

ACKNOWLEDGMENTS

A CROSS-CULTURAL ANALYSIS OF WORK-RELATED  
VALUES IN A MINING INDUSTRY

I wish to express my sincere thanks and appreciation for  
the help, support and interest of the following people:

by

Prof. Dr R. P. de la Rey, my teacher and promoter whose  
academic acumen and expertise I hold in the highest

SCHALK WILLEM THERON

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years, in the best of patriarchal German tradition I am  
entitled to call his "Gastvater".

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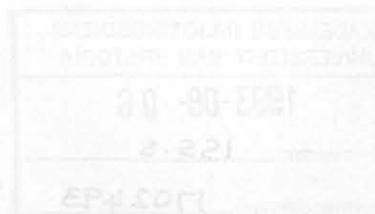
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advised me and  
recommended this research to me. Prof. du Preez's advice  
resulted in a thesis which is very important to the  
political and industrial life of South Africa.

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SUMMARY

A CROSS-CULTURAL ANALYSIS OF WORK-RELATED VALUES  
IN A MINING INDUSTRY

by

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In 1992 South Africa is on the brink of change - politically, economically and socially. The survival of South Africa as a modern industrial complex in an era of increased integration will depend to a large extent on the ability of its peoples who think differently and have different values, to strive towards the development and attainment of common company goals. It is at the work place that the different interest groups with their rich cultural diversity and different value systems, are in interaction with each other in an effort to attain organizational, personal and group goals.

Hofstede (1980a) accommodates values and value systems under four broad dimensions which provide maximum differentiation between national cultures: power distance, individualism, uncertainty avoidance and masculinity. In the work setting as well as in the social environment, people may attribute the cause of events either to themselves (internality) or to the external environment (externality) and the influence of powerful people in positions of authority.

The aim of the study therefore, was to do a comprehensive analysis of work values expressed by the labour force in two sectors of the mining industry, viz free enterprise and parastatal sectors. Specific differences in the areas of home language, religion, educational level, years of formal school education completed, income, occupational level, age, country of origin and ethnicity as independent variables and the four value dimensions and three dimensions of locus of control as dependent variables, are researched in order to determine their impact on the structure and functioning of organizations and industry.

The research design is an a posteriori quasi-experimental single sample design with only one measurement taken of 215 subjects that were randomly sampled from the available population. The measurement was done by means of Hofstede's Value Survey Module and the Activism and Powerful Others-scale of Levenson (1974). High reliability estimates were obtained for both measurement instruments. Data was subjected to a discriminant analysis and two-way factorial analysis of variance. Post-hoc comparison were done with the Scheffé-test.

The distinction between the two sectors of the economy was judged on the above-mentioned four value dimensions. The parastatal sector is slightly more inclined towards individualism but strongly towards avoidance of unnecessary uncertainty. The freemarket sector is more prepared to face risk and uncertainty. Both sectors are characterized by a large power distance.

## SAMEVATTING

'N KRUISSKULTURELE ONTLEDING VAN BEROEPSVERWANTE  
WAARDES IN DIE MYNBEDRYF

deur

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Suid-Afrika beleef in 1992 'n tyd van grootskaalse verandering - polities, ekonomies en sosiaal. Suid-Afrika se oorlewing as 'n moderne industriële kompleks sal in 'n era van toenemende integrasie bepaal word deur die mate waarin die verskillende inwoners van die land met hulle verskillende waardes en waardestelsels daarin kan slaag om gemeenskaplike organisasiedoelwitte te bereik. Binne die werksomgewing is daar verskillende belangegroepes wat gekenmerk word deur 'n ryke verskeidenheid van groepe, kulture en verskillende waardesisteme wat in interaksie met mekaar is in 'n poging om organisasie-, persoonlike en groepsdoelwitte te verwesenlik.

Hofstede (1980a) akkommodeer waardes binne vier breë waardedimensies naamlik magsafstand, individualisme, vermyding van onsekerheid en manlikheid. Hierdie vier waardedimensies differensieer tussen die verskillende nasionale kulture. Binne die werks- sowel as die sosiale omgewing mag individue die oorsaak van gebeure en omstandighede aan hulself toeskryf (interne lokus) of kan

hulle gebeure en omstandighede toeskryf aan kragte in die eksterne omgewing en aan die invloed van persone in posisies van mag (eksterne lokus van kontrole).

Gevolgtlik was die doel van hierdie studie om 'n omvattende ontleding te doen van die beroepsverwante waardes soos dit tot uiting kom onder die arbeidsmag in twee sektore van die mynbedryf, te wete 'n vrye mark-georiënteerde onderneming en 'n sentraal-geleide onderneming. Spesifieke verskille is nagevors met huistaal, godsdiens, opvoedkundige vlak, aantal jare formele skoolopleiding voltooi, inkomste, beroepsvlak, land van herkoms en etnisiteit as die onafhanklike veranderlikes en die vier waardedimensies en lokus van kontrole as die afhanklike veranderlikes ten einde die invloed daarvan op die struktuur en funksionering van die nywerheid en organisasie te bepaal.

Die navorsingsontwerp is 'n a posteriori kwasi-eksperimentele ontwerp vir 'n enkel steekproef met 'n enkele meting, wat verkry is met behulp van 215 proefpersone wat ewekansig geselekteer is uit die beskikbare bevolking. Die meetinstrumente het bestaan uit die Werkswaardevraelys van Hofstede en die Aktivisme en Outoritere Persoonlikheidskaal van Levenson (1974). Hoe betroubaarheidskoëffisiënte is vir elke vraelys verkry. Die data is verwerk met behulp van 'n diskriminantontleding asook 'n tweerigting faktorale variansieontleding. Post-hoc vergelykings is gedoen met die Scheffé-toets.

Die sentraal geleide sektor vertoon 'n neiging tot individualisme en veral 'n vermyding van onsekerheid. Die vryemark-sektor daarenteen vertoon 'n neiging tot die aanvaarding van risiko's. Beide sektore word gekenmerk deur 'n groot magsafstand.

## CHAPTER 1

## GENERAL INTRODUCTION

## 1.1 INTRODUCTION

South Africa in 1992 is on the brink of change - politically, economically and socially. Apartheid as a socio-economic system, was based on the tenets that peoples of different cultures acted differently and had different value systems. Seperate development was therefore seen as the obvious solution in such diversity.

Three major developments contributed to the demise of Apartheid. Firstly, it was seen as an unjust and discriminating system. Secondly, the United States of America was involved in the fostering of the ideal of a New World Order, calling for greater integration of human potential. Thirdly, Western Europe and more recently the countries of the old Soviet Union and the Eastern bloc, were moving towards a united Europe. The survival of South Africa as a modern industrial complex in the era of increased integration will depend to a large extent on the ability of its peoples who think differently and have different values and beliefs to strive towards the attainment of common goals. South Africans of different races and cultures grapple with hopes and fears which are all bound up in needs as fundamental as food and housing and as complex as the interlocking symptoms of civilization, of poverty, unemployment, education and development, automation, productivity and a common South-African citizenship. These problems however, can only be solved if the different races have a deep understanding of each other.

The development of people-to-people linkages irrespective of national differences, can and may ameliorate national tensions and inequities.

## 1.2 DIVERSITY AND INTERDEPENDENCE

Cultural collaborations in heterogeneous communities presuppose some understanding of where others' thinking differs from one's own. Understanding the way in which nationality and culture predisposes people's own thinking, is therefore a necessity for a better understanding of invisible cultural differences.

Culture may be defined as a transmitted and created content and as patterns of values, ideas and other symbolic meaningful systems that serve as factors in the shaping of human behaviour and the artifacts produced through behaviour (Kroeber and Parsons, 1958, p 583). Onyemelukwe (1973, p 5) asserts that differences in culture make for dissimilar adaptations to industrialization. He continues by saying that Africa is the one region where man and his culture have been ignored and regarded as totally irrelevant in a modern context. In addition to these problems the African worker has to cope with the heavy psychological burden of being forced to deal with a technology which is mainly developed in an alien culture.

One basic characteristic of the complex South African society is multi-culturalism. The term implies that people from more than one culture have to interact (Adler, 1986, p 7). Applied to organizational settings, it implies that people from different cultures interact in work roles. Culture thus influences the values and behaviour patterns of members of organizations. At the core of this rich cultural diversity is a complex array of human values. Rokeach (1973, p 26) states that it is difficult to conceive of a human problem that would not be better illuminated if reliable value data concerning it, were available.

Differences between cultures, social classes, occupations, religions or political orientations are all translatable into questions concerning differences in the individual's underlying values and value systems. Values according to Sargent and Williamson (1966, p 261) are kinds of motives. They are closely related to attitudes since they represent orientation to or striving towards given goals.

### 1.3 VALUES AND VALUE SYSTEMS

Hofstede (1980) accommodates values and value systems under four broad dimensions which provide maximum differentiation between national cultures: Power Distance, Individuality, Uncertainty Avoidance and Masculinity.

The term Power Distance is taken from the work of Mulder (1977) who defines Power as "the potential to determine or direct the behaviour of another person more so than the other way round". Mulder sees Power Distance as "the degree of inequality in power between a less powerful individual and a more powerful other". According to Hofstede (1980a, p 120), Power Distance is a norm which deals with the desirability and undesirability of inequality and of dependence versus interdependence in society. Values about inequality are coupled with values about the exercise of power and is likely to affect the organizational structure. Co-determination and worker participation have been assumed to reduce the power distribution in organizations and have been regarded as a form of power equalization (Mc Allister, 1982, p 9). Gasse (in Hofstede, 1980a, p 99) argues that each culture justifies authority by emphasising its major values. He pictured a continuum of which the two poles are



monolithism and pluralism. The latter implies a culture with a small power distance. In such a culture competition between leaders and groups is encouraged and democratic politics are fostered. Pluralist approaches or scenarios would be to make greater statutory provision for worker involvement in decision-making ranging from quality circles through to job enrichment type of initiatives, through to work councils and to worker participation on boards of directors. Adelman and Morris (1967) suggest that variables such as the strength of the labour movement, wage differentials and the centralization of power are related to Power Distance.

A second dimension is Individualism. Beteille (1977, p 162) stresses the relationship between political democracy, capitalism, competition and individualism. The capitalistic market economy fosters individualism whereas the various socialist types of economic order foster collectivism. Hofstede (1980a) postulates that the reason why Belgium and France continue to respect certain rules of political pluralism in spite of strong authoritarian elements in their national value systems, is mainly due to individualism. In South Africa there are indications that the increasing frustration of individual goals by political restrictions leads to a gradual redefining of the psychological future in which attempts at personal planning are progressively replaced by concern for the collective fate of one's group (Danziger, 1963, p 36). Collectivism does not imply a negation of the individual's well-being. It only means the maintenance of the group's well-being as the best guarantee of the individual's future. Collaboration rather than competition in the African culture makes more available to all. A collectivist value system calls for greater emotional dependence of members on their organizations. The organization

assumes a broad responsibility for its members.

Individualism is thus opposed to humaneness or communalism. There is also an association between the degree of collectivism/individualism in a society and its degree of modernity and level of economic development. Technologies developed in Western individualistic settings presuppose an individualistic mentality which is part of modernity (Triandis, 1973, p 166).

The dimension of Uncertainty Avoidance relates to uncertainty about the future, a basic fact with which human beings try to cope and the consequent need to protect society. Ways of coping with uncertainty belong to the cultural heritage of societies and are transformed and reinforced through basic institutions such as the family, school and state. The way in which organizations deal with uncertainty is reflected in collectively held values. Downey, Hellriegel and Slocum (1977) have shown that perceptions of uncertainty relate to personality variables. Therefore the perceptions of uncertainty are also affected by cultural variables. This implies that different societies deal with uncertainty in different ways. This should affect the way in which organizational policy reacts to uncertainty. A strong achievement motive indicates a low uncertainty and thus a willingness to take risks. Hofstede (1980a, p 172) also finds that a strong preference for group decisions and consultative management discloses risk avoidance for the individual decision maker. Research done by Fridrich (in Hofstede, 1980a, p 174) shows the cultural difference between Germans and Americans in Uncertainty Avoidance. The Germans stress, more than the

Americans, employment security, economic performance and stability in their society.

The Masculine value system is associated with high stress levels and individual decision-making rather than group decision-making and also with a preference for large corporations which have a right to intervene in the lives of their employees. Vroom (1964, p 43) quotes research findings of a positive correlation between job satisfaction and masculinity. The masculine value system is also related to religion. Data shows that the Catholic culture tends to be more masculine than a Protestant culture (Hofstede, 1980a, p 293). This masculine value system does not refer in a simple way to fundamental personality traits but to learned styles of interpersonal interaction. Masculinity could be seen as a social-ego factor. If job performance is central to the worker, the performance is ego-involved. Allport (1946) describes ego-involvement as the situation in which the person engages in the "status seeking motive" of his work. Hofstede (1980a) says that cultures differ along a social-ego dimension.

#### 1.4 LOCUS OF CONTROL

Also important for an explanation of human behaviour in social and organizational settings is the concept of locus of control. People may attribute the cause of events either to themselves or on the external environment and the influence of powerful persons in positions of authority. Those who consider their own personalities as the causal factor of events in their lives are said to be internality inclined or to have an internal locus of control. People who are externally inclined or have an external locus of control consider

outside forces (including powerful persons) to be in control of their lives.

Hofstede's four value dimensions and the concept of locus of control have implications for a changing South Africa.

### 1.5 INTERPERSONAL GOALS VERSUS ORGANIZATIONAL GOALS

Work goals are opposed to interpersonal relation goals. Research done by Dubin (1956) on work centrality shows that the central life interests of United States workers are job satisfaction, work performance and self-esteem. Work centrality is related to the concept of job involvement. Lodahl and Kijner (1965) defines job involvement as the degree to which a person psychologically identifies with his work. Job involvement is thus the degree in which performance affects self-esteem. Its main determinant is a value orientation towards work which is learned early in the socialization process.

To effect improvements in the labour, economic, racial and social relations field and to cope successfully and creatively with such change, South Africans belonging to the different cultures in this multi-cultural society, need to become aware of the feelings, attitudes and values of one another. As increased interaction takes place between the different cultures with their different value systems in a common work environment, the opportunity for South African organizations to bring about major cultural transferences and transpositions which could contribute towards a new cultural synthesis, increases. The changes should however retain from the original value systems of the different cultures those elements that

are essential. It implies the development of an approach to labour which incorporates different cultures into single organizations. Thus potential cultural conflict is turned into cultural synergy.<sup>1</sup>

## 1.1 INTRODUCTION

South Africa is experiencing a period of rapid change particularly in the political, social and economic spheres as it becomes engaged in the social re-orientation of a modernised industrial society. Changes in the social and political environment, as well as with organizations operate with the increased interdependence between labour movements, business and political institutions could be expected throughout management, development, training and an increasing need to understand cultural differences within the organization in order to facilitate change.

## 1.2 STATEMENT OF THE PROBLEM

Differentiation between especially the black and white population groups as well as between the other cultural groups caused much conflict in the early 1980s. South African society and work organizations are characterized by an extreme cultural diversity, this reflecting the complexity of the society in which they belong. At the centre of this diversity is a complex array of human values which is of particular relevance to the work place. At the work place, different interest groups with different cultural and value

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1. Cultural synergy is a process of mutual influence between cultures in contact out of which new aspects emerge which transcend these in the original culture.

## CHAPTER 2

## STATEMENT OF THE PROBLEM AND RESEARCH OBJECTIVES

## 2.1 INTRODUCTION

South Africa is experiencing a period of rapid change, particularly in the political, social and economic spheres as it becomes engaged in the social revolution of a modernised industrial society. Changes in the social and political environments within which organizations operate and the increasing interdependence between labour movements, businesses and political institutions cause the questioning of longheld management assumptions. Therefore, there is an increasing need to understand cultural interaction within the organization in order to facilitate change.

## 2.2 STATEMENT OF THE PROBLEM

Differentiation between especially the black and white population groups as well as between the other cultural groups caused much conflict on the shop floor. South African society and work organizations are characterized by an extreme cultural diversity, thus reflecting the complexity of the society to which they belong. At the centre of this diversity is a complex array of human values which is of particular relevance to the work place. At the work place, different interest groups with different cultural and value systems are in interaction with each other in an effort to attain organizational, personal and group goals.

The exploration and study of work related values have consequences for organizational policy in a number of areas, i.e. industrial democracy, leadership, decision making, management, motivation as well as company ownership and control. The implications of these value dimensions range from democratic principles (the unalienable right of a citizen to a voice in his own concerns<sup>1</sup>) to the viewpoint that workers have a right to a measure of control over the enterprise. Related to company ownership and control are two broad value systems which may be identified as individualism and collectivism (Hofstede, 1980a). Values underlie the mode of leadership and decision making whether democratic, autocratic or laissez-fair. Individualism emphasizes individual achievement and competition.

Related to management style (leadership and decision making) is the value dimension of power distance which indicates a measure of the interpersonal power and influence between superiors and subordinates. The values of a specific culture may disclose a preference for team-leadership and should the central authority in an organization be concentrated in one person, this may lead to conflict. Team leadership would also be preferable if the commitment and consensus of many people are necessary for the successful implementation of decisions. Also, management development and organizational development, job enrichment and job enlargement are all related to the underlying value systems. Organizational development can be achieved by the fulfilment of the objectives of individuals within the organization. Job enrichment and job enlargement refer to changes in the job content designed to produce

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1. Poole, 1978, p 3. Index would like work written rules, norms and structure and also displays a lower labour turnover.

increases in the intrinsic motivation of those who hold the jobs. Recognition of achievement, advancement and responsibility are all examples of intrinsic motivators. Worker motivation is also related to the cultural value system.

A masculine value system refers to the notion that the predominant socialization pattern is for men to be assertive and women to be nurturant. This value system may display a preference for self-esteem, achievement and challenging tasks, personal excellence and high earnings (assertive interest) as contrasted to those emphasizing nurturing interests such as a satisfying and friendly work environment, attaching importance to co-operation, good relations with the manager, affiliation motivation and group-mindedness (Hofstede, 1980a; Jablin, 1987, p 277). Mc Clelland (1961) suggests that his achievement motivation may be the answer to the problems of underdevelopment in the Third World. Pareek (1968), however, writing on the basis of Indian development practices, proposes that next to achievement motivation, his country needs (what he calls) "extension motivation" - a concern for other people and for the society as a whole. The underlying value position also has a bearing on management by objectives. The successful implementation of a style of management-by-objectives presupposes a value system where the subordinates are sufficiently independent on meaningful negotiations with the superior (Hofstede, 1980a). This value position also implies a small power distance. The value position of uncertainty avoidance refers to the degree of tolerance of uncertainty. Rule orientation, employment stability and work stress are indicators of this value dimension (Jablin, 1987, p 276). A cultural group with a high score on the uncertainty avoidance index would like more written rules, norms and structure and also displays a lower labour turnover.



Locus of control concepts (internality and externality) have important managerial implications. In the work setting internality would be mainly concerned with work flow, task accomplishment and achievement, challenging tasks, goal setting, and opportunity for higher earnings which tie in with a masculine value system. Externality revolves around good working relationships with immediate supervisors, co-operating well with co-workers, ascribing achievement and attachment to luck, fortune and fate. Externals are better followers than leaders and are less inclined to participate in decision making (Spector, 1982). Internals are also likely to have a voice in performance appraisals because they believe their performance depends on how well they control their environment (Moorhead and Griffin, 1989, pp 81-82).

### 2.3 SCOPE OF THE STUDY

The divergent value systems of both individuals and groups have a particular relevance on the work place where interest groups with different value patterns are thrown together and interact out of necessity.

Internal and external loci of control have direct and exhaustive effects on organizations. Internal orientated workers, believing that they can control outcomes and rewards exert more control in the work setting than externals. Externals, being compliant with the wishes and demands of both superiors and subordinates, consider good relationships of utmost importance, are natural followers and are easy to supervise.

The aim of the envisaged study is to do a comprehensive analysis of work values (Hofstede's Work Values) expressed by means of the Values Survey Module as well as the loci of control (Rotter's Locus of Control)

expressed by means of Levenson's (1974) Activism and Powerful Others-scale used by a particular part of the labour force in the mining industry, that presently is involved in an industrial training scheme. A single sample will be taken from the participants in this training scheme. The sample will be divided into several subsamples or subsets. The subdivision of the sample into subsets will enable the researcher to do comparisons of work values and loci of control between:

- three ethnically composed groups
- four groups formed in respect of home languages
- six groups based on religious affiliation
- three groups formed on the basis of level of education
- three groups in terms of years of schooling received
- four groups structured in terms of annual income received
- four groups taking age into consideration
- two groups according to country of origin
- four groups according to level of occupation
- two groups comprising the freemarket and semi-governmental or parastatal sectors of the economy.

The abovementioned variables will serve as independent variables for the purposes of this study while the four dimensions of Hofstede's research work and the three dimensions of the Locus of Control Scale of Rotter as revised by Levenson will serve as dependent variables in order to determine their impact on the structure and functioning of organizations and industry, on economic growth, and on the political context that allows economic and industrial development and to planned efforts to redress the asymmetry in relations between the "haves" and the "have-nots". The goal of economic

development in general in South Africa is to improve the well-being of people and to address the problems of poverty, scarcity, social inequality and an inadequate education system, problems that can only be solved if people know and understand each other at grass-roots level. The development of people-to-people linkages, of worker-to-worker linkages, irrespective of social inequality, ethnic diversity and division, can ameliorate tensions and inequities. The conclusions of the study would be translated into recommendations for practical policy formation. In addition, information will be provided regarding the validity and reliability of Hofstede's Scale of Work Values and Levonson's Activism and Powerful Others-scale.

Data will be extensively analysed according to statistical criteria developed and expressed by Ferguson (1981), Bohrnstedt and Knoke (1988) and Tabachnick and Fidell (1983). The major statistical methods may be analysis of variance, either in its simple or multivariate approach, Student's t-test, Hotelling's  $T^2$ -test and discriminant analysis for possible profile analysis, correlational statistics (Bravais-Pearson product-moment correlation), factor analysis, descriptive statistics and, if necessary, non-parametric statistics such as Kruskal-Wallis' one-way analysis of variance, Mann-Whitney's U test and Spearman's rank order correlation (Spearman's rho).

As stated above, the research will have implications and consequences for policy and research in a number of areas e.g. motivation, leadership, management by objectives, planning and control, organization development, industrial democracy and company ownership and control. For example the preferred managerial type and style may have implications for the viability of

democracy and a freemarket system. The problem however may be that the different cultural groups may have different conceptions of democracy. The Whites may perhaps have an industrial type of democracy in mind with co-determination while the Black groups may have a social democracy in mind. The sustainment of a freemarket system demands a democratic type of government with little interference from this authority in the economy to ensure the determining of prices of all commodities, including labour costs, by free bargaining and negotiating. A freemarket also demands the free movement of people in the country in an endeavour to acquire jobs, to save and invest, and to acquire and dispose of property.

The research also has implications for industrial relations. While an autocratic-persuasive style of management demands orderly relations with no strikes on the shop floor, the miners for example are seeking the unfettered right to strike and to challenge management on large scale dismissals, disciplinary actions, and wage determination. The new industrial relations environment demands laws protecting strikers so that workers can have and may have some resource to legal action in the case of unfair or unjustified dismissal. The research also has implications for ownership and control. The idea of private ownership (owned by an individual) is almost unique to Western culture. The Black societies with their Ubuntu-value system which implies communalism, see the tribe of the specific "ethnicity" as the "owners" of the land and property. The land for example, is not only the soil and territory but also the holy place, where the spirits of the ancestors dwell. The environment and the cosmos belong to the group. This view has implications for the nationalization of industries. Black South

Africans talk about a national development strategy to rectify the gross imbalances in society and economy (collectivism/Ubuntu) while White South Africans believe strongly that such a development strategy must be formulated with regard to a freemarket system. The immediate question is whether it is possible to incorporate these two views into a cultural synergy.

Also regarding motivation the research has obvious implications. Achievement motivation is needed for economic development. It may be expected that persons with an internal locus of control will display greater job motivation than externals. It may also be expected that internals may perform better on the job accepting challenging tasks and welcoming opportunities for higher earnings. Externals do not ascribe rewards and outcomes to personality, performance and diligence but to outside forces such as fate, fortune and luck and therefore do not perform as well as those workers that are internally inclined. Locus of control could also have political implications. Internality could give Blacks new zest, hope and self-confidence for political liberation and economic improvement.

#### 2.4 RESEARCH OBJECTIVES

Briefly the research objectives of the envisaged study are summarized as follows:

1. An assessment of the construct and content validity of the Values Survey Module of Hofstede and the Locus of Control-scale of Rotter, as revised by Levenson;
2. Determination of the reliability of the two aforesaid questionnaires;

3. Comparison by means of multiple analysis of variance of a privatised and parastatal sector of the mining industry, in terms of the Work Values Survey and the Locus of Control questionnaires;
4. Extension of the comparison mentioned in 2.4(iii) to a comparison of three ethnic groups;
5. Similar comparisons of the possible influence of language, religion, educational level, income, occupational level, age, country of origin and years of formal school education received;
6. Analysis of the intercorrelations between the Work Values and Locus of Control;
7. Provision of descriptive and other statistics for further research; and
8. A discriminant analysis of employment in the privatised and parastatal sectors of the mining industry, in terms of Hofstede's four work value dimensions;
9. Provision of data and conclusions on which assumptions regarding the possibility of cultural synergy and policy formulation may be based.

## 2.5 SUMMARY

The literature study and empirical research focus on the attainment of the aforementioned nine goals.

## 3.2 THE CULTURAL CONCEPT

Culture is a broad social phenomenon. It is evolutionary in nature and develops in response to circumstances in a particular society. It affects broader dimensions of social life, like institutions, organisations and social movements and ensures stability in and continuity of a given society. It gives meaning to life and enables groups and

## CHAPTER 3

## LITERATURE REVIEW

## 3.1 INTRODUCTION

In this chapter the concepts of culture and organizational culture will be theoretically explored. Culture and organizational culture will be defined and their influence on behaviour in general and on the organizational setting will be discussed. Attention will be given to the concept of ethnicity and its influence on the industrial setting and work relationships in South Africa. Attention will also be paid to the definitions of values and organizational values. Especially the structure and influence of corporate values will be discussed in depth. The development of work values, a cross-cultural perspective on work, and the relation between values, attitudes, and behaviour will also be theoretically investigated. Recent research on work related values and attitudes will be discussed as well as the different methods of measurements applied to the assessment of values.

## 3.2 THE CULTURE CONCEPT

Culture is a broad social phenomenon. It is evolutionary in nature and develops in response to circumstances in a particular society. It effects broader dimensions of social life, like institutions, organizations and social movements and ensures stability in and continuity of a given society. It gives meaning to life and enables groups and

individuals to create a distinctive world. It also facilitates an individual's growth in self-actualization. It is a problem-solving social phenomenon and helps groups and individuals to cope with problems and stress in a particular environment (Harris and Moran, 1979, p 10). Harris *et al* (1979, p 10) suggest that peoples of diverse cultures at different stages of social and technological development, should borrow from each other's culture to enrich their own culture in order to promote a better understanding between them.

### 3.2.1 DEFINITIONS OF CULTURE

Several definitions rooted in the above conceptual foundations may be proffered. Sargent and Williamson (1966) believe that culture "is an unique set of solutions to biological and social needs in general". Allport (1968) refers to culture as "that which gives ready-made answers to the problems of life". According to Allport these ready-made answers to questions of group relations are usually ethnocentric in character. Malinowski (1944, p 1) sees culture as "that integral whole consisting of implements and consumer goods, of constitutional charters, of human ideas and crafts, beliefs and customs, a vast apparatus, partly material and partly spiritual, by which man is able to cope with concrete problems that face him". Doob (1988) views culture as consisting "of all the human made products associated with a society ... culture provides us with a framework to guide as we solve every day problems". Doob distinguishes two types of cultural products - material and non-material. Non-material products manifest in beliefs, values, norms and

agreement on decision making and problem solving according to how they're accustomed to the way things are done.



technology and form the foundation of culture. These non-material products are essential to the development of culture and for interpersonal behaviour. In collaboration with Kroeber, Kluckhohn defines culture "as consisting of patterns explicit and implicit, of and for behaviour, acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional ideas and especially their attached values; culture systems may on the one hand be considered products of action, on the other as conditioning elements of further action" (1959, p 921). To Segall (1979, p 17) culture denotes "all the symbolic behavior, especially language, that makes possible the transmission of wisdom in the form of techniques for coping with the environment from generation to generation". Kroeber (1948, p 8) sees culture "as the mass of learned and transmitted motor reactions, techniques, ideas, values, and the behavior they induce".

Deal and Kennedy (1982, p 4) quoting Webster's New Collegiate Dictionary, define culture as "the integrated pattern of human behavior that includes thought, speech, action, and artifacts and depends on man's capacity for learning and transmitting knowledge to succeeding generations". Killmann, Saxton, Serpa and Associates (1985, p 5) view culture as "the shared philosophies, ideologies, values, assumptions, beliefs, expectations, attitudes and norms that knit a community together". Cultural groups utilise these interrelated psychological qualities to reach agreement on decision making and problem solving according to how they're accustomed to the way things are done.

Hofstede (1980a, p 14) offers a unique definition describing culture as "mental programming of the mind which distinguishes the members of one human group from another". Hofstede views these mental programmes as intangibles and he describes them as constructs. These mental programmes are of stable quality and do not change over time. As mental programmes determine behaviour, the stable quality implies that the same person usually shows the same behaviour in similar situations. According to Hofstede, these mental programmes are partly unique, partly shared by others. He distinguishes three broad dimensions on the level of uniqueness in mental programmes viz. the universal, the collective and the individual. The universal is the most basic, being shared by all mankind. An example of the universal dimension is the 'biological operating system' of the human body. The whole area of subjective human culture, shared by people belonging to a certain group or category, belongs to and constitutes the collective dimension of mental programming. Subjective human culture includes the group's perception of general human activities, the physical distance being kept from others to feel comfortable (Hofstede, 1980a, p 15). The individual dimension of human programming implies the level of the individual personality. Programming differs from person to person. Therefore the individual dimension is responsible for the rich variety of alternative behaviours on the collective level (Hofstede, 1980a, p 16).

Culture is not only characteristic of individuals but also of collectives or groups of people such as tribes, ethnic groups, nations, or national minorities. Members of a collective were usually

conditioned by the same life experiences and education. This differential conditioning results in members of different ethnic and minority groups, geographical regions and nations having different perceptions of the same reality and the mental programmes also differ from group to group. These collective mental programmes are stable in character and exist in the minds of members of a collective. But these mental programmes also give form to the institutions found in a society, like family structures, educational systems, religious organizations, forms of government, law and legal institutions, literature, technology and scientific theories (Hofstede, 1980b, p 43).

Krech, Crutchfield and Ballachey (1962, p 380) define culture as "the pattern of all those arrangements, material or behavioral, which has been adopted by a society as the traditional ways of solving the problems of its members. Culture includes all the institutionalized ways and the implicit cultural beliefs, norms, values and premises which underlie and govern conduct". According to Krech et al (1962, p 346) the model patterns of behaviour distinctive of a particular society and the beliefs, values, norms and premises which regulate behaviour, form the substance of a culture. Implicit in this definition lie two dimensions of culture, i.e. the explicit and the implicit dimensions. The explicit dimension comprises the directly observable, verbal and non-verbal behavioural patterns of a group of people or members of a society. The behaviour of a typical member of a collective lies in the domain of explicit culture.

dimension indicates the extent to which power in

Implicit culture encompasses the belief systems of a collective which consists of beliefs, values, norms, myths, legends, and superstitions (Krech et al, 1962, p 49). Belief systems influence action in standard behavioural events which are the behaviour patterns of a typical member of a culture in a situation standard in that culture (Krech et al, 1962, pp 351, 380).

### 3.2.2 DIMENSIONS OF CULTURE

Kluckhohn (1962, pp 317-318) points to the existence of universal categories of culture because different cultures have a variety of different answers to essentially the same societal problems. He therefore hypothesized the existence of a general framework underlying the more apparent and noticeable facts of cultural relativity. To Hofstede (1980a, p 44) this framework consists of "empirically verifiable, independent dimensions on which culture can be meaningfully ordered". Hofstede's (1980b, pp 42-63) definition of culture "as the collective mental programming of people in an environment" implicates members of the same cultural collective - a tribe, ethnic group, sociological minority, a nation - as being conditioned by the same cultural experiences. Culture refers to the same collective programming which members of the same cultural collective have in common. Hofstede (1980b, p 43) empirically determined four main dimensions on which members of different cultural groups differ, viz. power distance, uncertainty avoidance, masculinity vs femininity, and individualism vs collectivism. The power distance dimension indicates the extent to which power in

for as long

institutions and organizations in a society is evenly distributed. Power distance is reflected in the values of the more powerful and the less powerful members of a society. Less powerful members of a society advocate the equality principle and would like to see all people interdependent on each other. In the work environment less powerful people would expect their superiors to be accessible to subordinates and to consider subordinates as people like themselves. The less powerful especially view redistribution of power as the only authentic way to change a social system. More powerful members of a society hold the exact opposite convictions. They believe that their status and positions are protected by an order of inequality. The less powerful should be dependent on the more powerful. In the work environment the more powerful are usually inaccessible to subordinates (Hofstede, 1980b, p 46).

The uncertainty avoidance dimension is denotative of the extent to which a society feels threatened by unpredictable and ambiguous situations and the extent to which it tries to avoid these situations by adopting strict codes of behaviour, providing greater career stability, establishing more formal rules, not tolerating deviant ideas and behaviours, and fostering belief in the attainment of expertise. Societies with a strong inclination towards uncertainty avoidance are characterized by high levels of anxiety and aggressiveness creating a strong inner urge to work hard. Societies with a weak uncertainty avoidance view life's inherent uncertainty as a given and accepts this uncertainty more readily. Members of collectives

with weak uncertainty avoidance do not consider hard work a virtue. Daily life as well as the work situation should be governed by as few rules as possible. Strong uncertainty avoidance societies have a preference for rules, values and absolute truths. Conflict and competition are considered to be bad in the work situation as well as in life in general. Consensus is a virtue that has to be pursued. Nationalism is considered to be of supreme importance (Hofstede, 1980b, p 47).

The individualism - collectivism dimension refers to the extent in which a loosely knit social framework exists wherein people can take care of themselves. Thus in individualistic cultures a person is assumed to look primarily after his own interests. As individual initiative is highly regarded, the individualism dimension is reflected in the degree of economic evolution and modernity in a society. Highly individualistic societies consider value standards which can be universally applied. The convergency theory in comparative management assumes that management philosophy and practice will become more and more alike globally. However, industrial development along the lines of western type modernization is not going to suppress cultural variety. In fact the 1960's and 1970's witnessed new nations, after their political independence and an unsuccessful struggle for economic independence to ferociously affirm their unique cultural identities (Hofstede, 1980a, pp 44-45; Hofstede, 1980b, p 48). The fourth dimension of masculinity - femininity, indicates the extent to which dominant values in a society are masculine or feminine. A masculine

value system encompasses assertiveness, the acquisition of money and goods and the total rejection of a caring attitude toward fellow men. Societies with a strong masculine inclination place a high premium on performance, money and the utilisation of material things. Of utmost importance is to be perceived as being successful. In a feminine society, the emphasis is on people, their caring and nurturing, equality between the sexes and interdependence between members of a collective (Hofstede, 1980b, p 49). Parsons and Shills (1951, p 77) offer a multidimensional classification of culture claiming that all human behaviours are determined by five pattern variables, viz:

1. Affection versus affective neutrality.
2. Self-orientation versus collective-orientation.
3. Universalism versus particularism.
4. Ascription versus achievement.
5. Specificity versus diffuseness.

Parsons (1977, p 14), however, suggests that in societies undergoing culture change due to societal evolution and economic development, particularism and ascription are replaced by universalism and achievement respectively. Inkeles and Levinson (1969) in their study of national character and modal personality, identified three dimensions according to which cultures may be analysed and which tie in with Hofstede's dimensions:

1. The relation to authority.
2. Conceptions of the self, including the individual's concepts of masculinity/ femininity.
3. Primary dilemmas and conflicts and the ways in which a society is accustomed to deal with them, including the expression and control of aggression.

According to Hofstede (1980a, p 47) these three dimensions are quite similar to the four empirically determined by him. His power distance dimension reflects relation to authority. Individualism and masculinity are related to Inkeles and Levinson's second dimension and uncertainty avoidance to the third.

Krech et al (1962, pp 346-349) distinguish between the explicit and implicit dimension of culture. The explicit dimension of culture refers to the typical behaviour, verbal and non-verbal, of a member of a specific society which is directly observable. This observable behaviour consists of cultural arrangements adopted by a society for problem solving in everyday life. A set of cultural arrangements is influenced by the physical environment as well as by other cultural groups. Elements in the physical environment influencing culture are climate, natural resources, geographical region and demography. On the social front, there is an exchange of ideas and technological acumen which a culture can use to reach its objectives. The explicit culture consists of standard behavioural events which are the behaviour patterns of a typical individual in a given situation standard in a culture. The most



important of these standard behaviour events is the standard interpersonal behaviour event which is a system of reciprocal role behaviours in a given situation where two or more persons, typical of their respective positions, interact. These basic elements (standard behaviour events) are usually organized into institutionalized ways which are the fundamental parts of a culture. Among the institutionalized ways are those which concern themselves with procreation, distributing goods and services, satisfying aesthetic needs and economic development (Krech et al, 1962, p 353). Implicit culture is an anthropological term encompassing cognition, wants, interpersonal response traits, attitudes, beliefs, norms premises and values. Implicit culture determines and gives meaning to the explicit behaviour of a collective. Cultural beliefs refer to the cognitions - ideas, knowledge, love, superstitions, myths, legends - by typical members of a society. Cultural norms which can be divided into folkways and mores, regulate standard behavioural events. Norms are the standards of conduct accepted by typical members of a society or occupants in a position. Cultural premises are tacit generalisations. Cultural values of course influence behaviour and actions of typical members of a society. A value is an especially important class of beliefs "shared by members of a society concerning what is desirable or good or what ought to be" (Krech et al, 1962, pp 350-353).

### 3.2.3 CORPORATE CULTURE

Entire nations, tribes, families, geographical regions, organizations and businesses possess the meaning of the concept culture. It has become

cultures. The culture of an organization may be weak and fragmented or it may be strong and cohesive. Successful organizations usually have strong cultures. Whether weak or strong, cultures exert powerful influences throughout the organization. They shape the lives of employees and have general effects on the decision making process and productivity, and determine promotions, demotions and retrenchments (Hickman & Silva, 1988, p 57; Deal and Kennedy, 1982, p 5).

However, organizational culture as a concept is fairly young. Since the 1950's and 1960's it has been explicitly used. In these two decades the field of organizational psychology began to differentiate itself from industrial psychology, emphasizing work groups and whole organizations. Coupled with this emphasis a need was developed for concepts that could describe patterns of norms and attitudes, cutting across a whole social unit (Schein, 1990, p 109). Katz & Kahn (1966, p 110) for example analysed organizations by means of systems theory and dynamics, thus laying the theoretical foundations for later culture studies. In its endeavour to understand organizations and organizational relationships, organizational psychology has taken over concepts from sociology and anthropology. Thus the concept of culture was applied to organizations only recently to explain (a) variations in patterns of organizational behaviour and (b) to highlight levels of stability in group and organizational behaviour.

There is, at present, limited agreement between organizational psychologists and theorists on the meaning of the concept culture. It has become

fashionable to label everything ranging from common behavioural patterns to newly espoused corporate values that senior management wishes to inculcate in their workforce as "culture" (Deal & Kennedy, 1982; Schein, 1990, p 109).

Organizational climate which is a surface manifestation of organizational culture and directly observable and measureable, enables organizational psychologists to fathom the deeper aspects of organizational functions and to offer explanations for variations in climate, norms and values. These are grounded in the deeper concept of organizational culture (Schein, 1990, p 109).

Van Maanen (1976; 1977; 1983) and Louis (1983) frequently view culture as a set of shared understandings, interpretations, and perspectives by which members of a group or collective articulate contextually appropriate accounts of their worlds of experience. Culture is therefore implicitly related to social cognitions of contextual sense-making and the shaping of meaning as well as the organization of the experiences of a cultural collective. Intellectually, organizational culture ponders on how members of organizations symbolically create an ordered world (Barley, 1983, p 393). Allaire and Firsirotu (in Barley, 1983, p 394) observed that organizational culture has been treated, with few exceptions as a cover term, "an elision for a grab bag of norms, beliefs, values and customs". The employment of the concept "culture" to organizational studies have a defect of theory and method. These defects have to be surmounted before culture could be displayed as a complex, interpretive system. Schein (1990) views culture as the fruits of

learning and experience which a group utilises to solve problems of survival in the external environment as well as problems of internal integration.

Recently the concept organizational culture was thrust into the forefront by an urge to try and explain why American companies do not perform as well as some of their counterparts elsewhere, especially in Japan. Ouchi (1981) as well as Pascale and Athos (1981) observe that national culture is not a sufficient explanation.

According to these authors concepts are needed that would permit differentiation between organizations within a society, especially in relation to different levels of effectiveness. The concept organizational culture is perfectly suitable for this purpose.

nat. vs org. culture.

### 3.2.3.1 DEFINITIONS OF CORPORATE CULTURE

Hofstede and Bond (1988, p 6) prefer to define culture as "the collective programming of the mind that distinguishes the members of one category of people from those of another". According to them this definition applies to national as well as corporate cultures. Deal and Kennedy (1982, p 4) refer to the Webster's New Collegiate Dictionary's definition of corporate culture as "the integrated pattern of human behaviour that includes thought, speech, action and artefacts and depends on man's capacity for learning and transmitting knowledge to succeeding generations". According to Denison (1990, p 2) corporate culture refers to "the underlying values, beliefs, and principles that serve as a foundation for an organization's management system as well as the set of management

practices & behaviors that both exemplify and reinforce those basic principles".

Lucas (1987, p 145) based his definition of organizational culture on a political-cultural analysis viewing organizational culture as the product of "interactions between interest groups as they define the meaning of, and then act upon, specific organizational issues such as budgets, strategic plans, plant acquisitions or manpower policies". Organizational culture is then, at a particular moment, the sum of solutions to organizational contradictions derived from the differences between interest group activities and perceptions regarding such issues. Handy (1987, p 186) sees organizational culture as a deep-set belief about the way work should be organized, the way authority should be exercised, and people rewarded or controlled. Jaeger (1986, p 179) refers to what he calls an ideational view of culture, conceptualizing culture as a set of ideas shared by a group. Jaeger relies heavily on Keesing's (1974) definition of national culture. Keesing views culture as a set of common theories of behaviour or mental programmes that are shared by a collective. Schwartz and Davis (1981, p 33) define organizational culture as a "pattern of beliefs and expectations shared by an organization's members".

Schein (1985, p 9) distinguishes between three structural levels of culture and ascertains that at any one level culture can be defined as "a pattern of basic assumptions, invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration. It has worked well enough to be taught to new members as the correct way to

perceive, think and feel in relation to these problems". Culture is therefore the learned product of a group's experience. This concept of organizational culture is rooted in theories of group dynamics and group growth (Schein, 1985, p 9). Learning, however, is simultaneously a behavioural, cognitive and emotional process. The cognitive processes include the perceptions, language and thought processes that a group come to share. It is also the ultimate causal determinants of feelings, attitudes, exposed values and overt behaviour. Schein (1990, p 111) draws attention to the fact that any definable group with a shared history can have a culture and within an organization there can therefore be many subcultures. Schein (1990, p 111) proceeds to define culture as "(a) a pattern of basic assumptions, (b) invented, discovered or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and therefore (e) is to be taught to new members as the (f) correct way to perceive, think and feel in relation to those problems". To summarise, organizational culture can be defined as a social force that controls patterns of organizational behaviour by shaping members' cognition and perceptions of meanings and realities, providing effective energy for mobilization and identifying membership or non-membership.

### 3.2.3.2 MEANINGS ATTACHED TO ORGANIZATIONAL CULTURE

The concept of organizational culture is very handy when an observer tries to understand and

gain insight into the mysterious ways of behaviour and (to the observer) irrational things, occurring in organizational systems. Schein (1985, p 6) lists some common meanings attached to organizational culture:

1. Observed behavioural regularities when people interact.
2. The norms that evolve in work groups.
3. The dominant values espoused by the organization.
4. The philosophy that guides an organization's policy towards employees and/or customers of the company.
5. The rules of the game for getting along in organizations.
6. The feeling or climate that is conveyed in an organization by the physical layout and the way in which members of an organization interact with customers and/or outsiders.

The six meanings may reflect an organization's culture but none of them is the essence of culture. The essence of culture reflects the elements of a culture and is closely related to the levels of culture (Schein, 1985, p 8).

### 3.2.3.3 LEVELS OF ORGANIZATIONAL CULTURE

Schein distinguishes between structural levels to which the term culture can be applied and levels of culture. Civilizations form the broadest structural level, thereafter countries with sufficient ethnic commonality and then countries within which there are different ethnic groups to which the term culture can be applied (Schein, 1990, p 8). Then follows the levels of

occupation, professions and occupational community. The last structural level to be identified is the level of organizations. Also within organizations, subgroups can be identified and such sub-units may develop their own group cultures (Schein, 1990, p 8). Besides these structural levels, Schein (1985, pp 13-14) identifies three levels of culture, viz:

1. Artefacts - physical and social environment. This refers to physical layout of an organization's offices, rules and interactions that are taught to newcomers.
2. Basic values which are to be seen as the organization's ideology.
3. The underlying conceptual categories and assumptions that enable people to communicate and to interpret everyday occurrences.

These three levels of culture embrace the essence of culture and the elements thereof.

The first level of Schein's typology of organizational culture is the level of the artefacts. Schein is adamant that the physical and social environment is the most visible level of culture. Artefacts are visible, tangible and audible behavioural patterns and fruits of behaviour. These results of behaviour are the observed manifestations of cultural essence. It includes an organization's written and spoken language and jargon, layouts and arrangements of office space, technological output, organizational structure, dress codes and overt behaviour. It focuses attention on such shared basic assumptions about the nature of the product, the market and

function of guiding members of a group in the



the organization's mission. Culture cannot be manipulated by managers. In fact, culture controls the manager through the "automatic filters that bias the managers' perceptions, thoughts and feelings" (Schein, 1985, p 314; Ott, 1989, p 59). Sathe (1985, p 10) describes artefacts as relatively "easy to see but hard to interpret without an understanding of the other two levels". Ott, however, adds a "level 1", "level 2" and "level 3" of organizational culture. Level 1 includes such elements as habits, patterns of behaviour, norms, rites and rituals.

Level 2 refers to values and beliefs. These are the sense of "what ought to be, as distinct from what is (Schein, 1985, p 15). Sathe (1985, p 10) describes level 2 as revealing "how people communicate, explain, rationalise and justify what they say and do as a community - how they make sense of the first level of culture. This level is denoted by the terms cultural communication and justification of behavior". The Level 2 constructs of organizational culture include ethos, philosophies, ideologies, ethnical and moral codes, and attitudes (Ott, 1989, p 60). Level 2 elements of organizational culture often yield espoused values - what people will say rather than values in use which can be used to predict what people will do. Only those values which are susceptible to physical and social validation and which continue to work reliably in solving the group's problems will become transformed into assumptions. Many values however, remain conscious and are explicitly articulated because they serve the normative function of guiding members of a group in how to

deal with certain key situations (Schein, 1985, p 16). A set of values, embodied in an ideology or organizational philosophy can thus serve as a guide and as a way of dealing with uncertainty of intrinsically uncontrollable and difficult events (Schein, 1985, p 17).

These Level 2 elements are better predictors of organizational behaviour than Level 1 elements because they are conceptually closer to Schein's true organizational culture that resides in Level 3 (Ott, 1989, p 60). According to Schein (1985, p 18) the true organizational culture resides in the basic underlying assumptions. He defines basic assumptions as fundamental beliefs, values and perceptions that "have become so taken for granted that one finds little variation within a cultural unit. Basic assumptions, like theories in use, tend to be non-confrontable & non-debatable" (Schein, 1985, p 18). As values begin to be taken for granted, they gradually become beliefs and assumptions and drop out of the consciousness. Basic assumptions are the Level 3 elements of organizational culture: these include spirit, truths, transactional analysis concepts of organizational scripts guiding behaviour and telling group members how to perceive, think and feel about things (Schein, 1985, p 18; Ott, 1989, p 61). These underlying and usually unconscious assumptions taken for granted, determine perceptions, thought processes, feelings and behaviour. Once one understands some of these assumptions, it becomes much easier to decipher the meanings implicit in the various behavioural and artefactual phenomena being observed (Schein, 1990, p 111). And once one understands the

underlying, accepted assumptions, it can be better understood how cultures can seem to be ambiguous or even self-contradictory (Martin and Mayerson, 1988). Deeply held assumptions often start out historically as values, but, as they stand the test of time, gradually come to be taken for granted and then take on the character of assumptions.

#### 2.3.4 COMPOSITE PARTS OF ORGANIZATIONAL CULTURE AND FACTORS INFLUENCING CULTURE

Handy (1987, p 197) proposes six principal factors i.e. history and ownership, size, technology, goals and objectives, environment and people which influence a choice of culture and structure for an organization.

History and ownership refers to the age of a company. Centralized ownership implies a power culture with complete control of resources. On the other hand diffused ownership implies diffused influence based on alternative sources of power. Family firms and founder dominated organizations are examples of power cultures, for example the Ford Motor Company. New organizations quite often repudiate role cultures and the systems, procedures and jargon that accompany role cultures. Managers also quite often imply a change in culture. Especially a new generation of managers heralds a change of culture.

The size of the organization is quite often the most important variable influencing a choice of culture and structure. In comparison to small organizations, large ones have formalized structures and specialized groups which, through

systematic co-ordination, push the organization towards a role culture. Large organizations are perceived by its members as offering more opportunity for advancement, more efficient planning, better control systems and structuring of activities but also as more authoritarian.

The technology of production as a major determinant of efficiency, also effects culture and structure. Differences in technology entail differences in communications, job design and organizational design (Dessler, 1986, p 87). The design of the organization has to take into account the nature of the work, the work-force, length of the line of command, percentage devoted to wages and salaries, ratio of managers to subordinates, graduates to non-graduates and indirect to direct labour. Effective organizations are characterized by structures in line with the norm for their technology (Handy, 1987, p 198). Routine programmable operations, high-cost technologies which need close monitoring and depth of expertise by direct supervision and economies of scale by mass production of heavy capital investment, all tend to encourage role cultures. However to deal effectively with rapidly changing technologies, a task or power culture is required (Handy, 1987, p 199).

An enterprise seldomly has clear-cut objectives. Culture and structure are affected by an organization's goals and objectives. It influences for example the quality of the product. Culture in turn, influences the goals and objectives. Growth and expansion goals are more appropriate to a power or task culture. On the other hand, goals in relation to the quality of

the product are more easily monitored in a role organization. Organizational goals are not static. It may change over a period of time depending on changes in culture (Handy, 1987, p 200).

The environment in which an organization functions is critical in determining the culture of an organization. The environment encompasses the geographical, societal and economic environments, the market, and the competitive scene.

Environmental changes require a sensitive, adaptable culture which is quick to respond to changes in the environment. On the other hand, market changes or changes in the product line require a task culture. A diversified organizational structure is more suited to a diversified environment which inclines towards a task culture. Threats and dangers in the environment like mergers, take-overs, nationalization or economic disaster are best countered by power cultures. Web-like organizations with a strong figure at centre will most likely be successful in circumstances of threats and dangers. Merger battles, for instance, are quite often decided by strength of personality. Implicit in power cultures is the ability to move swiftly and decisively and to act aggressively in countering threats and dangers. On the other hand standardization inclines towards a role culture. Functional organizations, for example, usually have a role culture (Handy, 1987, pp 201-203).

The last factor to influence the choice of culture is people. Different cultures postulate different psychological contracts. Sathe (1985, p 544 n)

views a psychological contract as an "implicit contract between an individual and the organization which specifies what each expect to give and receive from the other in the relationship". A correspondence between organization culture and an individual's expectations (psychological contract) should lead to a satisfied individual. This, however, does not lead to higher productivity as job satisfaction does not differentiate between cultures (Handy, 1987, p 203). Handy (1987, pp 204-205) continues by hypothesizing that individuals with a low tolerance for ambiguity will prefer the tighter role prescriptions of the role culture but the need to establish one's identity at work will be appropriate in a power or task culture. People with inadequate interpersonal skills and low intelligence would move an organization towards a role culture. People play a significant role in pushing an organization towards a particular culture. The individual orientation of key people in an organization determines to a large extent the dominant culture of an organization. Maccoby (op cit, p 205) in a psycho-analytic study of the personalities of 250 corporate managers, distinguishes four character types - the jungle fighter who needs power, the company man, the gamesman, and the craftsman - which may determine the dominant culture of an organization.

