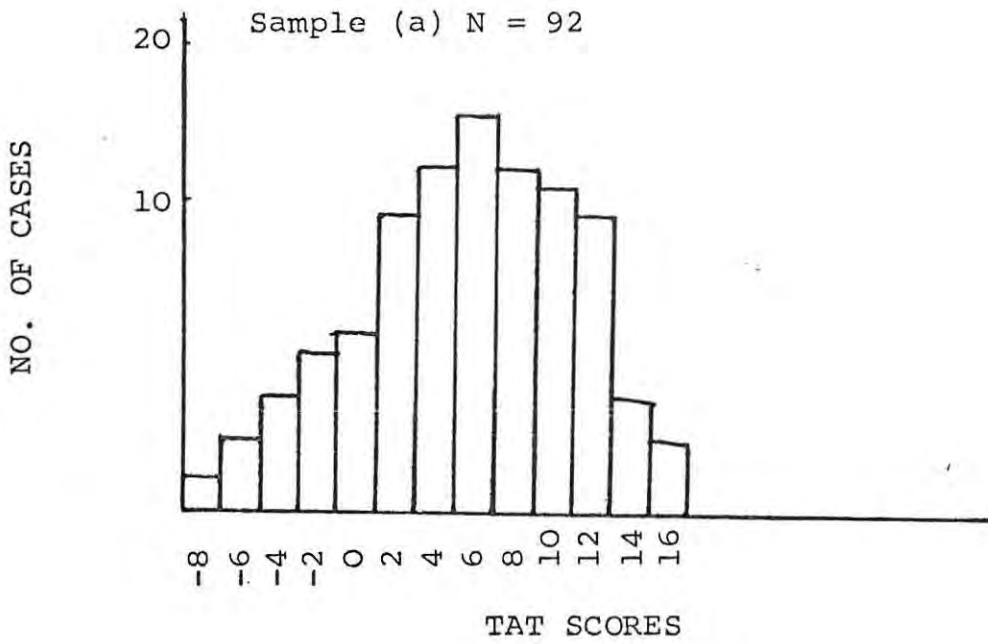


FIGURE 13

FREQUENCY DISTRIBUTION OF JOB SATISFACTION SCORES

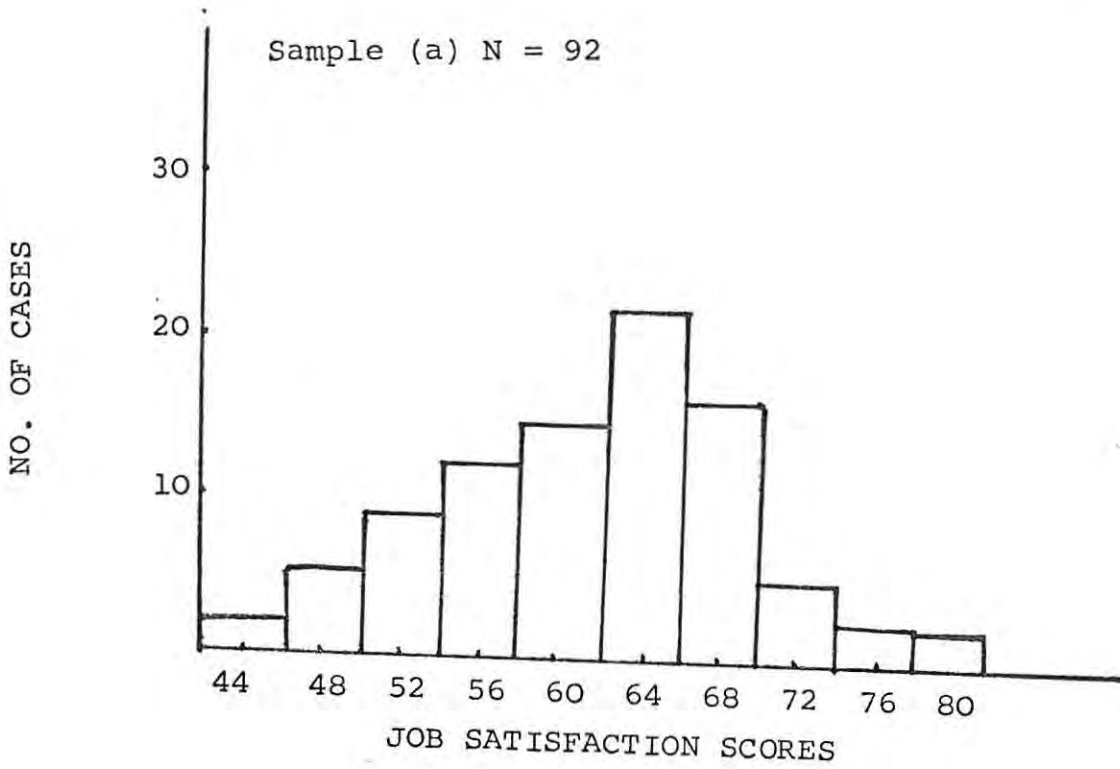


FIGURE 14

FREQUENCY DISTRIBUTION OF TAT SCORES (MCCLELLAND)