#### 3.2.3.5 TYPES OF ORGANIZATIONAL CULTURE

Martin & Siehl (1983, p 53) draw a distinction between an organization's dominant culture and the various subcultures that might co-exist within it. The dominant culture expresses, through

artefacts, core values which are shared by a majority of the organization's members. These two authors distinguish three types of subcultures: enhancing, orthogonal and counter-cultural. They view an enhancing subculture as one in which adherence to the core values of the dominant culture is all comprehensive and of utmost importance. In an orthogonal subculture the people would simultaneously abide to the core values of a dominant culture and develop an unconflicting set of values peculiar to themselves. The core values of a counter-culture, however, present a direct challenge to the core values of a dominant culture leading to an uneasy symbiosis between dominant organizational culture and counter-culture. These two cultures are in opposition to each other on critically important value issues. A strongly centralized institution with a significant decentralization of authority is most likely to be a fertile ground for the development of a counter-culture. A counter-culture is most likely to emerge within well-defined structural boundaries stimulated by charismatic leaders (Martin & Siehl, 1983, pp 54-55).

Handy (1987, pp 188-196) distinguishes between four types of culture viz. a power culture, a role culture, task culture, and a person culture. Lessem (1989), drawing heavily on Morgan's (1986) eight images as a complimentary basis for structural classification, identifies four kinds of organizational structures eg. club, role, task and person which corresponds to Handy's four types of culture. Handy's power culture corresponds with Lessem's club structure. The club has the structure of a spider's web. The centre is the

cockpit of power with rays of power and influence radiating from it. The size of the organization however, presents or may present a problem for power cultures as the web could break if it links too many activities. Organizations encompassing power cultures are proud, strong, tough, abrasive, competitive and characterized by an ability to move quickly and react well to threats and dangers. Employees in power cultures are power orientated, politically minded, and predisposed to risk taking. Security is rated as a minor element in the psychological contract. Power cultures are in fact political systems. Power politics is a particular feature of larger organizations. Organizational politics arise when the diversity, created by people who think and act differently, leads to tensions which can only be resolved through political means. The original function of organizational politics was and still is the reconciliation of divergent individual interests by means of adequate and appropriate systems and procedures of representation, consultation and negotiation.

According to Lessem (1989, p 283) the club structure corresponds to the formal organization which is found in hierarchical societies. In these societies a social group imposes itself quite often on others through show of force, eg. conquest. Such conquest by force results in a class-based society. Domination during the industrial revolution in America and Europe was primarily based on a division between employer and employees. Karl Marx's call for a proletarian revolution to break the capitalistic order and the emergence of the trade union movement, were responses to the physical and social oppression of



the worker classes. In Great Britain the Conservative and Labour Parties still embody and reinforce the organizational, social, and industrial divide and as such reflect the historically determined images of class domination. Class consciousness and power politics also affect the commercial and political relations between industrialized and industrializing countries. In the United States of America mobility between classes<sup>1</sup> is very fluid. In Germany and Japan, however, organizational culture is not affected by internal political differences.

A role culture is often stereotyped as and corresponds with the structure of a bureaucracy. Large bureaucratic institutions are the dominant organizational force in the industrialized and industrializing (developing) societies. They are based on position power, not personal or expert power, which drives its functions and specialities. Rules and procedures for job descriptions, communications and/or settlement of disputes influence the interaction between functions. Max Weber originally formulated the concept of a bureaucracy and determined the explicit features of a bureaucracy as:

1. A division of labour in which authority and responsibility were closely defined and officially legitimized.
2. A hierarchy of authority resulting in a chain of command.
3. Separation of manager from owner.

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1. Mobility between classes = structural separation between management and labour union.

4. The subjection of the manager to strict rules, discipline and controls, impersonally and uniformly applied (Lessem, 1989, p 286).

According to Lessem (1989, p 292) role structure is built on the assumption that rational man is capable of organizing an organization in a logical fashion by means of a system of prescribed roles sustained by rules and procedures. Handy (1987, p 196) views a task culture as being job or project orientated. It is a team culture and its structure may be visualized as "a net with some of the strands of the net thicker and stronger than the others". It derives its power and influence from expert power which is situated at the interstices of the net. Efficiency is enhanced by the identification of the individual with the objectives of the organization. The unifying power of the team facilitates the formation and reformation of project teams, task forces and research groups for specific purposes. However, task cultures are not inclined to the development of economies of scale and do not produce great depths of expertise. Lastly, Handy's personal culture corresponds with Lessem's personal structure. According to Handy (1987, p 196) this is an unusual culture and Lessem (1989, p 278) views these organizations as psychic prisons. Many individuals espoused the values of this culture which is characterized by the self-orientated individual being given centre stage. The power base is usually expertise. Groups which usually have this "person"-orientation of doing what they are good at and being listened to on appropriate topics are barristers' chambers, social groups, student communes, families and small consultancy firms.

companies and financial service organizations.

Deal and Kennedy (1982, p 107) distilled four generic types of culture, viz the toughguy-macho culture, the work hard/play hard culture, the bet-your-company culture, and the process culture. The toughguy-macho culture, usually young with the emphasis on speed, implies a high risk culture with quick decision making and quick feedback to individuals on whether their actions were right or wrong. Successful decision making as well as internal competition require a tough attitude. The work hard/play hard culture is characterized by fun and action but with low risks. For success in this culture a high level of relatively low risk activity is necessary. To obtain this end, checks and balances are built into a system to keep the organization from becoming a big risk. In this culture customers and their needs are highly valued. Cultures with big stake decisions, high risks, and slow feedback environments are described as a bet-your-company culture. Deal and Kennedy (1982, p 116) describe this culture as a "duet of high risk but slow feedback". It means risking the future of an organization by investing large sums of capital in a project which may take years to develop and refine before management discovers its success rate. The values of this culture are entirely future orientated. Lastly, Deal and Kennedy (1982, pp 107, 119 - 120) describe what they call process culture. Process culture implies a low risk environment in which employees get little or no feedback on the correctness of their actions. Memo's and reports seem to disappear in a void; attention, instead, is given to how the job is done. Technical perfection is the prime value of this culture. Organizations which are usually inclined to process culture are banks, insurance companies and financial service organizations.

### 3.2.3.6 ELEMENTS OF CULTURE

Deal and Kennedy (1982, pp 13 - 15) identified the following six elements of culture, viz business environment, values, heroes, rites, rituals and the cultural network. The business environment is the single most important influence shaping the corporate culture. The environment determines the success or not of an organization. Values encompass the basic concepts and beliefs prevalent in an organization and are the crux of any corporate culture. The complex value systems of organizations with strong cultures are shared by all employees. The people who personify the corporation's values are termed "heroes". These heroes are tangible role models for the work-force to follow. Deal and Kennedy view the rites and rituals as "the systematic and programmed routines of day-by-day life". Rituals supply employees with role models of the behaviour expected of them. Quite often these routine behavioural rituals are spelt out in great detail to employees. The cultural network is the primary means of communication within the organization and as such it is the carrier of corporate values. The cultural network is usually effectively monopolized by story tellers, spies, cables and whisperers.

### 3.2.3.7 CULTURE AND EFFECTIVE ORGANIZATIONAL BEHAVIOUR AND PERFORMANCE

According to Denison (1990) there is a close relationship between organizational culture and organizational effectiveness. Organizational performance at or near peak capability does not

only lead to improved strategic success but also to an organizational culture characterized by high performance (Thompson and Strickland, 1990, p 263). The success of effective, high performance organizations are usually attributed to a combination of values, beliefs, policies and practices. Effectiveness is a function of the policies, procedures and practices pertaining to a set of shared values and beliefs prevailing in an organization. There is a relationship between effectiveness and the translation of core values and beliefs into policies and practices. Specific practices as they pertain to the management of human resources, the internal environment of an organization, resolving conflict, planning strategy, work design and decision making influence performance and effectiveness (Denison, 1990, pp 5 - 6).

According to Wilkins and Ouchi (1983), organizations with a distinct local culture with particular properties will be inclined to significant performance efficiency. They posit three modes of organizational governance namely the market, the bureaucracy and the clan. They argue that these three forms of organizational governance are controlled by the transaction cost perspective (Wilkins and Ouchi, 1983, p 470). Wilkins et al (1983, p 471) define a transaction cost perspective as "any activity which is engaged in satisfying each party to an exchange that the value given and received is in accord with his/her expectations". Furthermore these two authors state that the central problem of organizational governance of transactions is the achievement of a perception of equity among self-interested parties who are boundedly rational. This social problem

is resolved in the market situation by means of a competitive price mechanism. Conditions of increased ambiguity may lead to more costly transactions. The bureaucracy deals for that very reason with conditions of ambiguity by creating an employment contract. But there are limits to ambiguity and complexity. Should it increase beyond a certain point, bureaucracy is bound to fail (Wilkins et al, 1983, p 471). The third principle of organizational governance of transactions, the clan, addresses the social problem of exchange by socializing the parties to the extent that, despite self-interest, the goals become congruent. This congruency leads to an efficient governing of transactions in the midst of relatively high complexity and uncertainty. To achieve this end, relatively high levels of goal congruence and a general paradigm is required. The term "goal congruence" refers to clan members' belief in equitable treatment. Typical examples of clans are Japanese firms with their theory-Z management orientation which encourages collective decision making. Theory-Z cultures facilitate the development of a general paradigm encompassing a perception of goal congruence leading to an efficient organizational performance (Wilkins et al, 1983, p 474).

According to Denison (1990) there are four integrative principles by which an organization's culture influences its effectiveness, viz the involvement principle, the consistency principle, the adaptability principle and the mission principle. The involvement principle implies a high level of involvement and participation of an organization's members to secure organizational

effectiveness. Denison (1990, p 7) argues that involvement and participation are dual in nature. On the one hand it may be considered a management strategy for effective performance. On the other hand it may create a better work environment for the worker, leading to a sense of ownership and responsibility embodied in a greater commitment to the organization and a lesser need for a tight control system. Ouchi (1981, p 8) argues that high levels of inclusion, involvement and participation lead to a value consensus reducing transaction costs.

Ouchi views high-involvement organizations as clans and organization transactions as governed primarily by values, beliefs, norms and traditions. Although Ouchi (1981, p 8) finds little supporting evidence for this principle, he cites as an example thereof in what he calls the contrast between "the litigious nature of American pluralism and the consensual efficiency of Japanese society". The consistency principle refers to the positive impact a strong culture can have on organizational effectiveness (Denison, 1990, p 8). Denison (1990, p 8) argues that the shared system of values, symbols and beliefs positively influences an organization's members in attaining consensus and implementing the aims and objectives of the organizations. Denison continues by viewing this system of shared internalized values, as a fundamental, implicit and effective control system co-ordinating the objectives and duties of the members of an organization. The consistency principle with its strong emphasis on highly committed employees, key central values, a distinctive method of implementing its objectives and policies, promotion from within and a clear set of "do's and

don'ts", is fundamental in building a strong, effective culture and a committed work force. A management system to exert constructive pressure to perform, needs a high degree of integration and co-ordination which is brought about by a close alignment between central values and beliefs and actual policies, practices and objectives.

The adaptability principle, as contrasted against the involvement and consistency principles which focus exclusively on the internal dynamics of an organization, focuses on the external environment of the organization. Three aspects of adaptability influencing organizational effectiveness may be distinguished, namely the ability to perceive and respond to the external environment, the ability to respond to internal customers, and the capacity to restructure and institutionalize behaviour and a set of processes which allow the organization to adapt. This is a prerequisite for organizational effectiveness. A relationship of support exists between these three aspects of adaptability and organizational culture (Denison, 1990, pp 9 - 11). These three aspects of adaptability penetrate to the core of an organization's value system.

The mission principle implies organizational culture to be driven by a clear mission. The mission refers to management's vision of the organization's functions, purposes and objectives. In this sense a mission provides purpose and meaning and specifies organizational activities to pursue and to chart in achieving strategic objectives. In



other words, a mission statement defines the appropriate course of action for the organization and provides purpose and meaning (Denison, 1990, p 13). Sherwood (1988, p 7) claims that efficient, high performance work cultures with competitive advantage are characterized by energy and quality.

Successful work cultures depend on the design of the work itself and the structure of work organizations. Challenging and significant work calls for energy and enthusiasm and the work force usually takes pride in the production of high quality products. Sherwood (1988, pp 8-9) continues by describing the salient features of an efficient, high performance work culture as delegating, teamwork, providing opportunities and evaluating contributions, integrating people and technology, and a shared sense of purpose and vision.

Delegating entails the deployment of responsibilities and decision making.

Teamwork involves the integration of every worker to serve the product manufacturing and customer satisfaction process, thus empowering all workers with the required responsibility and expertise to get their jobs done. The integration of people and technology requires initiative and creativity. The shared sense of purpose suggests a vision by management of what the organization seeks to do and to become. The design and building of an efficient work culture revolve around five key

1. elements i.e. people, technology, political process, environment and the links between
2. these five elements (Sherwood, 1988, p 18).

Four functions are decisive in the design and

building of a high performance and high commitment organizational culture, viz political and financial sponsorship, a legitimizing and supporting role, the design and implementation of objectives, and educational input (Sherwood, 1988, p 18).

### 3.3 ETHNICITY

Employees belonging to different ethnicities have different attitudes, beliefs, norms, values, philosophies and patterns of behaviour. These differences are culturally based because culture (ethnicity) reflects a group's or society's knowledge, beliefs, customs, morals, language, self-perception and values. Because corporate governance is part of that reflection, different ethnicities differ in their perceptions of the work environment (Clegg and Redding (Eds), 1990, p 187; Shibutani and Kwan, 1965, p 57). Sumner (1940, p 13) defines ethnicity as the tendency to "view things in which one's own group is the centre of everything and all others are scaled and rated with reference to it".

Schrire (1980) draws attention to much scholarly debate generated by the term "ethnicity" and the many different ways in which it has been defined. According to Schrire, this reflects the fact that ethnicity is partly contextual, with shifting contours, depending on the environment and the level of social interaction. Furthermore, Schrire defines an ethnic group as a "self-conscious social grouping that has the following properties:

1. A full demographic range of the population with internal cleavages.
2. Status differences which are viewed as being less salient than perceived.

3. An identity derived primarily from ascriptive factors".

Slabbert and Welsh (1979, p 10) see an ethnic group as "a group that is bounded off from other comparable groups or population categories in the society by a sense of its difference which may consist in some combination of a real or mythical ancestry and a common culture and experience". Employed in the context of intergroup relations, this definition would cover groups which are physically or racially different as well as those which are culturally different. The same authors view ethnocentrism simply as "the propensity to evaluate one's own group in more favourable terms than other groups" (1979, p 12). Schlemmer (1977, p 13) views an ethnic group as "a social organization in which roles and status are articulated mainly within the ethnic context".

Banton (1983, pp 9 - 14) distinguishes between race and ethnicity by means of the two complimentary processes of inclusion and exclusion. The adjective "race" designates physical characteristics for example skin colour. Racial differences are usually drawn upon to identify a group and to exclude others from this particular group and the privileges accruing to group membership. The adjective "ethnic" designates cultural characteristics for example language, custom, religion and values when these are used as a basis for group identification. Ideas about shared ethnicity have been used to promote inclusion. Linking up with Banton's theory, is the rational choice theory of race and ethnic relations (Banton, 1977). The rational choice theory has competition as its central theme and is based on two suppositions (Banton, 1983, p 104):

Ethnicity denotes the situation of a group

1. Individuals act in order to obtain the maximum group advantage.
2. Action at one moment of time influences and restricts the alternatives between which individuals will have to choose on subsequent occasions.

The rational choice theory of race and ethnic relations implies that:

1. Individuals utilize physical and cultural differences to create groups and categories by the processes of inclusion and exclusion.
2. Ethnic groups result from inclusive and racial categories from exclusive processes.
3. When groups interact, processes of change affect their boundaries by the form and intensity of competition - especially when individuals compete as groups' ethnic boundaries are reinforced.

Adam and Moodley (1986) view ethnic consciousness as always existing within some specific socio-political context. The policies of the dominant group determine how ethnicity asserts itself. They see nationalism as the political expression of a shared ethnic consciousness whose major components are cultural ethnicity, economic ethnicity and political/legal ethnicity. Ethnic consciousness functions to claim rightful entitlement, thwarts intrusion into monopolized realms, and inspires collective action. Cultural ethnicity denotes a feeling of commonality based on language, religion, regional particularities, values and customs all of which are decisive for the identity of group members. Political ethnicity denotes exclusiveness in the institutions of the state. Economic ethnicity denotes the situation of economic

become crystallized in the institutions common to these people like work organizations and labour associations.

inequalities (or privileges) coinciding with ethnic group boundaries. Ethnic economic differentiation leads to inequality.

Cross (1971, p 487) defines ethnic groups as "groups defined in relation to cultural features". As already stated, culture includes knowledge, beliefs, art, law, morals, customs and values. Hofstede and Bond (1988, p 6) describe culture as "the collective programming of the mind that distinguishes the members of one category of people from those of another". National culture influences organizational culture, magnifying cross-cultural differences and giving a better explanation of the differences between ethnic groups in the workplace. Striking cultural differences exist at the workplace because employees (and managers) bring their ethnicity (and cultural differences) to the workplace. Culture provides the context for behaviour in work organizations. "Organizational systems are cultural answers to the problems encountered by humans in achieving their collective ends" (Crosier in Kast and Rosenzweig, 1985, p 589).

Hofstede (1980b, p 43) describes the importance of cultural conditioning and defines culture as the collective mental programming of the people in an environment. According to Hofstede culture is not a characteristic of individuals but it rather encompasses a number of people who were conditioned by the same education and life experience. Hofstede is convinced that culture also refers to the "collective mental programming that these people have in common - a programming that is different from that of other groups, tribes, regions, minorities or majorities, or nations". Culture in the sense of collective mental programming is shared by a number of people and has become crystallized in the institutions common to these people like work organizations and labour associations.

Laurent (1983, p 77) for instance finds more pronounced cultural differences among foreign employees working within the same multi-national organization than among employees working for organizations in their native lands. He concludes that employees of different ethnicities (or national identities) working for the same multi-national corporation maintain and even strengthen their cultural differences. Corporate culture enhances national differences instead of eliminating and/or reducing it (Adler, 1986, pp 46-48).

Economic ethnicity may be defined as economic culture (Clegg and Redding (Eds), 1990; Berger, 1987). Berger (1987, pp 7 - 8) coined the term "economic culture" as a theory to explore the "social, political and cultural matrix or context" within which organizations operate. The term "economic culture" is not causal in nature. It only draws attention to the relationships which such an enquiry must explore. This concept will, therefore, explore the social, political and cultural (ethnic) matrix within which organizations operate. Moorhead and Griffin (1989, p 672) focus on the differences and similarities in work behaviour across cultures and point out that cultures and national boundaries do not necessarily coincide and that profound differences exist within the same national boundaries. These authors draw attention to a recent review of literature on international management and the five basic conclusions reached:

1. Behaviour in organizational settings varies across cultures. This implies that employees of different ethnic groups are likely to have different work attitudes and manifest different patterns of behaviour in organizational settings.
2. Ethnicity (culture) is a major cause of this variation.

3. Although behaviour within organizational settings remains quite diverse across cultures, organizations themselves appear to be increasingly similar.
4. The same manager behaves differently in different cultural settings.
5. Cultural diversity can be an important source of synergy in enhancing organizational effectiveness. Organizations adopting a multi-ethnic strategy can become and do become holistic in their approach. Operations in each culture can benefit from operations in other cultures through an enhanced understanding of how the world works.

Variations in behaviour across cultures can be viewed in terms of individual differences, managerial behaviour, motivation, leadership, management by objectives, planning and control, organizational design, management development and organizational development, job design, group dynamics, humanization of work, leadership, power and conflict, industrial democracy, company ownership and control, management of multi-cultural organizations, decision-making, rewards and environment and technology (Hofstede, 1980a; Moorhead and Griffin, 1989).

Moorhead and Griffin (1989, pp 674 - 675) highlight Hofstede's four dimensions along which individual behaviour varies across cultures:

1. Individualism/Collectivism - Individualism is a state in which the individual's own interests and values take priority. People in an individualistic culture usually favour and prefer their own careers to their organization's success. They assess situations in terms of how

- decisions and events will affect their careers and lives. Collectivism on the other hand, is a feeling that the good of the group or organization should come first. People in an collectivistic culture quite often put the needs of the organization before their own personal needs.
2. Power Distance - It indicates the extent in which a society accepts the unequal distribution of power in institutions and organizations. It is reflected in the values of the less powerful members as well as in the values of the most powerful. Power distance is an indication of the degree and extent to which the idea is accepted that an organization's employees rightfully have different levels of power.
  3. Uncertainty Avoidance - Uncertainty avoidance indicates the extent to which people in a culture feels threatened by uncertainty and try to avoid it.
  4. Masculinity/Femininity - Measurements in terms of this dimension express the extent to which cultures value things like assertiveness, ambition, materialism and clearly differentiated sex roles on the one hand or people, quality of life, nurturing and fluid sex roles on the other.
- Adler (1986, pp 36 - 45) expounded these definitions of the four cultural domains on which ethnic groups may differ. She views individualism as implying a loosely knit social framework in which people are supposed to take care only of themselves and their immediate families. Collectivism is characterised by a tight social framework in which people distinguish between their own group(s) (ingroup(s)) and other outgroups. In collective cultures people expect their ingroup(s) to look after them, protect them and care for them in hierarchical-relationship systems. The first dimension



exchange for loyalty. Adler holds up as an example the Arab executive considering employee loyalty as more important than efficiency. The collectivist flavour of the East Asian cultures are characterized by a determinism reflecting the will of the group in members' beliefs and behaviour. Also, members of the collectivist cultures are controlled through external societal pressure while individualistic cultures control their members through internal pressure, for example by guilt-feelings. Adler views power distance as the extent in which less powerful members of organizations accept the unequal distribution of power. The extent to which employees accept that the superior has greater power than themselves, indicates the degree of power distance. Uncertainty avoidance measures the extent to which a society feels threatened by uncertain and ambiguous situations and how society tries to avoid these situations by providing career stability, establishing more formal rules, not tolerating deviant ideas and behaviours and accepting the possibility of absolute truths and the attainment of expertise. The masculinity/femininity dimension denotes the extent in which dominant values in a culture are assertive, emphasizing the acquisition of money and goods (materialism) with no particular concern for people. Values on the feminine pole veer towards emphasis on the relationship among people, concern for others and the overall quality of life.

Laurent's four dimensions along which Western conceptions of managerial ideology differ, link up with Hofstede's four dimensions (1983, pp 75 - 96). Laurent (1983, pp 75 - 96) discerns four systems (dimensions), namely organizations as political systems, organizations as authority systems, organizations as role-formalization systems, and organizations as hierarchical-relationship systems. The first dimension

along which Western cultures differ, namely organizations as political systems, clusters around three items dealing with the political role played by managers in society, their perception of power motivation within the organization and an assessment of the degree in which organizational structures are clearly defined in the minds of the individuals. This dimension clearly links up with Hofstede's power distance dimension. Laurent (1983, p 79) found managers in Latin cultures (i.e. France and Italy) to have a stronger perception of their political role in society than managers in Anglo-Saxon or Scandinavian cultures (i.e. Britain, Denmark and Sweden). Latin managers also strongly emphasize the importance of power motivation within the organization and report a fairly hazy notion of organizational structure. Anglo-Saxon and Scandinavian managers, on the other hand, have a significantly lower political orientation within the organization and within society at large and a clearcut notion of organizational structure.

Organizations as systems of authority tie in with Hofstede's dimension of uncertainty avoidance. There are three issues dealing with the conception of hierarchical structure, which are specification of authority relationships, a perception of authority crisis in organizations and an image of the manager as a negotiator. These three issues comprise the dimension of organizations as authority systems and the purpose is to bring about a hierarchical structure so that everyone should know who has authority over whom. Again Laurent (1983, p 83) found a sharp contrast between Latin cultures and Anglo-Saxon and Asian cultures. Latin countries like Belgium, Italy and France got high index scores on the authority continuum while the United States and Germany tended towards the

lower end. National culture strongly affects managers conceptions of authority. For example French managers view organizations as authority systems more frequently than American managers.

Hofstede's dimension of masculinity/femininity correlates with the dimension of organizations as role-formalization systems (Laurent, 1983, pp 83-84). This dimension comprises three items, namely the relative importance of defining and specifying the functions and roles of organizational members, stressing the values of clarity and efficiency which can be obtained by implementing such organizational devices as detailed job descriptions, well-defined functions and precisely defined roles, and the insistence on the need for role formalization. The results indicate a relatively lower insistence on the need for role formalization in Anglo-Saxon, Scandinavian and Netherlandic cultures than in Latin countries such as France and Italy. Laurent's last index, namely organizations as hierarchical-relationship systems again shows significant differences between Anglo-Saxon cultures and Latin cultures in management attitudes toward organizational relationship. Britain and America as well as Scandinavian countries cluster on the lower end of the continuum with the Latin countries of Europe such as France, Italy and Belgium on the higher end. Laurent (1983, pp 85-86) suggests that this index should be used to assess the feasibility of an organizational matrix structure arrangement to replace the more classic hierarchical forms.)

Also, in individualistic cultures, promotion is on the basis of performance. In collectivist cultures, for example Japan, promotion is on the basis of seniority with the company (Clegg, Higgins and Spytay, 1990, pp 40-47). In high power distance

### 3.3.1 ETHNIC DIFFERENCES IN MANAGEMENT AND WORK BEHAVIOUR

Ethnic differences obviously shape managerial and employee behaviour (Moorhead et al, 1989, p 675). Reference was already made to the dimensions along which individual behaviour varies across ethnicities (Hofstede, 1980a) as well as the four dimensions along which Western conceptions of management differ (Laurent, 1983). In general, these ethnic differences relate to the role of authority, power and individualism in organizations (Laurent, 1983, pp 75-96). Managers in Indonesia, Italy and Japan view the purpose of organizational structure as to inform everyone with clarity who the superior is. Managers in the United States, Great Britain and Germany, in contrast, view organizational structure as the co-ordination of group behaviour and effort (Moorhead et al, 1989, p 675). Arab executives see employee loyalty as more important than efficiency. The individualistic cultures of the United States and Great Britain are characterized by self-determinism and self-respect. In contrast, the will of the group determines members' beliefs and behaviour in Japan's collectivist culture. In the individualistic Western cultures, group members believe that each person should determine his/her own fate, beliefs, and behaviour. Most North Americans, for example, believe that democracy should ideally be shared by all (Adler, 1986, p 36). Also, in individualistic cultures, promotion is on the basis of performance. In collectivist cultures, for example Japan, promotion is on the basis of seniority with the company (Clegg, Higgins and Spybey, 1990, pp 40-47). In high power distance

countries such as Sweden, the Phillipines, Venezuela and India bypassing is being considered as insubordinate by managers while managers in low power distance countries such as Italy and Germany consider it acceptable to bypass one's superior and in fact expect to be bypassed to get the work done.

Ethnic differences also have an influence on negotiations. In high power distance cultures it is of absolute importance for the company representative to be titled equivalent to or higher than their bargaining partners. In low power distance cultures, titles, status and formality are of less importance. Cultures also differ quite markedly on the uncertainty avoidance dimension. High job mobility is characteristic of post-Confucian and Scandinavian cultures, especially Singapore, Hong Kong and Denmark. Organizations in Scandinavian countries are characterized by low counts on both the power distance and uncertainty avoidance dimensions. These organizations may be compared to village markets. The organizational hierarchy is weak and risk taking is both expected and encouraged. In Singapore, with it's post-Confucian culture, which is high on power distance and low on uncertainty avoidance, organizations usually resemble traditional families where the father, as head of the family, protects family members. Organizations high on both dimensions are viewed as pyramids of people. Typical examples are Yugoslavian and Mexican organizations. In organizations with a pyramid structure, the hierarchical sequence is clear with a sharp distinction between subordinate and superior (Clegg et al, 1990; Adler, 1986, p 41).

Regarding masculinity/femininity, Scandinavian cultures tend to be the most feminine in contrast to Japanese and Austrian cultures who are highly masculine. In masculine cultures women are generally expected to stay at home and take care of the children. The masculinity/femininity dimension also has important implications for motivation in the workplace (Adler, 1986, p 43). According to Moorhead et al (1990, p 676), Maslow's hierarchy of needs has been shown to vary across some cultures and remain stable across others. Security needs, for example, are more important in Japan and Greece while social needs tend to dominate in Sweden and Norway. Moorhead et al (1990, p 677) point out that the need for achievement, Herzberg's two-factor theory and the expectancy theory of motivation, all vary across cultures. American managers, for example, believe that hard work and dedication have a causal relationship with high performance while Arabic executives are convinced success is determined solely by God.

According to McClelland performance is due to the achievement motive. One performs because he/she has a need to achieve. Maslow postulates a hierarchy of human needs from more "basic" needs to the "higher" needs. The "higher" needs point to self-actualization and incorporate McClelland's theory of achievement. Maslow views motivation as basically a rational activity by which we expect to fulfil successive levels of needs. Herzberg's two-factor theory of motivation distinguishes between hygienic factors and motivators. Only the motivators have the potential to motivate positively. Vroom has formalized the role of expectancy in motivation and opposes expectancy

satisfied to a considerable extent before

theories and drive theories (Hofstede, 1980b, p 53). People are being pulled by an expectancy of some kind of result of their conscious acts. Drives are inner unconscious forces that push people.

From a cultural perspective a distinct relationship is noticeable between McClelland's need for achievement scores and a combination of weak uncertainty avoidance and strong masculinity. Therefore Hofstede (1980b, p 55) concludes that the achievement motive presupposes two cultural choices, viz a willingness to accept risks (weak uncertainty avoidance) and a concern with performance (strong masculinity). This combination is usually found in Anglo-Saxon cultures, viz Great Britain, United States, Ireland, Canada, New Zealand, Australia, the Republic of South Africa and the Philippines. Achievement motivation is quite strong in these cultures and the ultra-high individualism of the United States finds expression in acts of self-interest. A strong uncertainty avoidance dimension is characteristic of Latin cultures (Italy, Venezuela, Argentina, Mexico and Belgium) and also Japan with its post-Confucian culture. Ethnicities who are strong on uncertainty avoidance are usually strongly security motivated and performance inclined. Feminine cultures are distinguished by a sharp focus on the quality of life and relationship between people rather than on performance and acquisition of money and goods. This in essence, boils down to social motivation: quality of life plus security.

Maslow views man as having a hierarchy of human needs in which the lower needs have to be satisfied to a considerable extent before the

higher needs can emerge to motivate the individual. Higher order needs become active only when succeeding lower-level needs are fairly well satisfied. Maslow views self-actualization plus self-esteem as the highest-order need (Hofstede, 1980b, p 55; Dessler, 1986, pp 333-334; Schein, 1980, pp 85-86). Hofstede views these theories of motivation not as the description of a universal human motivation process but as the description of a value system of a specific ethnic group. The value systems of a specific ethnic group or culture profoundly influence politics and the economy. The Catholic value system in Latin cultures, from Latin America to Poland, plays a decisive role in economic and industrial development. Also, the Confucian culture zone of East Asia, by economic criteria one of the least favoured regions on earth, displays an economic dynamism which outstrips any other region of the world. The Western value system which has shifted from a materialist to a post-materialistic emphasis, gives top priority to self-expression, belonging and quality of life. These values, due to want of motivation, de-emphasize economic achievement and lead to the current economic decline in advanced industrial Western societies like the United States and France with West Germany and Great Britain as exceptions to the rule (Inglehart, 1990, pp 66-103). Again, conspicuous differences between ethnicities are

Laurent (1983), linking up with Adler (1986), advances four cultural dimensions along which Western conceptions of management differ. Laurent considers organizations to be political systems. This dimension revolves around the political role played by managers in society, managers' Also the Scandinavian countries, especially Sweden, has a matrix structure which differs from the classic



perception of power motivation within the organization, and an assessment of the degree to which organizational structures are clearly defined in the minds of the individuals involved. The differences in perception on this dimension between Anglo-Saxon and Latin cultures are quite conspicuous. French sociologists (Latin culture) view organizations as sets of games and power strategies. They define and perceive organizations as political systems. The British researchers, on the contrary, have a rational approach to the structure of organizations. Laurent also views organizations as authority systems. This dimension revolves around the hierarchical structure of authority relationships, the perception of authority crisis in organizations and an image of the manager as negotiator. Ethnic differences on this dimension are spectacular. Managers from Latin cultures such as France, Italy and Belgium view authority relationships on a more personal and social level (Laurent, 1983, pp 79-85).

American and German managers have a more rational and instrumental view of authority in organizations. In regard to role-formalization, the relative importance of defining and specifying the functions and roles of organizational members forms the substance of this dimension. Again conspicuous differences between ethnicities are evident. The United States, Sweden and the Netherlands have a relatively lower inclination toward role formalization than the Latin cultures. The hierarchical-relationship index shows sharp differences in organizational relationships between Anglo-Saxon and Latin cultures. Also the Scandinavian countries, especially Sweden, has a matrix structure which differs from the classic

hierarchical forms of Latin cultures. Laurent therefore comes to the conclusion that "national variations in conceiving organizations as hierarchical relationship systems may affect the structure of organizations in different countries and have implications for the transfer of organizational forms across cultures" (Laurent, 1983, *ibid*).

Kahn (1979) explicated the post-Confucian hypothesis proposing that the success of organizations in East-Asian countries was due mainly to certain key traits shared by the majority of organization members which could be attributed to an upbringing in the Confucian tradition. Kahn held the belief that specific ethnicities have specific cultural traits which are "rather sticky and difficult to change in any basic fashion although they can often be modified". The neo-Confucian hypothesis holds that the East Asian countries have common cultural roots going far back into history and that under the world market conditions of the past 30 years, this cultural inheritance has constituted a competitive advantage of successful business activity (Kahn, 1979; Hofstede and Bond, 1988, pp 5-21).

The key notion of Confucianism boils down to a concern for the courteous and proper conduct of one's duties based on ritual, order, imperial patrimonialism, service and the meritocratic achievement of these virtues and a respect for social conventions. Confucianism is profoundly anti-individualistic. Post-Confucianism also stresses familalism, collectivism defined in terms of the family and a meritocratic stress on education as the means to collectively consolidate

family wealth (Kahn, 1979). Hofstede and Bond (1988, p 8) discern five key principles of Confucian teaching:

1. The stability of society is based on unequal relationships between people.
2. The family is the prototype of all social organizations.
3. Virtuous behaviour towards others consists of treating others as one would like to be treated oneself: a basic human benevolence - which, however, does not extend as far as the Christian injunction to love thy enemies.
4. Virtue with regard to one's tasks in life consists of trying to acquire skills and education, working hard, not spending more than necessary, being patient and persevering.

These are the distinctive characteristics of East Asian societies. The five "Dragons" - Singapore, Hong Kong, Taiwan, South Korea and Japan - have managed to mobilize their cultural traits and dispositions to their own successful economic advancement and performance. The East Asian economic success was built on a post-Confucian economic culture. An economic culture is "the social, political and cultural matrix in which particular economic and industrial processes operate" (Berger, 1987, p 7).

The post-Confucian cultures' economic success, particularly Japan's, has been spectacular. There is general agreement that Japanese success relates primarily to personnel practices, decision making processes and management practices and philosophies (Clegg et al, 1990, p 40). Although

these practices of loyalty and commitment cannot be regarded as unproblematic, they do seem to generate higher worker satisfaction according to Ketcham (1987) although Clegg *et al* (1990) disclaim this. Ketcham (1987, p 106) attributes worker satisfaction to the nature of groups in the workplace. He views the worker as having a pervasive, emotional commitment to the group. Individual Japanese workers are valued and trusted and "all speak up and make important contributions".

O'Reilly (1988, p 108) bestows high praise on the Japanese consensus style of decision making though Clegg *et al* (1990, p 42) view Japanese industrial relations as a striking disconfirmation of any historically rooted Japanese consensual culture. Lifetime employment however, illustrates the special nature of the Japanese employment system (Yamaguchi, 1988, p 34). Lifetime employment implies a career within one organization until retirement. The employment agreement is not based on binding contracts. It rather revolves around a seniority-based salary structure and the Japanese inclination to long-term relationships. Benefits accruing from this system are the facilitation of intra-company business and a considerable investment can be made in human resources development. Japanese management philosophy is another sub-unit of Japanese economic culture. This philosophy emphasizes long-term corporate strategy and supports a family style of management. The family style of management implies a totalism that is figurative of the total interaction between company, employee and society in the post-Confucian environment (Yamaguchi, 1988, p 35).

Organizational structure and design also vary across cultures (Moorhead et al, 1989, p 683). This variation operates in two forms, viz between culture issues and the structural features of multi-national organizations. Moorhead and Griffin (1989, p 683) compare the organizational structure and design of multi-national companies with companies operating in different ethnicities. Research, comparing the organizational structures in both Anglo-Saxon and post-Confucian cultures, finds both similarities and differences. Post-Confucian, and especially Japanese, organizational structures are less rigid, less specialized, with taller hierarchies, and also less affected by technology than Anglo-Saxon manufacturing plants. Especially technology plays a decisive role in determining organizational structure.

Lincoln, Hanada and McBride (1986, pp 338-364) relate taller hierarchies and broader chief executive spans of control, as is evident in the organizational structure of Japanese manufacturing plants, to rigid automated technologies, also characteristic of Japanese organizational structure. Lincoln et al (1986, p 356) observe that chief executives' spans of control increase linearly with technological advance. Also in regard to decision making dimensions, operations technology plays a far greater role in United States organizational structure than in the Japanese. Decision making responsibility is to a large degree delegated in the United States while Japanese decision making is of a centralized nature. Japanese decision making is quite often described as "consensus based" meaning that final action is deferred until consensus can be reached by employees affected by a decision (Lincoln et al, 1986, pp 342; 356-357).

Scandinavian economic culture, characterized by social democracy, involves a combination of "organized labour's high profile in economic decision making with free enterprise and state surveillance and co-ordination (mechanisms exist for capital to be channelled in particular directions, especially into product development and new technology)" (Clegg et al, 1990, p 63).

In the Scandinavian countries, especially Sweden, an economic culture emerged stressing social labour democracy. The crux of this economic culture was comprehensive reform on both macro- and micro-economic levels pursuing efficiency, equity and democracy as mutually reinforcing goals. Free market economic rationality with its attended outcomes of "macro- and micro-economic inefficiency and social inequity" was rejected (Clegg et al, 1990, p 64). Clegg et al (1990, p 67) view representation, in constitutional terms, as the key to the Swedish economic culture. With local government written into its constitution, constitutional representation is organized from the lowest levels upwards. This implies participation at the lower tier of government in district councils. The representative and democratic participative dimensions in the culture enable the Swedish government, for example, to handle labour market problems at grassroots level. The labour movement supports the labour market policies board in its endeavour to keep wages high. There is no question of low wage workers subsidizing inefficient firms. Wages are kept high even if this means forcing weak firms out of business.

Conspicuous of Anglo-Saxon cultures is the well-developed antagonism to state intervention in the economy. The British laissez-faire capitalist

system is an example of these cultures. Cultural preconceptions condition an ethnicity to a particular relationship between industry and government. Anglo-Saxon organizations are supposed to be totally independent of government and they try to keep the government at arm's length. Cultural norms pertaining to state intervention, are incorporated in organizational structure, recruitment processes, financing processes and in the linkage patterns with other organizations (Wilks, 1990, pp 131-132). Wiener (in Clegg *et al*, 1990, p 132) sees the "anti-industrial culture", conspicuous of pre-1980 Britain, as primarily responsible for British industrial decline in those years.

Thatcher's ascendancy to power has brought about a cultural change in post-1980 Britain. A new pro-industrial culture developed encouraging individuals to participate actively in creating prosperity, stressing individualism. The transformation of Great Britain into a strong free-market economy may be due to individualism. According to Berger (1987, p 96) the individualism of Western culture is associated with the development of capitalism. British industry has regained a culture of individualism leading to a commitment to free market principles.

Another feature of Anglo-Saxon economic culture is the concentration of British industry(ies) in the hands of family firms and conglomerate holding companies and the inability of British businesses to express collectivistic views. Attempts to substitute collectivism for individualism in industry are destined to fail because "modernity has not caused individualism, but, on the contrary, the individualistic patterns of medieval England made it possible for modernity to arise

there" (Wilks, 1990, p 146). The Anglo-Saxon cultural features of individualism, voluntarism, and commitment to the market are also recognizable in the United States.

### 3.3.1.1 ETHNICITY AND THE WORLD OF WORK IN THE UNITED STATES OF AMERICA

Demo and Hughes (1990, pp 364-365) argue that ethnicity is an emergent phenomenon arising from structural conditions and processes in American society. Ethnic groups in American society have generally followed specific paths in gaining prominence since the 1920's. Following these specific paths has to a great extent, been determined by the various ethnic group's cultures. Morawska (1982, pp 76-77) postulates that the ethnic values of East European immigrants to the United States influenced their economic attainment. The East Europeans were deeply religious, the church was seen as the centre of their social lives. They eagerly and wholeheartedly tithed for its upkeep. "All kinds of donations, gifts, dues, collections, votive Masses and saint patrons' festivities for rebuilding, remodelling, maintaining the village church, its bells, holy figures and the parsonage, provided frequent occasions to reaffirm or add to one's family prestige, which often turned into spectacular status contests among villagers" (Morawska, 1982, p 77).

The cultural system focused its energies on the maintenance of the family unit. This familial culture had a decisive influence on economic achievements in the social structure. Occupational dispersion was quite limited as immigrants relied on ethnic and kinship



attachments to gain entry into a given occupation. Kinship and ethnicity functioned so effectively in the distribution of workers, that managers not only approved of the system but actively encouraged it. The behaviour of individuals at the workplace was an extension of their familial world (Bodner, 1990, p 56). For example, immigrants from Eastern Europe, the Ukrainian territory, and also Blacks entered the mines and mills of Pennsylvania mostly because of the need of their next of kin. According to Bodner personal satisfaction, control of production, equality and mobility were secondary concerns (Bodner, 1990, p 65). East Europeans mostly settled into wage-earning occupations. The Italians were generally intent on individual advancement and proprietorship. The Ukrainians were mostly artisans and British and German immigrants of the working-classes (in their marked desire for self-improvement) experienced an embourgeoisment into businessmen and industrialists (Bodner, 1980, p 53; Morawska, 1982, pp 88-89).

Jones, James, Bruni and Sells (1977) draw attention to the differences in work environment perceptions and job satisfaction between Black and White Americans. Blacks usually have higher occupational aspirations but lower job expectations. Blacks do not plan for the future and are low on achievement orientation (Jones et al, 1977, p 5). Blacks tend to be more satisfied than Whites in regard to pay, rules and regulations about dress and appearance, and opportunities to get a better job but don't differ with Whites on aspects such as security, training,

job advancement, esteem and ego needs, social needs and self-actualization.

homogeneous groups will lend both psychological

### 3.3.1.2 ETHNICITY AND AFRICAN WORK ENVIRONMENTS

condition for effective performance, to the worker

The familial culture was characteristic not only of East European societies. Also in East African societies, especially Kenya, kinship and ethnicity function in the distribution of jobs. Inside information about suitable job vacancies is conveyed to workseekers by a member of his tribe or ethnic group who is already a member of that work organization (Blunt, 1980, p 340). This creates a culture of personalissimo, being defined as "the social pro of knowing somebody who knows the person from whom you need a service". The culture of personalissimo is related to Hofstede's power distance dimension. Because of an uncertain environment, uncertainty is reduced or avoided by knowing "the right people" which leads to narrow ethnic homogeneous groups (in-groups) which will increase power distance between the in-group and out-group in the environment (Munene, 1991, p 455).

3.3.1.3 Everyone inside the worker organization has a moral obligation to find jobs for relatives or friends in the rural areas. This familial culture leads to ethnic homogeneity which functions to improve organizational effectiveness and organizational control, facilitates socialization in the work process and ensures commitment to the organization, reduces turnover and damage to company property (Blunt, 1980, pp 346-348). Being a member of an ethnic homogeneous work group which share the same values accrued to the worker himself in a number of practical ways is very beneficial to the individual. In crisis and spiritual energy in service of another. From

situations and in circumstances of severe economic, social and political pressures, ethnic homogeneous groups will lend both psychological support and security which is a necessary condition for effective performance, to the member (Blunt, 1980, p 348). Psychological security reduces uncertainty and extreme uncertainty is a characteristic of developing East African societies in their endeavour to move away from subsistence agriculture to supply and demand economies. The African migrant experiences heightened levels of powerlessness, exploitation and alienation. The extreme environmental uncertainty, related to Hofstede's uncertainty avoidance dimension prevents the attainment of organizational goals. Uncertainty avoidance and power distance relate to each other through the culture of "personalissimo". Munene (1991, pp 455-456) argues that the interaction between power distance, uncertainty avoidance and personalissimo translate into an economic culture peculiar to Africa.

### 3.3.1.3 ETHNICITY AND WORK BEHAVIOUR IN SOUTH AFRICA

#### ATTITUDES, VALUES AND STEREOTYPES

The most fundamental human right is the right to exist, which in the early days of human habitation on earth consisted basically of the right to obtain enough food to stay alive and to be able to enjoy certain elementary social rights. Since the change to a money economy took place, these rights developed in accordance with the increased needs of human habitation and self-fulfilment. The right to exist was gradually transformed into the right to work. This means that every person should have the right to "sell" his/her physical and spiritual energy in service of another. From

1.3.1.3.1 this right emerged a number of relationships, for the purpose of this study the most important of which is labour relations.

The concept "labour relations" implies the relationships which emerge from man's association in industrial activity. Different ethnicities come to meet each other within the labour relations environment and profoundly affect work behaviour in industrial organizations. But it is difficult to obtain a full understanding of the current labour situation without an examination of the historical forces which led up to it. Ethnic disposition determines the conduct of individuals and members of work groups. But the present intergroup attitudes, values and stereotypes are the result of historical development over the years and social attitudes handed down by previous generations. Therefore the influence of ethnicity on work behaviour in South African organizations will be discussed first from a historical perspective. Then the effect of inter-ethnic differences on organizations will be considered.

#### 3.3.1.3.1 THE HISTORICAL DEVELOPMENT OF ETHNIC ATTITUDES, VALUES AND STEREOTYPES

The pattern of ethnic relations was determined in the course of three hundred and forty years of history. Ethnicity profoundly influenced the development of industrial relations and a peculiar South African economic culture. This development has four phases.

settled in Cape Town. They were involved in commerce, trade and transport. A large proportion of Whites, however, became involved

3.3.1.3.1.1 THE PRE-INDUSTRIAL PHASE

The pre-industrial phase, or as Lemmer (1985, p 4) called it "the individualistic/paternalistic phase", was characterized by three main features (Giliomee and Schlemmer, 1989, p 1):

1. Slavery and frontier conquest placed an unskilled and rightless black labour force under white control.
2. A sufficient number of Whites was available to man all strategic positions in the political, economic and administrative systems of the colony.
3. Growing racial discrimination characterized colonial society from the late eighteenth century onwards.

Race and ethnicity formed an effective basis for the social order. The identity of the colonists at the Cape was shaped by their European cultural heritage, Calvinistic religion and also material forces. Over time slaves, ex-slaves and Khoisan (indigenous tribes), not part of the Calvinist tradition and heritage, were relegated to a different and inferior status compared to the Whites. The existing social order was based on class. All the rich and powerful people were white and the poor and powerless, brown and black (Theron, 1989).

A small proportion of the white colonists settled in Cape Town. They were involved in commerce, trade and transport. A large proportion of Whites, however, became involved

in agricultural pursuits. In tribal areas Blacks pursued their subsistence agriculture. Cultivation was done by members of the family according to the traditional division of labour (Orpen, 1976, p 4). As farm labourers, the brown and black peoples' movements were severely restricted by legal means especially by the so-called masters and servants laws which "imposed the compulsory registration of all contracts and criminal penalties for a worker's breach of contract" (Giliomee et al, 1989, p 3). In this way, a society developed, reinforced by the reciprocal interaction of race, class and ethnicity, setting a mould which neither the colour-blind constitution, introduced by the British authorities in 1854, nor, in later years, industrialization with concomitant urbanization was able to crack. As the stock-farmers moved eastward they came into contact with indigenous black tribes, especially the Xhosa. The colonists considered themselves superior to these black tribes at the eastern frontier and social relations became rigid along ethnic lines. Attempts by the missionary societies to put Whites and Blacks on an equal footing precipitated the Great Trek (Giliomee et al, 1989, p 3; Orpen, 1976, p 5).

The emancipation of the slaves and the insistence of the British colonial government and the missionaries on equality for all before the law and protection for all by the courts, filled the frontiersmen with gloom, despair and insecurity. So the frontiersmen of Dutch origin, who had a well-developed sense of group position, decided to move (trek) into

the unknown interior of Southern Africa (Theron, 1989). In the Free State and Transvaal Voortrekker settlements, the Trekkers' perception of themselves as a separate people, chosen by God and superior to the indigenous peoples they came across on the northern frontier, were incorporated in legislation (Theron, 1976, p 5).

### 3.3.1.3.1.2 COLLECTIVE RIGHTS OF WORKERS

Lemmer (1985, p 5) calls the second phase "the collective rights of workers" while Giliomee et al (1989, p 6) describe this phase as the period of early industrialization and white supremacy. The discovery of diamonds and gold in South Africa in 1870 and 1886 triggered off the process of industrialization which led to an almost insatiable demand for labour. Unionized skilled labour flooded from the more advanced industrialized countries overseas to South Africa to work on the mines.

The unprecedented opportunities for earning cash wages offered by the mines resulted in an unprecedented movement of Blacks from the rural areas to the mining towns. So a fairly large and heterogeneous labour force came into being with a sharp distinction between skilled and unskilled labour. Unskilled Black labour, earning low wages, was in over-supply while skilled White labour earned high wages. This black-white disparity in wages and kinds of work "fitted easily and rather conveniently (for the Whites) into the traditional attitudes and interaction patterns which had been established by the farmers. This

dictated that white men should perform only supervisory, administrative and perhaps, highly skilled jobs, leaving the unskilled and menial tasks to be done by Blacks" (Orpen, 1976, p 7). This view linked up with the Afrikaners' Calvinist religion, linking a white skin to Christianity and salvation while a dark skin was linked with paganism and inferiority, predestined to damnation. The skilled white miners feared their standards would be eroded by Blacks given skilled work and the importation of Chinese workers to alleviate the acute shortage of skilled labour were regarded as a threat to their privileged position by white miners (Orpen, 1976, p 7).

Political leaders, chiefly Afrikaner leaders, feared that industrial development and the rapid urbanization of Blacks would undermine white and especially Afrikaner supremacy. Therefore attempts were made to regulate African labour and entrench white political control (Giliomee et al, 1989, p 6). The multi-racial content of the workforce and the cultural heritage of the Afrikaans people led to attempts to legalize the separation of races and had a particular influence on industrial relations and economic culture (Theron, 1989). Shepstone's regulations to control the movement of African labour in Natal contained the essence of influx control. The pass system also showed its face as Africans were required to register and wear a badge. In the mining towns attempts at segregation developed into the compound system, housing migrant labours. These migrant labourers left their families behind in the tribal areas and returned home on

"civilized labour policy" gave preference to



expiry of their contracts. The South African Native Areas Commission tried to put into action a system of control to ensure the efficient functioning of segregation:

1. Land had to be divided into areas for Whites and Africans.
2. African townships had to be established for Africans near all of the major labour centres.
3. Agricultural and industrial education would equip the African for his position in life.
4. The commission also endorsed political segregation - a system which had existed in Natal, the Free State and Transvaal prior to the Anglo Boer War.

Finally the segregation system established a job colour bar. The Mines and Works Act of 1911 as amended in 1926 "formalise and legalise the exclusion of ultra-exploitable non-white workers from skilled work" and as such perpetuated racial and ethnic demarcation.

Ethnic discrimination was quite conspicuous in the labour regulations and Ordinances of the Transvaal colony which defined unskilled labour as "such labour as is usually performed in the mines in the Witwatersrand District by persons belonging to the aboriginal races or tribes of Africa south of the equator". The job colour bar thus functioned to the protection of white workers by reserving skilled work for white workers and restricting the employability of Africans in skilled work. Hertzog's government with a so-called "civilized labour policy" gave preference to

white workers in the public sector even setting rates of pay for Whites enabling them to maintain their standards of living against Blacks (Giliomee et al, 1989, pp 9-18; Johnstone, 1976, pp 66-72). A range of laws was put into effect to control the African's life and labour. These laws formed a system of control to ensure the supply of sufficient labour to the mines and white farms. This way, a colour line was officially drawn, segregating Black and White on the political, social and economic levels eventually resulting in the Verwoerdian vision of apartheid depriving Africans of all political and industrial rights in the common (white) area. A segregated order had developed along with the accelerated industrialization and urbanization of South Africa following the discovery of diamonds and gold (Giliomee et al, 1989, pp 14-21).

### 3.3.1.3.1.3

#### THE STATE AND THE EMPLOYER DOMINATION

The advent of the Second World War generated an economic boom, leading to increased employment and fluid ethnic relations. The war effort made the colour bar redundant as many industries employed Africans and coloureds in jobs previously reserved for Whites. The coloureds found themselves in a precarious position. Although not statutory excluded from skilled employment, they were mainly employed as unskilled labourers. The Asian population suffered quite wide-ranging segregation. Totally excluded from the Orange Free State, in other provinces Asian occupation and ownership were restricted. The

Smuts-government accepted the inevitability of the process of economic integration but D.F. Malan's Afrikaner orientated National Party considered the many black blue-collar workers who had acquired skills in the war years as a threat to the white worker. Afrikaner nationalist were especially concerned that the more aggressive business sector "would employ Blacks rather than Whites at cheaper rates". They considered the rapid industrial integration and urbanization of Africans as a menace to white political control and Western civilization. Afrikaner nationalism therefore set into motion a statutory process to legalize apartheid (Giliomee et al, 1989, pp 21-34).

State domination in industrial relations, commenced during the second world war, was perpetuated by Malan's administration. Black workers were excluded from the Industrial Conciliation Act, but were covered by the Bantu Labour (Settlement of Disputes) Act which regulated the employment of black labour. Mixed trade unions were strictly forbidden. The general economic philosophy of South Africa was adjusted, taking precautionary measures to prevent endangering "national values" such as racial harmony and the criteria for economic stability (Lemmer, 1985, pp 15-16).

#### 3.3.1.3.1.4 DEMOCRATIC PRINCIPLES IN INDUSTRIAL RELATIONS

The period from the late 70's to the beginning of the 80's saw the initialising of industrial action leading to some penetrating debates

concerning worker representation resulting in the appointment of the Wiehahn Commission which concluded that all workers should resort under the same legislative system of representation. The commission also recommended the removal of all discriminatory measures, the removal of job reservation and the creation of one unitary system of collective bargaining. These changes were made effective in legislation.

### 3.3.1.3.2

#### ETHNIC DIFFERENCES IN SOUTH AFRICAN ORGANIZATIONS

Inter-ethnic differences profoundly influenced worker behaviour in South African organizations. Workers in fact, belong to two worlds. They are either members of the Western world or they are still members of the tribal world. The tribalized worker for instance differs from the Western worker in perception. His perception is two-dimensional. This has implications in the work situation. The worker with two-dimensional perceptions finds it extremely difficult to recognise photographs, drawings and posters. It is difficult to read, perceive and interpret safety posters. African engineering students also experience difficulties in interpreting three-dimensional engineering and architectural drawings. The tribal-orientated worker is also incapable of comprehending the symbolism incorporated in pictures and safety and advertising posters (Du Preez, 1987, pp 68-74). Ethnic issues also have an influence on the motivation to work. Motivation is one of the

most important industrial problems. Cross-cultural studies of black groups in South Africa illicit proof that for both rural (tribal) and urban Blacks, physiological needs were dominant, followed by the need for esteem (Du Preez, 1987, p 85). Barling (1981, p 50) shows black promotional aspirations to be related to physiological and safety needs as well as the need to belong. On the other hand Asian promotional aspirations are only related to physiological needs. In regard to Whites, no correlation was found between promotional aspirations and physiological and safety needs and the need to belong.

Godsell (1983a), however, has found that young black workers rated challenge and opportunity as very important. The black workers in her sample also put a heavy emphasis on the community or "ubuntu" value. "Ubuntu" may also be seen as humaneness. The "ubuntu" value motivates a person to help others, work as part of a team, pursue friendly relationships with other people and share with others. Whites are usually motivated by challenge, competence, self-development and self-esteem (Godsell, 1983b, p 113).

Baran (1975) finds the tribal African worker field dependent. His perception of a situation is strongly influenced by external forces. The white and urbanized black workers' perceptions are field independent, viz perceptions are determined by forces residing within an individual. This also have implications for industry. According to Baran (1975) a field dependent person does not show

much personal initiative while field independent persons are creative and original in their thoughts and construct their perceptual environment actively and analytically. The Western worker (Orpen, 1976, p 55) ascribed status as prestige on the basis of attainment and education. The tribal person ascribes status on the basis of senior tribal position and "the extent a person is perceived to be capable of assisting" them in their dealings with Whites, especially at work.

Ethnic differences also prevail in the measuring of success. For the Blacks, success is measured by their relative standing in the subsistence agrarian economy. Tribal workers are more thrifty than Westernized workers and portray a deep respect for their seniors.

#### 3.4 INTERNAL-EXTERNAL LOCUS OF CONTROL

Locus of control is a personality variable that has been defined as a "generalized expectancy that rewards, reinforcements or outcomes in life are controlled by one's own actions (internality) or by other forces (externality)" (Spector, 1988, p 335). O'Brien (1983, p 7), linking up with this definition, views locus of control as "a concept that refers to a generalized expectancy about the extent to which reinforcements are under internal or external control". The locus of control-concept revolves around the controllability of events in one's life. People attribute the control of events either to themselves or to factors in the external environment. People with an internal locus of control are in control of events in their lives themselves and are referred to as internals. Externals have an outside locus of control and believe their lives to be controlled by external forces (Spector, 1982, p 482).

### 3.4.1 MEASUREMENT OF THE LOCUS OF CONTROL

The most widely used instrument to measure the degree of internality versus externality is Rotter's Internal-External (I-E) scale consisting of 23 loci of control and six filler items in a forced choice format, multi-dimensional in its structure, tapping such dimensions as expectations of fate, chance and powerful others (Spector, 1982, p 482; Levenson, 1974, p 15). The I-E-scale was subjected to a number of factor analytic studies and a belief in powerful others, behaving differently from those who are convinced that the world is unordered and unpredictable, was conceptualized as a result. Out of this conceptualization the internal, powerful others and chance (IPC) scales were developed. The I-scale measured the extent to which people believe that they have control over their own lives. The P-scale refers to powerful others and the influence they exert on one's life. The C-scale deals with perceptions of chance control or externality.

### 3.4.2 LOCUS OF CONTROL AND ETHNICITY

As previously stated, the internal-external locus of control construct was conceived as a generalized expectancy to perceive rewards and outcomes either as contingent upon one's own behaviour or as the result of forces beyond one's control. According to Riordan (1981, p 159) the process of socialization involves both the acquisition of behaviour and the development of expectancies and values attached to the rewards and outcomes of their performance. But the most

pervasive social differentiation is along ethnic and/or racial lines. Ethnicity is of central importance on the locus of control dimension. Riordan's research (1981) elicits proof of significant differences between ethnic groups in South Africa on locus of control. The Asians, the Coloureds the Africans and the English-speaking Whites measure high on the external dimension of the locus of control, expected to be controlled by luck, fate and powerful others. The Afrikaans-speaking Whites measure high on internality. These differences may perhaps be ascribed to the political environment. The four ethnic groups lend little support to the political status quo which is being upheld by the Afrikaans group.

The Afrikaans group, although a minority when compared to the other groups together, controls South Africa politically and therefore, to a greater or lesser extent, also the fate of the other groups. Socio-economic status also has a powerful influence on the locus of control. The lower status groups have expectancies of external control (Riordan, 1981, p 165). The perception of his environment being controlled by powerful others has a profound influence on the economic activity of the African (Danziger, 1963, p 38). The migrant worker and especially the farm migrant, perceives a high degree of external control. Being deprived of all rights and privileges, subjected to direct control of an oppressive labour tenant system, controlled by powerful others without the protection of trade union rights, the external locus of control is directly related to the "incapacitating



psychological experiences of learned helplessness and powerlessness" (Magwaza and Bhana, 1991, pp 162-163). (Dyal, 1983). Scandinavians, however tend to believe that they have little personal efficiency in a competitive capitalistic economy demands individualistic economic values. However being subjected to the most rigid restrictions as a group and total political control of every aspect of his life and economic activity, leads to the African redefining his economic aspirations in political terms (Danziger, 1963, p 39). Dyal (1984, pp 214-215) has found American Blacks who are low on socio-economic status and with minimal power to be more external than United States Whites. Coleman's research (in Dyal, 1984, p 214) ties in with this finding. The minority groups in Coleman's sample, viz the Mexicans, Puerto Ricans, Native Americans, Orientals and people of African descent, were more external than Whites. In Africa itself, research on locus of control for Nigerians and Zimbabweans, proved Nigerians to be more external on locus of control with regard to destiny and education items than Zimbabweans. Both groups however were high on the external dimension in regard to political items. In regard to personal control items, black Zimbabweans manifest a higher externality than white Zimbabweans (Dyal, 1983, p 231).

Ryckman, Posen and Kulberg (1978) have found that situational factors control ideology, for example white Zimbabweans had stronger feelings of self-determination. Oriental Asians with their post-Confucian culture, being situation-centred with the emphasis on luck, chance and fate would be characterizing life as being full of ambiguity and

complexity, are more externally controlled than Anglo-Americans who are usually more internally controlled (Dyal, 1983). Scandinavians, however tend to believe that they have little personal control over their lives and behaviour and that external factors influence their destinies.

### 3.4.3 THE RELATIONSHIP BETWEEN LOCUS OF CONTROL AND ORGANIZATIONAL VARIABLES

The conviction that one exerts personal control over one's life and events in the environment, also has a direct and powerful bearing on organizations. Internals attempt to control and in fact exert more control than externals on the work setting. Control would probably be exercised in the areas of (Spector, 1982, p 485):

1. Work flow.
2. Task accomplishments.
3. Operating procedures.
4. Work assignments.
5. Relationships with supervisors and subordinates.
6. Working conditions.
7. Goal setting.
8. Work scheduling.
9. Organizational policy.

Control, however, should be perceived to lead to desired outcomes and rewards. If the appropriate performance - reward contingency(ies) is absent, the internal's inclination to control shouldn't differ from the externals. Externals, being more conforming and compliant than internals, would be easier to supervise. It would be easier for them will lead to valued outcomes (O'Brien, 1984, pp

to follow directions than to give it. Thus for externals are more likely to be followers than leaders. Internals on the contrary, make excellent leaders. The nature and structure of the job also determine whether an internal or external would be best suited for the vacancy. Internals for example would perform better on jobs of complex nature demanding initiative and independent action. Externals would do better on simple tasks of compliant nature. Due to their higher levels of motivation, internals would also do better on jobs requiring high motivation. Internals are therefore especially suited for professional and/or managerial jobs (Spector, 1982, p 486). Internals are more motivated to work than externals. Internals perceive themselves as exerting greater control over their work environment and organizational setting, exhibiting more task-orientated and goal-orientated behaviour, therefore displaying greater job motivation towards acquiring rewards. Rewards have to follow performance otherwise internals may adopt a more external stance. But internals are not only more motivated to work than externals, internals also tend to attain higher occupations than externals (Spector, 1982, p 487; O'Brien, 1983, p 15). Internals seek jobs which have a greater autonomy, which exert more effort, have higher status occupations, and earn more money (O'Brien, 1984, p 16). Motivation is related to expectancy theory. This theory holds that effort will lead to good performance on the job and good job performance will lead to valued outcomes (O'Brien, 1984, pp

to quit a dissatisfying job.

29-30). Personal effectiveness is decisive for outstanding performance and good performance will be rewarded. Effort is associated with performance levels and performance is instrumental in attaining valued rewards. Internals with their strong sense of competence, believe that their own efforts will lead to good performance and that performance will lead to valued outcomes or reinforcements. Externals view performance and its outcomes, as contingent on factors beyond their control. Internals' effort-to-performance expectancy lead to greater job effort for monetary rewards and other incentive systems. Externals are insensitive to pay incentives (Spector, 1984, pp 488-489).

Although Spector (1984) is adamant that research Internals perform better on the job than externals (O'Brien, 1983, p 19; Spector, 1982, p 488). Spector (1982, p 488) relates the better job performance to the internal's greater expectancies that effort will lead to good performance and good performance to reward. Spector, (1982, p 488) also advances a second reason for the internal's better job performance. According to Spector, internals seek more relevant information which enables them to perform better in complex task situations. Ruble (in O'Brien, 1983, p 19) qualifies this by stating that internals perform better in participative decision groups while externals' performance is better in directive leader-groups. Internals demonstrate greater job satisfaction than externals. Spector (1982, p 490) advances four reasons for the direct effect of locus of control on job satisfaction:

1. Internals tend to take action more frequently than externals and are therefore more likely to quit a dissatisfying job.

2. Internals perform better and the better performance results in the intended rewards and reinforcements.
3. Internals advance more quickly through the hierarchy and receive more raises and are more successful in their careers than externals.
4. Internals who perceive greater controllability of events in the work environment and ability to leave, are more likely to leave in dissatisfying situations. An internal deciding to stay on in dissatisfying situations will tend to re-evaluate the situation favourably to retain a cognitive consistency between attitudes and behaviour.

Although Spector (1984) is adamant that research supports the locus of control - satisfaction hypotheses, O'Brien (1983) has found that locus of control is not a significant predictor of job satisfaction when age, income and education are being controlled statistically. However, O'Brien (1983, p 45) cited research supporting the claim that internals are more job involved than externals. It may be that internals place a higher premium on work than externals because they believe "it provides opportunities for obtaining rewards through the exercise of skills and personal autonomy".

#### 1.5 CONCEPT VALUES

Runyon (1973) studied the moderating effect of locus of control on leadership in industry. He has found internals to be more satisfied with a participative style of leadership than with a directive style. Spector (1982, p 491) cited research findings that externals were more satisfied with high-consideration supervisors than internals. Externals also complied better with

the demands of the coercive supervisors than internals. These results tie in with the locus of control - authoritarianism hypothesis. Externals, preferring coercive means of supervision tend to be authoritarian. According to Spector (1982, p 493) the relationship between locus of control and turnover is complex. In a highly dissatisfying work environment internals tend to take action exhibiting more turnover than externals. On the other hand, in a highly satisfying work environment, internals tend to be more successful and more satisfied exhibiting the same rate of turnover as externals.

Spector (1982, p 493) suggests that locus of control moderates the relationship between job satisfaction and turnover in the following way: "Externals tend not to take action, and therefore even if they are dissatisfied, they may stay on the job, at least until environmental factors force them to leave. Internals on the other hand tend to take action and would be expected to quit a dissatisfying job. Therefore the correlation between satisfaction and turnover should be higher for internals than for externals". Research cited above suggests that locus of control is an important variable in the organizational context.

### 3.5 CONCEPT VALUES

At the core of the diversity in South African organizational cultures, is a wide array of values. Acquired and refined in the course of ongoing socialization, these values give direction and impetus to human behaviour and human interaction by determining the underlying goals and motives (Godsell, 1983b).

## 3.5.1 DEFINITION OF VALUES

Human behaviour, social systems, managerial concepts and actions, economic development and the transformation to modern industrialism are affected by values and value systems. Values which govern human behaviour to a significant degree guide human actions. These human actions usually result in outcomes which are mostly rewarding to an action. According to McClintock (1978, p 121), individuals normally select that behavioural alternative, "for which the perceived value of the accompanying outcomes is greater than those attached to other available alternatives". McClintock (1978, p 122) continues by defining social values as "consistent preferences for distributions of outcomes that may serve a motivational or a strategic purpose".

Building on Griesinger and Livingston's two person spatial model of social values which emphasized the influences of an actor's behaviour on another actor's outcomes, McClintock (1978, p 122) defines values as "vectors consistent with commonly observed preferences for distributions of outcomes to self and other". Krech et al (1962, p 102) see values as beliefs about what is desirable or good and what is undesirable or bad. [Values reflect the culture of a group, or society, or region, or country and as such are shared by the members of that culture.] [Worchel and Cooper (1979, p 628) define values as "positive or negative affects attached to an object or an idea".] Kunutu (1990, p 1), holds that values have cultural connotations because capacities and needs of people depend on cultural development in general and on the cultural level of the individual in particular,

hence values, and belief systems should be understood and evaluated from a cross-cultural perspective. According to Kunutu (1990, p 14) values are a dimension of the meaning and purpose of life and living and the social setting in which life and living occur. Jacobs (1985, p 36) also stresses the cross-cultural dimension of values. According to him, norms and value systems differ from one cultural group to another, making the need for cross-cultural awareness indispensable for vocational orientation.

Kalish (1973, p 460) views values in the same vein as Krech et al. Values are beliefs about what are desirable and undesirable goals and about ways of reaching those goals. Allport (1958, p 24) defines values as "the goal objects of human motivation, personally attributable to or derived from basic needs or instincts". Rokeach (1968, p 160) views values as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to alternative modes of conduct or end-states of existence". Once a value is internalized, it becomes a criterion for guiding behaviour and determining concepts and actions - also behaviour, concepts and action in the organizational and industrial environments. Values form the bedrock of organizational culture. Values differentiate significantly between groups varying in demographic and cultural variables.

### 3.5.2 VALUES AND ORGANIZATIONAL CULTURE

Organizational (corporate) values are quite often set down in a formal statement of corporate philosophy. Therefore employees know what



standards of conduct they are expected to uphold and their decisions and actions will support those standards. Values are the crux of a company's philosophy and provide direction for all employees for the achievement of company goals and the attainment of personal success. Deal and Kennedy (1982, p 22) advance three characteristics of the value system of successful companies:

1. They have a clear and explicit philosophy about how to conduct business.
2. Management shape these values to conform to the business environment of the company and the economic development of a region. Management is at great pains to convey these values to the organization.
3. These values are known to and shared by all the people who work for the company.

These values constitute the fundamental and unique character of an organization. They give a specific identity to an organization and to those in the organization. Values have the power of pulling together those sharing them thus enhancing the effectiveness of the value system. Many successful organizations have a richly developed tradition of values and beliefs. The core values of an organization divulge that in which the members of an organization deeply believe (Deal and Kennedy, 1982, pp 23-24).

### 3.5.3 THE STRUCTURE AND INFLUENCE OF CORPORATE VALUES

Organizational values affect every aspect of the organization itself. Strong values guide the organization, determine its design, stipulate patterns of actions. This view illustrates the utmost importance of an employee's total commitment to and identification with the

organization's fundamental values in synchronizing management - worker relations, determine the achievement of organizational goals, indicate which matters are to be attended to most assiduously and influence the decision making process. Values affect the performance of the organization in three ways (Deal and Kennedy, 1982, p 33):

1. Managers and workers throughout the organization give extraordinary attention to whatever matters are stressed in the corporate value system.
2. Down the line managers make marginally better decisions, on average, because they are guided by their perceptions of shared values.
3. People simply work a little harder because they are dedicated to a cause.

Sathe (1985) sees values as justifications for behaviour. Cultural values and norms predispose the employee to a lesser or greater extent to the experiences and demands of the modern industrial environment and the work scenario. Organizational values are central to organizational culture and influence organizational behaviour to a great extent, viz it influences interpersonal relationships in the industrial setting, decision making, problem solving, ethical conduct and the realization of organizational goals (Theron, 1989).

Values also determine the allocation of organizational resources (Ott, 1989, p 39). Mercer (in Dessler, 1986, pp 365-367) views corporate culture as an expression of an organization's basic values and its typical patterns of actions. This view illustrates the utmost importance of an employee's total commitment to and identification with the

organization's fundamental values in synchronizing the goals of the organization with those of himself. But if the central and decisive role of values in organizations is to be understood, organizational socialization has to be surveyed. Values are of central importance to the process of organizational socialization (Godsell, 1987, p 106). Godsell distinguishes five socialization processes:

1. Anticipatory socialization.
2. Peer group socialization.
3. Values as barriers.
4. Dealing with value conflict.
5. Value conflict in South African organizations.

Values are involved at the stage of anticipatory socialization and Godsell (in Barling et al, 1987, pp 106-107) is adamant that it is of central importance to select employees whose values are compatible with those of the organization. An individual whose personal value framework differs from those of the organization will be at a disadvantage. He/she would be unable to understand the observed behaviour or to behave in the expected correct way. For example, for those who's work fulfils affiliative needs would produce different work behaviours from those with individualistic, competitive and achievement needs. Also, newcomers whose value systems differ from those of the organization, may be excluded from both formal and informal group contacts.

Godsell (in Barling et al, 1987, p 107) stresses that the individual is not socialized into the organization as a whole, but into (a) separate subunit(s). "If the sub-culture is well integrated into the organizational culture, the

individual's assimilation into the organization will be facilitated by integration into the subunit", provided of course the individual's value system is equivalent to the subunit's. The acceptance into a subunit also has a bearing on the competence and performance of the individual. Usually colleagues do not provide newcomers with essential information which is necessary to do the job well until they are accepted into the specific subunit and mutual relations of friendship and trust developed. But organizational socialization takes place throughout an employee's career.

Values remain of utmost importance as the individual rises in the hierarchy, gaining status and power within an organization. Value differences may form boundaries excluding an individual from influential power groups and thus from decision making processes. These boundaries quite often consist of highly informal norms shared by the group. Upward mobility and promotion do not necessarily depend on formal educational qualifications, skill and ability but on personal values and goals being congruent with the value framework and goals of the organization.

According to Godsell (in Barling et al, 1987, pp 110-111) value conflict may cause severe problems at any stage of an individual's career. Value conflict poses dangers for both the organization and the employee. Severe organizational socialization to narrow the gap between the value system of the organization and that of the individual, may lead to either rebellion or over-conformity. Rebellion usually leads to a total rejection of organizational values resulting

in the employee leaving the organization. Over-conformity may lead to an unhappy employee without any initiative or achievement motivation.

South African organizations are the green house-mould for value conflict. Educational, class, ethnic, racial and cultural differences may all give rise to different value systems. The industrialized and mining sectors of the economy are run along Western lines. The greater part of the workforce, employed in these sectors, however, has been socialized into non-Western tribal cultures. Such a work environment may lead to alienation. Employees from different socio-economic and cultural environments may feel isolated from peer groups, important work groups, and also feel cut off from the necessary support and information. Godsell (in Barling *et al*, 1987, p 111) observes that such value differences force employees into unproductive conformity and under-achievement.

Sathe (1985) describes values as justifications of behaviour. Values are conscious, effective desires and wants which give meaning to work and explain why people work. There are significant differences in the work values of employees and these differences affect their job performances. To some people, depending on class, culture, ethnicity and race, work is more of a central life commitment than to others (Dessler, 1986, p 324).

#### 3.5.4

#### WORK VALUES

The notion of work as simply a means towards earning a living is a serious error. Work gives meaning to one's life, providing opportunities

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for social contact and promoting personal fulfilment (Vecchio, 1980, p 361). The reasons why people work are closely related to their work values (Theron, 1989). Elizur, Borg, Hunt and Beck (1991, p 22) view the "value" of a given social group as "any entity (object, behaviour, situation) on which that group places a high worth or importance". These authors consider work values as such entities in the work context. Wollack (in Theron, 1989, p 13) defines work values as "an index of a person's attitudes towards work in general as contrasted with attitudes towards a specific job. It differs from job satisfaction insofar as job satisfaction refers to an employee's attitude towards his job".

Life values have a significant and positive correlation with work values (Kinnane and Gaubinger, 1963, pp 365-366). For example, man might value the advancing of scientific knowledge in everyday life but also achievement in his work life. Economic and political values reflect an orientation towards work which is concerned with factors extrinsic to work. A high premium is placed on the conditions in which the work is done and what accrues from it. Religious values are usually highly valued in everyday life. In the work setting religious values may take the form of social welfare reflecting a humanitarian approach to social problems by management. The social dimension of life values may be translated into a sense of responsibility for social problems in the work situation (Kinnane et al, 1963, p 366). Instead of using the classical approach classifying work values as intrinsic or extrinsic, Elizur et al (1991, p 23) define the essential facets of work values as (1) modality of outcome

and (2) system performance contingency.

The modality of work outcomes refers to its material or instrumental nature in the sense that it is of practical use. Apart from instrumentality, outcomes may also be affective or cognitive. The system performance contingency cuts across modality. Individuals are motivated to become members of the organization and to attend to work. Management provides various incentives such as benefit plans, work conditions, pay incentives and various services, such as transportation and subsidized meals. According to Elizur et al (1991, p 24) these incentives are usually given "before task performance and are not conditional upon its outcome". However certain other outcomes such as pay, recognition, achievement and status are usually provided after task performance. This class of outcomes may be viewed as rewards. The authors have found that cultural differences arise in both the relative meaning and importance of specific work values. The basic structure of work values for Western Europe and North American samples is similar.

The conceptual structure of work values for Far Eastern countries with their post-Confucian culture, differs markedly from the West European - North American structures. Confucianism determines the basic value system. Implicit in this value framework is a collectivism stressing harmonious relationships. It revolves around five constant virtues corresponding to five cardinal relationships:

1. Filial piety/father - son.
2. Faithfulness/husband - wife.

3. Brotherhood/elder brother - younger brother.
4. Loyalty/monarch - subject.
5. Sincerity/friend - friend.

The stress on relationships is to create and maintain a harmonious collective social order. The post-Confucian value system stresses the obligations of subordinates to superiors although in Japan's economic life the reciprocal nature of responsibilities in hierarchical relationships is emphasized. However, the independent samples from various cultural environments have essentially similar structures. Elizur et al (1991, p 35) conclude that a conceptual framework for work values can be inferred. "The modality facet with its three elements, viz cognitive, affective and instrumental, is shared by all values. The performance contingency facet appears to be a more unique facet to work values".

Research findings also indicate a high degree of similarity between the work values of newly hired white and black university graduates. Both race groups stress the importance of job satisfaction and achievement. Hygienic factors were rated less important by both groups although Blacks gave significantly higher priority to security needs than Whites (Alper, 1975, pp 133-134). Slocum and Strawser (1972, pp 28-32) also examine racial differences in work values. The results of their study reveal that Blacks (blue-collar employees) assigned more importance to lower order needs (security needs). The black managerial sample however stressed higher order needs such as autonomy and self-actualization. Lefcourt and Ladwig (1965, pp 668-671) find that Blacks become



more task orientated and expose achievement values when they expect that their own behaviour (internal locus of control) can determine the occurrence of rewards. They place a high premium on this. Therefore Lefcourt et al (1965, p 671) infer that with gradual changes in Blacks' opportunities for upward mobility, Blacks will increasingly respect and value middle-class goals and therefore accept middle-class values and consequently display more achievement orientated behaviour. Linking up with the abovementioned research, Klein and Verdun (1981) examine the work values of poor versus non-poor service workers. These researchers have found pervasive value differences for lower versus higher socio-economic levels:

1. Non-poor showed a higher preference for intellectual stimulation. Poor classes tend to value jobs more for tangible rewards.
2. Non-poor showed greater preference for business contacts with people. The lower classes are ignorant about the functions of the market and the economy.
3. The poor whose jobs are usually of a routine nature, showed greater preference for variety.
4. The non-poor showed a greater ability to perform under stress.
5. The non-poor showed a greater preference for gradual independence. Lower economic classes do not put a high premium on independence.
6. The poor classes showed a greater preference for aesthetics. Materially they valued possessions that gave life "grace as well as comfort".
7. The temperament factor showed the greatest difference between the poor and the non-poor.

The poor preferred exacting guidelines and rigid structures which perhaps correspond to their basic insecurity.

The values an individual associates with his job affect all aspects of his life. Understanding his work values would enable counsellors to deal more effectively with the classes who are transforming their value frameworks to middle-class value systems, with an emphasis on achievement motivation (Klein et al, 1981, pp 54-63).

### 3.6 THE DEVELOPMENT OF WORK VALUES

A variety of factors and processes play a role in the development and acquisition of work values (Godsell, 1983a). Inglehart (1990) observes that the rise and development of work values are based on two key hypotheses:

1. Scarcity hypothesis - an individual's priorities reflect the socio-economic environment.
2. Socialization hypothesis - one's basic value framework reflects the conditions prevailing during one's pre-adult years.

Early socialization seems to carry greater weight in the development and function of work values than later socialization. The socialization hypothesis implies a gradual, invisible process in which values are transmitted to the individual (Inglehart, 1990, pp 67-69). The anthropological approach to the study of work values holds that work orientations are transmitted to children by parents as part of the transmission of a core culture (Theron, 1989, p 16).

Kinnane and Pable (1962) are quite positive that family background is an important factor in the development of vocational values. They have found that heuristic-creative values are related to the degree of cultural stimulation at home. Students' security, economic and material values were found to relate to the degree of economic security in the family but the students' achievement-prestige values did not correlate with the upward social mobility of their families. Family cohesiveness, however, was related to the extent the students value work for the conditions and associates, viz pleasant working conditions and congenial companions.

Paine, Deutsch and Smith (1967, pp 320-323) also investigated the relationship between family background and work values. They cited previous research concluding that early life experiences and attitudes influence jobs and the reaction of employees to their work. Significant differences were also found in occupational values among persons of differing socio-economic status and attitudes towards work between college students from upper- and middle-class homes (Paine et al, 1967, pp 320). The exploration of values indicated that a low family income tended to place a high premium on job-security. Other variables predicting security needs are a close family relationship with discipline, social activities, community activities, religion and a great number of close friends. Paine et al (1967, p 321) conclude that "this type of family perhaps 'makes up' for lack of income by imbuing social-religious security which affects the developmental process of work values". The occupational values of prestige, responsibility and independence relate to several family background factors such as social activities, independence, culture and the number of times the family moved. It seems that the amount of prestige desired is a function of the extent to which one was encouraged to

participate in social activities and the stress on material things in one's home life. The value attached to monetary compensation was also found to be associated with several family-background factors such as emphasis on community activities, the number of close friends, material things and religion. The emphasis which the materialistic family puts on religion and close friends seems to inspire their offspring toward a greater emphasis on monetary rewards (Paine et al, 1967, p 322). Mietus (1979) explored the differences in work values between groups of students categorized on the basis of parental occupation. Statistical analysis of the data indicates that parents' occupations has a significant bearing on the occupational values of students.

The educational process also seems to influence the development of work values. For example the work force at Nissan was educated in the Genba Kanri value system by means of interaction management resulting in a value change. The shop floor management system has led to a revolution in the workplace. Nissan SA is characterized by relative industrial peace in the strike-affected motor industry (Chalmers, Sunday Times, October 15, 1989). The values of individualism, competition, equality and equity are instilled through the process of formal education (Mc Clintock, 1978). As children advanced through primary school and progressively engaged in conflict and co-ordinating tasks, they learnt to make choices consistent with "achieving valued individualistic outcomes". Results indicated an increase in competitiveness in Japanese, Grecian and American cultures between the second and fourth grade. In Belgium however, the major increment occurs between the fourth and sixth grade (Mc Clintock, 1978, pp 128-129).

Equity and equality are valued as social as well as occupational goals individuals may attempt to master while in interaction with others. Mc Clintock (1978, p 135) has found children to be more equalitarian when interacting in a team setup. The results also indicated that when in a disadvantaged position, subjects (children) usually apply the equality distribution rule and when in an advantaged position, the equity rule. In regard to the relation of the values of welfare and equality in the economic system and industrial scenario, Berger (1991, p 23) points out that the guiding value of equality can only be realized in a very modest way under modern conditions in a social democracy. If however the goal is the upliftment of large populations from abject poverty to a decent standard of material life under political arrangements which respect basic human liberties and rights, the option of a capitalist economic system should take precedence over the value of equality.

Organizational socialization also contributes to the development of work values. Organizations are subject to cultural influences and are likely to influence and to be influenced by the individual's work values. Godsell (1983a, p 46) observes that much organizational behaviour only acquires meaning when viewed within a certain value framework. The newcomer to an organization whose value framework differs from that of the organization, will find it difficult to make sense out of the behaviour he observes and is unlikely to produce the desired (correct) behaviours himself. He needs to internalize the standard norms and values of the organization. This internalization implies an organizational socialization that cuts across three types of boundaries, viz hierarchical, functional and inclusional. As already discussed, important factors in the socialization process are: The

peer group which acts as a socialization model in the internalization of work values of any group, the supervisor whose effectiveness as a socialization model is moderated by the degree of similarity in values between superior and subordinate and the internalization of values as employees are winding their way through the hierarchy attempting to increase their status and power (Godsell, 1983a; Godsell, 1983b).

The internalization of standard norms and values also plays an important part in Black-White ethnic differences in identification with the work ethic. Workers who internalize the standard norms and values of the middle class concerning the inherent dignity and value of work, tend to respond better to the demands of challenging jobs and are better performers. Bhagat (op cit, p 381) observes that children of rural middle class parents usually developed a value framework responding to the values of expanding economic as well as growth-related opportunities in the context of their work environment and working lives. Blacks (and members of other lower socio-economic classes) usually grow up outside the mainstream of middle class work values and are totally deprived of the meaning and inherent significance of work as reflected in the work ethic. Black youths also find it difficult to identify with socially significant others internalizing desirable occupational models. Blacks are thus relatively deprived of work-related cultural training and socialization during their formative years (Bhagat, 1979, p 382). Bhagat (1979, p 384) concludes that race discrimination seems responsible for the failure of Blacks to identify with and to internalize the work ethic.

(Katz and Rosenzweig, 1985, p 25).

The concept of the work ethic and the values implicit in it, are rooted in the Protestant tradition. The work ethic revolves around four value dimensions (Bhagat, 1979, p 382):

1. The good provider theme.
2. The independence theme.
3. The success theme.
4. The self-respect theme.

These dimensions influenced the cultures and economic life of societies transforming developing cultures into advanced industrial societies (Inglehart, 1990, p 3). Inglehart (1990, p 3) observes that culture represents a people's strategy for adaptation responding to economic and technological changes. Cultures shape the environment and organizations are sub-systems of the socio-cultural environment.

There is a dynamic interplay between the organization and society. Organizational values influence societal values and the social value system legitimizes the existence and functioning of organizational values (Kast and Rosenzweig, 1985, pp 24-25). Kast and Rosenzweig observe that organizations utilize environmental resources to accomplish goals and in turn are constrained by the social and economic needs of society. This is a confirmation of Inglehart's scarcity hypothesis. Inglehart hypothesizes that an individual's priorities reflect the socio-economic environment (Inglehart, 1990, p 68). In this interplay between organization and society, values evolve and are modified. These values profoundly influence business organizations and economic development, especially a cluster of work values known as the capitalistic ethic (Kast and Rosenzweig, 1985, p 25).

The capitalistic ethic developed as an evolutionary process that had its roots in the free enterprise economies of antiquity. During the middle ages the views of the church regarding commercial activities restrained commercialism. Usury was frowned upon as a dubious activity. However, significant cultural changes facilitated the rise of the capitalistic ethic. Urbanization and the development of nations stimulated the growth of commerce and industry. The values of competition and individualism were directly responsible for the growth of the market system which was vital to industrial capitalism. Competition and individualism made the product markets of the nineteenth century more competitive and self-regulating. Culture also influenced the development of a machine technology which was the essence of the Industrial Revolution creating a new economy and a new society in an internationally extending environment (Dalton, 1975, pp 34-38).

Economic rationality in the freemarket system was directed basically towards "the efficient organization of the individual undertaking, the criterion of success being the profit of the enterprise. In this sense it can be said that profit is both the motive power and the mechanism by which the direction of production is determined in the capitalist system" (Viljoen, 1974, pp 261-270). Religious values and attitudes are considered to have a profound effect on the development of the capitalistic system. Judaic values such as self-control, hard work, sobriety, thrift and abidance were seen to be conducive to economic development. Weber, on the other hand emphasized the Protestant work ethic as conducive to economic development and the freemarket system. According to Weber, Protestantism provided the basic value framework for the development of Capitalism. Protestantism stresses the virtues of hard work, sobriety and the accumulation of worldly goods as a "sign of being in God's grace". The



Protestant ethic also encourages scientific investigation and the application of advanced technology (Kast and Rosenzweig, 1985, pp 26-28). Adam Smith advanced the values of competition and self-interest. He transformed the then capitalist model into a competitive model for social good providing ideological support for industrial capitalism (The Economist, July 14, 1990).

The great Depression, however, cast doubts on the basic tenets of the Protestant work ethic namely individualism, hard work and thrift. Keynes challenged these basic tenets advocating consumption rather than savings to achieve full utilization of resources (Keynes, 1975, pp 82-88). Kast and Rosenzweig (1985) observe that the value system of contemporary Capitalism is pragmatic with a recognition that the social environment in which an organization operates is of utmost importance. The economic active population translates the work ethic into the four themes (Bhagat, 1979, p 382):

1. The good provider - this links up with the masculine dimension that the man who provides for his family is a real man.
2. The independence theme - work is of the utmost importance because it helps one to be independent of others. Independence ties in with efficaciousness and the belief in oneself to bring about change in your environment and control your life (internal locus of control).
3. The success theme - the belief that hard work always pays off.
4. The self-respect theme implies that implicit in hard work is an inherent dignity.

The guiding value in a socialist or centrally planned economy is that of teamwork. "Society, not the government, owns the firm. Representatives of the workers have the controlling power and the firm decides its own inputs and outputs on market criteria set by the central government. So the preference functions of politicians and not that of consumers, determine the allocation of resources. The values of economic rationality, self-control, hard work and abidance do not determine the appropriate rate of consumption and capital formation. In a centrally planned economy there is little scope for private initiative (Viljoen, 1974, pp 275-277).

### 3.7 CROSS-CULTURAL PERSPECTIVE ON WORK

The growth of international business is due mainly to communication systems and transportation. Both have changed the international business environment dramatically and lead to expanding markets. As organizations move into the international realm, employees of different nationalities, cultures and ethnicities with different value frameworks come into close contact with each other. The business environment is cross-cultural in nature, stressing ethnic differences and similarities causing different behaviour patterns in the organizational environment (Moorhead et al, 1989, pp 670-671). Adler, Doktor and Redding (1986, pp 295-318) advance five characteristics of the cross-cultural perspective on work:

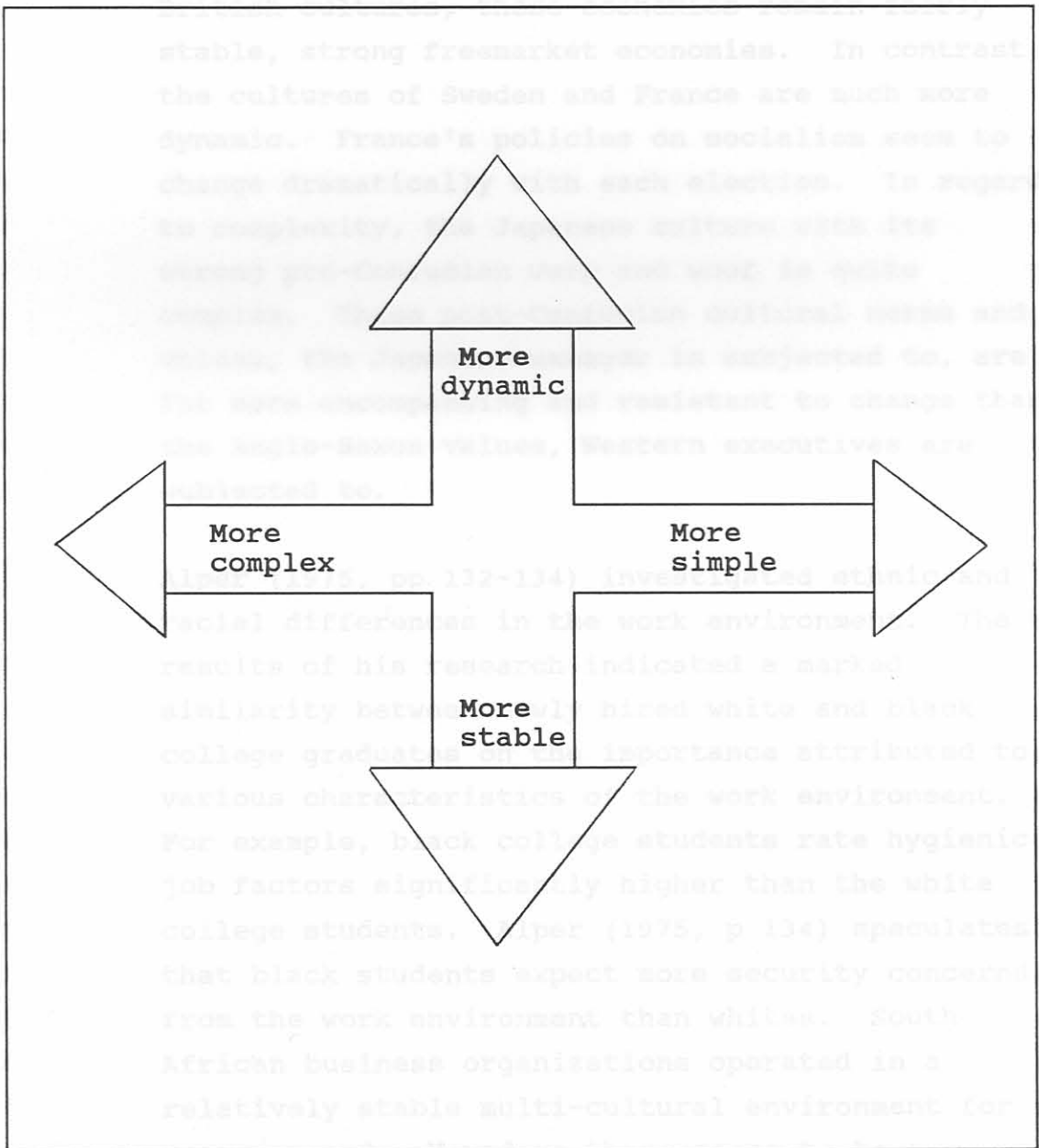
1. Behaviour in organizational settings does indeed vary across cultures. Employees, for example, in Japanese, American, British and West German companies are likely to have different patterns of behaviour and attitudes toward work.

2. Culture itself is primarily responsible for this variation although different socio-economic conditions, different standards of living and geographical conditions may also have an effect.
3. Although behaviour within organizations may vary across cultures, organizations themselves appear to be increasingly similar, for example in regard to organizational design and technology.
4. Managers behave differently in different cultural settings.
5. Cultural diversity is an important source of energy in enhancing organizational effectiveness. From a holistic point of view, organizations operating on a multi-national level become more than the sum of their parts. Moorhead et al (1989, p 673) are confident that operations in different cultures can benefit from mutual enrichment, work experience and an understanding of the international world of work. Cultural values and ethnicity also have a profound influence on the work environment, technology, organizational structure and organizational design.

### 3.7.1 ORGANIZATIONAL CHARACTERISTICS IN A MULTI-CULTURAL ENVIRONMENT

Moorhead et al (1989, pp 680-682) observe that the business and economic environments in which organizations operate, vary across cultures according to complexity and dynamism. Figure 3.1 shows the variation in complexity and dynamism which may be found within any culture.

Figure 3.1: VARIATION IN COMPLEXITY AND DYNAMISM IN MULTI-CULTURAL ENVIRONMENTS.



(Source: Moorhead et al, 1989, p 683)

Technology also influences the business environment. In many underdeveloped cultures, there is a lack of the basic infrastructure such as electric power, a well-developed communications

Many economies operate in stable cultural environments. Although competitive values are relatively strong in Japanese, American and British cultures, these economies remain fairly stable, strong freemarket economies. In contrast, the cultures of Sweden and France are much more dynamic. France's policies on socialism seem to change dramatically with each election. In regard to complexity, the Japanese culture with its strong pro-Confucian warp and woof is quite complex. These post-Confucian cultural norms and values, the Japanese manager is subjected to, are far more encompassing and resistant to change than the Anglo-Saxon values, Western executives are subjected to.

Alper (1975, pp 132-134) investigated ethnic and racial differences in the work environment. The results of his research indicated a marked similarity between newly hired white and black college graduates on the importance attributed to various characteristics of the work environment. For example, black college students rate hygienic job factors significantly higher than the white college students. Alper (1975, p 134) speculates that black students expect more security concerns from the work environment than whites. South African business organizations operated in a relatively stable multi-cultural environment for years on end. Nowadays there seems to be a fluidity causing an unstable environment and much insecurity.

Technology also influences the business environment. In many underdeveloped cultures, there is a lack of the basic infrastructure such as electric power, a well-developed communications

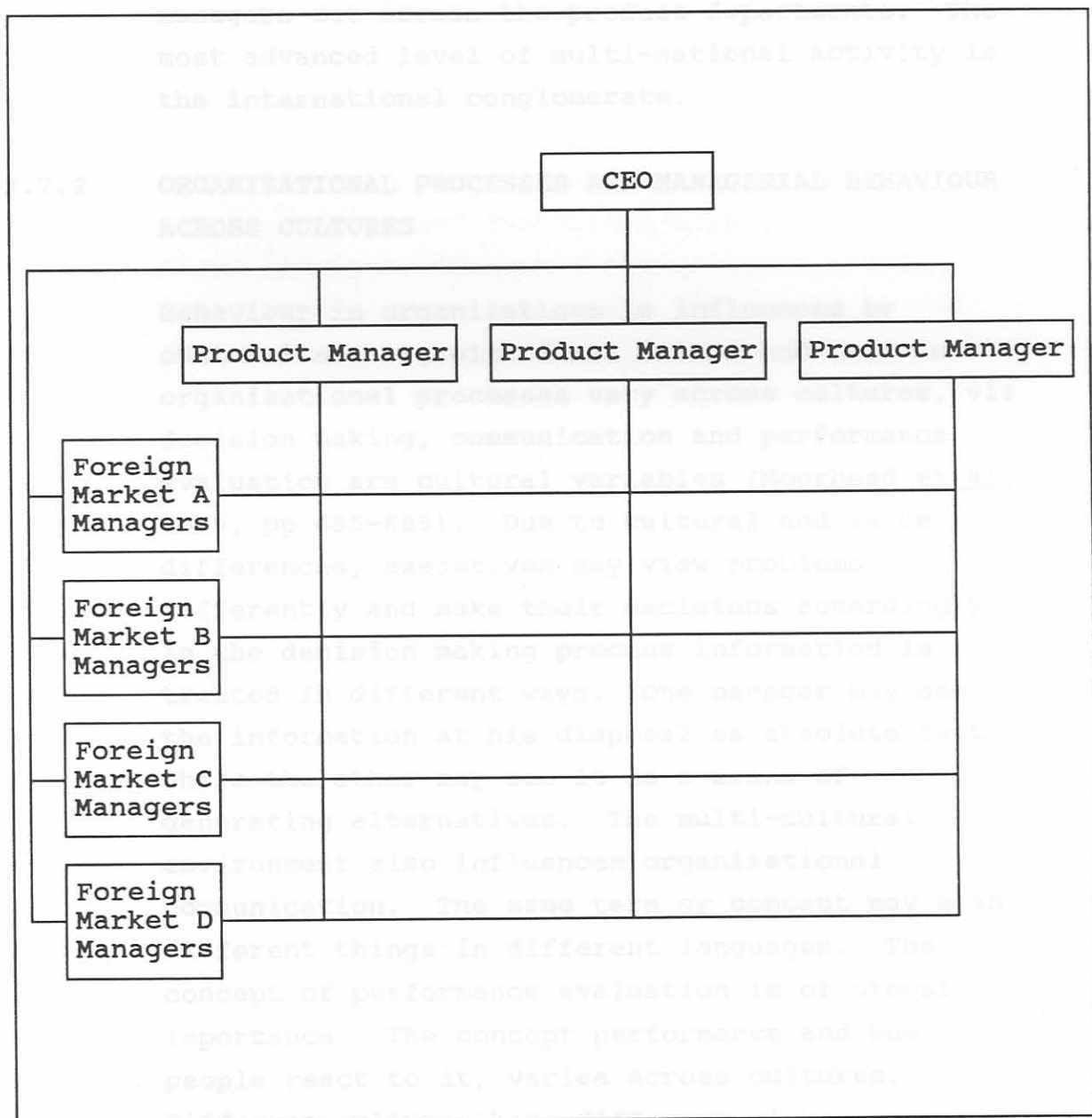
system, transport system and advanced technology so necessary for economic development.

Organizational structure and design also vary across cultures. Moorhead *et al* (1989, p 683) observe that Japanese companies, for example, have less specialization, more formal centralization and taller hierarchies than American companies. In Western organizations decentralization and worker participation are a central part of the organizational structure and design.

However more and more organizations are operating in a multi-national environment. They are therefore compelled to adapt their organizational structure and design to the demands of the multi-national environment. This enables them to cope better with the different cultures, their values and norms. Moorhead *et al* (1989, pp 684-688) propose the international matrix as an organizational design for a multi-national organization. An example of an international matrix is illustrated in Figure 3.2.

(Source: Moorhead *et al*, 1987, p 734)

Figure 3.2: AN INTERNATIONAL MATRIX. are put at the top. Project teams headed by foreign market



(Source: Moorhead et al, 1987, p 739)

performance, for example "workers in highly grow; (Source: Moorhead et al, 1987, p 739) measures which assess the individual's contribution (Moorhead et al, 1987, p 689; Adler, 1986, pp 115-116).

But as cross-cultural management focuses on the interaction of people from more than one culture

In the above matrix product managers are put at the top. Project teams headed by foreign market managers cut across the product departments. The most advanced level of multi-national activity is the international conglomerate.

### 3.7.2 ORGANIZATIONAL PROCESSES AND MANAGERIAL BEHAVIOUR ACROSS CULTURES

Behaviour in organizations is influenced by cultural and organizational values and therefore organizational processes vary across cultures, viz decision making, communication and performance evaluation are cultural variables (Moorhead et al, 1989, pp 685-689). Due to cultural and value differences, executives may view problems differently and make their decisions accordingly. In the decision making process information is treated in different ways. One manager may see the information at his disposal as absolute fact while the other may see it as a means of generating alternatives. The multi-cultural environment also influences organizational communication. The same term or concept may mean different things in different languages. The concept of performance evaluation is of utmost importance. The concept performance and how people react to it, varies across cultures. Different cultures have different views on performance, for example "workers in highly group focused cultures" might shy away from performance measures which assess the individual's contribution (Moorhead et al, 1989, p 689; Adler, 1986, pp 115-116).

But as cross-cultural management focuses on the interaction of people from more than one culture



in the work and business environment, managerial behaviour should also vary across cultures (Adler, 1980, p 164; England, 1978, pp 35-43). England's research indicates large differences in the value systems of managers from different countries and cultures. England and his co-workers investigated the value frameworks of American, Japanese, Korean, Indian and Australian managers. They found American and Australian managers highly individualistic in comparison with Japanese and Korean managers who are highly group focused. The most important value differences across culture are in regard to ambition, obedience, aggression, achievement, success, competition, risk, loyalty, trust, co-operation, compassion, tolerance, religion and employee and social welfare. These values and value-systems influence the way managers behave in different cultures. These values influence the executive's behaviour and decision-making in the international and multi-cultural business environments. Adler (1980, pp 170-171) proposes a cultural compromise model to facilitate international management. The cultural compromise model is shown in Figure 3.3.

extensively in the next chapter. Therefore no further attention will be given to it here

Onyemelukwe (1973, pp 27-29) discusses the impact of Western culture and work values on Africans. This leads to a discord in the personality of the African worker. The demand for modern skills is absolutely important but it should not obscure traditional tribal work values. Because these values have been ignored to a great extent, Africans have failed to attain leadership and to accomplish in the industrial environment. Slocum

According to Adler (1980, p 171) this model synthesizes the similarities and differences in the various management styles of employers from different cultures to create the organization's policies and practices. A new international organizational culture is thus created by way of a cultural synergy. The cultural synergy recognizes both the similarities and differences between cultures and uses this diversity as a resource in the design and structure of organizations.

### 3.7.3 INDIVIDUAL BEHAVIOUR IN MULTI-CULTURAL CONTEXT

Adler et al (1986, p 318) observe that organizational behaviour does indeed vary across cultures and that culture is a major cause of this variation. This implies that individual behaviour also differs across cultures (Moorhead et al, 1989, p 673). Hofstede identified four dimensions along which individual behaviour may vary, viz individualism, power distance, uncertainty avoidance and masculinity with its antipode femininity. Reference was already made to these four dimensions and it will be discussed quite extensively in the next chapter. Therefore no further attention will be given to it here.

Onyemelukwe (1973, pp 27-29) discusses the impact of Western culture and work values on Africans. This leads to a discord in the personality of the African worker. The demand for modern skills is absolutely important but it should not obscure traditional tribal work values. Because these values have been ignored to a great extent, Africans have failed to attain leadership and to accomplish in the industrial environment. Slocum predispose the individual to evaluate and respond to social objects in a favourable or unfavourable way.

and Strawser (1972, p 28) have found that black and white employees do not differ markedly on self-actualization but that significant differences exist on values like opportunity to help others, friendship, feelings of self-esteem, opportunity for independent thought and action, the growth and development and compensation. Black employees generally reported higher need deficiencies in every instance (Slocum and Strawser, 1972, p 29). From the above, relationships may be inferred between values, attitudes and behaviour.

### 3.8 THE RELATION BETWEEN VALUES, ATTITUDES AND BEHAVIOUR

Rokeach (1968, p 126) ascertains that a behavioural response towards an attitude object cannot happen in a social vacuum but must of necessity occur within the context of some social situation about which an individual has attitudes and values. Rokeach sees an attitude as an organization of several beliefs focused on a specific object. Krech et al (1963, p 163) view values as beliefs about what is desirable or "good" and what is undesirable or "bad". Rokeach (1968, p 127) observes that human behaviour and action are determined by attitudes and values. England (1978, p 35) is in agreement with Rokeach. He considers a personal value system to be a relatively permanent perceptual framework likely to shape and influence an individual's behaviour. Cascio (1987, p 105) also draws attention to the relationship between attitudes and behaviour. According to him this is an imperfect relationship because behaviour is also determined by environmental and other personal factors. However attitudes predispose the individual to evaluate and respond to social objects in a favourable or unfavourable way.