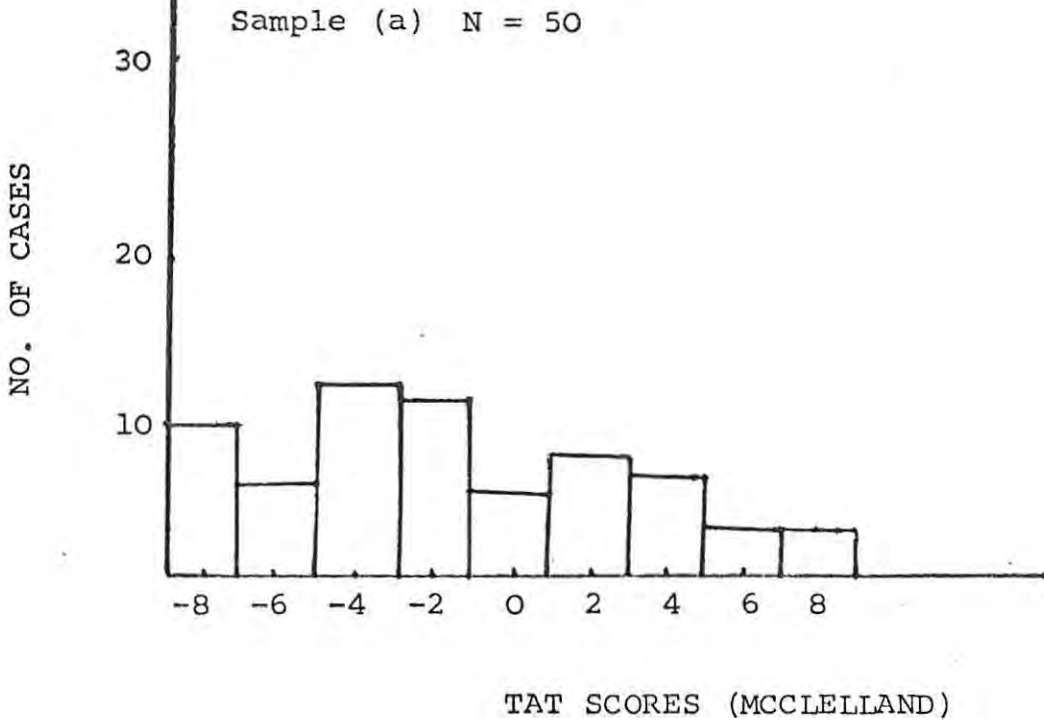


TABLE 22. SAMPLE (a) N = 92

INTERCORRELATION MATRIX

7 VARIABLES

	1	2	3	4	5	6
1 TAT (A1 + A2)	1					
2 RESISTANCE	<u>-0.185</u>					
3 URBANIZATION	0.127	-0.105				
4 TAT (B1 +B2)	<u>0.901</u>	<u>-0.216</u>	0.079			
5 JOB SATISF.	<u>0.272</u>	<u>-0.245</u>	0.031	<u>0.380</u>		
6 JOB RATING(1)	<u>0.475</u>	<u>-0.168</u>	-0.015	<u>0.530</u>	<u>0.291</u>	
7 JOB RATING(2)	<u>0.699</u>	-0.110	0.008	<u>0.768</u>	<u>0.352</u>	<u>0.613</u>

SIGNIFICANT CORRELATIONS ARE UNDERLINED

(SIGNIFICANT AT THE ,05 LEVEL)

- 393 -

TABLE 23 SAMPLE (b) N = 200

INTERCORRELATION MATRIX

3 VARIABLES

1 TAT (A1 + A2)	1	2
2 RESISTANCE	<u>-0.306</u>	
3 URBANIZATION	<u>0.150</u>	0.046

SIGNIFICANT CORRELATIONS ARE UNDERLINED

(SIGNIFICANT AT THE ,05 LEVEL)

TABLE 24. SAMPLE (a + b) N = 292

INTERCORRELATION MATRIX

3 VARIABLES

1 TAT (A1 + A2)	1	2
2 RESISTANCE	<u>-0.289</u>	
3 URBANIZATION	-0.013	0.040

SIGNIFICANT CORRELATIONS UNDERLINED

(SIGNIFICANT AT THE ,05 LEVEL)

APPENDIX E

ANALYSIS OF VARIANCE

TABLE 25

N = 60 sets of TAT scores (TAT A1, B1) randomly selected from sample (a) N = 92.

FACTORIAL ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F-RATIO	P(<F>COMP F
TOTAL	119	3882.59167			
1	1	4.40833	4.40833	0.13194	
2	1	1.87500	1.87500	0.05612	
12	1	0.67500	0.67500	0.02020	
ERROR	116	3875.63333	33.41063		

NOTE: F-TESTS ASSUME ALL FACTORS FIXED.

TABLE 26

N = 60 sets of TAT scores (TAT A2, B2) randomly selected from sample (a) N = 92

FACTORIAL ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F-RATIO	P(<F>COMP F
TOTAL	119	4034.92500			
1	1	7.00833	7.00833	0.19797	
2	1	1.00833	1.00833	0.02704	
12	1	1.87500	1.87500	0.05029	
ERROR	116	4025.03333	37.20477		

NOTE: F-TESTS ASSUME ALL FACTORS FIXED.