But work experience can have a powerful effect on the value systems of individuals (Weiss, 1978, p 711). This has a bearing on the organizational socialization process whereby the individual learns the normative behaviours, attitudes and values expected of him as a newcomer to the organization. Social learning leads to the development of behaviours needed to cross the hierarchical, functional and inclusion boundaries - boundaries which the newcomer has to cross if he wants to move inward to the influential centre and rise in the hierarchy of the organization (Weiss, 1978, pp 712-717).

### 3.9 RECENT RESEARCH ON WORK-RELATED VALUES

Research on the concept of values is reviewed from its roots through the functionalist and empirical traditions to the present. At the start of value research, social scientists viewed values analogous to the term's Latin etymology, viz valere: to be worth. Smith (in Kast and Rosenzweig, 1985, p 29) in 1776 viewed labour as the ultimate standard by which value could be determined. Corey (in Spates, 1983, p 29) defined value as "the measure of the resistance to be overcome in obtaining those commodities or things required for our purpose". Thomas and Znaniecki presented the first sociological definition of values by observing that "a value was any datum having an empirical content accessible to the members of some social group and a meaning with regard to which it is or may be an object of activity" (in Spates, 1983, p 29). Small, Vincent and Sumner defined values in normative terms (Spates, 1983, p 29). Parsons (1951) approached the study of values from a functionalist point of view. He considers values to be cultural in nature and playing a decisive role in social affairs

and in determining human behaviour.

Kluckhohn (1951) linking up with Parsons, reckons values to be conceptions of the desirable "instigating behavior within the individual". Parsons and Kluckhohn consider values to be internalized by the actor. These internalized values determine and regulate behaviour patterns. Parsons and Shills (1951) conducted extensive research on values, value systems, motives and systems of action and reached four conclusions:

1. Without values, social life would hardly be possible.
2. Values are orientations - values may be goal orientated, i.e. instrumental values which are of importance in the work environment, for example values of competence and self-actualization.
3. Value orientations give meaning to a situation. They give meaning to the work situation for example. The act of working gives a feeling of being tied up into a larger society, of having a purpose in life.
4. The institutionalization of values in a social group (work group) could produce a perfect effect - harmonious relations and interactions between group members due to the common value orientations.

Parsons (1961) modified his concept of values and isolated values and norms. This modification provided Parsons with a theoretical justification for his theory of social evolution. Parsons, building on Weber's thesis of the Protestant work ethic, reckoned that a value framework provided the entire society with a means to live more efficiently and to attain valued goals, e.g. achievement, personal success and material wealth.

In regard to the empirical tradition, Hart (1945), Dodd (1951), Grace and Grace (1952), Podell (1956) and Wilson and Nye (1966) all recognise the difficulties in value measurement and concern themselves with methodological finesse from the start. Thus Hart tried to construct a "reliable scale of value judgements". Grace and Grace examined verbal and behavioural measures to ascertain accurate determinants of their sample's values. Wilson and Nye researched the operationalization of values and tried to formulate an accepted definition (Spates, 1983, p 39). Values were also examined by means of qualitative methods. Lowenthal (in Spates, 1983, p 39) used content analysis to examine the biographies in popular magazines. Lowenthal's study indicated a decline in achievement values in American society. McClelland's theory (1961) that the value of achievement played a dominant role in American life and in industrial society, led to a bevy of studies. The research of Cosev and Kim (1977), Chandler (1979), and Machr and Nichols (1980) as reported by Spates (1983, p 40) are of utmost importance in ascertaining the role of the achievement value in economic development. Rosenberg (1957) discussed the effect of occupations on values.

Elizur (1984) examined the facets of work values and endeavoured to construct an explicit definition of the work value domain. Data was analysed by means of Guttman's smallest space analysis and the result elicited proof of two facets of work values, viz modality of outcome and relations to task performance. He suggested a framework of work values delineating and classifying the conceptual space of work values in which modality of outcome and relation to task performance is defined. Billings and Cornelius (1980) also researched the dimensions of work outcomes and

suggested a multi-dimensional model of work outcomes to be more useful than a categorical intrinsic/extrinsic dichotomy. Elizur et al (1991, pp 21-38) examined the structure of work values across cultures. Data was once again analysed by means of facet analysis and Guttman's smallest space analysis. The results indicated cultural differences in the rating of a limited number of specific work values. Elizur et al (1991) warned however, that these variations exist within the broad pattern of structural value similarity. They conclude therefore that this finding lends support to the definitive framework of values suggested, namely that the structure of work values consists of two essential facets : modality of outcome and system performance contingency.

Furnham (1984) investigated work values and beliefs in Great Britain. Statistical analysis showed the Protestant work ethic to be positively and significantly related with Conservatism but negatively related to the Leisure ethic and Marxist-related beliefs about labour. Educational status and voting patterns strongly differentiated work values and attitudes in predictable directions. Of importance for South Africa is Furnham's finding that children of lower socio-economic status, reared in the Protestant work ethic, were reared to be independent, to postpone gratification, be trained to develop a strong achievement motivation, to tend to work harder and to be more work-involved. However they are more conservative and less tolerant of humanistic and Marxist-related attitudes which may be antithetical to individual achievement (Furnham, 1984, p 289). Wilson (in Furnham, 1984, pp 289-290) argues however that conservatism is nothing more than a mechanism to cope with uncertainty. Uncertainty for Wilson includes innovation, complexity, novelty, ambiguity, risk,

anomie, freedom of choice, conflicting needs and desires, lack of self-reliance and experiencing threat and anxiety in the face of uncertainty.

Klein et al (1981) examined the work values of the poor versus the non-poor. Surprisingly the authors found more similarities than differences between the two groups. They did however find seven values on which the poor and non-poor differed significantly, viz intellectual stimulation, business contact with people, variety, performance under stress, independence, aesthetics and temperament (arriving at generalizations, judgements, or decisions based upon measurable and verifiable criteria). England (1978) investigated the value systems of managers across cultures. Analysis of data indicated individual differences in personal values of managers across cultures. England (1978, p 39) also found that personal value systems influenced the way managers behaved on the job. The most important finding for organizational behaviour and multi-national management is that "values get translated from states of intention into behaviour outcomes in a similar way across the countries". There is a common pattern of translation of personal values into managerial behaviour (England, 1978, p 41).

The most comprehensive, expansive, all encompassing research on international differences in work related values was done by Hofstede (1980a). Over a period of six years Hofstede conducted a large project on national cultures and work values in 40 different cultures, language and ethnic groups. He found four dimensions on which national cultures differed by means of theoretical reasoning and massive statistical analysis. He labelled the four dimensions power distance, individualism - collectivism, uncertainty



avoidance and masculinity - femininity. These four dimensions profoundly influenced organizational work behaviour, motivation, leadership, managerial work: v12 behaviour, planning and control, organization design, organization development and management development, humanization of work, industrial democracy, company ownership and control, authorities and action groups, labour unions, interaction between organization and local environment, multicultural organizations, international business environment and economic development (Hofstede, 1980a; Hofstede, 1980b).

### 3.10 MEASURING OF WORK VALUES

Godsell (1990) suggests that a discussion of work value scales should begin with Weber's Protestant work ethic. Weber used this term to describe the Puritan attitude towards work and money. The Puritans saw hard work as a religious duty. The Protestant work ethic is often regarded as not only good, but usually as the only correct work value. Many current work value scales are explicitly based on the concept of the Protestant work ethic. The central concept in many of these scales is the intrinsic, self-rewarding aspect of work (Wollack, Goodale, Wijting and Smith, 1971, p 332). Wollack et al (1971, pp 331-338) set out to construct a set of scales measuring several areas of work values. They constructed the Survey of Work Values Scale which was intended to measure a person's attitudes towards work in general rather than feelings about a specific job. They view the concept "work values" as the meaning an individual attaches to his work. The Survey of Work Values Scale is limited to the construct of the Protestant work ethic and its principal aspects, namely individualism, ascetism

role-appropriate behaviour.

and industriousness. Wollack et al (1971, p 332) selected three dimensions of the Protestant work ethic to cover the intrinsic aspects of work, viz pride in work, job involvement and activity preferences. Attitude towards earnings and social status on the job reflect the extrinsic aspects of work. Two dimensions included were regarded to be of mixed character, viz upward striving and the sense of responsibility towards work. The provisional scale was first subjected to reallocation and then to a principal components analysis with quartimax rotation. The standardization resulted in six sub-scales each containing nine items. The six scales are status, activity, striving, earnings, pride and involvement. This scale is intended to be an index of a person's attitudes to work in general but may also be applied to differentiate between occupational groups.

Mirels and Garrett (1971) explored the psychological meaning of the Protestant work ethic as a personality variable. Mirels and Garrett (1971, pp 40-44) administered the Protestant Ethics Scale together with the Mosher Scales for Sex Guilt and Morality, Conscience Guilt and the Hostile Guilt Scale and the Strong Vocational Interest Blank. The results indicated that Protestant ethic values are positively and significantly associated with interest patterns of persons "in occupations demanding a concrete pragmatic orientation toward work". Mirels et al (1971, p 43) have also found that occupations with interest patterns positively related to the Protestant work ethic, usually stress a conventional adherence to prescribed role-appropriate behaviour.

Blood (1969) developed the Protestant Ethic Scale. Blood (1969, p 456) theorized that the way a person views and evaluates work in general should be positively related to his attitudes towards his own particular job. The meaning one attaches to work in general will have a bearing on his job satisfaction and occupational achievement. Taken into consideration Lenski's finding (in Blood, 1969, p 456) that Jews and white Protestants were more committed to Capitalism and the Protestant work ethic than Negro Protestants and Catholics, Blood set out to design a psychological measuring device to predict differences in job responses within groups and between groups. He administered the Job Description Index Scale, the two Faces Scales which measured satisfaction with the job in general as well as life in general and an Eight Item Scale to measure agreement with the Protestant ethic. The Protestant ethic questions were subjected to a principal components analysis with varimax rotation. Two components were extracted. Correlations were computed between the Protestant ethic dimensions and the satisfaction scores. The results elicit proof that agreement with the Protestant ethic is directly related to satisfaction. In a multiple regression the Protestant ethic was found to contribute to the prediction of job satisfaction. Persons ascribing to the Protestant work ethic are more satisfied with their jobs (Blood, 1969, p 457).

Other scales measuring work values and occupational values have been constructed by Super, Steffbre, Rosenberg and Kilpatrick, Cummings and Jennings (Wollack et al, 1971, p 331).

Godsell (1987, p 115) refers to a cross-cultural comparative study of work values carried out by Peck, Manaster, Borich, Angelini, Diaz Guerrero and Kubo. The results indicated clear distinctions in value patterns. Each culture has a unique value framework. The hypothesis of an "acculturation gradient whereby a migrant population would start out identical with its original culture and move through intermediate degrees, closer and closer to the new culture", was invalidated by the findings. Peck et al (in Godsell, 1987, p 115) conclude that "the new values of the migrants appear to reflect the present realities of career opportunities and the prevailing mood of the 'new' society, but these presumed shifts do not appear to happen as a series of increasingly close approximations to the new society values. The melting pot does not dissolve the partially unique value patterns of migrants, even after several generations in a new society".

Closer to home Munro (1985, pp 33-41) developed a free format inventory to measure work value constructs free from Western connotations. Each item defines a value construct at a level that can be understood by any respondent. Munro called this instrument a Life and Work Values Inventory. Items were derived from a variety of value scales and theoretical descriptions in the area of work related values and attitudes. Factor analysis by means of varimax rotation yielded five factors, viz:

us of westernized Blacks and tribal black workers by means of the Work Value Scale of Wollack et al (1971) and the Work Value Inventory of Nirels et al (1971).

1. A comfortable life.
2. Conformity to convention.
3. Competence and activity.
4. Freedom for self.
5. Achievement and recognition.

Munro (1985, p 39) defined the two higher-order factors as a concern with self and a concern with conforming to the demands of society. Munro views freedom, individuality, dominance and a comfortable life to be components of the first factor. The second factor means the desire to be accepted socially and at work and to be competent in one's work. Munro reckons that these two factors may be the poles of Hofstede's (1980a) individualism/collectivism - dimension. Munro (1985, p 39) theorises about the existence of intra-personal conflict and/or confusion between self-serving and socialistic values and concludes:

"... the public behaviour of African people lead to the conclusion that individuals do experience conflict and tension over the opposing social pressures for obedience versus freedom, collectivism versus individualism (politicized as Socialism versus Capitalism) and traditionalism versus modernism".

England, Agarwal and Trerise (1971) made use of the Personal Values Questionnaire to examine and compare the value systems of union leaders and managers. Orpen (1978) investigated the work values of westernized Blacks and tribal black workers by means of the Work Value Scale of Wollack et al (1971) and the Work Value Inventory of Mirels et al (1971).

3.11

## SUMMARY

This chapter contains a theoretical exploration of concepts of culture, organizational culture, ethnicity, values, work values and their development. Culture is seen as the pattern of all those arrangements, material or behavioural, which has been adopted by a society as the traditional ways of solving its members' problems. Organizational culture is defined as a unifying theme that provides meaning, direction and mobilization of behaviour in organizations. The development of organizational culture, its origins, essence, functions and definitions were discussed in detail. It was pointed out that ethnic relations as moulded by historical, political, economic and social circumstances have had a profound influence on work-relationships and different ethnic groups have different work values. The concepts of values and work values were defined and discussed, especially the structure and influence of work values. Similarities and dissimilarities between the work values of Whites and Blacks were pointed out. Blacks, especially assign much more importance to opportunities for helping others which may be due to the Ubuntu-value system of the Africans. However, with more opportunities for upward mobility, Blacks will display more achievement motivated behaviour. Attention was given to the role of socialization and scarcity in the development of work values. A cross-cultural perspective on work is given as the growth of international business and expanding markets bring employees of different nationalities, cultures and ethnicities with different value frameworks into

close contact with each other. Organizational processes, managerial behaviour and individual behaviour across cultures were discussed and attention drawn to the relationship between values, attitudes and behaviour. Finally, recent research on work values and the different work value questionnaires, the development and application of inventories and scales, were discussed.

#### 4.1 INTRODUCTION

Reference has already been made to the four broad value dimensions namely power distance, uncertainty avoidance, individualism and masculinity. These four value dimensions will be discussed in detail in this chapter. Attention will be paid to the operationality and measurability of these concepts, their core content, and their relation to society and organizations.

#### 4.2 OPERATIONALITY AND MEASURABILITY OF THE CONCEPTS

This part of the chapter will be devoted to a broad theoretical overview of the concepts of power distance, individualism, uncertainty avoidance and masculinity. Research evidence as presented by Hofstede (1980a) to operationalize and measure these four concepts will be discussed and analysed extensively.

In identifying these four dimensions, Hofstede (1980a) compared these scores of survey questions about values, using matched samples of employees (same employees, same jobs, same age brackets, same gender distribution) of a multi-national corporation in 40 countries around the world. The comparative study therefore, covers an unusually large number of national cultures. Hofstede's (1980a) analysis of the data required an extensive statistical argumentation by applying factor analysis, Bravais-Pearson product-moment correlations,

## CHAPTER 4

## IMPORTANT CONCEPTS

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Spearman correlations ( $\rho$ ), analysis of variance with multiple comparisons, significance tests and multiple regressions (stepwise). The four dimensions were found by means of a factor analysis of mean scores of respondent samples from different cultures. The four criteria by which national cultures differ were thus empirically determined. As the samples were well matched in every aspect except nationality, the effect of cultural (nationality) differences on value choices are unusually clear.

The four criteria (dimensions) can be related to sociological and anthropological societal issues. The first dimension, power distance, relates to "the extent to which the less powerful members of institutions and organizations accept that power is distributed unequally" (Hofstede and Bond, 1984, p 419). Power distance is directly related to the basic societal issue of social inequality and the amount of authority one person has over another (or others). Hofstede and Bond (1984, p 419) define the second dimension, uncertainty avoidance, as "the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions that try to avoid these". Uncertainty avoidance deals with the way a society deals with conflicts and aggression. Individualism and its antithesis collectivism, refers to "a situation in which people are supposed to look after themselves and their immediate family only" and/or "a situation in which people belong to in-groups or collectivities which are supposed to look after them in exchange for loyalty". The individualism/collectivism dimension relates to the societal issue of the individual's dependence on the group and an emphasis on the self-concept "I" or "We" (Hofstede and Bond, 1984, p 419). The fourth dimension, masculinity

versus femininity, is defined as "a situation in which the dominant values in society are success, money and things or caring for others and the quality of life (femininity)". The societal issue of social sex role choices and its effects on people's self-concepts relates to this dimension (Hofstede and Bond, 1984, p 420). Inkeles' and Levinson's (1969) remark about the existence of a limited number of "standard analytical issues broad enough for cross-cultural significance and meaningful for both individual and social systems" ties in with Hofstede's four dimensions. The four dimensions were found to be conceptually linked to many variables identified and measured in other cross-cultural studies. Hofstede himself lists 30 country-level sociological, political, psychological, demographic and economic indicators which are significantly correlated with one of his four dimensions (Hofstede, 1980a; Hofstede and Bond, 1984; Hofstede, 1980b).

#### 4.2.1 POWER DISTANCE

Hofstede (1980a, p 98) defines power distance as the "degree of inequality in power between a less powerful individual (I) and a more powerful other (O) in which I and O belong to the same (loosely or tightly knit) social system". Power distance is a measure of the interpersonal power between a superior and a subordinate or the influence which a superior or boss has over his/her subordinate. It renders a meaningful description of the relationship between a boss and subordinate in a hierarchy. Hofstede (1980a, p 98) cites six proven hypotheses in regard to power distance which are of importance to societal, political, economical and organizational life:

1. The mere exercise of power will give satisfaction.
2. The more powerful individual will strive to maintain or to increase the power distance to the less powerful person.
3. The greater this distance from the less powerful person, the stronger the striving to increase it.
4. Individuals will strive to reduce the power distance between themselves and more powerful persons.
5. The smaller this distance from the more powerful person, the stronger the tendency to reduce it.
6. The "downward" tendencies of the powerful to maintain the power distance, and the "upward" power distance reduction of the less powerful reinforce each other.

Hofstede emphasizes the fifth hypothesis as immensely important to the societal, political and industrial environments. This hypothesis implies that the strongest power distance reduction tendency will be found in people whose power striving is partly satisfied and not in the powerless. The striving for power is fed by satisfaction. Kipnis' (1972) laboratory findings link up with and prove this hypothesis. His experiments revealed a tendency for the more powerful to devalue the worth and performance of the less powerful and to attribute the cause of the less powerful's effort to themselves. Kipnis (1972, p 39) also proposes a relationship between this tendency and locus of control. Persons used to and also subjected to the control of power are more likely to attribute its consequences to this

control rather than viewing them as external forces controlled by themselves. Kipnis concludes that inequity of power is descriptive of harmonious social relations and drastically limits the possibility that the more powerful can maintain close and harmonious relations with the less powerful. These conclusions converge with the findings of sociological studies such as Michel's Iron law on Oligarchy which holds that inequality confirms and perpetuates itself. It also ties in with the Matthew principle (Matthew 13:12 "for to him who has will more be given and he will have great plenty; but from him who has not even the little he has will be taken away" - Christian New Testament) which is present both in the concentration of power and in the concentration of wealth (Hofstede, 1980a, p 99). An analysis of economic history confirms the omnipresence of inequality in power. Power distance thus indicates a culture's adaptation to inequalities among its members. It also reveals the extent to which pecking orders are tolerated and fostered. Some cultures nurture natural physical and intellectual inequalities resulting in gross social, political and economic inequalities which may be perpetuated on a hereditary basis.

Other cultures may try to narrow the power distance between their members (Mead, 1990, p 18). The power distance dimension also has implications for the industrial environment and economic activity. In high power distance cultures employees usually comply with the wishes of the manager, displaying a total lack of initiative. Employees are extremely co-operative

in dealings with superiors but display a reluctance to co-operate with peers. In low power distance cultures on the other hand the reverse applies (Mead, 1990, p 18).

Understanding power is important in understanding societal, political, economical and organizational dynamics. Power is a major factor which cannot be ignored by anyone interested in understanding the fabric of society. Wrong (1979, p 2) quotes Hobbes and Russell on power. Hobbes viewed power as "man's present means to any future apparent good" while to Russell it meant "the production of intended effects". Wrong himself adopted a modified version of Russell's definition viewing power as "the capacity of some persons to produce intended and unforeseen effects on others". Pfeffer (1981) defines power as "a force sufficient to change the probability of an individual's behavior from what it would have been in the absence of force". Moorhead and Griffin (1989, p 356) define power as "the potential ability of a person or group to influence another person or group". According to these two authors, power may reside in an individual and in formal and informal groups.

Bacharach and Lawler (1980, p 16) observe that most definitions of power reveal a view of power as a mode of interaction rather than as a structural characteristic independent of and in opposition to the actors engaged in the interaction. Bacharach and Lawler (1980) and Daudi (1986, pp 185-186) cited some definitions evolved by authors and researchers working within the field of power:

"Weber: Power is the probability that one actor within a social relationship will be in a position to carry out his own will, despite resistance and regardless of the basis on which this probability rests.

Blau: Power is the ability of persons as groups to impose their will on others despite resistance through deference either in the form of withholding regularly supplied rewards or in the form of punishment in as much as the former as well as the latter constitutes in effect negative sanction.

Dahl: A has power over B to the extent that he can get B to do something that he would not do otherwise.

Bierstadt: Power is latent force. Power itself is the prior capacity which makes the application of force possible".

These definitions of power delineate three distinctive features of power, viz

1. Power is a mode of interaction.
2. Actors show some consideration for each other.
3. Power is attributed to an actor as if it were a property.

Mintzberg (1983, p 4) viewed power from an organizational perspective simply defining it "as the capacity to effect or affect organizational outcomes". Mintzberg connected organizational power and organizational politics. He viewed it

organizational politics as a subset of power, treating it as "informal power, illegitimate in nature". Authority in organizations is also a subset of power, but is "formal power, the power vested by virtue of the position held". They (1980, p 35) identify four sources of power:

#### 4.2.1.1 BASES AND SOURCES OF POWER

1. Structure - structural position may provide a

French and Raven (in Bacharach and Lawler, 1980, p 33) distinguish five major bases of power, viz coercion, rewards, expertise, legitimacy and referent power. Coercion implies the threat of decreasing another's outcomes. Someone may have the ability to punish or harm someone else, physically or psychologically. Expert power refers to specialized knowledge, an expertise in regard to certain or particular issues or activities within an organization. To the extent that someone has expertise needed by someone else or another division in the organization, the person has expert power over the other(s).

Legitimate power is tantamount to authority and it is power granted by virtue of one's position in the organization. It is therefore based on rights of control and the concomitant obligations to obey. The bounds of this legitimacy are defined by the formal nature of the position involved and also by informal norms and traditions. Reward power is interpersonal in nature and indicates the extent to which one person controls rewards which are valued by another. Referent power is also interpersonal in nature and is basically power through identification. Referent power is related to the concept of charisma and also often involves trust, similarity, acceptance, affection, willingness to follow and emotional involvement

power includes:

(Bacharach et al, 1980, pp 33-34; Moorhead et al, 1989, pp 356-360).

Bacharach et al (1980, p 34) also distinguish between bases of power and sources of power. They (1980, p 35) identify four sources of power:

1. Structure - structural position may provide a party access to various bases of power.
2. Personal characteristics - charisma is the most conspicuous personal characteristic as a source of power. Weber observed that the charismatic leader has power by virtue of extraordinary and often mystical characteristics. However, physical attributes, verbal and argumentative skills are also relevant personal characteristics.
3. Expertise - it refers to the specialized skills which actors bring into the organization. Expertise is based on activities outside the organization, especially education and training. Expertise is only a potential resource. It needs to be developed further, refined and applied to the organizational context to become an intra-organizational power base.
4. Opportunity - it is embedded in the informal organizational structure. The informal aspects which arise spontaneously out of the activities and interactions of those in formal positions, provide a significant amount of important information to others. Wrong (1979, p 124) equates resources of power with values or value-bases of power, quoting Dahl's base values of power available to political man for influencing others. These "base values" of power include:



"an individual's own time, access to money, credit and wealth, control over information, the possession of charisma, popularity, legitimacy, legality, the rights pertaining to public office, solidarity: the capacity of a member of one segment of society to evoke support from others who identify him as like themselves because of similarities in occupation, social standing, religion, ethnic origin or racial stock, the right to vote, to education and perhaps even one's energy level".

This emphasis on the sources and base values of power calls to mind Hobbes' definition of power as "man's present means to any future apparent good". The existence of sources of power does not guarantee them being employed. This implies that power is potential - it is anticipated reactions. People have to believe that an actor actually possesses and controls the relevant resources and may behave accordingly by anticipating the effective use of these sources to control their own actions and behaviour (Wrong, 1979, p 126).

#### 4.2.1.2 FORM AND CONTENT OF POWER

The form and content of power play a part in all social relations and facilitate the understanding of the phenomenon of power (Daudi, 1986, p 186). Taken into consideration the definition of power as "the capacity to produce intended effects in a social action" (Wrong, 1979, p 22) regardless of the physical or psychological factors in which the

capacity rests, Wrong (1979) differentiates force, manipulation, persuasion and authority as distinct forms of power. Bacharach et al (1980) view authority together with influence as distinct dimensions of the content of power and these two dimensions also as types of power. The form "force" implies a physical or biological force. The ultimate form of force is violence. It implies the infliction of bodily pain or even the destruction of life itself and the frustration and deprivation of biological and psychological needs. Wrong (1979, p 28) considers psychic violence in which the perpetrator uses verbal and/or symbolic abuse to insult or degrade a person thus inflicting mental or emotional harm, as continuous with physical violence. Manipulation denotes a "deliberate and successful effort to influence the response of another, where the desired response has not been explicitly communicated to the other". The power holder conceals the intended effect he wishes to produce from the subject. The effects of manipulation seem to be fairly limited in extensiveness, comprehensiveness and intensity. Wrong (1979, p 32) observes that manipulation can achieve only limited results but, when employed in combination with the other forms of power, may become an effective supplement.

Persuasion is a means by which an actor may achieve an intended effect on another's behaviour by way of communicative interaction. Reciprocity which is an essential feature of communicative interaction is implicit in this form of power. One person communicates his own values, goals, principles, attitudes, opinions and beliefs to

another and the other one accepts the communication as the basis of his own behaviour. Inequality, however, exists in the distribution of the means of persuasion. Individual talents conducive to successful persuasion such as articulateness, oratorical ability, psychological perceptiveness and intelligence are unequally distributed. This unequal distribution of individual talents are quite relevant to power struggles on the large societal stage (Wrong, 1979, pp 32-34).

As already stated Wrong (1979) considers authority as a form of power while Bacharach et al view it as a dimension of the content of power. The essence of authority is the issuing of commands and the making of decisions which will affect the activities of others in the organization. Wrong (1979, p 35) describes it as "successful ordering or forbidding". Superiors frame and transmit decisions and orders, expecting subordinates to accept and obey these orders and decisions. Subordinates in fact acquiesce without questioning the superior's moral and intellectual judgements and the appropriateness of the superior's directives to the prevailing circumstances (Bacharach et al, 1980, pp 28-29).

Wrong (1979) differentiates between four types of authority, viz coercive authority, authority by inducements, legitimate authority and personal authority. Coercive authority revolves around the superior's capability and willingness to use force against the subordinate. The boss (superior) may convince the subordinate of the authority by displaying the means and instruments of control.

Military displays and the publicising of successful nuclear tests are such means and instruments of control to coerce less powerful nations into compliance with the wishes of the super nations. Unsuccessful methods of forcing subordinates into compliance may lead to an actual test of force. "Force is often employed simply to eliminate people from the scene or to prevent them from acting at all, but it is more often used to establish credibility and thus to create future power relations based on the threat of force that precludes the necessity of overt resort to it". Coercive authority is the distinctive basis of political power. Authority by inducement is the counterpart of coercive authority. Authority by inducement implies the offering of rewards for compliance with a command rather than threatening deprivations. The subordinate is induced into complying with the wishes of the superior by means of positive sanctions. But authority by inducement is not always beneficial. Exploitation could also be a possible outcome. For example, the subordinate (powerless) may only have one commodity to offer, namely, his labour power while the boss (superior) may control the means of subsistence necessary for the subordinate's survival. Such a relationship easily and usually results in economic exploitation.

Marx (in Wrong, 1979, p 44) views authority by inducement as a continuum with classical relationship of economic exchange between equals in the market place forming one pole and coercive authority based on wage slavery as the other pole. Authority by inducement is characteristic of economic power and therefore universally existing in all societies. Authority by inducement is conducive to economic growth and development:

1. It is capable of achieving great extensiveness especially in the non-agrarian economy employing modern techniques of production.
  2. Authority by inducement arouses less resistance and antagonism on the part of the "have nots". Economic policy based on authority by inducement, has to create the incentives for the private sector to deliver the wherewithal of improving the disposition of the deprived masses.
  3. Authority by inducement must actually provide the promised benefits, employing economic resources (of the superior) to produce economic goods with which to maintain control. Authority by inducement boils down to the creation and application of incentives through the generation and flow of funds to finance capital formation and other economic activities for the restructuring of the economy to address the deprivational problems of the "have nots" - problems that would not be addressed by wage increases, concerned with closing wage gaps to satisfy political sentiments, goals and objectives. This is nothing else than taking from the "haves" and giving to the "have nots" and would result only in inflation. Productivity and growth would suffer.
- Economic development must be the common interest of government, political organizations, organized business and industry, communities and labour (Wrong, 1979, pp 45-49; Bethlehem, 1988, pp 220-225).

Legitimate authority points to a power relation in which the power holder possesses "an acknowledged right to command and the power subject an acknowledged obligation to obey". The source of a command endorses it with legitimacy or not. Legitimate authority has two main features (Wrong, 1979, p 51):

1. The subordinate feels obliged to obey even though a particular command may be disliked.
2. The norms of the larger "collectivity of subordinates" may prescribe obedience and a dissenting subordinate may incur some disapproval if he fails to comply.

The basis of competent authority is the subject's beliefs in the superior skill and knowledge of the exerciser. "Competent authority is a power relation in which the subject obeys the directives of the authority out of a belief in the authority's superior competence or expertise to decide which actions will best serve the subject's interests and goals" (Wrong, 1979, p 53).

Personal authority implies a power relationship in which the subordinate obeys out of a desire to please or serve another person (superior) solely because of the latter's personal qualities. The power holder (command giver) does not possess any coercive powers, transferable resources, or any special competence. The relationship between superior and subject does not rest on the subject's fear of coercion. Neither does it rest on the expectations of reward. Charismatic leaders and charismatic movements are examples of personal authority. Extraordinary gifts and

powers are imputed to charismatic personalities and they exhibit personal authority in its most extensive form. Charismatic leaders and movements are not confined to politics and religion, but may also be found in the arts, intellectual life and in economic enterprises (Wrong, 1979, pp 60-64).

Bacharach et al (1980) and Daudi (1986) discuss forms of power by distinguishing two essential dimensions of the phenomenon of power, viz the relational dimension and the interdependent dimension of power. The relational dimension of power pays attention to the interactional dynamics of power relationships. The interaction between actors and groups (groups within the organization and within the environment) competing for scarce resources, the interaction of organizational elites with other subgroups within the organization to ensure supremacy, the interaction between different departments and with those higher and lower in the hierarchy, is part of the daily power game. A study of these relationships identifies, measures and determines the possibilities of the different groups of mobilising the various resources. The seemingly subordinate may, for example, contract the space of action of the superiors (space of action implies conscious individuals in action, interpreting their situations and actions to others). The interdependence dimension of form of power refers to exchange in social relations. Power is a central aspect of an exchange approach to social relations. The dimension of interdependency makes exchange of central importance in social relationships. It gives exchange a constituent dimension as a power relation. "Interdependence exists when an actor's

outcomes are contingent not just on the actor's own behaviour but also on what other actors do simultaneously and/or in response to the actor's behaviour. Therefore interdependence implies that an actor's outcomes are determined by the interrelationship between his or her behaviour and the behaviour of others" (Bacharach et al, 1980, p 20).

#### 4.2.1.3 DIMENSIONS OF POWER

Wrong (1979, pp 3-14) ascribed three attributes to power, viz extensiveness, comprehensiveness and intensiveness and then discerned five dimensions of power, namely, intentionality, effectiveness, latency, asymmetry and balance and the nature of the effects produced.

Extensiveness of power relations deals with the span of control. The span of control may be narrow or broad. A single person may hold power over a single other person. A broad span of control refers to political regimes who hold sway over millions of subjects. Comprehensiveness of power deals with the number of different institutional activities in which the superior controls the activities of the subordinates. Intensity of power relations points to the range of effective options open to the superior within every institution and activity of the subordinate's conduct over which he wields power (Wrong, 1979, pp 14-16).

Wrong (1979, pp 3-14) then continues by discerning and formulating five dimensions implicit in the concept of power:



1. Intentionality - this dimension refers to power as an intended and effective influence. People exercise mutual influence and control over each other's conduct and behaviour in all social interaction producing intended or unintended effects.
2. Effectiveness of power - effectiveness of power is an obvious and determinative criterion for its action and presence. If an attempted exercise of power does not produce the intended effects, the result is a breakdown in power relations.
3. Latency of power - this dimension refers to imputations of power based on the anticipated reactions of a subordinate. It is the capacity to control others and is not necessarily always exercised.
4. Asymmetry and balance in power relations - the superior wields greater control over the behaviour of the subordinate than the reverse although reciprocity of influence between superior and subordinate is never totally destroyed. Asymmetry exists in each individual act-response sequence. In a specific relationship one actor may control the act (and therefore the other actor) with respect to (a) particular situation(s) while the other actor may be dominant in other areas of activity. Power relations are not exclusively hierarchical and unilateral but may also be interscursive. Interscursive power relations are characterized by a balance of power and procedures for bargaining and joint decision making which govern the relations between superiors and subordinates when matters of goals and interests are involved.

5. The nature of the effects produced by power - the power holder may not cause an actual change in the subordinate's behaviour, but may affect change in his feelings, attitudes and beliefs. If this effect is in the desired direction, then clearly the superior (power holder) has power over the subordinate. If the intention was to produce a particular behaviour, which does not materialize the superior does not wield any power over the subordinate. The intentions of the superior have to be taken into consideration in determining if he holds any power over a subordinate and also the extent of the power. In many situations the aim of the power-holder is no more than to maintain and strengthen the existing attitudes, beliefs and meanings.

#### 4.2.1.4 THE DISTRIBUTION OF POWER

There are several models for the distribution of power in society. Castles, Murray and Potter (1971, p 285) select the four most important and primary models on which decision-making is based: ruling class, elitism, pluralism and egalitarian democracy. The ruling class model owes its origin and subsequent development to the social theory of Marx. The main elements of the model is a class which rules and exploits and a class or classes which is ruled and exploited. The ruling class has a different relationship to the major means and processes of production. It owns and controls the means of production. Marxist social theory called for social justice and equality and designed a blueprint for a perfect society (Dalton, 1975, p 67). The ruling class found its

source of power in economic dominance which was sustained by ownership of property and means of productions. This power was transferred within families through the laws of production (Castles et al, 1971, p 286). Marx's social theory accounts for a new economy, materially improved in organization and performance which would lead to a new, humane, just and harmonious society in two ways: classes have common economic interest because power would be equally spread within society and conflict within classes which will lead to self-awareness and solidarity (Dalton, 1975, p 68; Castles et al, 1971, p 286).

Milliband (in Castles et al, 1971, pp 300 - 303) argues that social dilution has occurred in the civil service and in political institutions whose choice of staff depends, directly or indirectly, on election, bringing people born in the lower-middle class and even the working classes into elite positions. But, observed Milliband (op cit, p 301), it would be misleading to speak of "democratization" as these people, drawn from the subordinate classes, form a small minority. Evidence conclusively suggests that in terms of social origin, education and class situation, power is still unevenly spread. In advanced capitalist societies the vast majority of men and women who hail from the subordinate classes are governed, administered, judged and commanded in war by people drawn from the economically and socially superior classes. Castles et al (1971, p 304) view monopoly capital as an intrinsic part of the ruling class. Big corporations, which are synonymous with monopolistic capitalism, are the source of big money and also of political power.

Baran & Sweezy (in Castles et al, 1971, pp 304 - 306) argue that non-property owning voters may mobilize enough mass support to become an effective political force threatening the economic power of the money oligarchy. This may lead to a breakdown of bourgeois democracy, and a resort to authoritarian rule. Instead of authoritarian methods, oligarchies may resort to subtle means to accomplish their ends. For example, trade unions and labour movements may be lulled into agreement by making concessions or the leaders may be bought off with money, flattery or honours. According to Crossland (in Castles et al, 1971, pp 319-325) a redistribution of economic power has taken place since World War II. The capitalist business class has lost economic power to political authority which now exerts control over quite a high proportion of the economic decisions. Governments also wield power to quite a large extent over the business policies and decisions of private companies and corporations. Crossland (op cit, p 300) argues that this is a consequence of the explicit acceptance by governments of responsibility for full employment, the rate of growth, balance of payments and the distribution of income.

The nationalization of basic industries has also had an effect on the distribution of power. Nationalisation of industries in fact implies a transfer of power but while there is general agreement about who lost power, it is not clear who gained it. The power for economic decision-making has passed out of the hands of the capitalist class into "the hands of a new and largely autonomous class of public industrial managers".

But within industry internal changes have also taken place, which effected the distribution of power and reduced the power of the capitalist class in relation to other managerial classes. Decision-making has become increasingly specialized. Decisions are sometimes predetermined by technological and research consideration. There is also a change in the psychology and motivation of the top management class due to the divorce between ownership and management and the relative growth of the joint stock corporation with fragmented shareholding. It is therefore indisputably clear that the economic power of the capitalist class is much less than before the War due to a redistribution of power.

The second model of distribution of power is elitism. Castles et al (1971, p 287) view elitism as "domination of the decision-making process by a single group, limited rank-and-file access, little or no opposition, dissensus vis - a-vis a political creed and failure on the part of most of the adult community to use their political resources to influence important decisions". An elite may be benign or malignant. It may exercise its power to the benefit of the masses or to the disadvantage of the masses. Presthus (in Castles et al, 1971, pp 331-339) views elitism as "a pattern of decision-making characterized by limited mass participation in community issues, and their domination by small groups of specialized or general leaders". Elitism boils down to rule by the law and power is distributed in the community on a continuum ranging from a high degree of rank-and-file participation to the pole of low degree, i.e. elitism.

Pluralism is the antithesis of elitism. As is the case with elitism, pluralism rejects the idea of a class-founded society and the accompanying class conflict. Pluralism views society as made up of a leadership component which makes political decisions and represents the masses and its particular interests. Castles et al (1971, p 287) observe five characteristics of the distribution of power on the plural model:

1. Competing centres with different bases of power and influence exist within a society.
2. There are opportunities for individuals and organizational access into the political system.
3. Individuals actively participate in and make their will felt through organizations of many kinds.
4. Elections are viable instruments of mass participation in political decisions including those on specific issues.
5. A consensus exists on what may be called the democratic creed.

Presthus (in Castles et al, 1971, pp 331-332) sees the origin of the pluralist rationale in the ancient fear of governmental power and in the old adage that power corrupts in geometric progression as it grows. Pluralism is a model of the distribution of power attempting to curb government's excessive demands by fragmenting its power. Pluralism assumed the broadest possible representation of private interest vis-a-vis the state. Presthus (op cit, p 332) warned about a problem inherent in such interests. Such interests achieve their ends at the expense of the

broader unorganized public. The unorganized public usually consists of consumers whose voices quite often go unheard on social issues of importance while those with an organized interest speak loudly. This leads to an inequality in bargaining power, power disequilibria and an inequitable access to power between organized and unorganized interests. Of decisive importance to pluralism is competition and participation among organized groups. This is an essential feature of pluralism. The problem however is that many of these groups become oligarchic and restrictive, monopolizing access to governmental power and limiting individual participation.

Pluralism guarantees freedom, preserves diversity, limits the power of and protects against extremist mass movements. Playford (in Castles *et al*, 1971, p 364) noticed that pluralism is a widely accepted theory of the way Western industrial democracies work. Pluralism assumes that power in these democracies is distributed in such a manner as "to guarantee that no one group can dominate any other group or segment of society".

The fourth model, egalitarian democracy, may be defined as "government by all people for all people" (Castles *et al*, 1971, p 293). According to Bottomore (in Castles *et al*, 1971, p 389) democracy implies that there "should be a substantial degree of equality among men, both in the sense that all the adult members of a society ought to have, as far as possible, an equal influence upon those decisions which affect important aspects of the life of the society and in the sense that inequalities of wealth, of

social rank or education and access to knowledge, should not be so considerable as to result in permanent subordination of some groups of men to others in any of the various spheres of social and life or to create great inequalities in the actual exercise of political rights". Egalitarian power democracy and equality among men are based on various considerations, three of which have particular importance:

1. In spite of individual idiosyncrasies, humans are remarkably alike in some fundamental respects: they have similar physical, and emotional and intellectual needs.
2. Individual differences among men and the social distinctions between them are two separate things. The major inequalities in society are to be found in the main social products, created and maintained by the institutions of property, inheritance, political power and military power.
3. The pursuit of equality is likely to create a more admirable society, offering mankind the opportunity and the means to fashion social life according to its desires.

This model figures in various ways in the thoughts of political scientists and sociologists. It is not the sole right of a single or specific school of thought but it is the birthright of everyone (Castles *et al*, 1971, p 292).

#### 4.2.1.5 THE USES OF POWER

Power can be used in many different ways to gain intended effects on others or to secure the power.

Managers should take the greatest precaution to have all the information available before applying coercive power and not to act impulsively.



advantages already attained. Wrong (1979, pp 218-223) differentiates between "power to" and "power over". "Power over" is an attempt to achieve a wide range of goals or satisfy needs and wants. Power may enable a leader to liberate the oppressed and to restore the environment. "Power over" also has a security dimension. Power may prevent violent deaths at the hands of other persons. Wrong sees a reputation for power as the individual's most effective insurance policy. Power may also lead to instant gratification if the power holder succeeds in inducing someone into the necessary behaviours to satisfy his own needs and wants. Men seek and use power to acquire scarce possessions, property rights and ownership as well as class privileges.

Moorhead et al (1989, pp 363-367) observe five usages of power. Referent power is a mechanistic method the manager uses to gain intended effects with role modeling. The subordinates relate and identify with the manager and may even emulate his behaviour. Expert power may be used to promote images of expertise and to maintain credibility. It helps a manager to demonstrate his firm grasp of situations and his ability to quickly clear up a point or problem. A manager exercises legitimate power by formally requesting and/or compelling subordinates to comply with his/her wishes. Compliance with the legitimate orders of a manager should however be the norm, otherwise the superior's power base will be eroded. A superior may also use reward power in motivating a subordinate to produce the desired and proper behaviour. Coercive power should be used with discretion because it could erode referent power. Managers should take the greatest precaution to have all the information available before applying coercive power and not to act impulsively.

From the preceding discussion it is evident that power is a fundamental concept in the social sciences and of utmost significance in social contexts and social relations.

#### 4.2.1.6 POWER DISTANCE AND HUMAN INEQUALITY

Hofstede (1980a, p 99) ascertains that the power distance norm can be used as a criterion for characterizing and describing cultures. Linking up with Hofstede, Gasse (in Hofstede, 1980a, p 99) argues for the justification of authority by each culture using its major values. Gasse pictures a continuum, the two poles of which he calls monolithism and pluralism. The monolithic pole points to elitism. Elite cultures are characterized by power held by a few people (see Presthus' definition of elitism, p 161). A few people dominate the decision-making process. The rank-and-file has limited access to the decision-making process and the elite group experiences little or no opposition. This does not imply, however, that the monolithic entity can have their way and achieve their ends all the time or that the locus of power never changes. This elite group however forms a small proportion of the community and is not representative in social terms of this community.

Presthus (in Castles et al, 1971, p 338) observes that the most important characteristic of elitism is the disproportionate control of scarce resources of money, skills and commodities. According to Gasse (in Hofstede, 1980a, p 99) pluralism (the pluralistic pole connotes competition between groups and leaders and their encouragement of this competition) implies limited

control by leaders, fostering of democratic politics and independent information sources. The de Tocquevillian political tradition associates pluralism with democracy and political integration. It presupposes consensus about essential social values and aims and an acceptance of the legitimacy of the existing political system. Conflicts exist but only insofar as the various contending groups have different interests. These different interests, economic, political and social, exert random pulls in various directions which cancel each other out and lead to a harmonious democracy (Van den Berghe, 1967, pp 270-271).

Playford (in Castles *et al*, 1971, p 364) observes that pluralism is said "to stand for the guarantee of freedom, the preservation of diversity, the limitation of power and protection against extremist mass movements. But in reality plural societies are immensely unequal due to an unequal distribution of benefits, privileges, political power and influence (Bonacich, 1989, p 80). In plural, democratic, capitalistic societies one's social status depends upon one's position in two co-existing systems of social stratification namely class and ethnicity. Class position depends, to a large extent upon occupation and income which are related to the level and quality of education attained. Although ethnic identity cannot be changed, people in minority groups may and can improve their lot through economic advancement. However one's ethnic and racial identity may place a ceiling upon the extent to which one can rise. It also appears that racism has changed its face and that new forms of racial injustices arose granting new forms of privilege

to minority groups - preferential treatment - due to social transformations. Omi and Winant (in Killian, 1990, p 9) observe that in America "the victims of racial discrimination have dramatically (changed) shifted from racial minorities to whites, particularly white males". "The culture of inequality" seems more entrenched than ever (Lewis, 1978). Inequality in society (human inequality) can occur in a variety of areas, e.g. physical and mental characteristics, social status and prestige, wealth, power, laws, rules, human rights and property rights.

In every society there are two opposing forces, viz status consistency and overall equality. These two forces are in constant conflict. The strong and the smart eliminate status inconsistencies by gaining wealth, power and prestige while the counterforce tries to maintain equality by offsetting rank in one area against another (Hofstede, 1980a, p 94).

Dahrendorf (in Beteille, 1972, pp 16-44) discusses several causal factors of inequality among men. The explanation of the origin of inequality in terms of private property and the division of labour has received much attention. Proposers of the thesis that property is the cause of social inequality range from Rousseau to Lorenzo von Stein to Karl Marx. In fact Rousseau and Marx are unrivalled in their radical insistence on property as the sole cause of social inequality. But this explanation does not stand the test of historical experience. Wherever private property has been reduced to virtual insignificance, social stratification still exists. According to the Schmoller theory, class formation (and social stratification) is based on a differentiation in

occupations. The problem, however, is that differentiation precedes the stratification of social positions.

Dahrendorf (op cit, p 36) argues that the origin of social inequality lies rather in certain features peculiar to all human societies, viz norms of behaviour to which sanctions are attached. These sanctions may be positive (rewards) or negative (punishments). "Only if we regard reward and punishment, incentive and threat, as related instruments for maintaining social norms, do we begin to see that applying social norms to human behavior in the form of sanctions, necessarily creates a system of inequality of rank and that social stratification is therefore an immediate result of the control of social behaviour by positive and negative sanctions" (Dahrendorf, op cit, p 35). Division of labour may be a universal feature of societies but it lacks the element of evaluation necessary to explain distinctions of rank. The importance attached to different positions and the market value of required qualifications, determine the unequal distribution of income and power.

The gross inequalities that characterize societies are multiplied when race and ethnicity are entered into the equation (Bonacich, 1989, p 83). Blacks and members of other minority groups are usually seriously over-represented at the bottom of the scale of material well-being. Whites on the other hand are usually over-represented at the top in a hierarchy of occupations. Bonacich (1989, p 83) observes that occupational disadvantages translate into wage and salary disadvantages. The absence of good jobs and decent pay for those jobs translates into poverty. Wilson (1987) in a

systematic treatment of poverty, shows the concentration of poverty in urban areas and a sharp increase in poverty since the 1970's. Wilson argues this increase was caused by structural transformations and also by middle-class minority members removing themselves spatially from the poor.

Massey and Eggers (1990) emphasize the important role of racial segregation in generating concentrated urban poverty. Massey et al (1990, p 1155) are adamant that race and the usual accompanying residential segregation are significant barriers to socio-economic progress and view housing as a key factor in the growing concentration of poverty among Blacks and in the social inequality of Blacks and members of minority groups. Linking up with Massey and Eggers's thesis, Wilson and Ramphela (1989) in an extensive study of poverty in South Africa, view the poor quality of housing, unemployment and lack of decent jobs, poor wages and insufficient earnings and a lack of education as manifestations of inequality among South African Blacks.

Considering poverty as a profoundly political issue, Wilson et al (1989, p 4) advance four reasons for its significance:

1. It inflicts psychological and physical damage on the individuals who must endure it.
2. It is sheer inefficiency in economic terms: e.g. hungry children cannot study properly, malnourished adults cannot be fully productive as workers and the economy has a structure of demand that does not encourage the production and marketing of the goods that are most needed.

3. Poverty as the manifestation of a great degree of inequality makes human community life impossible.

4. Poverty is often "the carcass left over from wealth acquisition" - it simultaneously produces wealth for some while impoverishing others.

In fact the unequal distribution of power is the essence of an organization (Hofstede). Those enduring poverty have to live in a state of powerlessness. This powerlessness gives rise to a sense of utter despair bred by the social and economic environment (Wilson *et al*, 1989, p 152).

Brown (1973) proposed economic development as an anti-poverty strategy. Brown (1973, p 169) sees economic development as "the increased productivity per capita for a poor area which in turn yields increased income per poor person". Brown proceeded by proposing a programme of corporate investment and technical assistance both of which logically grow out of and are ideologically underpinned by the functional-rational modes of poverty, social stratification and economic growth. The functional-rational model of poverty as developed by Davis and Moore (in Brown, 1973, p 175) postulates social inequality as an "unconsciously evolved device by which societies insure that the most important positions are conscientiously filled by the most qualified person". Economic development is also a matter of power. Policy and practice regarding zoning for land use, enforcement of employment codes, taxation and routing of capital are all political decisions which are the outcomes of competition between various power groups in a society.

apply French and Raven's model of the bases of power to organizational settings (Figure 4.1).

## 4.2.1.7 POWER DISTANCE AND INEQUALITY IN ORGANIZATIONS

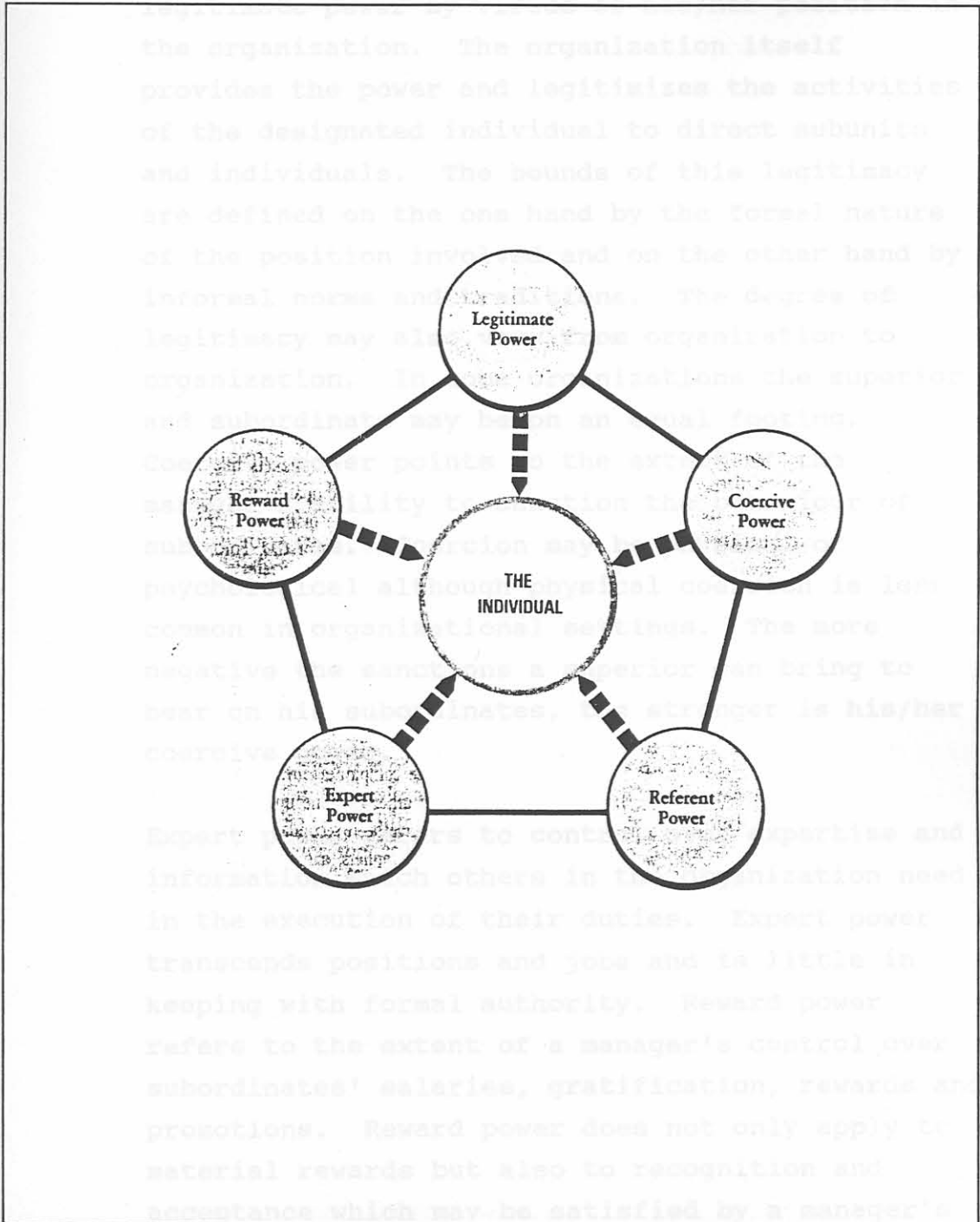
The power distance norm may spill over from the social environment into work organizations. In work organizations inequality of members' abilities and inequality of power are quite conspicuous. In fact the unequal distribution of power is the essence of an organization (Hofstede, 1980a, pp 96-97). Mintzberg (1983, p 4) defines organizational power simply as "the capacity to effect (or affect) organizational outcomes". Staw (1991, pp 388-389) sees power simply as "the ability to get things done the way one wants them to be done". Powerful people in an organization are known by the general impact they have on organizational policies and for influencing specific decisions.

Salancik and Pfeffer (1991, p 388) based their model of power on the strategic-contingency theory of power which views power as something accruing to organizational subunits, assisting them to cope with "critical organizational problems". Subunits may use power to secure their own survival. This survival is achieved through the control of scarce resources, placement of allies in key positions and the definition and formulation of organizational problems and policies. Mumby (1988, p 61) sees power as a process by which organizational stability is maintained. The exercising of power within the organization is the legitimate maintenance of the hierarchical structure which is intrinsic to all reasonably complex societies.

Moorhead et al (1989, pp 356-360) apply French and Raven's model of the bases of power to organizational settings (Figure 4.1).



Figure 4.1: FIVE BASES OF ORGANIZATIONAL POWER.



(Source: Moorhead et al, 1989, p 358)

Figure 4.1 details the interface between the individual and the bases of power in organizational settings. The individual attains legitimate power by virtue of his/her position in the organization. The organization itself provides the power and legitimizes the activities of the designated individual to direct subunits and individuals. The bounds of this legitimacy are defined on the one hand by the formal nature of the position involved and on the other hand by informal norms and traditions. The degree of legitimacy may also vary from organization to organization. In some organizations the superior and subordinate may be on an equal footing. Coercive power points to the extent of the manager's ability to sanction the behaviour of subordinates. Coercion may be physical or psychological although physical coercion is less common in organizational settings. The more negative the sanctions a superior can bring to bear on his subordinates, the stronger is his/her coercive power.

Expert power refers to control over expertise and information which others in the organization need in the execution of their duties. Expert power transcends positions and jobs and is little in keeping with formal authority. Reward power refers to the extent of a manager's control over subordinates' salaries, gratification, rewards and promotions. Reward power does not only apply to material rewards but also to recognition and acceptance which may be satisfied by a manager's praise and acknowledgement. Referent power is "power through recognition" and it is not always related to formal organizational authorization. Taking uncalled for disciplinary steps and making

unwarranted remarks, may seriously undermine the credibility of the superior and jeopardize human relations.

Closely related to organizational power, is the issue of organizational politics which may be defined as "activities carried out by people to acquire, enhance and use power and other resources to obtain their preferred outcomes in a situation where there is uncertainty or disagreement".

Political behaviour is a means to obtain power and to use it to get one's own way about things (Moorhead et al, 1989, p 368). Organizational politics has pervasive influence on the organizations. It has an impact on decision-making, influencing salary decisions, hiring decisions, promotions and strategy. Organizational politics are often viewed as bad, unfair, dirty tricks and backstabbing but managers may use it in a constructive manner.

Political behaviour may be ethical and appropriate if it complies with two conditions, viz it respects the rights of all affected parties and if it respects fairness and justice (Moorhead et al, 1989, p 368). Several techniques are used in practicing political behaviour, viz controlling as much information as possible, controlling agendas and controlling lines of communication. Also using outside consultants and advisors can be an effective political tool in the hands of a manager, especially when a selected consultant has views which match his own. This usually leads to a manager who gets what he wants. Image building is also a subtle form of political behaviour, enabling a manager to enhance his power base for future activity.

Salancik and Pfeffer (in Staw, 1991, pp 394-395) examine the impact of the distribution of power on organizational decision-making. They ascertain that three conditions, viz scarcity, criticality and uncertainty, are likely to influence or effect the use of power in organizations. Scarcity is related to subunits' attempts to exert influence when the resources of the organization are scarce, e.g. to secure a bigger part of the budget. Criticality points to a subunit's attempts to influence decisions to obtain resources critical to its own survival and activities. Uncertainty also affects the use of power. When management is uncertain about strategies and policy decisions, power will effect the decision-making process. Power and the accompanying status and social ties will be decisive.

The distribution of power is usually attended with inequalities. Two dimensions of inequality usually affect organizations and their environments, viz the distribution of rewards and opportunities and the differences in criteria for matching workers and jobs (Baron, 1984, p 37).

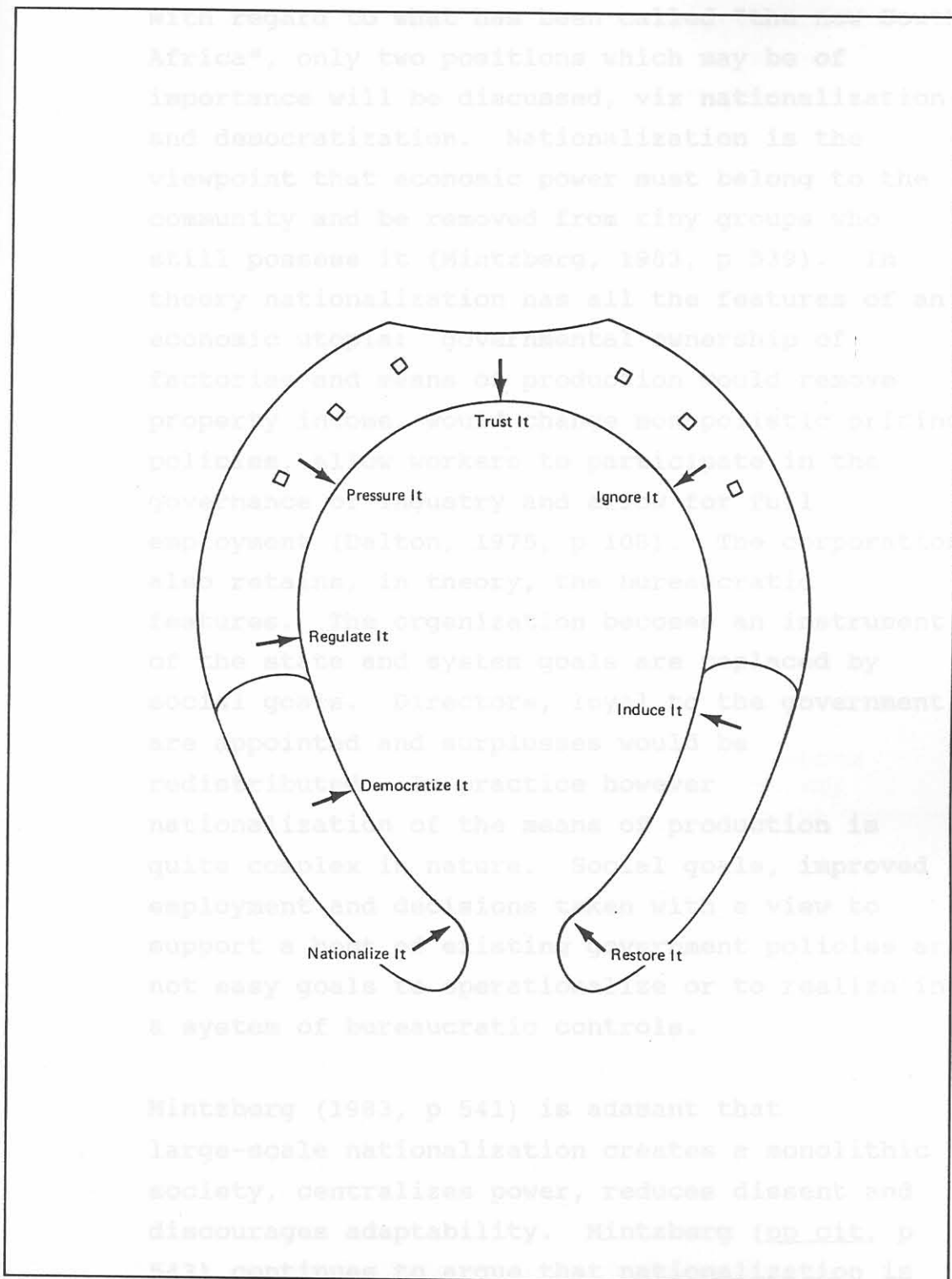
Baron (1984, p 38) views unequal access to avenues of advancement within organizations as a principle source of inequality. Orthodox economic theory holds that wage differentials are related to worker productivity and labour supply but productivity is an individuality. Referent power involves trust, affection, emotional involvement and acceptance. In organizational settings referent power surfaces as imitation. People usually copy a person's manners, ways of speech and dress and work-related behaviour.

Figure 4.2 depicts the conceptual horsebox.

Power can be used in many different ways in organizations. A superior/manager may build a referent power base by hiring subordinates with similar backgrounds, similar ideological and religious inclinations and persons who attended the same college as he/she did. Referent power may also be exercised through role modelling. Expert power is exercised by making others subtly aware of their education, expertise, experience and accomplishments. Expert power should not be based on pretensions because an exposure would rapidly lead to a loss of expert power. Legitimate power is exercised by formally ordering or requesting subordinates to do something. Moorhead et al (1989, p 366) observe that compliance by employees with legitimate power should be the norm in an organization as non-compliance will erode the superior's power base. The superior, however, should issue his orders politely and cordially and in a confident manner. Requests and orders should also be proper and ethical. Leaders should also verify compliance with a request before rewarding the subordinate in order for the performance-reward linkage to be recognized. Coercive power should be recognized and exercised with restraint by superiors otherwise it may lead to resentment.

Organizational power also has a bearing on the question "Who should control the corporation?". There are eight possible answers to this question which may be presented as a conceptual horseshoe depicting the eight positions, viz rationalize it, democratize it, regulate it, pressure it, trust it, ignore it, induce it and restore it. Figure 4.2 depicts the conceptual horseshoe.

Figure 4.2: A CONCEPTUAL HORSESHOE.



(Source: Mintzberg, 1983, p 529)

nationalization would not assist in any

Figure 4.2 details the possible answers to the question "Who should control the organization?" With regard to what has been called "the new South Africa", only two positions which may be of importance will be discussed, viz nationalization and democratization. Nationalization is the viewpoint that economic power must belong to the community and be removed from tiny groups who still possess it (Mintzberg, 1983, p 539). In theory nationalization has all the features of an economic utopia: governmental ownership of factories and means of production would remove property income, would change monopolistic pricing policies, allow workers to participate in the governance of industry and allow for full employment (Dalton, 1975, p 108). The corporation also retains, in theory, the bureaucratic features. The organization becomes an instrument of the state and system goals are replaced by social goals. Directors, loyal to the government, are appointed and surplusses would be redistributed. In practice however nationalization of the means of production is quite complex in nature. Social goals, improved employment and decisions taken with a view to support a host of existing government policies are not easy goals to operationalize or to realize in a system of bureaucratic controls.

Mintzberg (1983, p 541) is adamant that large-scale nationalization creates a monolithic society, centralizes power, reduces dissent and discourages adaptability. Mintzberg (*op cit*, p 543) continues to argue that nationalization is not the answer to the problems of social performance of giant corporations or big businesses. Applying the concept of nationalization to South African circumstances,

nationalization would not assist in any egalitarian restructuring. "It would debilitate entrepreneurial endeavour among Blacks, discourage exploration and investment and by politicising business, lead to a misallocation of resources that would impoverish the country" (Financial Mail, Feb 23, 1990, p 28).

Democracy at organizational level may be representative or participative. The one form entails the election of representatives, the other direct involvement in internal decision-making. Every one (individual or group) affected by the activities of the corporation may be involved in either form of democratization (Mintzberg, 1983, p 545). Four basic forms of corporate democracy may be discerned as is portrayed in Table 4.1.

Table 4.1: FOUR BASIC FORMS OF CORPORATE DEMOCRACY.

Groups Involved	
Internal Influences (employees)	External Influences (interest groups)
<p>Worker Representative Democracy</p> <p>(European style, e.g., "co-determination" or worker ownership)</p>	<p>Pluralistic Representative Democracy</p> <p>(American style, e.g., "public interest" directors)</p>
<p>Worker Participatory Democracy</p> <p>(e.g., works councils)</p>	<p>Pluralistic Participatory Democracy</p> <p>(e.g., outsiders on new product committees)</p>

(Source: Mintzberg, 1983, p 346)

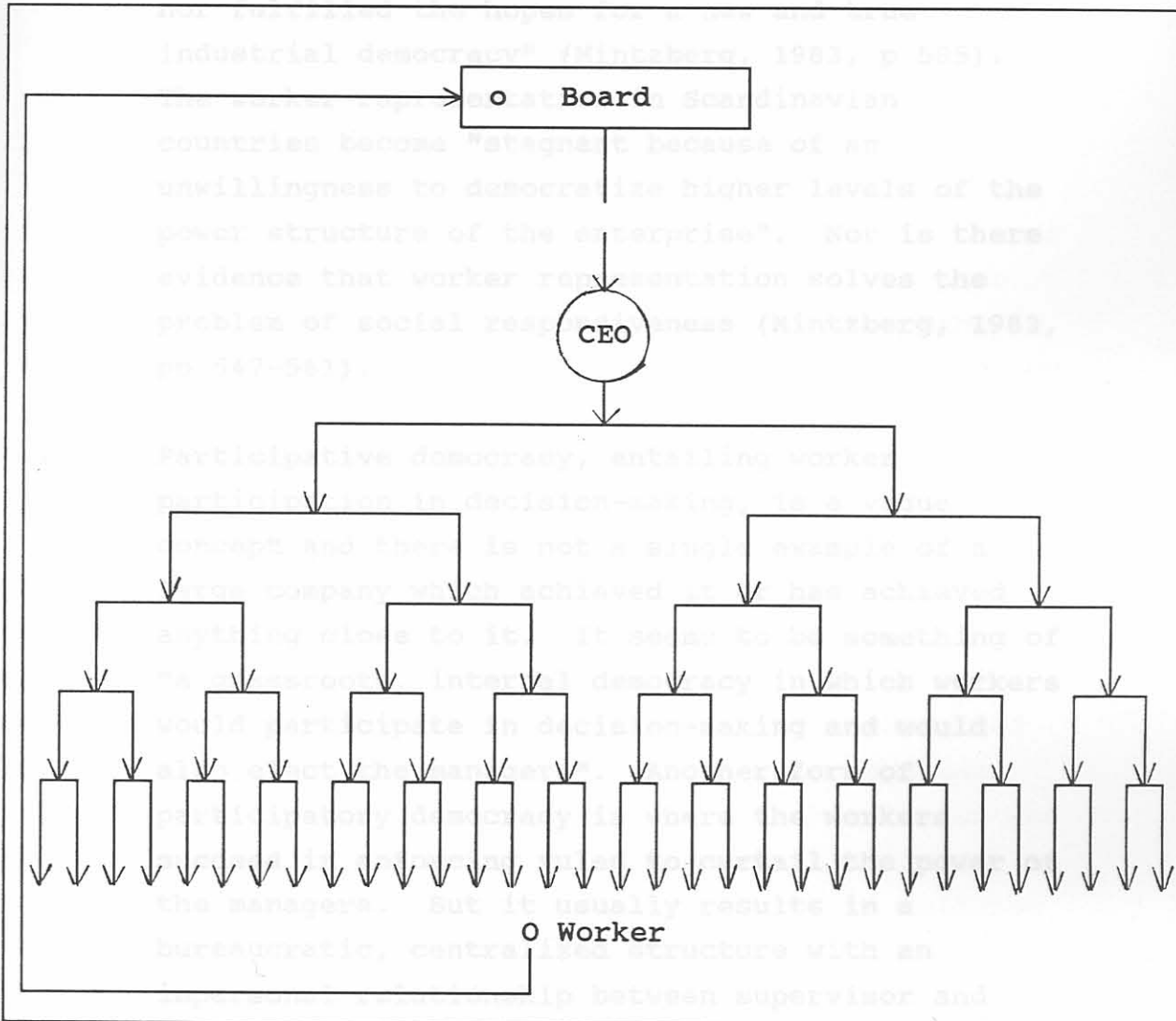


Figure 4 Table 4.1 details the four basic forms of corporate democracy, viz worker representative democracy, pluralistic representative democracy, worker participative democracy and pluralistic participative democracy.

Pluralistic representative democracy, also called interest group management, is primarily concerned with outside interest groups. In essence it is a supposition that conflicting interest can and should be made to negotiate. The attempts to elect public interest directors or representatives of particular consumer or environmental groups to corporate boards reflect the spirit of pluralistic representative democracy.

Proponents of worker representative democracy are mostly European and primarily concerned with opening up the boards to the workers. Worker representation is concerned with the issues of power and democracy, not efficiency. In Yugoslavia, worker representation means social ownership which should not be confused with state ownership. In social ownership the right to manage rests with the workers. The model of co-determination, developed in what was West-Germany, has been the most far-reaching model of worker representation. The essence of co-determination is the right to equal representation which workers have with shareholders on the boards of companies. Worker representatives include directors named by the unions and those elected by employee delegates. The last mentioned type of directors includes blue-collar as well as white-collar (ordinary and managerial) representatives. Figure 4.3 shows the typical composition of a board with worker representatives.

Figure 4.3: WORKER REPRESENTATION ON A CO-DETERMINATION BOARD.



(Source: Mintzberg, 1983, p 557)

Co-determination has not had any revolutionary effect on industry or society. "It did not bring about a new society nor did it lead to socialism, nor fulfilled the hopes for a new and true industrial democracy" (Mintzberg, 1983, p 585). The worker representation in Scandinavian countries become "stagnant because of an unwillingness to democratize higher levels of the power structure of the enterprise". Nor is there evidence that worker representation solves the problem of social responsiveness (Mintzberg, 1983, pp 547-561).

Participative democracy, entailing worker participation in decision-making, is a vague concept and there is not a single example of a large company which achieved it or has achieved anything close to it. It seems to be something of "a grassroots, internal democracy in which workers would participate in decision-making and would also elect the managers". Another form of participatory democracy is where the workers succeed in enforcing rules to curtail the power of the managers. But it usually results in a bureaucratic, centralized structure with an impersonal relationship between supervisor and subordinates. However, worker participative democracy is very clear on who is to be involved.

Pluralistic participatory democracy is difficult to define and it is not clear who are involved. Not only workers but also other external influences are involved. Apparently it entails a shift of accountability from management to the people affected by boardroom decisions. Mintzberg (op cit, p 565) proposes two ways in incorporating

outsiders in the decision-making process.

External influencers may name a representative to a position of power inside an organization.

Another approach would be the direct participation of representatives of external groups on certain decision-making committees. It may be in management's best interest for example to involve pressure groups in the social environment in the decision-making process of the company. The inner sanctums of a corporation could be opened up to the participation of outside groups, resulting in insiders and outsiders working harmoniously to the benefit of the corporation and the society (Mintzberg, 1983, pp 562-567).

In closing, attention should be paid to the influence of the value systems of both superior and subordinate on the decision-making process and the exercise of power. Hofstede (1980a, p 97) observes that inequality in society is sustained by both dominant and subordinate value systems. Hofstede proceeds by stating that subordinates and members of minority groups have a collective complicity to the exercise of power. In cultures with high power distance-values, subordinates are usually afraid to express disagreement with their superiors. The superior usually makes his/her decisions promptly and communicates it firmly to the subordinates, expecting them to carry out his/her decisions. In cultures with low power distance-values, managers usually discuss problems with subordinates before taking a decision. The manager usually accepts the majority's viewpoint as the final decision (Hofstede, 1980a).

1. Non-managerial employees' perception that employees are afraid to disagree with their managers (Question 34).

#### 4.2.1.8 THE POWER DISTANCE INDEX

Hofstede (1980a, pp 100-104) computed a power distance index for different cultures. He used question 34 (Value Survey Module), "How frequently, in your work environment, are subordinates afraid to express disagreement with their superiors?" as the central item for exploring power distance differences between cultures. This question expresses power distance most clearly. Other researchers (Patchen, 1965; Whyte, 1969; Neghandi and Prasad, 1971) have used fear of disagreement as a measure.

Two other questions, namely question 37 (preferred manager to work under) and question 38 (perceptions of the behaviour of a superior) provide unique information about the power distance in superior-subordinate relationships. Question 37 is a description of four types of decision-making behaviour of managers, viz autocratic, persuasive/paternalistic, consultative and participative. In selecting his preferred manager, the subordinate actually expresses a value. Hofstede has found this preference to correlate with the "being afraid" question (no 34) and perceptions of managers as being autocratic or persuasive (question 38). Question 38 uses the same four alternatives as question 37 and the subordinate has to indicate his perceptions of his superior's behaviour.

Hofstede proceeds by computing a power distance index on the basis of the country's mean scores for the three aforementioned questions:

1. Non-managerial employees' perception that employees are afraid to disagree with their managers (Question 34).

2. Subordinates' perception that their boss tends to take decisions in an autocratic or persuasive/paternalistic way (Question 38).
3. Subordinates' preference for anything but a consultative style of decision-making in their boss (Question 37).

In the computation mean percentage values for questions 37 and 38 were used. Mean scores were used for question 34. These mean scores were multiplied by -25 (to make their range and therefore their contribution to the power distance index (PDI) roughly equal to the range in percentage values) and a constant of 135 was added to give the culture index values a range between zero (small PDI) and 100 (large PDI).

The actual formula used was:

$$PDI = 135 - 25 (\text{mean score employee afraid of authority (question 34)}) + (\text{mean percentage values manager 1} + 2 \text{ (question 38)}) - (\text{mean percentage 3 (question 37)})$$

Hofstede (1980a, p 103) views the PDI as a measure of values found in the subsidiaries of multi-national corporations. The concept is not applicable to individuals but only to the subsidiaries. This in fact means that the PDI concept is only applicable to societies as every subsidiary is operating in a particular society. It is also an ecological index in the sense that factors such as geography, economy, demography, genetics, hygiene, history, technology and urbanization are all related to the PDI. All three questions measuring power distance are put to subordinates and not to superiors. The

least powerful partners in a relationship have to evaluate and give their perceptions of the superior's behaviour in a relationship. The least powerful is in a better position to judge power distance than their more powerful superiors. Only question 37, where a preference for one state of affairs over others have to be stated, measures a value. Question 34 deals with an aspect of organizational climate and question 38 with a characteristic of the organization's regime. Hofstede has found a Bravais-Pearson correlation score on the three questions across countries of well over 0,50 which, according to him, is an indication that value, regime and climate forms "a coherent pattern" which differentiates between countries and cultures. Hofstede finds a virtual zero correlation among the three questions across individuals. This is a confirmation that the concept of power distance (as measured here) is only applicable to social systems and not to individuals (Hofstede, 1980a, p 104). Hofstede also obtained high correlation coefficients for the three PDI questions among occupations. The PDI can therefore also be analyzed by occupation.

#### 4.2.1.9 POWER DISTANCE NORM - ITS ORIGINS AND CONSEQUENCES

The power distance norm is meant to be a societal norm. This is meant to be a value system shared by a majority in a middle class society (Hofstede, 1980a, p 120). According to Hofstede, it revolves around the desirability and undesirability of inequality and of dependence versus independence in society. "The basic values with regard to inequality", observes Hofstede (1980a,

\* Subordinates are people like me.

\* Superiors consider subordinates as being of a different kind.

Table 4.1 p 120), "are projected onto the hierarchical relationship and make it into a convenient arrangement on the one hand and an existential arrangement on the other". Values about inequality correlate with the values about the exercise of power.

As is evident from Table 4.2 the difference between high power distance index and low power distance index societies are quite conspicuous. For example, in low power distance countries power holders are not very proud of the power they wield and usually blame the system for any problems encountered, while in high power distance societies power holders apply power quite ruthlessly and usually blame the powerless for problems.

Table 4.2: THE POWER DISTANCE SOCIETAL NORM.

Low PDI	High PDI
* Inequality in society should be minimized.	* There should be an order of inequality in this world in which everyone has his rightful place; high and low are protected by this order.
* All should be interdependent.	* A few should be interdependent; most should be dependent.
* Hierarchy means an inequality of roles, established for convenience.	* Hierarchy means existential inequality.
* Subordinates are people like me.	* Superiors consider subordinates as being of a different kind.



Table 4.2 (continued)

Low PDI	High PDI
* The use of power should be legitimate and is subject to the judgement between good and evil.	* Power is a basic fact of society which antedates good or evil. Its legitimacy is irrelevant.
* All should have equal rights.	* Powerholders are entitled to privileges.
* Powerful people should try to look less powerful than they are.	* Powerful people should try to look as powerful as possible.
* Stress on reward, legitimate and expert power.	* Stress on coercive and referent power.
* The system is to blame.	* The underdog is to blame.
* The way to change a social system is by redistributing power.	* The way to change a social system is by dethroning those in power.
* People at various power levels feel less threatened and more prepared to trust people.	* Other people are a potential threat to one's power and rarely can be trusted.
* Latent harmony between the powerful and the powerless.	* Latent conflict between the powerful and the powerless.
* Co-operation among the powerless can be based on solidarity.	* Co-operation among the powerless is difficult to bring about because of low faith in people norm.

(Source: Hofstede, 1980a, p 122)

Table 4.2 details the cardinal differences between low power distance and high power distance countries.

Hofstede (1980a, p 122) finds the strongest predictor of the power distance index the geographical latitude of a country's capital. Geographical latitude was found to have a fundamental effect on the subjective culture of the inhabitants of the region. Population size is also a predictor of PDI. The larger the size of the population, the larger the PDI. The reverse is true for smaller populations. The third variable which is a predictor of PDI is wealth, which is itself highly correlated with latitude. Although a variety of factors, i.e. size (small) of the traditional agricultural sector, the extent of social mobility, extent of literacy, extent of urbanization and the importance of the middle class are all correlated to national wealth. Wealth too, has a causal relationship with power distance. The greater the Gross Domestic Product (GDP) (wealth) the smaller the power distance.

In a factorial analysis of data obtained from about 25 relatively developed countries, Adelman and Morris (1967) find variables such as the level of modernization of techniques in agriculture, strength of the labour movement, weak centralization of political power, little or no military involvement in political decision-making and a high level of industrial modernization in a first factor with a loading of 0,82 on Gross National Product (GNP) per capita. These factors are all related to a small PDI and a high GNP per capita (Adelman and Morris, 1967; Hofstede, 1980a; Inglehart, 1990; Clegg and Redding, (Eds.), 1990).

A strong labour movement is positively related to wealth while a centralized economy and political institutions and a strong involvement of the military in political decision-making, are negatively related to wealth.

At societal level, inequality in power and wealth go hand in hand. The greater the wealth in a society, the smaller the wealth distance and the smaller the income inequality. Societies of low income inequality are characterized by high technological advancement and a higher educated work force with better paid lower and middle strata of the labour market (Adelman and Morris, 1967). The historical development of regions and societies with accompanying value systems has a profound influence on the PDI. The PDI of Latin cultures usually is high. Historically, the Roman Empire with absolute power vested in the emperor, was the first organized state in Europe with policies affecting all institutions and affairs of state. With the disintegration of the Roman empire, the authority and rules of government were taken over by the Germanic invaders (Mc Neill, 1964). Anglo-Saxon cultures were characterized by lower power distance and democracy. Especially America (part of the Anglo-Saxon culture), emerges as the cradle of democracy with a federal constitution guaranteeing all the ethnic groups and other interest groups equal rights as corporate entities and in particular, the right of existence, of participation in the central power of state and autonomy (Rockefeller, 1962). However, countries (Africa and in the East-Indian archipelago) gaining their independence from colonial powers

relationship between PDI and political systems. such as Great Britain, who practice democracy, do not exhibit the same small PDI as the colonial power but show an extremely high PDI, i.e. the Philippines and India. Pakistan on the other hand has a low PDI score which may be attributed to the practice of the Muslim faith with its basic tenet of equality before God. The low PDI index for Israel is to a certain extent surprising, taken into consideration the basic Judaistic teaching of Jewry as "the chosen of the Lord". But then it should also be remembered that Israel developed the kibbutz system which is peculiar to low power distance societies. The low PDI of Scandinavian countries explains the institution and practice of social democracy although, at present in Sweden the face of the country is changing from a social democracy to a more freemarket oriented economy (Business Day, Nov 21, 1991, p 12).

The relationship between the PDI norm and education is unclear. Although there is a positive correlation between PDI and formal education, in high PDI societies (poorer countries) there is an oversupply of people with "many formal years of schooling" (Hofstede, 1980a, p 126). Education is associated with a need for mastery of technology and peak scientific performance which are usually characteristic of low PDI societies. Low PDI societies also tend to produce more Nobel laureates than high PDI societies. Some educational systems just maintain large power distances, i.e. the French. In France the norm is to accept authority and the less powerful and lower educated never challenge those in rank above them (Hofstede, 1980a; Schonfeld, 1976). There is a profound and significant

relationship between PDI and political systems. Greg and Banks (1965, p 610) find seven dimensions of political systems by factor analytic study, i.e. electoral system, constitutional regime, group opposition, horizontal power distribution, representativeness of regime, press freedom and the absence of a totalitarian regime to correspond to (or with) the distinction between constitutional - pluralistic and monopolistic regimes or to what Cutright (1967) calls the political representativeness index. Hofstede (1980a, p 130) observes that "political systems, unless imposed by foreign violence, reflect something about the values and the behaviour of the population". Low PDI points to a value consensus among the population which reduces political violence and disruptive conflicts. The opposite of course is true of countries (societies) with a middle or high PDI. The latter also has problems of political and governmental instability. Argentina, Chile, Greece, Iran, Italy, Peru, South Africa, Thailand and Venezuela, to mention a few, are examples of high PDI societies with endemic political violence and instability but with authoritarian governments. Low PDI societies are usually relatively stable pluralist systems.

The PDI is also related to the kind and type of labour movement a country has. Maurice, Sellier and Silvestre (in Hofstede, 1980a, p 131) observe that in many high PDI societies trade unions are organized by government. In other societies the unions are ideologically based and involved in politics. Trade unions in low PDI countries are usually orientated toward the work situation and concerned with work conditions, worker participation, employment security and earnings.

Hofstede (1980a, p 131) traces the origins of the power distance norm back to religion and ideological and philosophical thinking. Hofstede does not imply that religion explains power distance. What he has in mind is rather an association between the power distance norm and certain aspects of religious life. Hofstede (op cit, p 132) detects a striking similarity between, as he puts it, "the limits of the Roman Empire and the limits of the Roman Catholic Church". The Reformation has only been successful, with notably few exceptions, in areas never under Roman control. It appears on face value, that the Roman Empire has been more decisive in the development of power distance than the Church. However, a religion, once adopted, will reinforce the values which led to its acceptance and practice. Hofstede observes that "Catholicism with the supreme authority of the Pope and the intermediate authority of the priest corresponds more to larger power distance than Protestantism with its general priesthood of believers". Weber (1930) links Protestantism with the capitalistic modernization of countries which ties in with a low PDI. This is also true for the religions of the Far East. Muslim Pakistan is much more equalitarian than Hindu India with its caste system, implying a great power distance.

In regard to ideology, it is conspicuous that authors from Latin cultures identify quite closely with the powerful and high power distance societies, viz Machiavelli, Mosca, Pareto, Michels and De La Boetie. Pluralist theories abound in low PDI countries. The assumption of power sharing and the possibility of the reduction of

power distances are peculiar to pluralist theories. Proponents of pluralist theories are More, Mulder and especially Tannenbaum who view power as a non-zero-sum game in which all parties can gain. The German political scientists proposing the Mitbestimmung, are also pluralists and so are those in the United States of America and Great Britain who want to reduce power distance by informal means, e.g. the participative management of Likert and the socio-technical systems of Miller.

The power distance norm is conceptually related to the concentration of authority in organizations. Brossard and Maurice (in Hofstede, 1980a, p 134) reported the differences in organizational structures between organizations in high PDI societies and those in low PDI societies. The French organizations (high PDI) for instance have more hierarchical levels than the German organizations (low PDI). Wage differentials were also larger in high PDI societies than in low PDI societies. The high income inequality scores for France and Italy (high PDI societies, having Latin cultures) account for the high concentration of managerial and specialist personnel, the great appreciation for white-collar work in general and the salary gap between blue-collar and white-collar workers which is wider in these countries than in small PDI societies.

Table 4.3 details the causal variables in the development of national power distance index differences.

Table 4.3 details the causal variables in the development of national power distance index differences.

Greater national wealth.      \* Less national wealth.

Wealth more widely distributed.      \* Wealth concentrated in hands of small elite.

Table 4.3: ORIGINS OF THE NATIONAL POWER DISTANCE INDEX DIFFERENCES.

Low PDI	High PDI
Origins of Power Distance norm	
* Moderate to cold climates.	* Tropical and subtropical climates.
* Survival and population growth more dependent on man's intervention with nature.	* Survival and population growth less dependent on man's intervention with nature.
* More need for technology.	* Less need for technology.
* Historical events: early legislation applied to rulers; one-son inheritance.	* Historical events: early legislation not applied to rulers; divided inheritance.
* Less traditional agriculture more modern industry, more urbanization.	* More traditional agriculture less modern industry, less urbanization.
* More need for education of lower strata (literacy, mass communication).	* Less need for education of lower strata.
* Greater social mobility and strong development of middle class.	* Less social mobility and weak development of middle class.
* Greater national wealth.	* Less national wealth.
* Wealth more widely distributed.	* Wealth concentrated in hands of small elite.

(Source: Hofstede, 1980a, p 124)



Table 4.3 (continued)

Low PDI	High PDI
* Political power based on system of representation.	* Political power concentrated in hands of oligarchy or military.
* Strong will to be independent: smaller size of population.	* Little popular resistance to integration into a large state: large size of population.
* Historical events: independence, federalism, negotiation.	* Historical events: occupation, colonialism, imperialism.
* Less centralization of political power.	* Centralization of political power.
* Faster population increase in wealthy countries.	* Slower population increase in wealthy countries.
* Technological momentum of change.	* More static society
* Children learn things which elders never learned: less dependent.	* Children dependent on parents and elders.
* Some teaching is two-way.	* Teachers are omniscient, teaching is one-way.
* More questioning of authority in general.	* Less questioning of authority in general.

(Source: Hofstede, 1980a, p 124)

Table 4.3 details the origin of national power distance differences between low and high PDI societies. Table 4.4 summarizes the consequences of national power distance index differences for low PDI and high PDI societies with regard to political systems, ideological thinking and organizational structures.

Table 4.4: CONSEQUENCES OF NATIONAL POWER DISTANCE INDEX DIFFERENCES.

Low PDI	High PDI
Consequences for Political Systems	
* Pluralist governments based on outcome of majority votes.	* Autocratic or oligarchic governments.
* No sudden changes in form of government (evolution and stability).	* Sudden changes in form of government (revolution and/or instability).
* Political parties exist and tend to be at the centre with relatively weak left and right wings.	* If political parties exist, there is a polarization between left and right with a weak centre.
* Government is frequently led by parties stressing equality, usually social democrats.	* If government is based on election results, it tends to be led by parties not stressing equality (right-wing).
* Tax system aims at redistributing wealth.	* Tax system protects the wealthy.

Table 4.4 (continued)

Low PDI	High PDI
<b>Consequences for Political Systems</b>	
* Free labour unions exist and tend to be pragmatically oriented.	* If free labour unions exist these tend to be ideologically based and involved in politics.
<b>Consequences for Religious Life and Philosophical and Ideological Thinking</b>	
* Success of religions in stressing equality.	* Success of religions stressing stratification.
* Ideologies of power equalization.	* Ideologies of power polarization.
* Pluralist theories about society.	* Elitist theories about society.
* Non-zero-sum theories of power.	* Zero-sum theories of power.
* "Foxes" approach is seen as leading to stability.	* "Lions" approach is seen as leading to stability.
* More, Marx, Weber, Mulder, Tannenbaum.	* Machiavelli, Mosca, Pareto, Michels.
<b>Consequences for Organizations</b>	
* Less centralization.	* Greater centralization.
* Flatter organization pyramids.	* Tall organization pyramids.

Table 4.4 (continued)

Low PDI	High PDI
<b>Consequences for Organizations</b>	
* Smaller proportion of supervisory personnel.	* Large proportion of supervisory personnel.
* Smaller wage differentials.	* Large wage differentials.
* High qualification of lower strata.	* Low qualification of lower strata.
* Manual work same status as clerical work.	* White-collar jobs valued more than blue-collar jobs.

(Source: Hofstede, 1980a, p 135)

Power is thus important for understanding organizational dynamics. It may energise and promote productivity and the desire to wield power may aid managerial effectiveness.

#### 4.2.2 UNCERTAINTY AVOIDANCE

Hofstede (1980a) labelled the second dimension of national culture "Uncertainty Avoidance". This dimension indicates the extent to which a society feels threatened by uncertain and ambiguous situations and to which feelings of uncertainty about the future are harboured. Societies try to cope with uncertainty by providing greater career stability, establishing formal rules, are intolerant of deviant ideas and behaviours, attain expertise, seek for absolute truths by way of religion and technology and the common law. Organizations usually try to avoid uncertainty and ambiguity by developing new technology and by

applying rules and rituals. Hofstede (1980b) also observes however, that societies with high uncertainty avoidance approaches are also characterized by a higher level of anxiety and aggressiveness resulting in a strong urge in people to work hard.

#### 4.2.2.1 THE CONCEPT OF UNCERTAINTY AVOIDANCE

Man is living with uncertainty and is conscious of it. All the possibilities of human life involve one "in uncertainties and are dubious in relation to the ground of one's being, a God posited or not posited" (Blackham, 1959, p 16). Hofstede (1980a, p 154) observes that extreme uncertainty creates intolerable anxiety. But human society has developed ways to cope with this comprehensive anxiety which is inherent in human living. These ways belong to the domains of technology which includes all human artifacts, law which includes all formal and informal rules and religion which posits a revealed knowledge of the unknown. Different societies cope with uncertainty in different ways but these ways usually belong to a cultural heritage. These ways of coping are usually transferred and reinforced through the basic institutions in a society such as the family, the school, the state.

Hofstede (op cit, p 154) sees these ways of coping reflected in the collectively held values of a particular society which may lead to collective behaviour in that particular society. The manifestations of collective behaviour in one society may be incomprehensible and repulsive to other societies. The strong political and

emotional forces of nationalism, facism and also Naziism are being viewed as responses to uncertainty in societies created by freedom. These societies usually have a low tolerance for uncertainty and anxiety. Freedom causes anxiety and uncertainty in the behaviour of human beings (Fromm, 1965). Totalitarian ideologies, authoritarianism and the authoritarian personality syndrome are responses to anxiety and manifestations of uncertainty avoidance. Authoritarianism correlates with rigidity, traditionalism, racism and ethnocentrism, and, especially intolerance of ambiguity. Prejudiced attitudes serve as uncertainty avoidance mechanisms to authoritarian personalities as it turns a threatening, insecure world into a more orderly secure place (Adorno, Frenkel-Brunswik, Levinson and Sanford, 1950). According to Adorno et al (op cit, 1950), authoritarianism implies a strong adherence to middle class values, a tendency to seek out and reject those who violate such conventional values, a belief that the individual's destiny is determined by forces beyond his control (external locus of control) and a pre-occupation with power-relationships enabling the individual to be either all-powerful or totally submissive.

Building on Adorno et al's assumptions, Nieuwoudt and Nel (1975, p 100) assert that in South Africa with its comprehensive experience of uncertainty in virtually all faculties of life and society, prejudiced norms could fulfil an important personality function for the authoritarian person supplying an appropriate group on which to displace aggression. A society in which

prejudice, or norms of prejudice, form part of the culture will facilitate the development of authoritarianism and the functioning of the prejudiced personality.

There also is a link between uncertainty and anxiety. Psychologists have related anxiety related behaviour to stress and established a link between stress reactions and the personality dimensions of neurotic anxiety, extraversion - introversion, flexibility - rigidity and achievement versus security considerations (Hofstede, 1980a, p 168).

Lynn and Hampson (in Hofstede, 1980a) conducted extensive research on national differences in anxiety levels and body reactions. They factor analysed 12 variables and obtained two factors. The first factor was labelled neuroticism (or anxiety) and has the following factor loadings:

1. -0,79 low chronic psychosis.
2. 0,78 high suicide death rate.
3. -0,69 low caffeine consumption.
4. 0,68 high alcoholism.
5. -0,68 low daily calorie intake.
6. -0,66 low coronary heart disease rate.
7. 0,66 high accident death rate.
8. 0,51 high punished crime rate.

The second factor was named extraversion and has the following factor loadings:

1. 0,73 high divorce rate.
2. 0,65 high murder rate.
3. 0,61 high cigarette consumption.
4. 0,61 high punished crime rate.
5. 0,60 high coronary heart disease rate.
6. 0,53 high illegitimate birth rate.

The first factor is a stress factor. The negative loadings of coronary heart disease (CHD) may be due to the fact that this is a correlation across societies (ecological) and not across individuals. A number of studies show that the effects of stress on the CHD are conditioned by people's ability to show emotions. In Japan the mortality rate for CHD is very low which may be attributed to the free expression of emotions in Japanese culture (Hofstede, 1980a, p 169). Strumpfer (in Barling, Fullager and Bluen, 1987) links up with this assertion and points to the cultural antecedents of stress in the modern business environment.

Strumpfer (1987, p 538) refers to the political and economic systems under which business is conducted and the prevailing economic and market conditions ("boom or bust") at a particular time and infers that these obviously must have effects on the subjective experience of executives and employees labouring under these conditions and systems. Strumpfer (op cit, p 539) names a few of these stressors: the task to be performed which may involve quantitative and qualitative overload, underutilization of abilities and skills, a perception of obsolescence and job insecurity, unemployment on individual level and role conflict and role ambiguity, lack of social support, lack of participation and difficulties in delegation on the interpersonal level. The structure of an organization, e.g. being too rigidly bureaucratic, interdepartmental conflict, management styles, e.g. excessively authoritarian and control systems are all stressors at organizational level.

Danilewitz (1987) discusses coronary prone behaviour patterns in industry referring to Type A



and Type B behaviour patterns. Danilewitz (op cit) sees Type A persons as hard driving, conscientious, determined to persevere against overwhelming odds, always engaged in excessive struggling to reach and obtain their goals, having a sense of time urgency and being extremely impatient and in their interpersonal relations they are abrasive, displaying a disconcern for others and treat others curtly. The Type B on the other hand are less competitive, relaxed, easy going, and have a lot of patience. They also take more time off to enjoy other pursuits. Strumpfer (1987, p 549) observes that Type A or B behaviour has a definite influence on a person's perception of stressors in the organizational environment and the conditioning of coping behaviour. Type A's, according to Strumpfer, are also likely to be "stress carriers", increasing the amount of stress in the lives of their co-workers and families and also the risk of CHD.

Hofstede (1980a, p 169) points to the high correlation between Lynn and Hampson's anxiety factor and the uncertainty avoidance index (UAI) and observes that this high correlation ( $\rho = .73$ ) validates the concept of uncertainty avoidance. McClelland's achievement motivation is also related to the concept of uncertainty avoidance. Handy (1987, p 36) sees the individual with a high need for achievement as characterized by a liking for moderate and calculated risks. The economic health of a society depends upon entrepreneurial activity which involves risk taking with the accompanying uncertainty and a certain degree of stress. Such activity has historically been associated with strong achievement motivation and has had a decisive influence on policy making in

development aid and the granting of financial aid to developing countries (McClelland, 1961; Schein, 1980; Hofstede, 1980a). Hofstede (1980a, p 171) is adamant that a low UAI means or implies a greater willingness to take risks and high masculinity implies assertiveness or ambitiousness. "The two together match the picture of McClelland's achievement - motivated individual".

#### 4.2.2.2 UNCERTAINTY IN ORGANIZATIONS

Uncertainty is an important and key concept in modern organizational theory and is quite often linked to the environment (Hofstede, 1980a, p 155). The concept of the environment refers to and includes "everything not under direct control of the organization" which, of course, is a source of uncertainty. Organizational theory dealing with the management of uncertainty can be divided into those based on rational behaviour and those allowing for non-rational behaviour. Hofstede (1980a, p 155) in imitation of Pareto, sees rational behaviour as logical behaviour consisting of activities "which are logically linked to an end, not only in respect to the person performing them but also to those other people who have more extensive knowledge". Theories assuming rational behaviour are normative<sup>1</sup> in nature and may be divided into three broad categories:

1. Theories of decision making under uncertainty.
2. Contingency theories.
3. Theories of strategic behaviour.

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<sup>1</sup>. Describing how organizations should deal with uncertainty.

Figure 4.

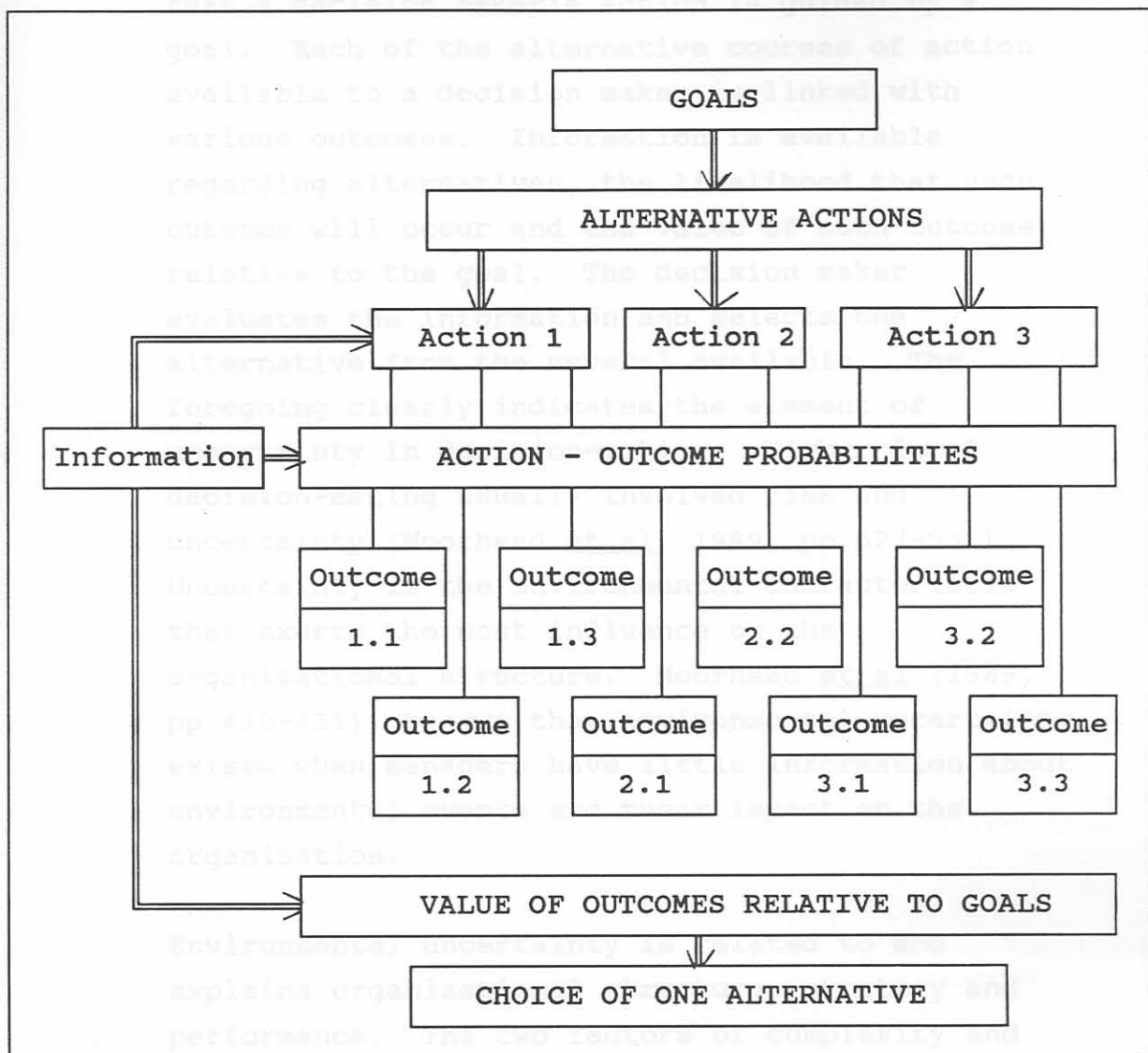
Hofstede (1980a, p 155) observes that operational research offers the necessary statistical tools to conduct decision-making under uncertainty.

Operational research puts certainty back into decisions. Operational research is the application of a wide range of statistical and mathematical techniques to the solution of a vast number of managerial problems and has been described as "the application of scientific methods, techniques and tools to problems involving the operations of systems so as to provide those in control of a system with optimum solutions to the problem" (Dessler, 1986, p 56). Decision-making entails the choice of one alternative from several under conditions of risk and uncertainty. Figure 4.4 details the basic elements of the decision making process.



(Source: Moorhead et al, 1989, p 328)

Figure 4.4: ELEMENTS OF DECISION-MAKING.



(Source: Moorhead *et al*, 1989, p 528)

Table 4. An analysis of the content of this figure reveals that a decision maker's action is guided by a goal. Each of the alternative courses of action available to a decision maker is linked with various outcomes. Information is available regarding alternatives, the likelihood that each outcome will occur and the value of each outcome relative to the goal. The decision maker evaluates the information and selects one alternative from the several available. The foregoing clearly indicates the element of uncertainty in decision-making. Higher level decision-making usually involved risk and uncertainty (Moorhead et al, 1989, pp 527-531). Uncertainty is the environmental characteristic that exerts the most influence on the organizational structure. Moorhead et al (1989, pp 430-431) observe that environmental uncertainty exists when managers have little information about environmental events and their impact on the organization.

Environmental uncertainty is related to and explains organizational structure, strategy and performance. The two factors of complexity and dynamism are the causes of uncertainty.

Environmental complexity points to the number of environmental components which impinge on organizational decision making while environmental dynamism is the extent to which these components change. These two dimensions are used to determine the degree of environmental uncertainty. A classification of environmental uncertainty is presented in Table 4.5.

Table 4.5: CLASSIFICATION OF ENVIRONMENTAL UNCERTAINTY.

		ENVIRONMENTAL COMPLEXITY	
		Simple	Complex
Static	Cell 1: Low Perceived Uncertainty	Cell 2: Moderately Low Perceived Uncertainty	
	<ol style="list-style-type: none"> <li>1. Small Number of Factors and Components in the Environment</li> <li>2. Factors and Components Are Somewhat Similar to One Another</li> <li>3. Factors and Components Remain Basically the Same</li> </ol> <p>Example: Cardboard Container Industry</p>	<ol style="list-style-type: none"> <li>1. Large Number of Factors and Components in the Environment</li> <li>2. Factors and Components Are Not Similar to One Another</li> <li>3. Factors and Components Remain Basically the Same</li> </ol> <p>Example: State Universities</p>	
Dynamic	Cell 3: Moderately High Perceived Uncertainty	Cell 4: High Perceived Uncertainty	
	<ol style="list-style-type: none"> <li>1. Small Number of Factors and Components in the Environment</li> <li>2. Factors and Components Are Somewhat Similar to One Another</li> <li>3. Factors and Components of the Environment Continually Change</li> </ol> <p>Example: Fashion Industry</p>	<ol style="list-style-type: none"> <li>1. Large Number of Factors and Components in the Environment</li> <li>2. Factors and Components Are Not Similar to One Another</li> <li>3. Factors and Components of Environment Continually Change</li> </ol> <p>Example: Banking Industry</p>	

(Source: Moorhead *et al*, 1989, p 431)

Decision-making under circumstances of uncertainty and risk is called non-programmed decision-making because the decision maker cannot rely on a previously established decision rule (Moorhead et al, 1989, p 529). Operational research may help to guide the decision maker in his non-programmed decision-making. Dessler (1986, p 56) identifies three distinguishing characteristics of operational research, namely undisputable standards of effectiveness, well-defined alternative courses of action in dealing with problems and a model or theory on how relevant factors and variables are related. Operational research tries to find the best solution to industrial problems by applying sophisticated mathematical tools and computers (Dessler, 1986, p 57). Operations research is directed towards solving actual problems facing management and the executive (Kast and Rosenzweig, 1985, p 89). Jackson (in Buffa and Dyer, 1977, p 6) defines problem solving simply as "... the business of purposefully inventing and choosing among ways to get where you want to go". Operational research consists of four steps (Buffa and Dyer, 1977, pp 8-9):

1. Bounding the problem.
2. Devising alternative means of dealing with the problem. One must have an understanding of the system and its environment one is dealing with.
3. Selecting a strategy for evaluating the effects of alternatives, deploying a model to cope with uncertainty and risks.
4. The implementation of the solution to the problem.

Buffa and Dyer (1977, p 10) distinguish between evaluative models and predictive models. Evaluative models are based on decision theory while predictive models predict the effect of alternative decisions and forecast the status of the environment. Models of special importance to industry are the models to forecast the environment and models predicting the effect of risk. The most well-known models in forecasting the environment are the time-series forecasting methods such as moving averages and trend effects, multiple regression and the Delphi method. These methods and especially the Delphi technique, may be used to probe into the future in the hope of ascertaining and anticipating the viability of new products in a rapidly changing environment.

Markov chains, Queuing theory and the Monte Carlo technique are methods predicting the effects of uncertainty and risks. Markov chains are used to estimate the transition probabilities, i.e. the probability that a person (or an item) will move from one state to another during a particular time period. Queuing models refer to decision problems involving risks. Predicting outputs depend on a complex interplay of inputs or arrivals and times of arrival are controlled by some queuing. Units of arrival may be men, products, or machines. Monte Carlo simulations deal with problems in industry by imitating what would happen in the real system, then keeping track of what happens in the model. By keeping record of the input data and recording results, a clear picture may be gained of what would happen if the policy, system, strategy, or design were actually put in practice (Buffa and Dyer, 1977).

Selection of contingency theories to organizational structure and design depends on the level of organizational uncertainty. The



The second broad category, viz contingency theories, view uncertainty as "an input which should affect the structure and functioning of organizations" (Hofstede, 1980a, p 155). Contingency theories emphasize the structural changes which match organizational structures to combinations of technologies and environments (Hannan and Freeman, 1989, p 12). French and Bell (1984, p 191) observe that organization structure refers to how work is divided up and the ensuing relationship between the different divisions, viz manufacturing, research, development and marketing. They proceed by stating that the appropriate structure is contingent upon the organizational environment - the environment the organization is operating in. Lawrence and Lorsch (1967, pp 156-158) hold that it is only possible to understand the differences in the internal states and processes of organizations by considering the relationship between these internal differences and the differences in the external environments. Organizational variables are in a complex interrelationship with one another and with conditions in the environment. Environmental uncertainty "pulls organizations in different directions at once as different parts of the organization seek to adjust to their own sub-environments" (Hannan et al, 1989, p 30). Schoonhoven (in Moorhead et al, 1989, p 464) links up with Hannan and Freeman, stating that contingency theory relates variables of organizational structure and task uncertainty to the successful or not performance of the organization. Schoonhoven's research proves that the successful application of contingency theories to organizational structure and design depends on the level of organizational uncertainty. The

higher the level of uncertainty, the greater the probability that change in the organizational structure may increase organizational effectiveness and performance. The Aston group noted that variability and uncertainty in the flow of work effected organizational structure in ways similar to environmental uncertainties (Hannan et al, 1989, p 30).

Different external environments require different organizational structures and successful organizations usually have a good balance between structure and environment (French et al, 1984, p 191). According to French et al (op cit, p 191), the environment determines the differentiation and the integration within and among departments and divisions. Differentiation is defined as "the difference in cognitive and emotional orientation among managers in different functional departments" while integration is viewed as "the quality of the state of collaboration that exists among departments which is required to achieve unity of effort by the demands of the environment". Lawrence et al (1967, pp 157-158) find the state of differentiation in successful, effective organizations consistent with the diversity of the parts of the environment and they distinguish four dimensions of differentiation on which managers can have different orientations, viz orientation towards particular goals, time orientation, interpersonal orientation and formality of structure. The degree of integration achieved was consistent with the extent of interdependence between the parts of the environment. Different environments require different amounts of integration between different departments (Lawrence et al, 1967, p 157; French et al, 1984, p 191).

Also related to contingency theory is the process of conflict resolution which may contribute to uncertainty avoidance. The locus of influence pushing for a resolution of conflict is usually at the level where uncertainty is low and the required knowledge about the environment is available and extensive (Lawrence et al, 1967, pp 157-158). Contingency theory has implications for organizational effectiveness, organization development and organization design. Moorhead et al (1989) distinguish three broad contingency approaches to organization design, viz sociotechnical systems theory, structural imperatives and strategy and strategic choice.

The socio-technical systems theory is based on systems theory. Moorhead et al (1989, p 465) define a system as "an interrelated set of elements, functioning as a whole". A system has numerous subsystems, each of which has inputs, transformation processes, outputs and feedback. Moorhead et al proceed by identifying two subsystems, viz the technical (task) subsystem and the social subsystem. The socio-technical systems approach views the organization "as an open system structured to integrate the two subsystems". The technical subsystem embraces the transformation processes transforming inputs into outputs. Scientific and engineering expertise may be applied to these transformation processes to get the highest productivity at the lowest costs. The way steel is formed, drilled and chemically treated may serve as an example of a transformation process. The social subsystem refers to the interpersonal relationships which

develop among people in organizations. These interpersonal relationships may influence work habits and values, personal friendships and communication. The socio-technical approach jointly harnesses the human and technical subsystems to deal with environmental uncertainty.

The structural contingency approach identifies three factors as structural imperatives, viz environment, technology and size (Moorhead et al, 1989, p 469). The environmental factor refers to environmental uncertainty and ecological variables. Uncertainty is the result of complexity and dynamism in the environment. Little information is usually available about environmental events and their impact on the organization. Ecological variables include resource dependence and population ecology. Organizations are dependent on resources in its environment, viz human resources, financial resources and physical resources. These three resources are the factors of production and the organizations need them to operate. Organizations must maintain resource exchanges with their environments in order to survive. Moorhead et al observe that the population ecology factor "proposes that organizations survive on the basis of a fit between their structural attributes and environmental characteristics". When the environment cannot support all of the existing organizations, those that maintain the best fit with the environment, will survive. All necessary information regarding the influence of environmental factors on the organization, should be available to the organization designer.

The technology factor refers to the technology employed (by an organization) to transform inputs into outputs. The organizational structures may be either mechanistic or organic. A mechanistic structure is primarily hierarchical and entails vertical communications and interactions, e.g. the superior issues instructions. The organic structure is like a network in nature entailing lateral and horizontal interactions and communications. It is important to realize that organizations have more than one important technology, e.g. operations technology, knowledge technology and materials technology. Organic structure will be the best suited to a rapidly changing technology demanding quick decision-making.

The size imperative (Moorhead *et al*, 1989, pp 469-470) is quite important as larger organizations have more complex structures than smaller ones. Large organization size is attended with more specialization of labour within departments but less co-ordination between groups, a larger span of control, more hierarchical levels and more formalization. Organization size can be gauged in terms of total number of employees, value of the organization's assets and/or physical capacity. Traditionally, as organizations have grown, advisory staff have been added to help co-ordinate the complexities and uncertainties inherent in large organizations. Nowadays however, organizational downsizing is the popular trend or "in-thing". Staff is reduced throughout the organization.

Starbuck (1986, p 72) also emphasized the "fit" between strategy and environment

The strategy and strategic choice contingency approach entails a type of organizational design whereby the manager is viewed as the decision maker. The manager's decisions determine the organizational structure. The manager's choices and decisions are affected by the purposes and goals, the imperatives, the manager's personality, value systems and experience (Moorhead et al, 1989, pp 473-474, 785). The organizational decision maker takes up his position between the structural imperatives and the structural features of the organization. Strategy determines structure which, in turn affects strategic decision-making. The third broad category dealing with uncertainty is theories of strategic behaviour. Strategic behaviour entails strategic planning and strategic management. French et al (1984, p 178) view strategic management activities as organization development (OD) interventions and define it "as the development and implementation of the organization's 'grand design' or overall strategy in relation to its current and future environmental demands".

Wheelen and Hunger (1987, p 6) describe strategic management as "a set of managerial decisions and actions which determines the long run performance of the corporation. It includes strategy formulation, strategy implementation, evaluation and control. The study of strategic management therefore emphasizes the monitoring and evaluation of environmental opportunities and constraints in the light of a corporation's strengths and weaknesses". Dessler (1986, p 72) also emphasizes the "fit" between strategy and environment

production factors, viz capital, raw material and human resources (Wheelen et al, 1987, pp 10-11; Kast et al, 1985, pp 113-115).

defining organization or management strategy as "the match between the organization's resources and skills and the environmental opportunities and risks it faces".

Implicit in these definitions of strategic management, is the concept of environment. Strategy is in fact top management policies directing the organization to compete in, adapt to and interact with its environment. Wheelen et al (1987, p 10) divide the environment into an external and internal component. The external environment consists of a task environment and a social environment. The task environment refers to those groups, units and variables which affect an organization's operations. The social environment points to economic, socio-cultural, technological and political legal forces which profoundly affect long-range decisions. The organizational environment with its uncertainty, constraints and opportunities, is of decisive importance for the functioning, performance and survival of the organization (French et al, 1984, p 178). The internal environment is composed of corporate structure, the corporation's culture and corporate resources. Corporate structure involves the ways in which the tasks of an organization are divided and co-ordinated entailing communication structures, authority patterns and workflow. The corporation's culture is the way an organization is looking at and thinking about behaviour and understanding the occurrence. Corporate culture consists of shared values, beliefs, assumptions, perceptions, norms, artifacts and patterns of behaviour. Corporate resources point to the production factors, viz capital, raw material and human resources (Wheelen et al, 1987, pp 10-11; Kast et al, 1985, pp 113-115).

Wheelen et al (1987, pp 8-9) identify three levels of strategy, viz corporate, business and functional. They view corporate strategy as the ways and means available of developing a favourable "portfolio strategy" for its activities, i.e. the flow of financial resources and to increase return on investment both of which are attended with high uncertainty and high risks. Business strategy is done at divisional level and entails the improvement of the competitiveness of the corporation's products and its market penetration. Functional strategy focuses primarily on maximizing resource productivity. Taken into consideration the uncertainties in the environment and the constraints of corporate and business strategies, the functional departments develop strategies "to pull together their various activities and competencies to improve performance".

Wheelen et al (1987, p 9) proceed by distinguishing three basic elements peculiar to the process of strategic management, viz strategy formulation, strategy implementation and evaluation and control. Strategy formulation (op cit, pp 12-13) involves a process of developing long-range plans to deal effectively with environmental uncertainties, threats and constraints. Strategy formulation includes specifying the corporate mission, achievable objectives, developing strategies to achieve its mission and objectives and setting policy guidelines. Thompson and Strickland (1990, p 4) link up with Wheelen et al's strategy formulation specifying five tasks of strategic management:



1. Developing a concept of the business and forming a vision of where the organization needs to be headed - in effect establishing a mission.
2. Translating the mission into specific long-range and short-range performance objectives.
3. Crafting a strategy to achieve the targeted performance.
4. Implementing and executing the chosen strategy effectively.
5. Evaluating performance, reviewing the situation and initiating corrective adjustments in mission, objectives, strategy and implementation.

Wheelen et al (1987, p 12) succinctly describe the corporate mission as "the purpose and/or reason for the corporation's existence". A vision of what the organization seeks to do and to become is usually termed as the organization's mission. The mission statement broadly outlines the organization's future course (Thompson et al, 1990, p 5). In outlining the corporations future course, the mission statement determines the parameters of the objectives top management sets to achieve. The objectives communicate what is to be accomplished and when it should be achieved. The objectives may be short-term or long-range. Short-term objectives involves what should be accomplished over the next year or two while the accomplishment of long-range objectives extend over five to ten years. Objectives are usually concrete, measurable performance targets and specifying the contribution of every unit in meeting the overall objectives.

The corporation's strategy is strongly entrepreneurial in character and entails a comprehensive master plan stating how a corporation will achieve its mission, objectives, and targeted results in the light of the organization's prospects and the prevailing circumstances in its environment. A strategy may be defined as "the pattern of organizational moves and managerial approaches used to achieve organizational objectives and to pursue the organization's mission" (Thompson et al, 1990, p 8). Charting and forming a strategy involves a thorough analysis of the organization's internal and external environment which leads to a global and holistic understanding of the organization and its environment, enabling top management to devise effective strategies generating the targeted results. Strategy provides the necessary guidelines for decision-making throughout the organization as well as the formulation of company policies and procedures. Strategy formulation is an ongoing process proceeding on two fronts, one pro-actively thought through in advance and the other conceived in response to new developments, crisis situations and special opportunities. The development of a corporate vision, the setting of objectives and the crafting of a strategy together constitute the organization's strategic plan (Thompson et al, 1990, p 8).

The second element, strategy implementation, entails the process of putting strategies and policies into action through the development of programmes, budgets and procedures. Middle and lower level managers usually implement the corporate strategy but it is reviewed from time to

time by top management to ensure effective and efficient implementation (Wheelen et al, 1987, p 13). Thompson et al (1990, p 12) observe that strategy implementation is primarily an action-driven administrative task getting things done on schedule. It cuts across virtually all divisions and departments of the corporation and all facets of managing. Strategy implementation involves a holistic evaluation of corporation and environment to determine the necessary level of internal change to effectuate the necessary change needed, to bring internal practices in line with the required strategy and to match strategy and organizational culture (Thompson et al, 1987, p 14).

The third element, evaluation and control, entails a process of monitoring corporate activities, evaluating performance and initiating corrective adjustments (Wheelen et al, 1987; Thompson et al, 1990). Evaluation and control are actually the search for better strategy execution. Management needs constant, clear, prompt and unbiased feedback to decide on the effectiveness of the fit between strategy and internal operating practices. Budget revisions, policy changes, personnel changes, culture change and revised compensation practices may enable managers to strengthen the fit between strategy and internal operating practices and make the strategy work better (Wheelen et al, 1987, pp 14-15; Thompson et al, 1990, p 13).

Strategic behaviour (Hofstede, 1980a) also has another dimension, viz strategic planning. French et al (1984, pp 178-179) consider organization

development (OD) interventions such as goal-setting activities, Beckhard's confrontation meeting and phases 4, 5 and 6 of Blake and Mouton's Grid OD as strategic planning activities. These planning activities assist the organization to manage the environment with its uncertainty and constraints. The organization can react defensively and/or offensively to the demands of the environment. Defensive reaction involves organizational change and the development of activities which would ensure a more appropriate fit between strategy and internal operating practices. Offensive reactions entails initiatives to reduce the organization's dependence on "outside factors" by reducing uncertainty and manage organizational demands by "avoiding influence, altering dependencies, negotiating with the environment, or legislatively creating a new environment" (Dessler, 1986, p 79). A corporation may, in an attempt to reduce uncertainty and manage environmental demands, renegotiate its environment by e.g. setting up trade associations, cartels, trade agreements co-ordinating councils and entering into agreements with trade or labour unions (Dessler, 1986, p 80). Thompson *et al* (1990, pp 43-48) advance factors which influence and shape strategy profoundly:

1. Societal, political, regulatory and citizenship considerations.
2. Industry attractiveness and competitive conditions.
3. Specific company opportunities and threats.
4. Organizational strengths, weaknesses and competitive capabilities.

5. The personal ambitions, business philosophies and ethical beliefs of managers.

6. The influence of shared values and company culture on strategy.

Societal priorities, community concerns and the potential for onerous legislation are variables in the corporation's external environment which may influence the corporation. Intense public pressure and adverse media coverage may compel corporations to give top priority to societal and community concerns. The task of the business community to formulate a strategy which responds to the social needs of the wider society means (Thompson et al, 1990, p 45):

1. Keeping organizational activities in tune with what is generally perceived as public interest.
2. Responding positively to emerging societal priorities and expectations.
3. Demonstrating a willingness to take action ahead of regulatory confrontation.
4. Balancing stockholder interests against the larger interest of society as a whole.
5. Being a good citizen in the community.

In South Africa the organization's strategy in regard to the needs and interests of the public takes on the form of social responsibility. The business sector should develop a strategy to win the trust of the poor people who constitute a large majority in this country. Without this trust, according to Wilson and Ramphela (1989, p 301), political change will be accompanied by feelings of deep hostility. Schlemmer (Business

Day, Nov. 21, 1991) is adamant that the social responsibility of business should spill over into the political sphere and he proposes a strategy of institutional extension for organized business entailing:

1. Allowing business to respond quickly and firmly but sympathetically to a diverse range of relevant policy prescriptions by politicians.
2. Making calculations and assessments of the possible consequences and achievable effects of all the various schemes for poverty alleviation.
3. Big business should take the notion of a "social contract" seriously and develop the skills and the accountability to its business community to seek an input in the constitutional negotiations.

Organizational strengths, weaknesses and competitive capabilities are other factors influencing strategy. Thompson et al (1990, p 46) observe that a successful strategy "must be well-matched to the company's strengths, weaknesses and competitive capabilities".

Opportunities should be pursued only when the necessary organizational competence and resources are available to utilize the opportunities. Organizational strengths fit some strategies while weaknesses make certain strategies risky.

According to Thompson et al (1990, p 46) the most pivotal strategy-shaping factor is whether an organization has the unique capability to build a distinctive competence giving it a competitive

edge in the marketplace. Values and company culture also shape strategy. An organization's values, traditions, behaviours, beliefs, ways of doing things, policies and procedures determine its distinctive culture. A strong social consciousness, a desire for corporate growth, outstanding customer service and a dedication to superior craftsmanship are characteristics of a company's culture. Strong cultures usually reflect their key values and conspicuous cultural traits in their strategy. Sometimes culture determines the choice of a strategy (Thompson et al, 1990, p 48).

The second broad dimension of theories dealing with uncertainty are those assuming non-rational behaviour and are descriptive in nature. March and Simon (1958, pp 137-138) observe that in the case of uncertainty it is impossible to make optimal choices in a highly specified and clearly defined environment and rationality becomes problematic. Uncertainty assumes that the consequences of each alternative belong to some subset of all possible consequences and the decision maker cannot assign definite probabilities to the occurrence of particular consequences. To avoid uncertainty, organizations maintain an environment which looks relatively certain to their members. This is achieved by way of uncertainty absorption which involves drawing inferences from a body of evidence and then communicating the inferences instead of the evidence itself. This limits the recipient's ability to judge the correctness and validity of the communication (March et al, 1958, pp 165-166).

Cyert and March (1963, pp 118-120; 295-297) explicitly use the concept or expression "uncertainty avoidance" and observe that uncertainty is a feature of organizational decision-making with which organizations must live. Organizations avoid uncertainties with respect to the behaviour of the market, the deliveries of suppliers, the attitudes of shareholders, the behaviour of competitors and the future actions of governmental agencies in two ways:

1. Organizations avoid the requirement of correctly anticipating events in the distant future by using decision rules emphasizing short-run reaction to short-run feedback rather than the anticipation of long-run uncertain events. Organizations solve pressing problems rather than develop long-run strategies.
2. Organizations avoid the requirement of anticipating future reactions of other parts of their environment by arranging a negotiated environment. They impose plans, standard operating procedures, industrial tradition and uncertainty-absorbing contracts on that environment. Organizations achieve a reasonably manageable decision situation by avoiding planning, where planning depends on predictions of uncertain future events and by emphasizing planning where the plans can be made self-confirming through some controlling device.

Feedback-reaction decision procedures involve decision-making by solving a series of problems.



Each problem is solved as it arises and the organization then waits for another problem to appear. The concept "negotiated environment" entails predictions about the behaviour of the organizational environment, especially the behaviour of competitors, suppliers and customers.

Organizations will devise and negotiate an environment so as to eliminate the environmental uncertainty and make it controllable. For example with competitors, an effective means of control would be the establishment of industry-wide conventional practices such as trade associations and external consultants (Cyert *et al*, 1963, p 120). Weick (1969, p 10) also describes the non-rational aspects of organizing and states that "to say that systems or organizations engage in rational decision-making makes sense only if we can specify some set of persons who agree on some desired outcome, on a specified set of means to attain this outcome, in ways in which the specific means will be activated and on how it will be known whether the desired outcome was attained or not". Hofstede (1980a, p 157) states that the way in which organizations deal with uncertainty, does not depend on some objective measure of uncertainty but on the way the organization perceives uncertainty. Hofstede proceeds by saying that it is more effected by cultural variables than personality variables.

#### 4.2.2.3 RULES, TECHNOLOGY AND RITUALS

Organizations use technology, rules and rituals to cope with uncertainty. Technology provides short-term predictability (Hofstede, 1980a, p

157) but a company needs technological competence and know-how to put technology to good use (Wheelen et al, 1987, p 124). Organizations usually use rules and regulations to reduce internal uncertainty. Hofstede (1980a, pp 158-159) sees rules as semi-rational and distinguishes between good and bad rules. Bad rules point to a schism between those making the rules and those who have to abide by them. Good rules set energies free, enabling employees to be more creative and innovative in the work environment. The authority of rules, as contrasted with the authority of persons, which is conceptually related to power distance, is related to uncertainty avoidance. The superior who is issuing orders, is irrelevant. It is the rule that counts. The rule is endorsed with authority. This suggests a high uncertainty avoidance.

Rituals in traditional as well as modern societies serve many important purposes, one of which is to make uncertainty tolerable. Shils (1975, p 154) describes a ritual as "a stereotyped, symbolically concentrated expression of beliefs and sentiments regarding ultimate things. It is a way of renewing contact with ultimate things, of bringing more vividly to the mind through symbolic performances, certain centrally important processes and norms". Rituals thus play an important role in the establishment of relationships between fellow men and in giving meaning to human existence. Hofstede (1980a, p 159) observes that uncertainty avoidance rituals in organizations "do not make the future more predictable, but relieve some of the stress of uncertainty by creating a pseudo-uncertainty

which have the greatest effectiveness in achieving objectives.

within which organization members can continue functioning". Hofstede proceeds by listing five categories of uncertainty avoidance rituals:

1. Memo's and reports.
2. Certain parts and units of the accounting system. Accounting absorbs uncertainty by the elaboration and assimilation of information.
3. Considerable parts of the planning system - but sophisticated planning systems do not necessarily guarantee more effective operations.
4. A considerable part of the control system.
5. The nomination of experts.

Category number four needs some elaboration.

Hofstede (1980a, p 160) observes that most control systems are cybernetic in nature, viz they presuppose some kind of standard, measurability of accomplishment and feedback. Quite a few techniques are available to enforce cybernetic control, viz management by objectives (MBO), planning programming budgeting system (PPBS), programme evaluation and review technique (Pert) and decision support system (DSS).

The PPBS approach assists top management in choosing among alternative programmes in terms of resources used and involves five steps (Wheelen et al, 1987, p 303):

1. Specify objectives as clearly as possible in quantitative, measurable terms.
2. Analyse the actual output in terms of stated objectives.
3. Measure the costs of a particular programme.
4. Analyse alternatives and search for those which have the greatest effectiveness in achieving objectives.

5. Establish the process in a systematic way so that it continues to occur over time. The application of a decision model is very rare and Wheelen et al (1987, p 210) see a programme as "a statement of activities or steps needed to accomplish a single-use plan, the purpose of which is to make the strategy action-orientated" while a budget to them is "a statement of the corporation's programmes in terms of dollars". The detailed cost of each programme is usually listed for planning and control purposes. Programmes and budgets are, in fact, more detailed plans for the implementation of strategy.

"Pert" is a methodology for planning, scheduling and controlling a project and can be used to evaluate and make decisions concerning time and costs (Cook and Russell, 1989, p 296). "Pert" views an activity as the task a project requires which is associated with a time estimate. It determines the minimum time required to complete a project. A thorough analysis of the project requires a network diagram or PERT chart which graphically represents the entire project. An activity is represented by an arrow and a circle represents an event which is seen as the beginning or completion of an activity. The longest path through the network is the critical path and corresponds to the minimum time required to complete the project (Cook et al, 1989, pp 296-297).

The concept of DSS is based on a philosophy of Cook et al (1989, p 803) define DSS as "a type of computer based system which involves the decision maker himself, a data base and some decision models to aid the decision process". DSS enables the decision maker to deal with unstructured problems as most problems encountered by decision

makers in the real world require some degree of human judgement and/or input. Straightforward application of a decision model is very rare and DSS is of immense value in cases of sufficient structure for computer and analytic aids where managers' judgements are essential. The decision maker's insights and judgements are used at all stages of the problem solving process (Cook et al, 1989, p 701).

Management by Objectives (MBO) is usually applied to control for non-measurable tasks (Hofstede, 1980a, p 160) but Hersey and Blanchard (1982, p 119) consider MBO a participative approach to integrate the goals and objectives of all individuals with the goals of the organization. This integration is achieved by involving all levels of management in the goal setting process (Kast and Rosenzweig, 1985, p 193). Odiorne (in Hersey et al, 1982, p 120) describes MBO as basically:

"A process whereby the superior and the subordinate managers of an enterprise jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected of him and use these measures as guides for operating the unit and assessing the contribution of each of its members".

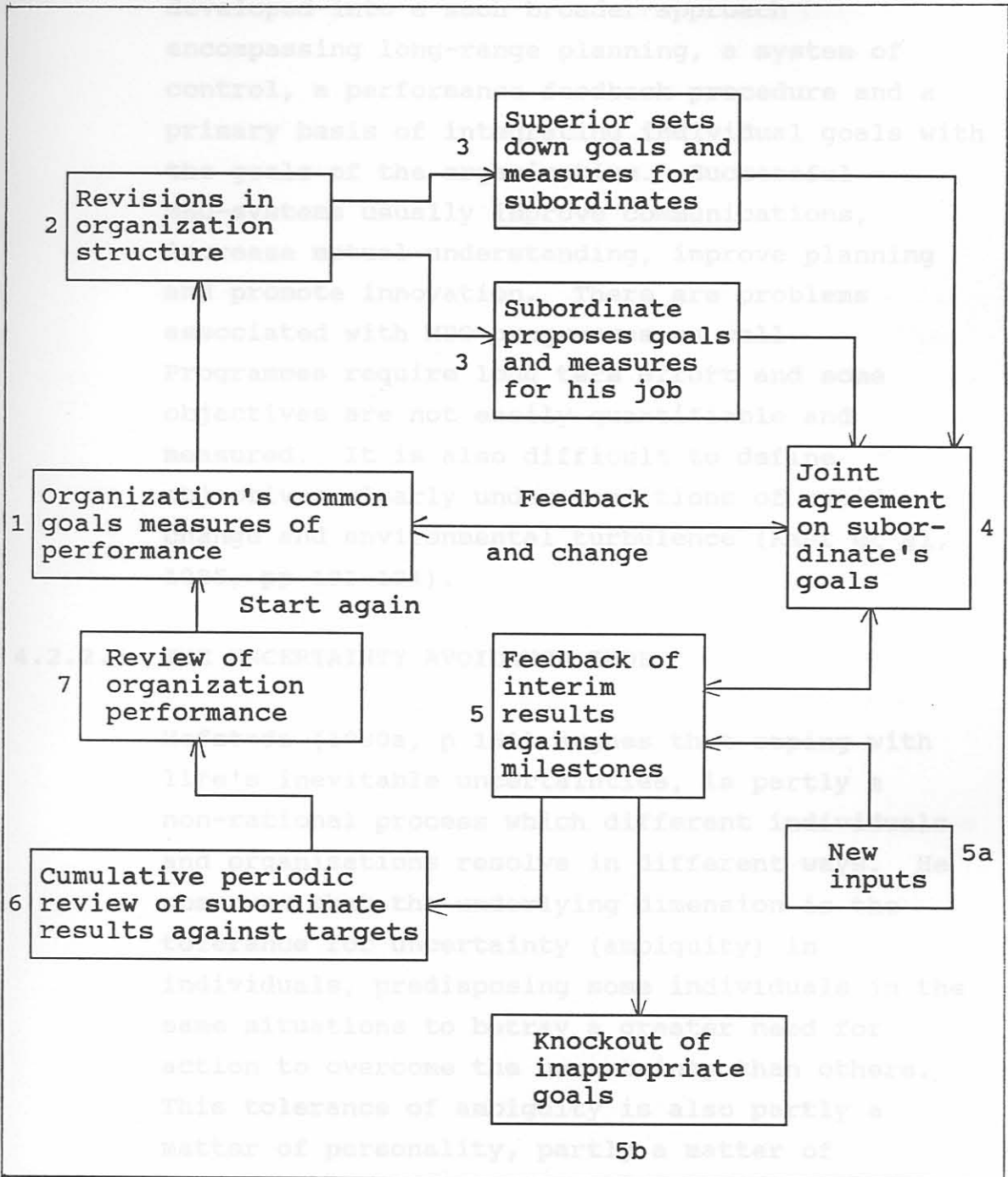
The concept of MBO is based on a philosophy of management which emphasizes an integration between external control (by superiors) and self-control (by subordinates) and it (MBO) is used to broaden individual responsibility and involvement in work

planning at the lowest hierarchical levels (Hersey et al, 1982, p 120). The smooth functioning of a MBO-system is dependent on the subordinate's performance goals jointly agreed upon between superior and subordinate in advance for a stated time period. Throughout this time period individual as well as group goals should be compared with what is being accomplished. It may involve adjustments to be made and inappropriate goals discarded. At the end of the time period a final mutual review of objectives and performance takes place (Hersey at al, 1982, p 120). Figure 4.5 represents the entire cycle of the MBO-system graphically.



(Source: Hersey et al, 1982, p 121)

Figure 4.5: THE CYCLE OF MANAGEMENT BY OBJECTIVES.



(Source: Hersey et al, 1982, p 121)

Many MBO programmes started initially as managerial performance-appraisal procedures but developed into a much broader approach encompassing long-range planning, a system of control, a performance feedback procedure and a primary basis of integrating individual goals with the goals of the organization. Successful MBO-systems usually improve communications, increase mutual understanding, improve planning and promote innovation. There are problems associated with MBO-programmes as well. Programmes require long term effort and some objectives are not easily quantifiable and measured. It is also difficult to define objectives clearly under conditions of rapid change and environmental turbulence (Kast et al, 1985, pp 193-194).

#### 4.2.2.4 THE UNCERTAINTY AVOIDANCE INDEX

Hofstede (1980a, p 161) argues that coping with life's inevitable uncertainties, is partly a non-rational process which different individuals and organizations resolve in different ways. He observes that the underlying dimension is the tolerance for uncertainty (ambiguity) in individuals, predisposing some individuals in the same situations to betray a greater need for action to overcome the uncertainty than others. This tolerance of ambiguity is also partly a matter of personality, partly a matter of culture. Hofstede (op cit, p 161) observes that societies differ in their societal norms for uncertainty avoidance. Hofstede (1980a) selects three questions from his Value Survey Module to measure the three components of national level of uncertainty, viz rule orientation, employment stability and stress:



1. Question 30 - A company's rules should not be broken, even when the employee thinks it is in the organization's best interest. This relates to rule orientation. Disagreement with this rule orientation statement indicates a higher level of tolerance for uncertainty. It would be acceptable for employees to break company rules if they believe this is in the company's best interest.
2. Question 35 - How long do you think you will continue working for this company? - relates to employment stability. Employment stability is an effective way to avoid uncertainty.
3. Question 36 - How often do you feel nervous or tense at work? - relates to stress. Although stress is a subjective experience, it is a fundamental phenomenon in human life. All human beings experience stress at times but the same objective situation may be experienced as stressful by one person and relatively stress-free by another.

Hofstede (1980a) identifies stress differences due to the socio-cultural environment and due to occupational differences. Ketz de Vries, Zaleznik and Howard (in Hofstede, 1980a, p 163) explain stress reactions from a combination of four kinds of variables:

1. A human being with his personal history and personality traits.
2. The non-work environment.
3. The work environment.
4. The larger socio-cultural environment in which personality, non-work-life and the work environment are all embedded.

{Source:

Using the aforementioned three questions, Hofstede computes an uncertainty avoidance index (UAI) using the following formula:

$$\text{UAI} = 300 - 30 (\text{mean score rule orientation}) - (\text{percentage (\%)} \text{ intending to stay less than five years}) - 40 (\text{mean stress score}).$$

Hofstede computed the UAI for 40 countries. The resulting values are summarized in Table 4.6.

Table 4.6: COUNTRY UNCERTAINTY AVOIDANCE INDEX (UAI).

Country	Actual	Control- ling for age	Country	Actual	Control- ling for age
Greece	112	98	Finland	59	54
Portugal	104	102	Switzerland	58	62
Belgium	94	80	Netherlands	53	45
Japan	92	112	Australia	51	47
Peru	87	91	Norway	50	38
France	86	73	South Africa	49	62
Chile	86	66	New Zealand	49	60
Spain	86	89	Canada	48	55
Argentina	86	74	U.S.A.	46	36
Turkey	85	61	Philippines	44	45
Mexico	82	86	India	40	48
Israel	81	73	Great Britain	35	43
Colombia	80	77	Ireland	35	54
Venezuela	76	78	Hong Kong	29	61
Brazil	76	74	Sweden	29	23
Italy	75	58	Denmark	23	32
Pakistan	70	82	<u>Singapore</u>	8	31
Austria	70	77	Mean of 39		
Taiwan	69	73	countries	64	64
Germany (F.R)	65	53	<u>(HERMES)</u>		
Thailand	64	73	Yugoslavia		
Iran	59	59	<u>(same industry)</u>	88	77

(Source: Hofstede, 1980a, p 165)

The ranking of countries in Table 4.6 suggests certain clusters of similar cultures. Hofstede finds the UAI for cultures uncorrelated across occupations. However, age may have an influence as employment stability level is a combined function of the average age of employees, their average educational level and the percentage of female employees in an occupation. The younger the employees, the higher their education level and the greater the number of female employees, the lesser the stability. The age variable has to be statistically controlled. Hofstede (1980a) finds a high UAI to indicate that advancement to a managerial position, working for small organizations, competition among employees, individual decisions, working for a foreign manager and a high rate of organizational change are experienced as risky situations which fewer people are willing to face. The correlation of UAI with a preference for group decisions, reminds strongly of the Japanese "ringi" collective decision making system avoiding risks for the individual.

#### 4.2.2.5 THE UNCERTAINTY AVOIDANCE NORM, ITS ORIGINS AND CONSEQUENCES

Hofstede (1980a, p 183) sees the uncertainty avoidance norm as a value system shared by the majority of the middle classes in any society. It deals with the level of anxiety about the future in a country and the consequent need to "protect society through three kinds of measures: technology, rules and rituals. High anxiety levels imply higher stress levels, a higher energy release and the consequent inner urge to work hard

and a strong superego to control dangerous impulses. High anxiety is released through aggressiveness leading to threatening conflict and competition between people in a society. People in high UAI societies are inclined toward collective decision making and have a greater need for consensus. The search for absolute truths in science and legislation is the order of the day in high UAI countries while relativism and pragmatism prevail in low UAI societies. Achievement in life in low UA countries and cultures fits in with what McClelland describes as the "achievement motive". It revolves more around social recognition. A belief in experts whose judgements and decisions are beyond questioning, represents the ritual element in high UAI cultures. This belief in experts discourages employees to take initiatives in their jobs. The UA norm reflects also, at societal level, some of the components of Adorno et al's (1950) Authoritarian Personality, e.g. the intolerance of ambiguity (Hofstede, 1980a, pp 183-185). Figure 4.6 depicts the characteristics of low and high uncertainty avoidance cultures.

Table 4.7: THE UNCERTAINTY AVOIDANCE SOCIETAL NORM.

Low UAI	High UAI
* The uncertainty inherent in life is more easily accepted and each day is taken as it comes.	* The uncertainty inherent in life is felt as a continuous threat which must be fought.
* Ease, lower stress.	* Higher anxiety and stress.
* Time is free.	* Time is money.

Table 4.7 (continued)

Low UAI	High UAI
* Hard work is not a virtue per se.	* Inner urge to work hard.
* Weaker superegos.	* Strong superegos.
* Aggressive behaviour is frowned upon.	* Aggressive behaviour of self and others is accepted.
* Less showing of emotions.	* More showing of emotions.
* Conflict and competition can be contained on the level of fair play and used constructively.	* Conflict and competition can unleash aggression and should therefore be avoided.
* More acceptance of dissent.	* Strong need for consensus.
* Deviance is not felt as threatening; greater tolerance.	* Deviant persons and ideas are dangerous; intolerance.
* Less nationalism.	* Nationalism.
* More positive toward younger people.	* Younger people are suspect.
* Less conservatism.	* Conservatism, law and order.
* More willingness to take risks in life.	* Concern with security in life.
* Achievement determined in terms of recognition.	* Achievement defined in terms of security.

Table 4.7 (continued)

Low UAI	High UAI
* Relativism, empiricism.	* Search for ultimate, absolute truths and values.
* There should be as few rules as possible.	* Need for written rules and regulations.
* If rules cannot be kept, we should change them.	* If rules cannot be kept, we are sinners and should repent.
* Belief in generalists and common sense.	* Belief in experts and their knowledge.
* The authorities are there to serve the citizens.	* Ordinary citizens are incompetent versus the authorities.

(Source: Hofstede, 1980a, p 184)

The UAI norm also affects the type of intellectual activity in a culture. Nobel laureates in the applied physical sciences usually originate from low UAI countries. It is conspicuous that the West's great theoreticians and philosophers all hailed from high UAI countries, especially Germany and Austria, e.g. Kant, Marx, Freud, Heidegger, Weber, Popper, Jaspers and Hegel inter alia. Empirical studies in the social sciences are more in circulation in small or low UAI countries. It seems as if scholars in high UA cultures do not want to risk exposing their truths to experiments with unpredictable outcomes (Hofstede, 1980a, p 182).

For wealthy countries, a strong relationship between UAI and economic growth was found for the period 1960 - 1970 but not over the 1973 - 1980 period.

It seems as if the cultural inheritance of the Roman Empire, with its effective system of formal control of its territories and unified legal system, also has an influence on the UAI. Latin countries (in Europe as well as the Americas) obtain high UAI scores. Hofstede (op cit, p 179) observes that laws and the legal system are the form par excellence in which societal norms are expressed. High UAI countries will have a greater need for legislation than low UAI norm countries. Great Britain with a lower UAI than most countries in Europe does not even have a written constitution and attempts to codify labour-management relations in Britain also failed. In high UAI countries, citizens are obliged to carry identity cards. Citizens feel more competent in low UAI countries and the burden of proof rests on the authorities if they want to identify somebody.

The UAI norm is also related to religion. Countries with a greater need for uncertainty avoidance usually practice religions which stress absolute certainties and are intolerant of other religions. Roman Catholic countries score higher on UAI than Protestant countries. Protestantism and especially Calvinism, encourages worldly ways to cope with uncertainty. Muslim cultures also score high on UAI although somewhat lower than Catholicism. Buddhist countries and Hindu India score low on UAI (Hofstede, 1980a, p 181). The relationship between economic growth and UAI is not clear. Hofstede (op cit, p 175) observes that the seemingly positive relationship between economic growth and uncertainty avoidance only applies within specific historical conditions. For wealthy countries, a strong relationship between UAI and economic growth was found for the period 1960 - 1970 but not over the 1925 - 1950 period.

With regard to the PDI, countries were divided into those with a political system with balanced power and those with a political system of unbalanced power. For UAI the balanced power cultures may be divided into old and young democracies. The young democracies which included countries like Austria, Finland, France, Germany, Ireland, Israel, Italy, Japan and Turkey, tended to obtain a higher score on the UAI than the older democracies which included countries like Australia, Belgium, Canada, Denmark, Great Britain, the Netherlands, New Zealand, Norway, Sweden, Switzerland and the United States. All of these young democracies developed their present form of government after losing or winning a war in which they played a more or less aggressive role.

Almond and Verba (1963) prove that citizen competence (the extent to which citizens believe they can participate in local political decisions) is highly related to the UAI norm. These younger democracies experienced periods in which citizens were deliberately kept incompetent and will, therefore not have the same level of subjective citizen competence as the old democracies with their established political systems. Low UAI cultures reveal a greater propensity to indulge in unorthodox political behaviour like boycotts and occupations. High UAI cultures favour the repression of political demonstrations by the government. The origins of the UAI norm are not clear at all. Causal evidence available is presented in Table 4.8.

various suggested consequences of the UAI norm.



Table 4.8: ORIGINS OF NATIONAL UNCERTAINTY AVOIDANCE  
INDEX DIFFERENCES.

Low UAI	High UAI
* Advanced modernization. after World War II.	* Beginning modernization: high rate of change in society.
* Older democracies.	* Younger democracies.
* Dense population in poor countries; sparse popula- tions in wealthy countries.	* Sparse population in poor countries; dense population in wealthy countries.
* Tolerant religions stressing relativity.	* Intolerant religions stressing absolute certain- ties, the hereafter, and sin.
* Historical events: less legislation, more settle- ment of disputes by nego- tiation and/or conflict.	* Historical events: inheri- tance of developed system of legislation.
* Low mean age of population leaders.	* High mean age of population leaders.
* Smaller organizations.	* Larger organizations.

(Source: Hofstede, 1980a, p 185)

Table 4.9 collects the various suggested consequences of the UAI norm.

Table 4.9: CONSEQUENCES OF NATIONAL UNCERTAINTY  
AVOIDANCE INDEX DIFFERENCES.

Low UAI	High UAI
Consequences of Society at Large	
* Slower economic growth after World War II.	* Faster economic growth after World War II.
* Weaker nationalism.	* Stronger nationalism.
* Less aggressiveness versus other nations.	* Greater aggressiveness versus other nations.
* "Looser" societies.	* "Tight" societies.
* Stronger feelings of citizen competence.	* Greater dependence of citizens on authorities.
* More tolerance for citizen protest.	* Less tolerance for citizen protest.
* Civil servants positive toward politics.	* Civil servants dislike politics.
* More casuistic approach to legal issues.	* More elaborate legal system.
* Lower speed limits and fewer fatal road accidents.	* Faster car-driving permitted and more fatal road accidents.
* Stronger accent on lay competence: more nurses per doctor.	* Stronger accent on expertise: fewer nurses per doctor.
* Organisations can be pluriform.	* Organisations should be as uniform as possible. (standardisation)

Table 4.9 (continued)

Low UAI	High UAI
<b>Consequences for Religious Life and Philosophical and Ideological Thinking</b>	
* Either no state religions or more de facto religious tolerance.	* More intolerant state religions.
* Pragmatic or introvert, meditative religions.	* Activist religions.
* Relativism.	* Search for absolute truth.
* Practical contribution to knowledge.	* Theoretical contributions to knowledge.
* Empiricism in social sciences.	* Theoricism in social sciences.
* Pragmatic thinking popular.	* Ideological thinking popular.

**Consequences for Organizations**

- |                                   |  |
|-----------------------------------|--|
| * Less structuring of activities. | * More structuring of activities.                                      |
| * Fewer written rules.            | * More written rules.  |
| * More generalists or amateurs.   | * Larger number of specialists   |
| * Organizations can be pluriform. | * Organizations should be as uniform as possible.<br>(standardization) |

Table 4.9 (continued)

Low UAI	High UAI
* Managers more involved in strategy.	* Managers more involved in details.
* Managers more interpersonal orientated and flexible in their style.	* Managers more task-orientated and consistent in their style.
* Managers more willing to make individual and risky decisions.	* Managers less willing to make individual and risky decisions.
* High labor turnover.	* Lower labor turnover.
* More ambitious employees.	* Less ambitious employees.
* Lower satisfaction scores.	* Higher satisfaction scores.
* Less power through control of uncertainty.	* More power through control of uncertainty.
* Less ritual behaviour.	* More ritual behaviour.

(Source: Hofstede, 1980a, p 187)

The consequences for society at large and for philosophical thinking over religious life have already been discussed. The consequences for organizations follow from the role which uncertainty plays in determining structures and processes. Organizations in high UAI countries tend to have more structuring and more written rules. Managers in these countries want to be better informed of detail than those in low UAI countries. Keeping an eye on detail is an

4.2.3 indication of uncertainty avoidance. In high UAI countries organizational decision-making happens at higher management levels than in low UAI countries although key decisions are made at higher levels in low UAI cultures. In some low UAI countries, e.g. Great Britain, one finds more managerial job descriptions. Managers in high UAI cultures are likely to be more task orientated. The UAI norm may also affect the exercise of power in organizations. Hofstede (1980a, p 189) ascertains that power in organizations is exercised among groups and sub-systems of organizations and therefore strongly affects the control of uncertainty. Hinings, Hickson, Pennings and Schneck (1974) link up with Hofstede's assertion, saying that uncertainty is the variable most critical to power and is the best single predictor of it. In high UAI cultures those in control of uncertainty will be the more powerful.

Ritual behaviour in organizations is likely to be found in high UAI cultures. These rituals serve a deep-seated human need to avoid uncertainties in human and organizational life. The strength of this need, however, differs among nations, groups within nations and individuals (Hofstede, 1980a, pp 186-189).

Organizational theorists emphasize that organizations must adapt to their environment if they are to remain viable. One of the central issues in this process is coping with environmental uncertainty.

## 4.2.3

INDIVIDUALISM: in-group to look after them in exchange for unquestioning loyalty". Triandis. The third dimension of national culture is called individualism. Hofstede and Bond (1984) observe that individualism has an opposite pole, viz collectivism. Thus individualism versus collectivism reflects the position of a culture on a bipolar continuum. They define the individualism pole as "a situation in which people are supposed to look after themselves and their immediate family only". Collectivism is defined as "a situation in which people belong to in-groups or collectivities which are supposed to look after them in exchange for loyalty". This bipolar continuum relates to the basic societal issue of the individual's dependence on the group and his/her self-concept as either "I" or "We" (Hofstede et al, 1984, p 419). However, Kagitcibasi (1989) questions this assumption of the unidimensionality of "individualism versus collectivism" as polar opposites and draws attention to the possible compatibility of these orientations.

1. Self-reliance, independence, freedom to do Moorhead et al (1989, p 674) view individualism as "a state in which people view themselves first as individuals and believe their own interest and values take priority". Collectivism, on the other hand, is "a feeling that the good of the group or society should come first". Wheeler, Reis and Bond (1989, p 79) also accept the unidimensionality of the continuum and define individualism as "preference for a loosely knit social framework in society wherein individuals are supposed to take care of themselves and their immediate families only". Collectivism represents "a preference for a tightly knit social framework in which individuals can expect their relatives,

clan, or other in-group to look after them in exchange for unquestioning loyalty". Triandis, Bontempo, Betancourt, Bond, Leung, Brenes, Georgas, Hui, Marin, Setiadi, Sinha, Verma, Spangenberg, Touzard and de Montmollin (1986) link up with Kagitcibasi suggesting that the two opposite poles should rather be conceptualized as two independent factors. Triandis et al (1986, p 259) characterize collectivism as:

1. A high consideration for the implications of their own behaviour to others.
2. Sharing material and non-material resources with others.
3. Emphasizing harmony with the in-group.
4. Being controlled by shame.
5. Sharing good as well as bad outcomes with others.
6. Feeling part of the in-group's life.

Triandis et al (1986, p 259) proceed by stipulating the characteristics of individualism:

1. Self-reliance, independence, freedom to do one's own thing and separation from family, religion and community.
2. Hedonism, utilitarianism, emphasis on exchanges, contracts, helping the community only if self gets something for it.
3. Competition: being a distinguished person.
4. Equity and fairness.
5. Trust in others.
6. Emphasis on competence.
7. Involvement in community life and in associations.

8. Equality, rejection of arbitrary authority.

9. The self as the only source of reality.

Bond, Wan, Leung and Giacalone (1985, p 113) state that the primacy attached to group membership, as opposed to individual characteristics in guiding behaviour, is a basic element in collectivism. Insko, Schopler, Hoyle, Dardis and Graets (1990) have found a tendency for intergroup relations to be more competitive or less co-operative than interpersonal relations. Interpersonal relations tend to be more co-operative than intergroup relations. This is referred to as a discontinuity effect. Competitive intergroup behaviour may flow from a social comparative tendency to establish social identity and self-worth.

#### 4.2.3.1 INDIVIDUALISM/COLLECTIVISM IN SOCIETY

Hofstede (1980a, p 214) points out that some animals are gregarious (wolves) while others are solitary (tigers) and that humans are, to a great extent, gregarious. Different human societies however, show gregariousness to different degrees. The relationship between the individual and the collectivity is the third dimension on which societies differ. An examination of a broad range of human societies, traditional as well as modern ones, reveals different degrees of gregariousness with regard to the complexity of the family units in which people live, the structure of the family system - nuclear or extended or tribal units based on kinship ties and day to day behaviour (Hofstede, 1980a, p 214). Blumberg and Winch (1972) advance a curvilinear hypothesis to describe the relationship between



the complexity of societies and family complexity. These societies developed from traditional societies with a combined practice of agriculture and herding and the direct provision of needs through the centrally administered riverine societies with its archaic storage economies to modern society. The traditional hunting-herding tribes usually lived in the nuclear family structure. The riverine-agricultural societies, especially those in Egypt and Mesopotamia were more complex and the family and/or tribal units became more extended. However in the urban-industrial and post-industrial societies, family complexity decreases again and extended families disintegrated into nuclear families.

Hui and Triandis (1986, p 226) view individualism as a "feeling or conduct in which the guiding principle is the interest of the individual". Triandis et al (1986, p 258) observe that individualism has two distinguishing characteristics, viz separation from in-groups and self-reliance with hedonism. It is thus intimately linked with societal norms in the sense of value systems of major groups of the population. It affects the structure and functioning of institutions such as educational, religious, political, economic and utilitarian institutions (Hofstede, 1980a, p 215). Waterman (in Hui et al, 1986, p 226) contended that individualism was embodied in four psychological qualities:

7. Feeling of involvement in other's lives.  
While the individualist's social world is segmented the collectivists feel and/or

1. A sense of personal identity.
2. Self-actualization.
3. Internal locus of control.
4. Post-conventional principled moral reasoning.

The concept of individualism links up with Parson's self-orientation in sociology. Self-orientation means for Parsons the permissibility of an actor pursuing any interest private to himself or to a small in-group. Self-orientated persons always act in their own interest or in the interest of a very small sub-collectivity (Hui et al, 1986, p 227). Triandis et al (1986, p 258) ascribe the characteristics of family integrity and interdependence with sociability to collectivism. Hui et al (1986, pp 229-232) view collectivism as a cluster of a wide variety of beliefs and behaviours which are grouped into seven categories:

1. Consideration of implications (costs and benefits) of one's own decisions and/or actions for other people.
2. Sharing of material resources.
3. Sharing of non-material resources.
4. Susceptibility to social influence.
5. Self-presentation and facework - some people are very concerned with gaining the approval of the collective and feel shameful if they fail to get it.
6. Sharing of outcomes, feeling and experiencing interdependence.
7. Feeling of involvement in other's lives.

While the individualist's social world is segmented the collectivists feel and/or

experience an involvement in other people's lives to the extent that the latter's experiences could have direct or indirect consequences for them. Collectivism was found to be negatively related to self-centredness and positively related to helping behaviour and co-operation. Parsons views collectivism as a collectivity orientation which compels the actor "to pursue the common interest of the collectivity" (Hui et al, 1986, pp 227-228).

The Ubuntu value in African culture is related to collectivism. The concept of Ubuntu entails humaneness, consideration for others, help of others, work as part of a team, friendly relationships with other people and sharing with others (Godsell, 1983b, pp 100-103). In the African context collectivism may be seen as African socialism of which there are different versions and concepts, e.g. the lyrical, existentialist and negritude socialism of Leopold Sedar Senghor in Senegal, the African socialism of Kenyatta and Mboya in Kenya, the co-operative and democratic socialism of Nasser and Sadat in Egypt, the pragmatic socialism of Nyerere in Tanzania and the dynamic socialism of Sekou Touré in Guinea (Kanza, 1971, p 101). The scientific theory of socialism as set out by its originators, Marx and Engels, regards socialism as "the phase of social development which will follow capitalism, according to an inevitable law of history". It advances the idea of a struggle between the bourgeois and proletarian classes resulting in the destruction of capitalism and the installation of socialism. African socialism does not imply any

class struggle but draws its inspiration from the spirit which "has imbued clans and tribes from time immemorial". This spirit is a driving force which automatically compels every individual to community service. This is a dynamic brand of socialism capable of adapting itself to the circumstances usually prevailing in developing societies (Kanza, 1971, pp 103-106).

Wheeler et al (1989, p 79) observe that cultures can be distinguished on the basis of their social activities and they identify individual-centered and situation-centred cultures. In individual-centered cultures, emphasis is put on the predilections of the individual. This is characteristic of freemarket orientated capitalistic societies. In situation-centred cultures the emphasis is put on the individual's appropriate place, behaviour and tendency to act in accordance with the external expectations or social norms. This pattern is also called a social orientation. Socially orientated people are able to protect their social selves and function as an integral part of the social network. Social orientation is quite similar to collectivism. A social orientation implies (Wheeler et al, 1989, p 80):

1. An emphasis on the views, needs and goals of the in-group rather than of oneself.
2. Social norms and duties defined by the in-group.
3. Beliefs are shared with the in-group and beliefs which distinguish oneself from the in-group are discarded.
4. A particular member is always ready to co-operate with in-group members.

5. An intense emotional attachment to the in-group.

One of the distinguishing characteristics of collectivist (socially orientated) societies is a sharp delineation between the in-group and the out-groups. The presence of a well-defined in-group implies a tight network of people who know one another well and are dependent upon one another. Triandis, Bontempo, Villareal, Asai and Lucca (1988) have done research which corroborated this finding. Their research reveals closer and enduring friendships in collectivist cultures due to the greater sense of emotional attachment to the in-group. The opposite is true of individualistic cultures. In such cultures, social networks are likely to be composed of superficial acquaintances which lower the level of interactional intimacy. Sinha and Verma (in Kagitcibasi, 1989, p 123) in discussing the structure of collectivism, observe that it is conducive to mental health and social harmony as it lends greater social support which acts as a shock absorber of the stresses and strains of life. Collectivism is characterized by an emphasis on:

1. The views, needs and goals of the in-groups rather than on self.
2. Social norms and duty defined by the in-group.
3. Beliefs shared within the in-group rather than beliefs which distinguish oneself from the in-group.
4. Greater readiness to co-operate with in-group members.

Collectivism manifests itself in "the believing and practices which reflect the individual's embeddedness in his/her in-group and the influence of in-groups on individuals" (Sinha and Verma, op cit, p 123). People in a collectivist culture seem to be relationship orientated and behave according to social norms designed to maintain social harmony in the in-group. Intra-group conflict is usually at a minimum. Sinha et al (in Kagitcibasi, 1989, p 124) proceed by quoting Triandis's distinction between collectivism at individual level and collectivism at cultural level. The former is designated as allocentrism and signifies the extent to which individuals perceive themselves as embedded in their in-groups. The latter is designated as collectivism and indicates the extent to which the members of a particular culture behave according to group norms.

Individualism has positive as well as negative implications. On the negative side extreme forms of individualism are suspected to be related to social problems such as high rates of suicide, divorce, child abuse, crime, emotional stress and physical and mental illness (Triandis et al, 1986, p 258). On the positive side individualism is related to economic development and the Gross Domestic Product of a country (culture) (Triandis et al, 1986, p 208; Hofstede, 1980a). Triandis (in Kagitcibasi, 1989, p 80) connects individualism with the equity principle. According to Triandis, people in highly individualistic cultures used the equity principle while collectivist cultures prefer the equality and need principles. However, people from the

post-Confucian East Asian cultures dealing with outsiders such as persons they have just met, apply the equity principle with the same effect as persons from the highly individualistic Anglo-Saxon cultures. Hofstede (op cit, p 216) also discusses the association between the degree of modernity in a society and its degree of individualism - collectivism.

He quotes three sources, viz Blumberg and Winch who associated modernity with lower familial complexity; Riesman, Glazer and Denny who associated transitional growth with inner-directedness and Tönnies who associated the state with "Gesellschaft". The degree of modernity (or economic evolution) of a society is a major determinant of societal norms and relates most closely to the individualism - collectivism dimension of national culture.

#### 4.2.3.2 Individualism in organizations

The degree of individualism/collectivism prevalent in a society will strongly affect the nature of the relationship between an individual and the organization to which he or she belongs (Hofstede, 1980a, p 217). Individualist cultures stress the individual's achievements and rights, and expect the individual to satisfy his/her own needs. Individualistic cultures put a high premium on autonomy in the work situation, personal time away from work, emotional independence in the work situation and the organization and preference for a small organization. The social order in individualistic cultures is usually associated with the needs of society rather than with the

needs of a particular community (Mead, 1990, p 20). Moorhead et al (1989, p 674) believe that employees in individualistic cultures tend to put their careers before the organization(s). They assess situations in terms of how decisions and alternative courses of action will affect them personally. Individualistic cultures exert control by internal pressures and motivate members by providing the opportunities for self-achievement.

Mead (1990, p 20) observes that collectivist cultures are characterized by tight social networks in which members identify closely with their organizations and have a great emotional dependence on the organizations. The needs of the organization exert a strong influence on the individual's private life and also determine his choice of friends. The organizational culture also determines the employee's notions of social order. Moorhead et al (1989, p 674) agree with Mead on this aspect. They are adamant that collectivist cultures put the need of the organization before the personal needs of the members of the culture. Group loyalty is highly valued and decisions are viewed in terms of their impact on the organization. Anglo-Saxon countries demonstrate individualistic industrial values while collectivistic industrial values are prevalent in post-Confucian countries, Pakistan and Central as well as South American countries. The degree of individualism/collectivism in a society determines the type of persons admitted into positions of authority and influence in configurations where digitality is its metaphysical principle and DNA its prophet" (Ahponen, 1990, p 345).



organizations. Merton (in Hofstede, 1980a, p 218) distinguishes between the "locals" and "cosmopolitans". The first are concerned with intra-organizational problems and are usually influential in collectivist climates. The latter are more concerned with inter-organizational problems and consider themselves as an integral part of the world outside the organization and usually become influential in individualist climates.

There is also a relationship between the organization's technology and the position of its employees on the individualism/collectivism continuum. Moorhead et al (1989, p 682) discern two forms of technological variation, viz variations in available technology and variations in attitudes toward technology. Technologies developed in Western individualistic settings presuppose an individualistic mentality in entrepreneurs, managers and employees which is part of modernity with its rationalism and objectivity (Hofstede, 1980a, p 218). Western countries are generally favourably disposed toward technology and technological development while the opposite holds good for collective cultures. Moorhead et al (1989, p 682) draw attention to the frustration experienced by managers in underdeveloped countries with their lack of electrical power resources, telephones, trucking equipment, computers and robots. The underdeveloped world lacks the high technology culture of the individualistic advanced West with its "proteic networks, order of simulacrum, order of models, codes, cybernetic operational configurations where digitality is its metaphysical principle and DNA its prophet" (Ahponen, 1990, p 345).

The individualistic cultures of the West with their emphasis on economic development and capitalism, are usually characterized by hierarchical, functional orders of systematic management of wage-work and free competition which have been considered as essential factors for accumulation of capital. This accumulation of capital can only be achieved by capitalism's demand to produce and to be productive and the subject's (in capitalist cultures) right to self-realization. High technology facilitates this production process to a great extent (Ahponen, 1990, pp 345-346). According to Hofstede, (1980a, p 218) the introduction of high technology into collectivist cultures creates problems as it demands new societal norms. The collectivist value patterns may set limits to the technology transfer possibilities. Hofstede therefore proposes a design of political and organizational structures which would allow for the co-existence of collectivism and modern technology.

The individualism/collectivism dimension is also discernible in the normative organization theories hailing from different countries. Theories originating from Western and especially Anglo-Saxon cultures are seen as inner-directed. This inner-directedness views the self as an independent entity with a right to self-realization and self-regulation. Theories originating from collectivist cultures are described as other-directed, which implies a concern for others within the boundaries of the organization. Hjelholt (in Hofstede, 1980a, p 219) who hails from a Scandinavian country with a

4.2.3.3 social democratic (welfare democratic) value system, views the "external and internal boundaries" of an organization as sources of collective identity for its members:

"I think the identity of groups and systems is important. Without identity the system or the group is neither productive nor satisfying as a place to live. And if we have to get our identity from other systems and just be a prisoner in the working organization, we not create a society which is clearly asking for trouble.

From this outburst you can guess my attitude toward the predominantly American organization theories advocating the organization structure as matrix-organizations or temporary systems. I think that the theories which try to get away with or loosen boundaries are attacking the group identities, and in this way, while temporarily ensuring flexibility inside the organization, they export problems to the outside, where we get a society of alienated, rootless individuals. I feel much more in accordance with the moves of groups to extend or redefine their boundaries, trying to let their values influence the organization as a whole. I refer to the unions' demand for a better work environment, their demand to be included in decision-making for the whole organization, and the like".

This quotation shows that a different value position leads to a different theory.

## 4.2.3.3 THE INDIVIDUALISM INDEX

The computation of the individualism index revolves around the 14 work goal questions of the format "How important would it be to you to ...?". Hofstede (1980a, pp 220-223) bases the individualism index (as well as the masculinity index) on two main factors which explain the national (culture) differences in employees' answers to the 14 work goal questions. A factor analysis (principal axis factoring with varimax rotation) attributes 50% of the variance in a culture's mean scores to these two factors. Hofstede proceeds by basing the individualism index on the first of these two factors. This factor accounts for 24 percent of the variance and is composed of the work goals presented in Table 4.10.

Table 4.10: FACTOR SCORES - WORK GOAL QUESTIONS.

Loading	Work goals
0,86	Personal time
0,49	Freedom
0,46	Challenge
0,63	Use of skills
0,69	Physical conditions
0,82	Training

The "loading" represents the correlation coefficient across the 40 countries between the factor score and the country mean score for each work goal. Table 4.10 reveals that the factor is composed of three goals with positive loadings and three with negative loadings. The three work goals with positive loadings stress the actor's independence from the organization and personal

accomplishment. The three goals with negative loadings stress things the organization should do for the individual. The latter, according to Hofstede (op cit, p 221) reflects a "local mentality" while the former reflects a "cosmopolitan" one. These two groups of work goals (local and cosmopolitan) discriminate sharply between national cultures. The two opposing groups of goals, viz goals stressing independence from the organization and those goals stressing dependence on the organization, have led to the naming of this factor as "Individual/Collective". A country's (or culture's) factor scores are used as the basis for its individualism index.

Hofstede (1980a, p 221) finds Anglo-Saxon countries to have the highest individualism index (IDV) values, e.g. the United States of America (91), Australia (90) and Great Britain (89) while the lowest values were obtained from Latin cultures and Islamic countries, e.g. Pakistan (14), Colombia (13) and Venezuela (12). Hofstede (op cit, p 221) also finds an overall correlation between the two dimensions of power distance index and individualism index. Hofstede also finds a need for strict authority of hierarchical superiors and, at the same time, personal independence from any collectivity in Latin cultures<sup>2</sup> (European) as well as South Africa<sup>3</sup>. He calls them dependent

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<sup>2</sup> This culture pattern of dependent individualism is strongly discernible in the case of France.

<sup>3</sup> South Africa marginally belongs to the Latin culture cluster.

individualists. Just the opposite pattern, which may be called independent collectivism, holds for Austria and Israel. No strict authority exists but a relative personal dependence on the collectivity. Hofstede did not find an individual/collective dimension across occupations.

A low but significant correlation ( $\rho = ,46$ ) was found between the individualism index (IDV) and McClelland's need for affiliation ( $n_{aff}$ ). The implication of this correlation is that in more individualistic countries, there is more emphasis on affiliation and a higher need for developing and maintaining a positive and affective friendship. In traditional societies with its extended families and low individualism, there is less of a need to make specific friendships. The IDV is also significantly although negatively related (Spearman's  $\rho = -,62$ ) to traffic deaths. The implication is that in more individualistic countries, traffic is safer. Individualistic countries tend to be wealthier which is likely to increase the number of vehicles available and to decrease the number of kilometres per vehicle. Etzioni's distinction between a calculative and a moral involvement in the traffic situation may be linked to the IDV of a culture. High IDV countries display a more calculative involvement in traffic which results in safer driving (Etzioni, 1975, pp 218, 228).

A summary of IDV differences between low IDV-countries and high IDV-countries is presented in Table 4.11.

Table 4.11: SUMMARY OF INDIVIDUALISM INDEX-DIFFERENCES  
BETWEEN LOW INDIVIDUALISM INDEX COUNTRIES AND  
HIGH INDIVIDUALISM INDEX COUNTRIES.

Low IDV Countries	High IDV Countries
* Importance of provisions by company (training, physical conditions).	* Importance of employees' personal life(time).
* Emotional dependence on company.	* Emotional independence from company.
* Large company attractive.	* Small company attractive.
* Moral involvement with company.	* Calculative involvement with company.
* More importance attached to training and use of skills in jobs.	* More importance attached to freedom and challenge in jobs.
* Students consider it less socially acceptable to claim pursuing their own ends without minding others.	* Students consider it socially acceptable to claim pursuing their own ends without minding others.
* Managers aspire to conformity and orderliness.	* Managers aspire to leadership and variety.
* Managers rate having security in their position more important.	* Managers rate having autonomy more important.
* More years of schooling needed to do a given job.	* Fewer years of schooling needed to do a given job.

Table 4.11 (continued)

Low IDV Countries	High IDV Countries
* Managers endorse "traditional" points of view, not supporting employee initiative and group activity.	* Managers endorse "modern" points of view on stimulating employee initiative and group activity.
* Group decisions are considered better than individual decisions.	* Individual decisions are considered better than group decisions.
* Duty in life appeals to students.	* Enjoyment in life appeals to students.
* Managers choose duty, expertise, and prestige as life goals.	* Managers choose pleasure, affection, and security as life goals.
* Individual initiative is socially frowned upon; fatalism.	* Individual initiative is socially encouraged.
* More acquiescence in responses to "importance" questions.	* Less acquiescence in responses to "importance" questions.
* People thought of in terms of in-groups and out-groups; particularism.	* People thought of in general terms; universalism.
* Social relations predetermined in terms of in-groups.	* Need to make specific friendships.
* More years of schooling needed to do a given job.	* Fewer years of schooling needed to do a given job.



Table 4.11 (continued)

Low IDV Countries	High IDV Countries
* More traffic accidents per 1 000 vehicles.	* Fewer traffic accidents per 1 000 vehicles.
* More traditional time-use pattern.	* More modern time-use pattern.

(Source: Hofstede, 1980a, pp 230-231)

#### 4.2.3.4 THE INDIVIDUALISM NORM - ITS ORIGINS AND CONSEQUENCES

Hofstede (1980a, p 231) explores the relationship between IDV and national wealth, geographical latitude and organization size statistically. A Bravais-Pearson product-moment correlation coefficient of 0,82 (explaining 67% of the variance) was obtained between the IDV and the GNP of a country. By entering wealth, geographical latitude and organization size simultaneously into the regression equation, the result is an even more accurate prediction of IDV. Individualism also has an influence on the atomized trade union system. In Anglo-Saxon culture countries and especially Great Britain, the individualistic value system makes integration between the craft unions extremely difficult. Worker self-management is not the order of the day in these countries. In collectivist cultures, e.g. Yugoslavia a worker self-management system is in operation. Chile and Portugal tried out forms of worker self-management. Sweden with its system of social democracy encourages worker participation.

Table 4.12.

Beteille (in Hofstede, 1980a, p 233) stresses the correspondence between political democracy, capitalism, competition and individualism.

Beteille ascertains that the capitalist market economy fosters individualism. Socialist types of economies, on the contrary, foster collectivism.

Hofstede (op cit, p 233) also detects a

correlation between individualism and balanced political power. Such cultures respect certain

rules of political pluralism. Dictators of such cultures would not be able to obtain sufficient

passive compliance to survive. Individualism and political stability (balanced political power) are

also related through the distribution of national wealth across sectors of the economy such as

mining, manufacturing and farming. Sectorial

equality is associated with a high IDV. Hofstede

(1980a, p 234) interprets this as the outcome of a

universalist attitude among both decision makers and population. This correlation will definitely

result in greater political stability as

underprivileged economic sectors are a threat to

the stability of a regime. The development of a

middle class also contributes to political

stability. The development of a middle class is a

central factor contributing directly to the GDP

and indirectly to the decentralization of

political power, the questioning of

authoritarianism and also leads to a reduction of

inequality in society.

As a societal norm, individualism is shared by the majority in the middle classes in a society. The general societal norm of individualism behind the low IDV and high IDV syndromes is depicted in Table 4.12.

Table 4.12: THE INDIVIDUALISM SOCIETAL NORM.

Low IDV	High IDV
* In society, people are born into extended families or clans which protect them in exchange for loyalty.	* In society, everyone is supposed to take care of him or herself and his or her immediate family.
* "We" consciousness.	* "I" consciousness.
* Collectivity-orientation.	* Self-orientation.
* Identity is based in the social system.	* Identity is based in the individual.
* Emotional dependence of individual on organizations and institutions.	* Emotional independence of individual from organizations or institutions.
* Emphasis on belonging to organization; membership ideal.	* Emphasis on individual initiative and achievement; leadership ideal.
* Private life is invaded by organizations and clans to which one belongs; opinions are predetermined.	* Everyone has a right to a private life and opinion.
* Expertise, order, duty, security provided by organization or clan.	* Autonomy, variety, pleasure, individual financial security.
* Survival less dependent on individual initiative.	* Survival more dependent on individual initiative.

Table 4.12 (continued)

Low IDV	High IDV
* Friendships predetermined by stable social relationships; but need for prestige within these relationships.	* Need for specific friendships.
* Belief in group decisions.	* Belief in individual decisions.
* Value standards differ for in-groups and out-groups; particularism.	* Value standards should apply to all; universalism.

(Source: Hofstede, 1980a, p 235)

Table 4.13 details the origins of national individualism index differences.

Table 4.13: ORIGINS OF NATIONAL INDIVIDUALISM INDEX DIFFERENCES.

Low IDV	High IDV
* Less economic development.	* Greater economic development.
* Less social mobility and weak development of middle class.	* Greater social mobility and strong development of middle class.
* Tropical and subtropical climates.	* Moderate to cold climates.
* Survival less dependent on individual initiative.	* Survival more dependent on individual initiative.

Table 4.13 (continued)

Low IDV	High IDV
* More traditional agriculture, less modern industry, less urbanization.	* Less traditional agriculture more modern industry, more urbanization.
* Extended family or tribal structures.	* Nuclear family structure.
* More children per nuclear family.	* Fewer children per nuclear family.
* Traditional educational systems, for minority of population.	* Pragmatic educational systems, for majority of population.
* Historical factors: tradition of collectivist thinking and action.	* Historical factors: tradition of individualist thinking and action.
* Smaller, particularist organizations.	* Larger, universalist organizations.

(Source: Hofstede, 1980a, p 237)

Table 4.13 lists the causal factors of IDV.

Economic development is the principal factor accounting for differences in IDV. Social

mobility and the development of a middle class

also play a pertinent role. Climate, family

structure, economic sector and educational systems

are of secondary importance. The consequences of

low and high IDV levels for society at large and

for organizations are depicted in Table 4.14.

Table 4.14: CONSEQUENCES OF NATIONAL INDIVIDUALISM INDEX DIFFERENCES.

Low IDV Countries	High IDV Countries
Consequences for Society at Large	
* Gemeinschaft (community-based) social order.	* Gesellschaft (society-based) social order.
* For wealthy countries, a relatively low IDV helps economic growth.	* After a certain level of wealth has been obtained, slower economic growth.
* Unbalanced power political systems.	* Balanced power political systems.
* Less occupational mobility.	* Greater occupational mobility.
* Income inequality between sectors of the economy.	* Income equality between sectors of the economy.
* Less press freedom.	* Greater press freedom.
* Repression potential.	* Protest potential.
* Labour movement more united.	* Labour movement more atomized.
* Labour unions more interested in sharing management responsibility; appeal of worker self-management.	* Labour unions less interested in sharing management responsibility.
* Organization has great influence on members' well-being.	* Organization has moderate influence on members' well-being.

Table 4.14 (continued)

Low IDV Countries	High IDV Countries
* More road accidents. ...ation to defend their interests.	* Safer driving. ...expected to defend their own interests.
Consequences for Religious Life and Philosophical and Ideological Thinking	
* Collective conversions.	* Individual conversions.
* Jen philosophy of man.	* Personality philosophy of man.
* Stress on identity and roots.	* Worship of the independent actor.
* Traditional ethic. ...in management ideas.	* "Protestant" (modernist) ethic. ...and endorse modern management ideas.
Consequences for Organizations	
* Involvement of individuals with organizations primarily moral. 1980a, pp	* Involvement of individuals with organizations primarily calculative.
* Employees expect organi- zations to look after them like a family - and can become very alienated if organization dissatisfies them.	* Organizations are not expected to look after employees from the cradle to the grave. The political ...with less press freedom than ...in high IDV countries. High IDV cultures are more inclined toward the Protestant work ethic and
* Organization has great influence on members' well-being.	* Organization has moderate influence on members' well-being. ...calculatively involved in organizations. Organizations are not expected to look after employees for as long as

Table 4.14 (continued)

Low IDV Countries	High IDV Countries
* Employees expect organization to defend their interests.	* Employees are expected to defend their own interests.
* Policies and practices based on loyalty and sense of duty.	* Policies and practices should allow for individual initiative.
* Promotion from inside.	* Promotion from inside and outside.
Promotion on seniority. (Localism)	Promotion on market value. (Cosmopolitanism)
* Less concern with fashion in management ideas.	* Managers try to be up-to-date and endorse modern management ideas.
* Policies and practices vary according to relations (particularism).	* Policies and practices apply to all (universalism).

(Source: Hofstede, 1980a, pp 238-239).

The data presented in Table 4.14 show that in low IDV cultures the social order is community based and that economic growth in wealthy countries is stimulated by a relatively low IDV. The political system is unbalanced with less press freedom than in high IDV countries. High IDV cultures are more inclined toward the Protestant work ethic and labour movements more atomized with union management less interested in sharing management responsibility. Individuals are calculatively involved in organizations. Organizations are not expected to look after employees for as long as



4.2.4.1 they live but it is the employee's duty to defend his/her own interest. Policies and practices should allow for individual initiative and should be applicable to all. Policies, procedures and practices in low IDV countries are based on loyalty and a sense of duty and vary according to relations (particularism).

#### 4.2.4 MASCULINITY

The fourth dimension along which national cultures may differ has been called masculinity with its opposite pole femininity. The bipolar masculinity/femininity dimension is a fundamental dimension and its influence is noticeable in all facets of life. Different cultures cope with it in different ways. Hofstede (1980a, p 261) remarks that the sex role distribution, characteristic and common in a particular society, is transferred by socialization in families, educational institutions, peer groups and through the media. The predominant socialization pattern is for men to be more assertive and for women to be more nurturing. The masculinity/femininity dimension reveals itself in organizations in the relationship between the perceived goals of the organization and the career possibilities for men and women. The mission and goals of business organizations are usually masculine with an emphasis on achievement, growth and high earnings on investment. Service organizations are more "feminine" in orientation and display a propensity to render service and a concern with interpersonal aspects and the physical environment.

## 4.2.4.1 SEXES AND SEX ROLES

The common trend among the majority of cultures, both traditional and modern, is to ascribe to men a general assertiveness and a concern with economic issues and achievement in general. A role of nurturance and a general caring attitude are usually ascribed to women folk. This male assertiveness tends to lead to dominance in political and economic life. Females usually take care of people in general and children in particular. Mead (1962, p 158) views the assertiveness/nurturance divide in the light of absolute sex differences: women bear children and breast-feed them while men beget children. Women attain a sense of "irreversible achievement" by bringing children into the world. Men have to reach, in the course of their lives, a solid sense of "irreversible achievement" by means of power, assertiveness and achievement in political, economic, academic and work life. Anthropology, psychology and political science confirm the male assertiveness/female nurturance pattern.

Williams, Giles and Edwards (in Hofstede, 1980a, p 263) report on sex role stereotypes in Great Britain, Ireland and the United States of America. The results of the study show a relationship between male behaviour and autonomy, aggression, exhibition and dominance. Female behaviour on the other hand is associated with nurturance, affiliation, helpfulness and humility. Barry, Bacon and Child (1959, pp 331-332) in a study on socialization, found girls to be socialized toward nurturance, responsibility and, to a lesser degree, obedience while boys are socialized toward achievement and self-reliance.

McClelland (1961) and McClelland and Winter (1969, pp 1, 11) show men to be well-disposed toward a particular human motive, viz the need to achievement. The need for achievement promotes entrepreneurship which in turn is the key to economic growth. Rationality, assertiveness, assuming personal responsibility for solving problems and performance orientation are characteristic of achievement orientation but are also distinctive of the male behaviour pattern. In traditional cultures the dominance of males remains unchallenged even when absent for a long time from the family, e.g. husbands absent from the family due to labour migratory patterns in South Africa. The absent husband still tends to control the larger share of the family income while placing an increased burden of work on the wives (Le Vine, 1966).

The issue of the equality or inequality between the sexes is also strongly entertained in religion and philosophy. The Judeo-Christian Old Testamental account of the creation tells the story of "the Man" first being created and put in the Garden in Eden. Then "the Woman" was made from one of Adam's ribs because the Lord said that "it is not good that the man should be alone: I will make him a help meet for him".<sup>4</sup> Even up to this present day the structure of the Roman Catholic Church has remained highly masculine while the structure of Protestant churches has become less masculine. Plato in the ancient Greek philosophy argued that the male sex was much better at everything than women.<sup>5</sup> Hofstede

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<sup>4</sup> Genesis 2: 7-23. The King James Version.

<sup>5</sup> Plato's The Republic in Stace C.T. 1963.

History of Greek philosophy.

(1980a, p 264) points out the existence of active feminist movements in a number of countries. To Hofstede this is an indication that some women, at least, no longer take the traditional pattern of male dominance for granted and try to develop alternative role distributions.

#### 4.2.4.2 SEX ROLES IN ORGANIZATIONS

The division of labour and the division of sex roles tend to be linked one way or another. The division of labour over the sexes is largely a matter of convention. Jobs being stereotyped as "masculine" in one culture may be stereotyped "feminine" in another. The mission and goals of the organization also have an effect on the distribution and division of labour. The masculine goal system of business organizations would concur with the achievement need and performance role of the male. Business corporations are almost always led by men and their organizational climate set by men. The picture and model entertained by Western culture of a successful manager is a masculine one. This view fits in with the general pattern of male dominance and bias against female managers in most societies (Hofstede, 1980a, p 267).

Perceptions and evaluations of managerial behaviour by observers are affected by the manager's sex. Sex role stereotypes influence and effect the evaluation of leaders and leadership behaviour. Bartol and Butterfield (1976, pp 452-453) find a propensity to evaluate females more favourable than males on consideration behaviour while males were more favourably evaluated than females on structuring behaviour. The different evaluations of identical leader

behaviour, depending upon the sex of a leader, gives impetus to the growing body of data indicating the existence of strong sex stereotypes for managers. The results of Bartol and Butterfield's study illicit proof of different standards being applied in the evaluation of male and female managers. The findings also lend support to the hypothesis that the sex of the evaluator also has an influence on the assessments of managerial style. Women do take, and have always taken a leadership role in organizations with nurturing goals. The nurturing mission and goals concur with the traditional nurturing female role.

Herzberg, Mausner, Peterson and Capwell (1957, pp 13-15) found inclusive results with regard to studies relating sex roles to job attitudes. Some studies indicated women to have more serious psychological problems than men in adjusting to work under conditions of stress, e.g. the difficult conditions of wartime factory work in Great Britain. Peck (in Herzberg et al, 1957, p 14) describes women school teachers as more poorly adjusted to their jobs than even the potential teachers attending teacher's college. Other studies report women's job satisfaction to be high. Davenport (in Herzberg et al, 1957, p 14) found a much greater need for achievement among college freshmen who were career orientated than among those who merely expected to work for a short time after college and before marriage. The peculiar problems experienced by married employed women who have to divide their interest and attention between their jobs and their traditional roles as housewife and mother, may also impede adjustment to the working world.

4.2.4.3 Work occupies a more important place in the lives of men than women. Men derive much more satisfaction from their careers or occupations than women. Women's primary life satisfaction usually comes from family relationships. Job satisfaction is more highly correlated with general satisfaction among employed men than among employed women (Vroom, 1964, pp 42-43). Sex also influences occupational choices. Males usually plan to enter law, engineering, farming and/or business whereas females usually choose teaching, social work, secretarial work, art, journalism and drama. The "masculine" occupations, with the exception of farming, usually provide high status and financial rewards. The female or "feminine" occupations tend to be nurturing and/or humanitarian in nature and tend to require creativity (Vroom, 1964, pp 92-93).

The association between occupational choices and sex roles stems, at least in part, from different patterns of socialization. Hofstede (1980a, p 265) sees socialization as the process by which culture patterns are transferred from one generation to the next. Both men and women learn what their place and accompanying behaviour in society is, and once they have learnt it, the majority of them want it that way. Sex role socialization is furthered through the parental home, religious upbringing, peer groups, schools, and the media.

Organization Development (OD) programmes and procedures which stress openness and expression of emotion, represent a counter-culture in the modern business world which fits traditional feminine values.

## 4.2.4.3 SEX DIFFERENCES IN WORK GOALS

Significant sex differences exist in regard to work goals. Herzberg et al (1957, p 52) find that opportunity for advancement and higher earnings are work goals more important to men while work goals such as a good working relationship with supervisors, good physical working conditions, well-defined working hours, social aspects of the job, e.g. good co-operation with co-workers and ease of work, are favoured by women. Crowley, Levitin and Quinn (in Hofstede, 1980a, p 269) see considerable freedom to adopt an own approach to the job as the most important work goal for men. Work goals that are more important to women include co-operation with co-workers, well-defined job situations with clearly defined responsibilities, well-defined working hours, good physical working conditions and convenient travel arrangements to and from work. Manhardt (1972) finds significant differences between the work goals of male and female employees of an insurance company. Male employees consider opportunity for advancement, responsibility, opportunity to increase earnings, creativeness and working on problems central to the organization, as the more important work goals. Female employees display a preference for congenial associates, ample leisure time, relationship with superiors, good physical working conditions and an element of variety and adventure in the job.

Bartol (1976, p 368) examine indications that differences in job orientation may be more closely related to professional interests as reflected in one's professional training area than to differences in sex. The results (op cit, pp

369-370) indicate that male and female business majors differ significantly on the dimension of a comfortable working environment and pleasant interpersonal relationships. The female business majors have a greater preference for both factors than the male business majors. Female psychology majors rated these work goals lower than the male business majors, which is an indication that the result cannot be explained solely by the sex variable. The business majors, both male and female, also placed a higher premium on career aspirations than the female psychology majors. However, the female psychology majors gave a higher rating to intrinsic job aspects than both male and female business majors. The results of this study clearly supports the hypothesis that members of the same profession, male as well as female, may have similar job interests than members of the same sex in different professions.

The results of the Mc Cann - Erikson study (in Hofstede, 1980a, p 270) of Dutch youth indicate that girls display a humanitarian attitude, choosing helping others and the ability to make friends, as the most important factors in choosing a job. Boys prefer exciting, challenging work, advancement opportunities, money and long-term security as determinants of a career. Herzbergian and Maslowian categories of need classification do not apply to sex differences just as little as they apply to national cultures (Hofstede, 1980a, p 271). However, when clustering work goals on the basis of differences between occupations, Hofstede does find two factors which he calls "intrinsic - extrinsic" and "social-ego". The work goals related to the intrinsic - extrinsic factor do not differ significantly in importance for the sexes.



The "social-ego" factor contains four goals significantly more important to women on the social side, viz manager, co-operation, friendly atmosphere and physical conditions. This factor also contains four goals significantly more important to men on the ego-side, viz up-to-dateness, advancement, training and earnings. The social-ego factor is virtually identical with Hofstede's male-preference-female-preference factor. Hofstede (op cit, pp 271-276) in his cross-national research in 40 countries using  $\pm$  160 000 subjects found seven occupations performed by both men and women in sufficient numbers to allow for statistical treatment of data and not subject to an internal division of labour in which the women still perform tasks differently from men. Hofstede finds across these seven occupations significant sex difference trends. The work goals more important to men are opportunity for advancement to higher paying jobs, having an opportunity for high earnings, having an opportunity for training and up-to-dateness. Females, on the other hand give preference to a friendly and co-operative atmosphere, security of employment, good physical working conditions and good working relationships with the manager.

Table 4.15.

Hofstede could not find any significant sex differences for job content goals and for private life goals. However, his data indicate a possible interaction between sex roles and education.

Women in higher educated occupations seem to be relatively more job-content orientated than men while the opposite holds good for lower educated occupations. Hofstede's data confirms the results of studies cited earlier. Herzberg et al (1957) for example, already reported sex differences for

Loading

0,69

0,69

0,59

0,48

-0,54

-0,56

-0,59

-0,70

Recognition

Earnings

advancement, earnings, atmosphere plus co-operation, physical conditions and preferred manager. Hofstede concludes that "it seems that the differences in sex roles which determine the reference groups of these women and men when they score their goal importances are pervasive in our modern industrialized world" (Hofstede, 1980a, p 274).

#### 4.2.4.4 THE MASCULINITY INDEX

A masculinity index can also be computed for the different cultures (across cultures). As is the case with the computation of the individualism index, the computation of the masculinity index also revolves around the 18 work goal questions of the format "How important would it be to you to ...?". Hofstede (1980a, pp 276-279) bases the masculinity index on the second main factor, labelled "social-ego" which also explains the country (culture) differences in employees' answers to the 18 work goal questions. A factor analysis (principal axis factoring with varimax rotation) attributes 22 percent of the variance in a culture's mean scores to this factor. This factor is composed of the work goals presented in Table 4.15.

Table 4.15: FACTOR SCORES - SOCIAL EGO WORK GOAL QUESTIONS.

Loading	Work goals
0,69	Manager
0,69	Co-operation
0,59	Desirable area
0,48	Employment security
-0,54	Challenge
-0,56	Advancement
-0,59	Recognition
-0,70	Earnings

The loading represents the correlation coefficient across the 40 countries between the factor score and the country mean score for each work goal. Table 4.15 reveals that the social-ego factor is composed of four goals with positive loadings and four with negative loadings. The four goals with positive loadings stress femininity as the dominant sex role pattern. It points to a social inclination. The four goals with negative loadings stress masculinity as the dominant sex role pattern with its ego inclination.

The masculinity/femininity dimension refers to the dominant sex role pattern in the vast majority of both traditional and modern societies, viz male assertiveness and female nurturing. The fact that the social-ego difference appears on a worldwide ecological level, implies, according to Hofstede, an association with nurturance interests versus assertiveness interests.

Hofstede has found the highest masculinity index (MAS) score for Japan. German-speaking countries as well as Latin cultures (Italy and South American) obtain high MAS scores. However Latin countries such as France, Spain, Portugal, Peru and Chile are low scorers on the MAS. Anglo-Saxon and post-Confucian cultures other than Japan, obtain average scores on the MAS while Nordic countries, Yugoslavia and the Netherlands are at the lowest end of the MAS. Comparing MAS across occupations, Hofstede finds a social-ego factor which is largely similar to the social-ego factor found across countries. In both instances nurturance interests are found to oppose assertiveness interests. Thus occupations can be identified as either more masculine (ego) or more feminine (social).

Hofstede (op cit, p 281) finds a high MAS (more masculine) score to correlate significantly with high stress-levels, the view that a large corporation is generally a more desirable place to work for than a small company and the view that most employees have an inherent dislike for work and will avoid it if they can. Hofstede (1980a, p 285) observes a correlation between MAS and overall job satisfaction. It suggests a central position for the job in the life span of employees. Especially higher educated positions or occupations (managers and professionals) rate as personally and socially desirable those facets which go together with high overall job satisfaction. This may be seen as work centrality or central life interests. Work centrality<sup>6</sup> is also closely related to job involvement. It may be postulated that people in more masculine countries "live to work" while people in more feminine countries "work to live".

#### 4.2.4.5 THE MASCULINITY NORM

Hofstede (1980a, p 291) statistically explores the relationship of MAS with economic, geographic and demographic indicators. He obtains a zero-order (highest) correlation of MAS with geographical latitude in the sense that countries closer to the equator tend to be more masculine and those closer to the poles tend to be more feminine. A complex relationship was found to exist between MAS and population growth. The correlation is negative

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<sup>6</sup> Work centrality implies the important primary social relationships that surround job and task performance in and at the work place.

for the wealthier countries and positive for the poorer ones. This implies an association between femininity and slower population growth in poorer countries and between femininity and faster population growth in wealthier countries<sup>7</sup>. Population growth depends strongly on the average family size.

It appears as if there is not only a feeling of Positive correlations exist between MAS and a country's population size as well as the size of organizations. In both cases Hofstede (1980a, p 292) finds size and masculine values to go together. There is also a relationship between masculinity and religion.

Data indicate, on the average, that countries with a Catholic culture tend to be more masculine and those with a Protestant culture more feminine. Catholicism has indeed produced some very tough masculine currents, e.g. the Templars and Jesuits. However, some Protestant groups like the Mormons have a strong masculine value system. An explanation for this may perhaps be found in the Bible which portrays a dual value system: the Old Testament with its teaching of an "eye for eye and tooth for tooth" is more masculine while the New Testament is more feminine with its teaching of "turn the other cheek".

Table 4.16: THE MASCULINITY SOCIETAL NORM

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<sup>7</sup> Population growth depends strongly on the average family size and on the level of medical care. Thus femininity means smaller families in poorer countries and larger families in wealthier countries (Hofstede, 1980a, p 292).

\* Quality of life and environment are important. \* Performance and growth are important.

Table 4.16: There is also a positive correlation between MAS and traffic habits. In more masculine cultures people are allowed to drive faster and more deaths occur in traffic accidents per 1 000 vehicles. Both these phenomena are consistent with the masculine societal norm of greater assertiveness.

It appears as if there is not only a feeling of "small is beautiful" in feminine cultures but also of "slow is beautiful". Lesser traffic deaths also occur in feminine countries. The Gross Domestic Product (GDP) is strongly negatively correlated with the masculinity index ( $\rho = -.81$ ). Hofstede (1980a, p 293) advances the argument that the greater benevolence and need for helping the weak and the poor in more feminine countries, the greater the percentage of the GDP which governments of wealthier countries spend on development assistance to Third World countries. However, MAS is virtually uncorrelated with national wealth (GDP per capita) per se. It is therefore clear that a value complex and not an economic condition determines what a government will give in development assistance (Hofstede, 1980a, p 293).

An integrated picture of masculinity as a societal norm is presented in Table 4.16.

Table 4.16: THE MASCULINITY SOCIETAL NORM.

Low MAS	High MAS
* People orientation.	* Money and things orientation
* Quality of life and environment are important.	* Performance and growth are important.

Table 4.16 (continued)

Low MAS	High MAS
* Work to live.	* Live to work.
* Service ideal.	* Achievement ideal.
* Interdependence ideal.	* Independence ideal.
* Intuition.	* Decisiveness.
* Sympathy for the unfortunate.	* Sympathy for the successful achiever.
* Levelling: don't try to be better than others.	* Excelling: try to be the best.
* Small and slow are beautiful.	* Big and fast are beautiful.
* Men need not be assertive but can also take caring roles.	* Men should behave assertively and women should care.
* Sex roles in society should be fluid.	* Sex roles in society should be clearly differentiated.
* Differences in sex roles should not mean differences in power.	* Men should dominate in all settings.
* Unisex and androgyny ideal.	* Machismo (ostentative manliness) ideal.

(Source: Hofstede, 1980a, p 294).

The masculinity norm should be seen as a value system shared especially by the majority in the middle classes of a society. According to Hofstede (1980a, p 294) much of the societal masculinity/femininity differences are historically and traditionally determined. The mechanism for the conservation of such differences is solid. There is no sign of a convergency in the direction of masculinity or femininity among modern nations. Hofstede advances as a possible explanation for the strong feminine cultures of Scandinavian countries that this is an inheritance from the Viking society in which the women had to manage the villages while the men were away on their long trips.

The consequences of national masculinity index differences are presented in Table 4.17.

Table 4.17: CONSEQUENCES OF NATIONAL MASCULINITY INDEX DIFFERENCES.

Low MAS countries	High MAS countries
Consequences for Society at Large	
* Trying to be better than others is neither socially nor materially rewarded.	* There are rewards in the form of wealth or status for the successful achiever.
* Social adaptation-oriented school system.	* Performance-orientated school system.
* More benevolence versus the Third World.	* Less benevolence versus the Third World.



Table 4.17 (continued)

Low MAS countries	High MAS countries
* Conservation of the environment is seen as a more important problem than economic growth.	* Economic growth is seen as a more important problem than conservation of the environment.
Consequences for Organizations	
* Small-scale enterprises, projects, etc. popular.	* Large-scale enterprises, projects, etc. popular.
* Men and women follow the same types of higher education.	* Men and women follow different types of higher-level education.
* Men and women can both be breadwinners.	* Men are breadwinners, women are cakewinners.
* Less occupational segregation: e.g. male nurses.	* Some occupations are considered typically male, others female.
* Slower car driving, fewer accidents.	* Faster car driving, more accidents.
Consequences for Religious Life and Philosophical and Ideological Thinking	
* In Christianity, greater affinity to Protestantism.	* In Christianity, greater affinity to Catholicism.
* Appeal of "tender" religious currents, philosophies and ideologies.	* Appeal of "tough" religious currents, philosophies and ideologies.
* Belief in equality of the sexes.	* Belief in inequality of the sexes.

Table 4.17 (continued) the consequences of different MAS levels as listed in Table 4.17 on statistical

Low MAS countries	High MAS countries
* More moderate women's liberation movements.	* Aggressive women's liberation movements.
<b>Consequences for Organizations</b>	
* Some young men and women want careers, others do not.	* Young men expect to make a career; those who don't see themselves as failures.
* Organizations should not interfere with people's private lives.	* Organizational interests are a legitimate reason for interfering with people's private lives.
* More women in more qualified and better-paid jobs.	* Fewer women in more qualified and better-paid jobs.
* Women in more qualified jobs not particularly assertive.	* Women in more qualified jobs are very assertive.
* Lower job stress.	* Higher job stress.
* Less industrial conflict.	* More industrial conflict.
* Appeal of job restructuring permitting group integration.	* Appeal of job restructuring permitting individual achievement.

(Source: Hofstede, 1980a, pp 296-297)

Hofstede based the consequences of different MAS levels as listed in Table 4.17 on statistical reasoning as well as on impressions. The different importance given to achievement in more masculine societies as opposed to more feminine societies, is reinforced by a difference in rewards. Successful achievers in high MAS countries are usually rewarded with wealth or status. Economic growth in high MAS cultures is much more important than conservation of the environment. Some occupations are clearly demarcated as male or female and men and women follow different types of higher level education. In religious life high MAS cultures pay greater affinity to Catholicism. A strong belief in the inequality of the sexes is entertained in high MAS countries. Organizational interests are the order of the day and are legitimate reasons for interfering with employees' private lives. Higher job stress and more industrial conflict prevail.

The opposite is true for low MAS countries. Achievement, for example, is neither socially nor materially rewarded. They show more benevolence toward the Third World. Less occupational segregation exists, e.g. male nurses. Low MAS countries have a greater affinity for Protestantism. A belief in the equality of sexes prevails. Lower stress levels and less industrial conflict are characteristic of low MAS societies. There is a firm belief that organizations should not interfere with people's private lives. The type of humanization of work (job restructuring) depends on the level of the MAS. In high MAS cultures, humanized jobs should give opportunities for recognition, advancement and challenge. In a feminine culture, humanization of work will stress co-operation and a working atmosphere (Hofstede, 1980a, p 298).

#### 4.3 CONCLUSIONS

There are great promises and challenges as South Africa enters the so-called era of hope presenting the continent in which it is situated and the world with a new history of political creation to guard and foster freedom, diversity and progress within a framework of order and unity. In order to obtain this stability (order and unity), economic power has to be employed to create the necessary wealth to meet South Africa's peoples' aspirations. Economic and social development and political stability are predicted on the assumption of reasonable stable governance. Stable governance implies that the larger part of the population supports and accepts (at least passively) the authority of the government in power (Berger, 1992, p 23). The concepts of economic development and the attendant modernization and urbanization as well as the viability and feasibility of a democratic government are based, implicitly as well as explicitly, on value premises (Todaro, 1987, p 10).

The concepts and value dimensions discussed in this chapter have practical implications for political, social and organizational policy. They relate to goals such as economic and social equality, elimination of poverty, high education standards, rising levels of living, modernization, political and economic participation, grass-roots democracy and full industrial citizenship, self-reliance and personal fulfilment. The value dimensions form the invisible part of a culture and are collectively held by the majority of the population. These values have grown into societal norms which, to a very large extent determine the political and organizational solutions which are feasible within a particular country (Hofstede, 1980a, p 373).

Low power distance seems to be a desired end. It would not only guarantee equal group rights but would simultaneously guarantee equal rights, whether civil, industrial and political, of all individuals living within the boundaries of the Republic of South Africa. This would give articulation to a common South African nationality which would co-exists with but not obliterate the sense of belonging to a specific ethnic group. Groups would form indestructable parts of an indestructable whole (Smuts, 1926). Low power distance also pertains to equal employment opportunities, small wage differentials and less centralization.

Individualism corresponds with political democracy, competition and capitalism. The freemarket fosters individualism and economic development and in turn depends on individualism. High individualism would augur well for economic growth as well as political stability as individualism and balanced political power (lower power distance) are related through the distribution of wealth across sectors of the economy. This distribution of wealth may lead to greater upward social mobility, fostering the development of a middle class. Individualistic values would also foster modern industrial development with attendant urbanization and thus less traditional agriculture. Uncertainty avoidance is also related to economic growth. High uncertainty avoidance is attended with an agressiveness which augurs well for economic development. Economic development is a prerequisite of a more equitable distribution of wealth and income. Pragmatic resistance politics (characteristic of low power distance cultures) could contribute, to a large extent, to economic growth. The government concerned, should however, refrain from manipulations, regulations and political experimentation which have distorted the internal economics and markets (Schlemmer, 1991, p 7).

The masculine value system also has some relevance for economic growth as performance and rewards in the form of wealth and status are emphasized. Masculinity implies a strong achievement motivation with assertive managerial roles and a prevalence for economic growth which also may have a bearing on the distribution of wealth and the fostering of a stable middle class.

Also, the dimensions of locus of control have a bearing on political activity. Internals (internality inclined people) are more likely to participate in social action because they believe their behaviour would bring about the desired goals. Liberals are usually significantly more internally inclined than conservatives. Conservatives are usually externals who perceive little connection between their behaviour and the desired outcomes.

In conclusion then, a low power distance which is indicative of societies with less violence and stable pluralist governments, may bode well for a negotiated settlement at Codesa. Stability and economic activity may be furthered by pragmatically orientated trade unions which are also characteristic of low power distance societies. A high power distance would have the opposite effect with existential inequality and latent conflict between the powerful and the powerless. The chances of a negotiated settlement would then also be very dim. With high individualism, high masculinity and high uncertainty avoidance there is quite a good possibility for economic development which may foster a stable middle class which in time is the necessary precondition for a stable government. The opposite is true of low individualism, low masculinity and low uncertainty avoidance.

differentiate between CHAPTER 5 De la Rey views research as generally successful only when the observed changes in behaviour can be attributed to the Independent

## VARIABLES OF IMPORTANCE IN WORK VALUE RELATED RESEARCH

psychologist to control all factors and variables which may have an influence on the results of the research.

### 5.1 INTRODUCTION

In this chapter the variables of importance in work value related research are extensively discussed. On the basis of a literature research 11 independent variables have been selected to explore the relationships among the dependent variables (power distance, uncertainty avoidance, individualism, masculinity, internality, externality and powerful others). The main variables which may be responsible for differences in the dependent variables are sex, religion, language, educational level, years of formal schooling received, income, age, occupational level, country of origin, ethnicity and sector of the economy employed in. These variables may all have an important bearing on the work values expressed by the different groups in the South African work environments. Attention is also paid to the concepts "Nuisance variable" and the control thereof.

### 5.2 EXPLORATION OF POSSIBLE NUISANCE VARIABLES

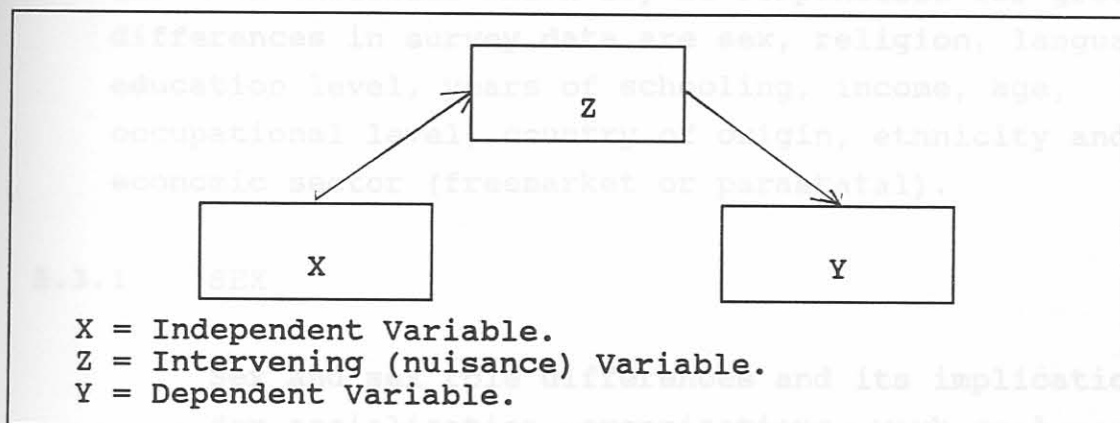
Mason and Bramble (1989, p 433) define variables as characteristics of persons, objects, groups, events, etc. to which qualitative and quantitative values can be assigned. However, De la Rey (1978, p 11) offers a more elaborate description of a variable. He sees it as "any psychological attribute, quality, characteristic or feature, or norm of judgement on which people tend to differ". Variables have to

differentiate between people. De la Rey views research as generally successful only when the observed changes in behaviour can be attributed to the Independent Variable (IV). However, it would not be possible for a psychologist to control all factors and variables which may have an influence on the results of the research. Variables which may have an affect on the findings of the research are called nuisance variables (also called intervening variables or extraneous variables) (De la Rey, 1978, p 12; Mason et al, 1989, p 63).

Psychologists try to control these variables which may contaminate and obscure the results of a research. If it is impossible to control these nuisance variables while planning the research, psychologists may control the intervening variables statistically by means of analysis of covariance. A nuisance variable is also known as a covariate (De la Rey, 1978, p 12). These covariates may intervene between an independent variable and a dependent variable affecting the direct relationship between input and output variables (Baker, 1988, p 289).

Nuisance variables may contaminate the relationship between the independent variable and the dependent variable (De la Rey, 1978, p 12) and psychologists try to control these nuisance variables to minimize the effects of the results of experiment or survey (Mason et al, 1989, p 68). Baker (1988, p 464) views such a control variable as a third variable in a trivariate analysis. The relationship between the dependent variable and the independent variable is examined under each condition of the control variable. The relationship between the independent and dependent variables and the nuisance (control) variable intervening between them is diagrammatically presented in Figure 5.1.



Figure 5.1: AN INTERVENING RELATIONSHIP.

(Source: Healy, 1990, p 342).

Figure 5.1 shows a trivariate relationship with the intervening variable occurring between the independent and dependent variables. As previously stated, the psychologist controls the nuisance variable statistically by means of analysis of covariance. Tabachnick and Fidell (1983, p 14) consider analysis of covariance as an analysis of variance which includes one or more extraneous or control variables in addition to the independent variables and a single dependent variable. The analysis of covariance is based on the possibility of a linear correlation between covariates and the dependent variable. This relationship is or can be evaluated by statistically testing the effect of covariates as a source of variance in the dependent variable (Tabachnick *et al*, 1983, p 178). The researcher contemplates to control for possible nuisance variables in order to ascertain the true relationship between the dependent and independent variables.

...a relatively strong sense of unity and forged a sense of identity among Afrikaners (Adje and Moodley, 1986, p 44).

### 5.3 MAIN INDEPENDENT VARIABLES

The main variables which may be responsible for group differences in survey data are sex, religion, language, education level, years of schooling, income, age, occupational level, country of origin, ethnicity and economic sector (freemarket or parastatal).

#### 5.3.1 SEX

Sex and sex role differences and its implications for socialization, organizations, work goals and occupations have already been discussed in detail (4.2.4) and it will not be repeated here.

#### 5.3.2 RELIGION

Religion is seen as related to the origin of the uncertainty avoidance syndrome. High uncertainty avoidance cultures usually have activist religions while low uncertainty avoidance cultures have pragmatic or introvert, meditative religions. Catholicism is seen as more masculine than Protestantism of which certain currents allow women as clergy. Religion has played a decisive role in South Africa in the mobilization for ethnicity. Afrikaner nationalism achieved its goal of securing control of the South African state through a skilful manipulation of the group's symbolic resources, e.g. language and religion. Ethnic entrepreneurs used religion to create a relatively strong sense of unity and forged a sense of identity among Afrikaners (Adam and Moodley, 1986, p 44).

The Dutch Reformed Church with its strong Calvinist orientation has given Apartheid its religious basis. From 1935 onwards, the Dutch Reformed Church (DRC) made little attempt to base its views and policies on the Scriptures when formulating its stand upon social issues. Instead, it took traditional Afrikaner norms as motivation for its decisions. "It believed that God created nations and shaped their destinies: the course along which a nation was guided, in other words the 'traditional', was an expression of God's will and was this in accordance with the Scriptures. As Afrikaner nationalists, the church leaders believed in Apartheid and used scattered texts and the history of Israel to provide some moral justification for their actions" (Giliomee and Schlemmer, 1989, p 46). Religion is also far more important to the Afrikaans group and has a strong influence on their behaviour. Although the church has occupied a central place in the social values of the Afrikaans people, there are signs that the Calvinist tradition is losing its grip. English speakers do not attach the same importance to religion as the Afrikaans group in the sense that they do not entertain a Calvinist view of themselves as "a chosen people" (Hanf, Weiland and Vierdag, 1981, pp 166-169).

Black theology with its emphasis on material, political and spiritual suffering has been seen as an unifying religious bond. But Black theology does not have a united pervasive church as Latin American liberation theology has in the Roman Catholic church. It does not encourage a separate religious ethnicity. On the contrary, Black theology laments the behaviour of fellow brothers

and sisters who are failing in their Christian duty. It advocates initiatives fundamentally at odds with the world view of the adversary just as Afrikaner Calvinism was with Anglican, Catholic and Jewish faiths (Adam et al, 1986, pp 49-50).

## 5.3.3

## LANGUAGE

Afrikaner nationalism also uses the Afrikaans language as a symbolic resource to forge Afrikaner identity. Language has been a primary contributor to ethnic prosperity once the Afrikaner was able to use the state to further Afrikaner occupational opportunities in the public service as well as in a spreading state capitalism. The Afrikaans language was the mobilizing and unifying force in channeling the displaced and impoverished Afrikaans peasants away from socialism into the ethnic fold by providing protective employment and status in a racial caste system (Adam et al, 1986, p 44). Blacks, however, do not have a single unifying African language. The African tradition of communalism fosters close kinship ties and reinforces ethnic solidarity in African society. The mutual social obligations within the particular tribe or clan establish cohesive bonds and are backed by a much higher degree of state organization and group awareness than among Whites. But heritage of language is not a unifying force among the different clans or tribes forging a particular identity on the Blacks. To insist on Zulu or Xhosa or Sotho to communicate in an interdependent industrial setting would bar Africans from jobs, education and occupational opportunities which depend on a mastery of official languages. "The indigenous language (be

it Xhosa, Zulu or Sotho) is used as a medium of resistance, a secret underground code during the struggle for equality, but it is not the language of material success. These oppositional modes of African expression are nevertheless not perceived as in need of rescue from the danger of Anglicization, let alone absorption into "Afrikanerdom" observe Adam et al (1986, pp 47-50). A language struggle (taalstryd) is not necessary to save the indigenous languages from extinction in the same way that Afrikaans-speaking people had to fight for the preservation of their language and language rights against the British.

Black students, regardless of ideological outlook, prefer to be educated in English but without giving up their linguistic heritage. Contrary to Afrikaans and English, the indigenous languages only retain regional importance but are insignificant in the arena of national or international politics. As Black consciousness includes awareness of the three designated racial groups of Africans, Coloureds and Indians and is based on the common political factor of discrimination and not common cultural affinities, the emergence of a single African language as a unifying cultural symbol would alienate Africans using other African vernaculars as well as the Coloureds and the Indians who have little historical relationships with African culture (Adam et al, 1986, pp 48-49).

#### 5.3.4

##### EDUCATIONAL LEVEL AND YEARS OF SCHOOLING

There is a close relationship between educational level and years of schooling received. Data about education levels may be less accurate than data

about years of schooling as education systems vary from one country to another and also from one ethnic group to another. The power distance dimension has an effect on educational systems. Across cultures, PDI and years of formal education received are positively correlated. In high PDI cultures which are also the poorer countries, there is a relative oversupply of people with long formal schooling. In low PDI countries, there is a need for education of lower strata. A need exists in lower PDI cultures for mastery of technology and achievement in the physical sciences. There tends to be more mastery of physics, chemistry, medicine and physiology in lower PDI countries judged by the number of Nobel laureates produced (Hofstede, 1980a, pp 124-127).

Since 1948, when the National Party came to power, an education policy of Christian National education has been in place in South Africa. The Christian principle of this policy means that education should be based on the Bible while the nationalist principle demands that for all ethnic groups the educational system should inculcate a love of "their own", love for their country, language, history and culture<sup>1</sup>. Religion was thus linked to education to foster the maintenance of desired value systems.

However, in the case of African education it implies the advocacy of a close link between schooling and the so-called "homelands" (Giliomee et al, 1989, p 52). The whole system of Bantu education (as it was derogatorily called) has led to immense dissatisfaction among the Blacks. The

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<sup>1</sup> Federasie van Afrikaanse Kultuurvereniginge. 1948. Christelike Nasionale Onderwysbeleid. Johannesburg: FAK.

system rejects preparation for incorporation into industrial society. This education system was based on the principle that the Black child had to be "trained and conditioned in Bantu culture ... The schools must also regard the fact that out of school hours the young Bantu child develops and lives in a Bantu community and when he reaches maturity he will be concerned with sharing and developing the life and culture of that community"<sup>2</sup>. Blacks regard this education system as "second class, deliberately designed to give them an inferior training" (Hanf et al, 1981, p 274). The Black youth regard this educational system as evil and a symbol of the whole hated system of Apartheid. Black schools have also been overcrowded which necessarily lowered the quality of teaching and increased pupils' fears for the future (Hanf et al, 1981, p 274).

A growth in Gross Domestic Product, an increase in personal wealth and dispensable income, the attainment of a higher standard of living and national economic growth and the competitive position of Blacks in the labour market demands an education, grounding the South African populace in the basic components of literacy and technical training. The economy has specific and compelling needs of its own. Economic growth can only be attained and sustained if the necessary schooled manpower is delivered through an advanced education system combining manpower planning and educational reform, making education and training more relevant and realistic (Bethlehem, 1988, pp 224-225).

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<sup>2</sup> Report of the Commission on Native Education. Eiselen Report, UG 53/951, paragraphs 773-774.

## 5.3.5 INCOME

Income is strongly correlated with inequality in society in the areas of social status and status and wealth. In South Africa there is a concentration of wealth in the White populace and widespread poverty among Blacks which implies a close relationship between income level and ethnicity. This relationship underlies the charge that the essence of Apartheid is exploitation and labour control. Ethnicity and class overlap to a high degree in South Africa. According to Giliomee et al (1989, p 103) the Apartheid order spawned a whole set of policies which favoured White over Black groups and the Afrikaners over the rest of the Whites. As a result of these policies, the income distribution and the distribution of status and prestige of Whites and the Black groups remained badly skewed. Apartheid was the common platform on which all the classes within Afrikanerdom joined forces with the common purpose to advance Afrikanerdom's interests.

Succeeding Nationalist governments expanded public and semi-state corporations to promote Afrikaner economic progress. The agricultural sector of which 80% were Afrikaners, were economically much aided by marketing boards, agricultural co-operatives and other forms of governmental intervention. The small Black bourgeoisie consists mostly of professional people but only a few of its members possess substantial independent wealth. Adam et al (1986, pp 16-17) formulate the income problem in an excellent way: "An emerging Black bureaucratic middle class is achieving salary parity but is still frustrated by



indignities of status. The few Black businessmen operate under so many severe restrictions that to all intents and purposes a free-enterprize system does not exist for them. Likewise, the Black labour market is constrained by influx control and bureaucratic tyranny ... Historically shortages in the local labour market have been filled by immigration from Europe rather than by training the indigenous subordinate population. With such a history of inequality, discrimination and neglect, it is not surprising that few cross-cutting ties and interests between the same strata in the different groups have developed to blunt the collective perceptions of one another". Many of these facts highlighted by Adams et al are in the process of change but despite those changes the perceptions still exist with the Blacks that inequality discrimination and neglect are still in existence.

#### 5.3.6 OCCUPATIONAL LEVEL

Interesting differences in regard to occupation and type of work exist in the South African society. Afrikaans speaking people are over-represented in the primary sector, transport and the civil service. English speaking people form the bulk of employees in industry, commerce and banking and are heavily represented in the upper strata of the private sector. Blacks form the bulk of semi-skilled and unskilled labour. It is only since the passing of the Labour Relations Amendment Act that Blacks have become liable for training as artisans. Very few Blacks find themselves in managerial and executive positions.

Hofstede (1980a, p 105) finds that lower education and lower status occupations tend to produce high PDI values. The opposite is true for the higher education, higher status occupations. Occupational level is also associated with uncertainty avoidance in the sense that stress differences can be identified due to occupation. For example, Friedman and Rosenman (in Hofstede, 1980a, p 163) have created a distinction between persons showing Type A and Type B behaviour. The Type A person tries to do more things in less time and was seven times more likely to develop coronary heart disease. Hofstede (1980a, pp 242-246) also finds two factors by means of principal axis factoring with varimax rotation, comprising work goals across occupations. He calls the first factor intrinsic/extrinsic and the second social-ego. The intrinsic variables are on the positive side and refer to job content while the negative pole (extrinsic) refers to job context. The social pole of the social-ego factor refers to nurturance while the ego pole refers to assertiveness. High scoring occupations on the first factor are departmental managers, divisional managers and headquarter managers. Low scoring occupations are semi-skilled and unskilled plant workers.

#### 5.3.7

#### AGE

Age is another independent variable which may have a significant influence on results. Employment stability is a function of the average age of its incumbents - the older the more stable. Young Whites are supposed to become more liberal and young Blacks more militant. Differences in values

5.3.9 among respondents of different ages may be due to maturation, seniority, generation and/or zeitgeist. Maturation implies that respondents' values shift as they grow older. Seniority effects occur when people become more senior in their organization and have acquired greater commitment, greater frustration, or perhaps a lower market value elsewhere. Generation effects mean that values are fixed in youth and stay with their age cohorts over its lifetime. Drastically different conditions during youth may lead to different generations having different fixed values. Zeitgeist refers to drastic system-wide changes in conditions which cause a shift in everyone's values (regardless of age) (Hofstede, 1980a, pp 344-345).

#### 5.3.8 LATITUDE OF COUNTRY OF ORIGIN

Latitude is an unambiguous measure of a country's geographical position and a crude measure of climate (Hofstede, 1980a, p 87). Hofstede (1980a, pp 121-123) observes that latitude is the strongest predictor of PDI. It has a strong effect on the subjective culture of the inhabitants as it was shaped over many generations. Tropical and subtropical countries usually have high PDI measures. The opposite holds for moderate to cold climates. A possible explanation, according to Hofstede, is that in tropical climates man is less inclined to work and less in need of technology. Colder climates suppose protection against nature. Only those people who are able to master the minimum technical skills necessary, survive.

5.3.9 ETHNICITY with a free enterprise economy is attributed to poor rates of growth, passive Ethnicity and its implications for the work, social and political environment have already been discussed in detail (3.3) and no further attention would be paid to it here.

5.3.10 ECONOMIC SECTOR When the Party came to power, a number of semi-state enterprises (corporations) were created. The research of this case was conducted in two sectors of the South African economy, viz a freemarket corporation and a parastatal (semi-state) corporation. A freemarket or free enterprise economy is essentially a demand economy with price relationships regulating all the major economic decisions. "Changes in price reflect changes in the relative scarcity of commodities, changes in costs show changes in the relative scarcity of the factors of production and their reaction provides a sensitive index for the distribution of productive resources" (Viljoen, 1974, p 269).

#### 5.4 CONCLUSIONS

In recent years, there has been a tremendous increase in the advocacy of the market mechanism as a key instrument for promoting greater efficiency and economic growth<sup>3</sup>. According to Todaro (1987, p 496) several underdeveloped countries instituted major economic reforms in the direction of a freemarket in the hope that "the 'invisible foot' would provide a more powerful kick toward economic growth and development than the 'visible' hand of central planning". This

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<sup>3</sup> Ronald Reagan referred to it as "the magic of the market place" - Cancun, Mexico, 1981.

regret obsession with a free enterprise economy is attributed to poor rates of growth, massive inflation, balance of payments problems, the rising burden of public spending, excessive price distortions and inward-looking trade policies (Todaro, 1987, p 497). Since the National Party came to power, a number of semi-state enterprises (corporations) were established, dominating especially utilities, transportation and communications. The main rationale for the creation and expansion of these semi-state corporations was the economic promotion and upliftment of Afrikanerdom. Many Afrikaners were impoverished due to the Great Depression and the engagement in public production was a means to expand employment and to facilitate training of that labour force. Characteristic of such parastatal organizations is the lack of private incentive to engage in promising economic activities.

#### 5.4 CONCLUSIONS

In this chapter the 11 independent variables applicable to this research were discussed. Value differences between sexes have an influence on the chosen career, motivation, working environment and relationships with co-workers and self-actualization. Differences among subjects of different ages may be due to maturation, seniority, generation or zeitgeist. Values shift as the subjects grow older. Different generations may also have different fixed values. But events may also occur which lead to drastic value shifts regardless of age. Country of origin (geographical latitude) has, according to Hofstede (1980a, p 332), a rich multiple

regression pattern which is positively related to the dependent variables of individualism and uncertainty avoidance and negatively to masculinity. The language split in South Africa is still a hot political issue. It is emotionally charged and is a result of historical events. The exploration of the value patterns of the different ethnic groups is of utmost importance to intercultural understanding, economic development and the bringing about of a system of government acceptable to all ethnic groups. An investigation into the prevalent value systems of a freemarket corporation and a parastatal corporation is also of importance as economic arrangements play a dual role in the promotion of a free society and the achievement of political freedom (Friedman, 1982, p 8). Religion is another variable of importance in this time of change which may have a profound influence on subjects' value systems. Religion may be decisive in the granting of development aid to underdeveloped countries in Africa and in showing a greater benevolence to the needy, the poor and the unemployed by means of a national state social security system (feminine value system). Education level and years of formal schooling attained with the attendant variables of income and occupational level, all have a bearing on economic and industrial development. This is a prerequisite for a stable government and economic growth with a prudent amount of redistribution.

In a catholic overview of these independent variables, they are all of importance to value systems or a shift in value systems which may be conducive to a negotiated settlement at Codesa, economic growth and development and a stable government.

## CHAPTER 6

## SOME PSYCHOMETRIC CONSIDERATIONS OF THE STUDY

## 6.1 INTRODUCTION

In this chapter the psychometric approach used in the study is extensively discussed. The Work Value Survey - module was constructed by the researcher. It is based on the Value Survey Module developed by Hofstede (1980a), employing well-matched samples in 40 countries around the world, and the Activism and Powerful Others - scale developed by Levenson (1974). This scale is actually a refinement of Rotter's Internal - External Locus of Control scale. The concepts of validity and reliability are discussed in detail. Reliability estimates were determined for each of the scales and are reported in this chapter.

## 6.2 VALUE SURVEY MODULE

Hofstede (1980a) developed this questionnaire in a large United States-based multinational corporation with subsidiaries in countries throughout the world. These subsidiaries, employing workers ranging from blue-collar labour through to those at managerial level, were organized along similar lines. Nationals of the country concerned were employed almost exclusively in the research project. Eventually 116 000 employees in 40 countries participated in the development and standardization of the questionnaire. Samples from these countries were well-matched with regard to demographical aspects. They had the same employer, similar job levels, income distributions

and came from heterogeneous age brackets. However, they differed on the concept of nationality (Hofstede, 1990, p 103). Hofstede administered a questionnaire on work values containing 120 questions, to these samples. The questionnaire was in English and the questions were derived from (Hofstede, 1980a, p 68):

1. The Allport-Vernon-Lindzey Study of Values.
2. L.V. Gordon's Survey of Interpersonal Values.
3. L.V. Gordon's Survey of Personal Values.
4. L.V. Gordon's Personal Profile.
5. G.W. England's Personal Value Questionnaire.
6. Fiedler's Least Preferred Co-Worker.
7. W.C. Schutz's Firo-B.

According to their content, these 120 questions could be divided into:

1. Questions regarding job satisfaction.
  2. Questions regarding work behaviour.
  3. Questions in respect of personal goals and beliefs.
  4. Demographical questions.
- (Hofstede 1980a, p 66).

Responses were evaluated by means of a five-point Likert scale. In order to test for convergence and correlation of the scores, Hofstede simultaneously administered his questionnaire plus value scales developed by Wollack, Super and Rosseel, as well as personality tests. Data was extensively analysed by means of analysis of variance and factor analysis. The factor analysis yielded, besides six factors relating to job content, reward, interpersonal relations, company, security and comfort, the four dimensions of power distance, individualism, uncertainty avoidance



and masculinity. These four dimensions emphasize the differences in national cultures (Hofstede, 1990, p 104). Hofstede refined the instrument which resulted in the Value Survey Module incorporated in the Work Value Survey Module (See appendices). Hermann (1989) administered Hofstede's Value Survey Module to a multi-ethnic group of respondents. He determined a reliability estimate and obtained a split-half coefficient with Spearman-Brown correction for unequal length of 0,9749 and an alpha coefficient of 0,9913 for part one and 0,9172 for part two.

### 6.3 ACTIVISM AND POWERFUL OTHERS-SCALE

Rotter and his associates (1966) developed the concept of Internal-External Locus of Control. They employed it to study the effect of reward on behaviour. An internally orientated person believes that his/her own behaviour affects the rewards which follow on it. An externally controlled person believes that outside forces shape and reward his life (Gurin, Gurin, Lao and Beattie, 1969, p 29). Rotter's Internal-External Locus of Control-scale (I-E scale) measures the extent to which people believe they are in command of their lives, exercising control (internally controlled) or the degree to which they feel their lives are determined by fate, chance or powerful others (externally controlled). As a number of closely related concepts had become prominent in the studies of low income and minority groups (Gurin *et al*, 1969, p 30), Levenson (1974) undertook further research to refine the I-E scale to become a valid instrument to obtain conceptually clearer measures of locus of control. Levenson (1974) separated the unidimensional locus of control scale into the three dimensions of internality, powerful others and chance. She subjected it to a validity study by means of a factor analysis to

namely content validity which is a matter of judgement and not of empirical correlation (Guion, 1965, p 125).

ascertain the validity of this separation. The factor analysis yielded proof that this tripartite separation of expectations of control, adds conceptually and empirically to the usefulness of the concept of locus of control (Levenson, 1974, p 382). The Activism and Powerful Others-scale is also incorporated in the Work Value Survey Module.

#### 6.4 BIOGRAPHICAL QUESTIONNAIRE

A biographical questionnaire forms part of the Work Value Survey Module. The questions relate to aspects such as gender and age brackets, home language, years of formal schooling received, religion, educational level, occupational level, income bracket, country of origin, ethnic group and sector of the economy employed in. Information obtained in this way provides either independent or nuisance variables in the processing of data.

#### 6.5 VALIDITY

Bohrnstedt and Knoke (1988, p 12) define validity as the degree to which an operation results in a measure that accurately reflects the concept it is intended to measure. Babbie (1989, p 98) views validity as a descriptive term used of a measure that accurately reflects the concept it is intended to measure. Mason *et al* (1989, p 420) see validity as "the degree to which a test measures what it is supposed to measure". De la Rey's view (1978, p 30), that a test is valid only if it measures the concept or characteristic it pretends to measure, ties in with these definitions. Validity is usually determined by means of correlational statistics and expressed as a validity coefficient. There is also a non-statistical approach to the determination of psychological test validity, namely content validity which is a matter of judgement and not of empirical correlation (Guion, 1965, p 125).

The validity estimate is usually determined by calculating the correlation between performance in a test and an independent, objective criterion of the behaviour being measured (Smit, 1983, p 47). But this is only one kind of validity, i.e. predictive validity which could either be concurrent or predictive prediction, as is illustrated later on in this chapter. De la Rey (1978, p 31) distinguishes between construct validity, content validity, criterion-related validity, concurrent validity, face validity and synthetic validity. Construct validity is the extent to which a test measures the construct it was designed to measure (Mason et al, 1989, p 260). Construct validity is determined by comparing a new test with existing valid tests measuring the same concept. A high significant correlation points to construct validity (Smit, 1983, pp 63-67). Construct validity evaluates the construct as well as the adequacy of the test in measuring the construct (Mason et al, 1989, p 261; Smit, 1983, p 64). Dane (1990, p 259) and Smit (1983, p 66) distinguish three approaches to the study of construct validity, viz convergent validity, discriminant validity and factorial analysis. Convergent validity points to the extent to which a measure correlates highly with existing psychological tests measuring the same concept. Discriminant validity, on the contrary, is the extent to which a measure does not correlate too obviously or not at all with tests measuring different concepts. The construct discriminates between similar and entirely different constructs (Smit, 1983, p 66). By means of factor analysis, the number of common factors, explaining the variance, are identified. These factors can predict performance in a test. By identifying the factors common to a construct, it is possible to construct a test which is a refined and clear measure of a specific theory or concept (Smit, 1983, p 66).

Content validity is of a qualitative nature and ascertains the degree of representativeness of the contents of a questionnaire of the construct being measured (De la Rey, 1978, p 31). Criterion-related validity may be separated into predictive validity and concurrent validity (Howard, 1985, p 100). Predictive validity concerns the degree to which a test predicts future behaviour or performance correctly (Smit, 1983, p 51). A predictive validity estimate is determined by means of Bravais-Pearson product moment correlation or multiple regression analysis (De la Rey, 1978, p 31). The validity coefficient is usually interpreted by way of its numerical size (magnitude), coefficient of alienation, coefficient of determination and the standard error of measurement (Smit, 1983, pp 52-53). Concurrent validity implies the degree to which test variance correlates with variance in a test (criterion) available at essentially the same time (Smit, 1983, p 61). Smit views concurrent validity as a relationship expressed in terms of a correlation coefficient between a test score and another yielded by a measure already accepted as valid of the same behavioural construct (1983, p 62). In other words, concurrent validity involves comparing a new measure to an existing valid measure with the emphasis on the present status of the measure or the respondent (Smit, 1983, p 62). Face validity or expert validity is the degree of consensus between experts that a measure represents a particular concept (Dane, 1990, p 257). Synthetic validity refers to presumed validity (De la Rey, 1978, p 31). Howard (1985, p 56) also distinguishes between external and internal validity. External validity deals with the extent to which a researcher can generalize across samples, situations, settings and times based on evidence from a particular study. Internal validity is defined as the extent to which procedures enable one to draw reasonable conclusions (Howard, 1985, p 110).

## 6.5.1 VALIDITY OF THE WORK VALUE SURVEY MODULE

Construct validity is of primary importance here. Hofstede (1980a) determined the construct validity of his value survey questionnaire by means of a factor analysis yielding the four value dimensions of individualism, masculinity, uncertainty avoidance and power distance. Factorial analysis done on data procured by the repeated application of Hofstede's Value Survey Module yielded the same results (Hofstede, 1980b; Hofstede and Bond, 1984; Singh, 1990). In the case in hand the data was submitted to a principal axis factoring with varimax rotation. The obtained results differed completely from previous validation studies. After rotation only two factors with eigenvalues greater than one could be obtained. The eigenvalues are presented in Table 6.1.

Table 6.1: EIGENVALUES: EXTRACTED FACTORS - VALUE SURVEY MODULE.

Factor	Eigenvalue	Percentage of variance	Cumulative Percentage
1	8,58	31,8	31,8
2	1,23	4,5	36,3
3	0,79	2,9	39,2
4	0,65	2,4	41,7

Table 6.1 shows that the factors with eigenvalues greater than one declare only 36,3% of the variance.

However, the rotated factor matrix which is presented in Table 6.2 contains four factors.

Table 6.2: ROTATED FACTOR MATRIX: VALUE SURVEY MODULE.

Variable	Description	Factor 1 Factor- score	Factor 2 Factor- score	Factor 3 Factor- score	Factor 4 Factor- score
Q25	Opportunity for advancement	0,81			
Q19	Co-operation	0,80			
Q22	High earnings	0,76			
Q21	Contribution to company	0,75			
Q24	Live in desirable area	0,74			
Q17	Security of employment	0,74			
Q27	Prestigious company	0,73			
Q15	Physical working conditions	0,72			
Q13	Challenging tasks	0,72		0,41	
Q29	Well-defined job situation	0,70			
Q28	Helping others	0,70			
Q18	Considerable freedom	0,67			
Q20	Consultation by superior	0,63			
Q12	Sufficient personal time	0,63			
Q26	Variety and adventure	0,58			
Q23	Serve one's country	0,50			
Q14	Little tension and stress	0,40			
Q33	Preference for large company		0,54		
Q35	Continuation of service		-0,44		
Q16	Good relationship with superior	0,42		-0,55	
Q37	Preferred manager				0,35

An analysis of the information in Table 6.2 shows that the factor matrix differed completely from the constructs and structure obtained by previous research (Hofstede, 1980b; Hofstede and Bond, 1984; Singh, 1990). The obtained factor matrix may be due to the prevalent ethnic differences in the South African society. The first one of the two extracted factors with eigenvalues greater than one may be termed work environment and the second work security.

As regards the Activism and Powerful Others-scale however, the factorial analysis done on the data (principal axis factoring with varimax rotation) yielded the same results as originally obtained by Levenson (1971). The factor analysis yielded three factors all of which have eigenvalues greater than one. The eigenvalues are presented in Table 6.3.

Table 6.3: EIGENVALUES: EXTRACTED FACTORS - ACTIVISM AND POWERFUL OTHERS-SCALE.

Factors	Eigenvalues	Percentage of variance	Cumulative Percentage
1	4,63	18,5	18,5
2	2,22	8,9	27,4
3	1,01	4,1	31,5

The information in Table 6.3 shows that the three extracted factors (eigenvalue > 1) declared 31,5% of the variance. The rotated factor matrix for these three factors is presented in Table 6.4.

Table 6.4: ROTATED FACTOR MATRIX: ACTIVISM AND POWERFUL OTHERS-SCALE.

Variable	Description	Factor 1 Factor- score	Factor 2 Factor- score	Factor 4 Factor- score
Q52	Good or bad fortune	0,74		
Q51	Luck	0,69		
Q60	Fate	0,62		
Q49	Accidental happenings	0,61		
Q50	Bad luck	0,48		
Q55	Luck determines events	0,46		
Q59	Important people	0,41		
Q58	Persons in authority		0,57	
Q43	Pleasing superiors		0,56	
Q41	Strong pressure groups		0,55	
Q42	Persons in control of authority		0,54	
Q40	Authoritative persons		0,49	
Q62	Desires of persons in authority		0,45	
Q53	Right time, right place		0,43	
Q54	Pre-determination		0,38	
Q45	Own actions			0,70
Q44	Own ability			0,69
Q47	Make plans work			0,61
Q48	Personal hard work			0,51
Q61	Own Leadership ability			0,48
Q56	Dexterity and skill			0,42

The information in Table 6.4 shows, that in general, the content of the questions classified under factor 1 relates to externality or chance factors. The questions classified under factor 2 relate to the dimension of powerful others. The questions classified under factor 3 relate to internality or the belief that one is in control of events in one's life. The information in Table 6.4 confirmed the construct validity of the Activism and Powerful Others-scale.



## 6.6 RELIABILITY TESTS RELIABILITY

Reliability goes hand in hand with validity and involves the consistency or stability of a test score when the test is repeated or replicated. If a particular test, applied repeatedly to the same object, yields the same results each time, it is reliable (Smit, 1983, pp 28-29). Babbie (1989, p 56) defines reliability as "that quality of measurement method that suggests that the same data would have been collected each time in repeated observations of the same phenomenon". Mason *et al* (1989, p 420) view reliability as "the consistency or dependability of a test" and proceed to define reliability statistically as "the ratio of variance in the scores to variance in observed scores" (1989, p 266) and offer the formula

$$r_{xx} = \frac{T_t^2}{T_o^2} = \frac{T_t^2}{T_t^2 + T_e^2} \quad \text{where}$$

$r_{xx}$  = reliability

$T_t^2$  = variance in true scores

$T_o^2$  = variance in observed scores

$T_e^2$  = variance of error.

## 6.6.1 COMPUTING RELIABILITY

Smit (1983) discerns three approaches to estimate reliability i.e. test-retest reliability, alternate forms reliability and internal consistency. The reliability estimate is determined by means of a correlation coefficient. The higher the numerical value of the obtained coefficient, the less the possibility of the effect of chance upon a test. The lower the obtained coefficient, the more the measure reflects chance factors (Mason *et al*, 1989, p 267).

6.6.1.1 TEST-RETEST RELIABILITY

Test-retest reliability boils down to two repeated administrations of the same test to the same group after a lapse of time. The two test scores obtained in this way are compared by means of correlational statistics. This procedure yields a reliability coefficient ( $r_{tt}$ ) known as the coefficient of stability. The length of time between the two administrations may turn out to be a major problem. If the lapse of time is too short, carry-over effects like exercise and memory may effect the reliability. If the period is too long, maturation (biological, psychological and emotional processes that change subjects over time) may influence reliability (Smit, 1983, p 29; Dane, 1990, p 254).

6.6.1.2 ALTERNATE FORMS RELIABILITY

Alternate forms reliability involves comparing performances by the same group on two different but equivalent forms of the same test. Two equivalent forms of the test are administered to the same sample. A lapse of time between the two administrations is not necessary because two equivalent forms of the test are used (Smit, 1983, p 30). According to Smit (1983, p 30) the two equivalent forms must comply with certain requirements:

1. Both forms must be of equal length.
2. The same procedures for marking must apply to both forms.
3. Item homogeneity must be the same for both the forms. (Smit, 1983, p 34-35). This formula is
4. Items must be uniform in regard to content, representativeness and degree of difficulty.

If the time period between the two administrations is short, the reliability estimate is known as the coefficient of equivalence. If there is a long lapse of time, the reliability estimate is known as the coefficient of stability and equivalence (Smit, 1983, p 31).

### 6.6.1.3 INTERNAL CONSISTENCY

There are many methods for computing internal consistency, viz split-half reliability and the Kuder Richardson method, amongst other approaches. The split-half technique is one appropriate to assess the reliability of a questionnaire. It involves dividing the test into two equivalent halves and computing the correlation between the halves. A measure is usually divided by separating the odd and even numbered items (Smit, 1983, p 33). But this division of the test into two halves shortens the measure which in turn affects reliability. A correction to the reliability estimate has to be done to compensate for the shortened halves. Spearman-Brown advances the formula (Mason et al, 1989, p 268) to affect this correction

$$r_{tt} = \frac{2r_{oe}}{1 + r_{oe}} \quad \text{where}$$

$r_{tt}$  = corrected reliability

$r_{oe}$  = the reliability estimate of the

split-half.

Guttman offers the following formula to affect the correction (Smit, 1983, p 24-35). This formula is independent of the requirements to calculate the correlation between the two halves.

$$r_{tt} = 2 \left( 1 - \frac{\sigma_A^2 + \sigma_B^2}{\sigma_t^2} \right) \quad \text{where}$$

$\sigma_A^2$  = variance of form A

$\sigma_B^2$  = variance of form B

$\sigma_t^2$  = variance of total group.

The Kuder-Richardson method, which usually yields higher reliability estimates because the measure is not split into two halves, is also employed to calculate internal consistency. The

Kuder-Richardson formula 20 provides an estimate of the average split-half reliability without requiring actually splitting of the test (Smit, 1983, p 35). The Kuder-Richardson-formula 20 is

$$r_{xx} = \frac{k}{k - 1} \left( 1 - \frac{\sum pq}{S_o^2} \right)$$

$r_{xx}$  = reliability estimate

$k$  = number of items on the test

$p$  = the portion of people who respond correctly to each item

$q$  = 1 -  $p$

$S_o^2$  = Observed score variance  
(Mason et al, 1989, p 269).

This Kuder-Richardson formula 20 is usually applied to obtain reliability coefficients when tests consist of dichotomously scored items. However, the Kuder-Richardson formula 20 may also be applied to tests comprising items which elicit more than two categories of response such as attitude scales. In the case of an item with more

than two response categories, the individual item variances are calculated and their sum substituted in the Kuder-Richardson formula 20 for

$$\sum_{i=1}^n p_i q_i$$

The Kuder-Richardson formula 20 used in the case of items which elicit more than two categories of response such as the case in hand the formula is (Ferguson, 1981, p 439):

$$\sum_{i=1}^n p_i q_i = \frac{\sum_{i=1}^n S_i^2}{n}$$

#### 6.6.1.4 ITEM TOTAL RELIABILITY

Item total reliability is "an estimate of the consistency of one item with respect to other items on the measure" (Mason et al, 1989, p 256). Calculating an item total reliability involves correlating the score on one item with the total score on the rest of the items. The Kuder-Richardson formula 20 may be employed. A high correlation coefficient may be an indication of the entire instrument being reliable (Mason et al, 1989, p 256).

#### 6.6.2 RELIABILITY OF THE VALUE SURVEY MODULE

Split-half and alpha reliability estimates were calculated by means of computer packages available on the main frame at the University of Pretoria. A split-half reliability estimate for unequal length of 0,79 was obtained. Because the partitioning of the questionnaire into two halves shortens the measure which in turn affects reliability, the Spearman-Brown correction to the

reliability estimate was done to compensate for the shortened halves (Mason et al, 1989, p 268; Smit, 1991, p 40). The Spearman-Brown correction yielded a reliability coefficient for unequal length of 0,88. An alpha coefficient of 0,90 was obtained for the Value Survey Module.

## 7.1 INTRODUCTION

### 6.6.3 RELIABILITY OF THE ACTIVISM AND POWERFUL

#### OTHERS-SCALE

Split-half and alpha reliability estimates were also calculated by means of computer packages available on the main frame at the University of Pretoria. A split-half reliability estimate for unequal length of 0,88 was obtained. A Spearman-Brown correction was also done to compensate for the shortened halves (Mason et al, 1989, p 268; Smit, 1991, p 40). The Spearman-Brown correction yielded a reliability coefficient for unequal length of 0,94. An alpha coefficient of 0,91 was obtained for the Activism and Powerful Others-scale.

### 6.7 SUMMARY

In this chapter the psychological tests used in the study were discussed. Attention was given to the construction and development of both Hofstede's Value Survey Module and Levenson's Activism and Powerful Others-scale. The different approaches in determining validity and reliability estimates were discussed in some detail and split-half and alpha reliability estimates calculated for the Value Survey Module and the Activism and Powerful Others-scale.

## CHAPTER 7

## RESEARCH DESIGN

## 7.1 INTRODUCTION

The choice of a research strategy, demarcation of a population, specific sampling procedure and the use of appropriate statistical methods for data analysis are of utmost importance in the research process. Suitable and proper research design, sampling methods, and statistics ensure a soundly based structured and systematic approach to scientific knowledge which can be checked for accuracy and the ability to generalize results to the population as a whole. In this chapter the choice of an appropriate research design is discussed. The population is demarcated and thereafter attention is given to the sampling and determination of a proper sample size which will be representative of the population under investigation enabling the researcher to generalize the findings. Lastly the statistical methods for the analysis of data as well as the computer programmes that will be used, are reviewed.

## 7.2 THE RESEARCH APPROACH

The aim of this study, as stated in Chapter 2, is a comprehensive analysis of the work values expressed by the labour force in two sectors of the mining industry. The extent of the internal/external locus of control as determinants of human behaviour in organizational and industrial settings and the investigation of specific differences in the orientation of control are two further objectives.

These differences will be highlighted in terms of ethnicity, language, religion, educational level, income, years of formal schooling received, occupational level, age, country of origin and economic sector employed in as independent variables. The four value dimensions and the locus of control will be used as the dependent variables and the biographic and demographic variables will be considered as possible nuisance variables. The achievement of the aims of the study entails obtaining information directly from the work force about their work values and their behaviour. Information thus has to be obtained from the subjects by posing questions about their preferences, feelings and behavioural intentions in regard to work values and completed actions that would reveal information about their internal/external locus of control. The resulting information can and may be obtained by way of questionnaires. Because of the location of the sample and the availability of subjects at training venues, the survey method of data gathering is considered as the appropriate method.

Although the basic approach for this research is the survey method, the data will be considered as being part of an experiment with multiple factorial analysis of variance as the main statistical method. In this instance the research approach would be an a posteriori quasi-experimental design involving questionnaires.

#### 7.2.1 A POSTERIORI QUASI-EXPERIMENTAL DESIGN

A posteriori or post hoc comparison refers to a comparison of means which has not been pre-planned but which allows the researcher to analyse the data in order to ascertain the differences



attributable to various independent variables which have given rise to significant F-ratios<sup>1</sup> (Shavelson, 1981, p 469). A posteriori comparison may be defined as a "hypothesis testing of the differences among population means carried out following an analysis of variance" (Bohrnstedt and Knoke, 1988, p 236). The basic requirement for using post hoc comparisons is that the overall F in the analysis of variance must be significant. Post hoc comparisons enable the researcher to make multiple comparisons among a set of means by utilizing the notion of a contrast.<sup>2</sup> The best known a posteriori multiple means comparison test is the Scheffé test (Bohrnstedt et al, 1988, pp 236-238).

A quasi-experimental design is a research plan that has some but not all the validity features of an experimental design. The researcher does not necessarily assign subjects randomly to treatment and control conditions and manipulations of the independent variable are quite difficult if not impossible under certain circumstances (Dooley, 1990, pp 182, 198). There is a change of emphasis in quasi-experimental designs so that the issue is whether an independent variable is an indicator of whatever the real cause may be and not the actual

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<sup>1</sup> F-ratio is a test statistic formed by the ratio of two mean-square estimates of the population error variance.

<sup>2</sup> A contrast is a set of weighted population means that sum to zero used in making post hoc comparisons of treatment groups. It is generally labelled  $\psi$  (psi).

cause of the dependent variable (Dane, 1990, p 105). Mason et al (1989, p 127) view quasi-experimental design as an alternative to the experimental design in that it can be carried out in field settings and does not need to comply with the requirement of equalization of groups by means of the random assignment of subjects.

The researcher may be forced to use this type of design because the study may have to be carried out in the natural setting where the experimental event occurs as is the case in hand. The researcher wishes to determine the effect of the independent variable on the dependent variable(s) and also, if possible, the confounding influence of the nuisance variables. The researcher does not have total control in these natural settings and therefore employs quasi-experimental techniques which were developed to deal systematically with the threats of internal and external validity (Mason et al, 1989, p 127). Internal validity refers to the truthfulness of the claim of a causal linkage between variables internal to the design while external validity points to the extent to which research findings may be applicable to other populations, other times and other settings (Dooley, 1990, pp 183, 218). Quasi-experimental designs are susceptible to the threats of regression, history, maturation, testing and instrumentation.

Instrumentation effects refer to changes in the manner in which the dependent variable is measured. Testing effects point to changes in responses caused by measuring the dependent variable. Maturation involves systematic changes over time regardless of specific events. The

history effect refers to the effect produced whenever some uncontrolled event alters participants' responses. Regression refers to the tendency for extreme behaviour to be replaced by less dramatic behaviour (Chadwick, Bahr and Albrecht, 1984, pp 178-179; Dane, 1990, pp 331-339). Dane (1990, pp 106-112) and Mason et al (1989, pp 129-137) advance several quasi-experimental techniques, viz nonequivalent control-group design, counterbalanced design, equivalent-time-samples design, time-series design and regression-discontinuity design. In the nonequivalent control-group design both the experimental and the control group take a pretest as well as a posttest. Only the experimental group is exposed to the experimental variable and is compared to a similar group (control group) not exposed to the experimental variable. This design may be presented as follows (Mason et al, 1989, p 129):

Experimental group	$O_1$ X $O_2$
Control group	$O_1$ $O_2$

$O_1$  = pretest  
 X = experimental intervention  
 $O_2$  = posttest.

The counterbalanced design is one in which there are several treatments and several respondents and each respondent is presented with each treatment condition in random order. The equivalent time-samples design refers to an experimental situation in which each subject serves repeatedly under the experimental and control conditions. The design may involve the alternation of experimental and control conditions. The

time-series design is an extended repeated measures design in which the dependent variable is measured several times before and after the introduction of the independent variable. Time-series design, of which there are two types, viz interrupted time-series and multiple time-series, implies a series of measures taken over a period of time (Dane, 1990, p 106; Howard, 1985, pp 123-126). Regression-discontinuity design is a cross-sectional design involving one measurement of different groups that represent different time periods. It is especially appropriate when people or groups are given awards or those in need given extra help and the researcher would like to discover the consequences of such interventions (Howard, 1985, p 121).

The case in hand may be termed a one shot case study and may be represented by the following formula:

X ----- O

X = exposure to the experimental variable

O = observation of the group (measurement).

Only one measurement is taken to determine the influence of the main effect and the interaction between the main and side effects. There is no control group but the independent variable(s) has a controlling effect.

#### 7.2.2 SURVEY RESEARCH

Dane (1990, p 338) defines survey research as a method of "obtaining information directly from a group of individuals". Chadwick *et al* (1984, p 442) view it "as a research technique that puts

questions to a sample of respondents by means of a questionnaire or an interview". Mason et al (1989, p 52) see survey research "as a technique to study the distribution of characteristics in a population". Random assignment, manipulation of the independent variable and testing of the cause-effect hypothesis seldom form part of survey research. The size of the sample, which in survey research is generally large, distinguishes it from other research strategies and methods (Dane, 1990, p 120). The three main methods of survey research are self-administered questionnaires, interview surveys and telephone surveys (Babbie, 1989, p 238; Baker, 1988, p 168).

The survey research process starts with the selection of valid measurements. A valid measurement is a questionnaire containing questions that measure the concept(s) which the researcher intends. Therefore the questions must be worded carefully and unambiguously. The gap between what the researcher wants to measure and the results of the survey must be as narrow and as small as possible (Baker, 1988, p 166). Having selected the appropriate test or having constructed an appropriate questionnaire to measure the concepts the researcher wants to measure, the researcher decides upon modes of eliciting information from the respondents. In the case in hand, questionnaires were chosen to record the respondents' answers. Thereupon respondents were selected. The relevant criterion in selecting respondents is that the population should be appropriate to the questions asked or, put another way, the questions should apply to the population from which the respondents are selected. The questions must be acceptable to the respondents, not give offence and be easily understood by respondents.

The next step in the research process is the administering of the survey. In the case in hand the questionnaires were distributed personally to randomly selected subjects on two mines. The administration was done by two personnel managers. They also gave instructions on how to complete the questionnaire. Once the questionnaires were completed, the respondents had to return them personally to the personnel managers.

### 7.2.3 THE SURVEY RESEARCH PROCESS

Baker (1988, pp 174-175) discusses four types of questions which may form part of a questionnaire, i.e. closed-ended questions, open-ended questions, contingency questions and matrix questions. Examples of matrix questions are the response categories of a Likert scale. The respondents select a response from a set of five or six response categories. The Value Survey Module and the Activism and Powerful Others-scale of the instrument used in this research (Work Value Survey Module) are both Likert scales. Open-ended questions allow for a more detailed written answer in the space provided. Baker (1988, p 174) suggests that a specific number of lines be left open, for answers to draw a more demarcated and precise reply. Too many lines may lead to the respondent skipping the items. Interesting questions should be put first. It may encourage the respondent to fill out the questionnaire. Sensitive questions should come near the end of the questionnaire (Baker, 1988, p 173). The researcher should take care that the questions are worded in such a way that the respondents understand them. Also, the set of questions

should be designed in such a way that they really tap the attitudes towards, and measure the topic concerned (Baker, 1988, p 168).

#### 7.2.4 ADMINISTERING THE QUESTIONNAIRE

Chadwick et al (1984, p 147) advance two broad strategies for collecting data by self-administered questionnaires. Questionnaires may be hand-delivered to individual respondents and collected after a few days or they may be administered to groups. The second strategy, according to Chadwick et al (1984, p 147), is much more efficient. Not only is data collection made easier but it enables the instructor to explain the purpose of the questionnaire and the instructions for their completion, handle enquiries and appeal to and motivate respondents to participate and complete the questionnaire. Although the questionnaire is administered to a group, every respondent completes it privately.

#### 7.4 SAMPLING PROCEDURE

##### 7.2.5 ADMINISTRATION OF THE WORK VALUE SURVEY MODULE

The Work Value Survey Module (the Value Survey Module and the Activism and Powerful Others-scale) was administered to a group of randomly selected employees at each mine. As it was difficult for the personnel manager in question to assemble the group in toto, he visited each respondent, handed out the questionnaire, explained the purpose and the aim of the research as well as the necessary instructions for the completion of the questionnaire. The instructor (personnel manager) also motivated participants in the research. On completion, the respondents handed the questionnaires directly to the instructor.

### 7.3 POPULATION

De la Rey (1978, p 16) specifies a population as "all the species, persons, or objects being present at a certain place and time holding a specific characteristic". It is clear from this definition that a population includes all possible members. De la Rey calls it a total aggregate. In order that the demands of scientific verification may be satisfied, it is necessary to demarcate and define the population as precisely as possible (De la Rey, 1978, p 16). All the employees working on a gold mine of the Anglo American Corporation in the Western Transvaal and all the employees working on a coal mine of Iscor in the North-Western Transvaal, made up the population for this research. It included employees on all levels ranging from unskilled blue-collar labourers to the managerial level, belonging to different racial and ethnic groups. The educational qualifications vary from primary school education to post-graduate level.

### 7.4 SAMPLING PROCEDURE

De la Rey (1978, p 16) views a sample as "a smaller number of persons, which one way or another, were drawn from a demarcated population for participation in a research project". There are different sampling methods and the method utilized may have an effect on the research findings. The way the sample is drawn must ensure that the characteristics of the population be present to the same extent in the sample. Such representativeness can be guaranteed only by drawing the sample structurally and methodically enabling the researcher to obtain reliable results (De la Rey, 1978, p 16). In the case in hand the sample consists of 400 employees, 200 from each mine randomly selected in each case from an alphabetical list of employees supplied by the companies.



## 7.4.1 SAMPLING METHOD

The method was determined to a great extent by the availability of subjects as participants. The researcher attempted to secure a large sample as availability affects the representativeness of the sample negatively. The method of sampling may be described as systematic sampling. According to De la Rey (1978, p 21) if a population or members of a population are classified randomly one way or another in regular succession, a systematic sample may be taken. Systematic sampling is a probability sample selecting every nth person after a random start. On the gold mine a number was randomly selected between 1 and 60, viz 27, and thereafter every 30th name until 200 had been selected. On the coal mine a number was also randomly selected between 1 and 40, viz 25, and henceforth every 20th name until 200 names had been selected. To ascertain the sufficiency and representativeness of the sample, Mc Hugh's formula was employed. McHugh (Guion, 1965, p 126) offered the formula

$$N = 3 + \frac{Z^2}{d^2} \quad \text{where}$$

N = number of subjects required

d = the permissible deviation from the population correlation coefficient and

Z = the normal deviate value of the desired confidence level.

The researcher accepted 5% as the lowest confidence level and equalized it with a value of 1,96. The deviation from the population to examine the structure of the questionnaire with an eye on validity.

7.5.1 correlation coefficient was put at 0,10. Ghiselli (in De la Rey, 1976, p 163) proved that the correlation coefficient seldom, if ever, exceeded 0,50. A deviation of 0,10 is therefore acceptable. Substituting the values of 1,96 and 0,10 in Mc Hugh's formula yield a N of 387. A sample of 400 exceeds this number and consequently is acceptable as sample of adequate size and hence it is hoped that the resulting statistical calculations ought to yield reliable and representative results and conclusions.

## 7.5 STATISTICAL METHODS

Data will be extensively analysed according to criteria developed and expressed by Ferguson (1981), Tabachnick and Fidell (1983), Ott and Mendenhall (1990), Shavelson (1981) and Harris (1975). The major tools of analysis may be descriptive statistics, correlational statistics, analysis of variance, Student's t-test, Kruskal-Wallis non-parametric oneway analysis of variance, Hotelling's  $T^2$ -test, discriminant analysis and the Mann-Whitney U-test<sup>3</sup>. The researcher hopes to ascertain the existence of significant differences or not between the cultures of a private enterprise and a semi-state corporation. The researcher also hopes to ascertain the influence of independent or moderator variables such as sex, religion, educational level, years of formal education received, income, occupational level, age, country of origin, economic sector and ethnic affiliation on work values and locus of control.

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<sup>3</sup> Factor analysis will not be discussed in detail in chapter 6 as it would not be applied as a statistical tool of analysis of data. It is only applied to examine the structure of the questionnaire with an eye on validity.

7.5.1 ANALYSIS OF VARIANCE

Bohrnstedt et al (1988, p 219) define analysis of variance (Anova) as "a statistical test of the difference of means for two or more groups". Ott et al (1990, p 695) view Anova as "a procedure for comparing more than two population means" while Ferguson (1981, p 234) holds that Anova is "a method for dividing the variation observed in experimental data into different parts, each part assignable to a known source, cause or factor". Anova is thus a method to statistically ascertain whether or not differences between two or more groups exist. The variance is partitioned into variance between groups

$$\sigma^2 = \frac{n\sum d^2}{r - 1} \dots \dots \dots A$$

and variance within groups

$$\sigma^2 = \frac{\sum \sum x_i^2}{r(n-1)} \dots \dots \dots B$$

and is usually expressed as the ratio  $\frac{B}{A}$  being called the F-ratio (Du Toit, 1963, p 108).

However, it is not only of importance to know, when two or more means are compared, whether there are any reliable differences among them.

Especially in experimental research using discrete groups as (the) independent variable(s) the major research question usually focuses on the extent to which the dependent variables differ as a function of group membership. Also, in all techniques for testing group differences, it is possible to test the strength of association between independent and dependent variables. Depending on the number

Error term is the difference between the observed score and the score predicted by the model.

of independent variables and dependent variables, a variety of techniques are available to undertake an analysis of variance. However, the logic behind an analysis of variance may be explained as follows: The Anova model tests the null hypothesis ( $H_0$ ) that all sample means are drawn from the same population and therefore are equal. The  $H_0$  may be represented as  $H_0 : \mu_1 = \mu_2 \dots = \mu_j$ . This implies that the group mean will equal the grand mean  $\mu$ . To measure the effect of an independent variable (IV) on a dependent variable (DV), cognizance has to be taken of this fact. "Effect" may be defined as the impact on a DV of being in a certain treatment group. The Anova model revolves around the question of how much of the total variation in the dependent variable can be explained by the IV or "treatment" variable and how much is left unexplained. The general Anova model with one IV may be presented as

$$Y_{ij} = \mu + a_j + e_{ij}$$

where  $e_{ij}$  = error term.<sup>4</sup>

This formula, according to Bohrnstedt *et al* (1988, p 222), indicates that the score of observation  $i$ , which is also a member of group  $j$  (hence  $Y_{ij}$ ), is a function of a group effect,  $a_j$ , plus the population mean and random error,  $e_{ij}$ . The numerator of the sample variance is then partitioned into two independent additive components to enable the researcher to estimate the proportion of variance in  $Y_{ij}$ .

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<sup>4</sup> Error term is the difference between the observed score and the score predicted by the model.

The formula  $\sum_{i=1}^n (Y_i - \bar{Y})^2$  is applied to

divide the numerator into two components.

$$\sum_{i=1}^N (Y_i - \bar{Y})^2 = \sum_{j=1}^J \sum_{i=1}^{n_j} (Y_{ij} - \bar{Y})^2$$

as the sum of observations across the J subgroups or treatments equals the total sample size N. The term

$$\sum_{j=1}^J \sum_{i=1}^{n_j} (Y_{ij} - \bar{Y})^2$$

is called the total sum of squares ( $SS_{total}$ ) and is partitioned into a between sum of squares ( $SS_{between}$ ) and a within sum of squares ( $SS_{within}$ ). Variance is thus expressed as the F-ratio

$$\frac{MS_{between}}{MS_{within}}$$

The total sum of squares refers to a number obtained by subtracting the scores of a distribution from their mean, squaring and summing these values. Between sum of squares is a value obtained by subtracting the grand mean from each group mean, squaring these differences for all individuals and summing them. Within sum of squares refers to the value obtained by subtracting each subgroup mean from each observed score, squaring and summing them (Bohrnstedt et al, 1988, pp 219-224; Ott et al, 1990, pp 527-540). Dividing the  $SS_{between}$  and  $SS_{within}$  by their respective degrees of freedom, provide the  $MS_{between}$  and the  $MS_{within}$  with which the F-ratios may be calculated.

The different techniques of analysis of variance are one-way analysis of variance, factorial anova, one-way manova and factorial manova. An one-way classification of variance enables the researcher to measure the effect of an independent variable

on (a) dependent variable (s) (Ferguson, 1981, p 235). In factorial Anova two independent variables or experimental variables are simultaneously investigated. It involves two bases of classification. These classification variables in analysis of variance, are called factors. Because there are two factors, the design is termed a "two-way design". (There might be three or more factors but the larger the design the more difficult the interpretation of results). The two-way design contains an effect term for each factor and a term for the interaction effect produced by both factors operating simultaneously.

Each score is considered to be influenced by its row, column and cell. Effects due to either column or row are called main effects while the effects due to column and row in combination are called interaction effects (Mason et al, 1989, p 231). Main effects are thus due to a single factor while interaction effects refer to influences of two or more factors in combination.

In a two-way factorial Anova the total sum of squares is partitioned into three parts, viz a between-rows sum of squares, a between-columns sum of squares and an interaction sum of squares. The total sum of squares of all observations about the grand mean is

$$\sum_{r=1}^R \sum_{c=1}^c \sum_{i=1}^n (X_{rci} - \bar{X} \dots)^2 \quad (\text{Ferguson, 1981, p 253}).$$

However, with more than one measurement for the treatment combinations (experimental conditions), the total sum of squares may be divided into four additive components, viz a between-rows sum of squares, a between-columns sum of squares, an

interaction sum of squares and a within-cells sum of squares. The variance is expressed as the ratio of the interaction effects ( $S_{rc}^2$ ) to the within-cells effect ( $S_w^2$ ), viz

$$F_{rc} = \frac{S_{rc}^2}{S_w^2}$$

(Ferguson, 1981, pp 252-266).

Multivariate analysis of variance (one-way Manova) is designed to investigate differences among two or more levels of an independent variable in terms of their impact on a set of dependent variables. Factorial Manova implies the extension of Manova to research comprizing more than one independent variable (Tabachnick et al, 1983, p 58). Manova has the advantage that the measuring of several dependent variables may improve the chance of discovering changes produced by different treatments and interactions. Manova may also reveal differences not shown in separate Anovas. However, the analysis is quite complex. In factorial Manova, a " 'best linear combination' of dependent variables is formed for each main effect and interaction. The combination of dependent variables that best separates the groups of the first main effect may be different from the combination that best separates the groups of the second main effect or the cells from an interaction" (Tabachnick et al, 1983, pp 222-223). Manova is also subjected to the limitations of unequal sample sizes, multivariate normality, outliers, linearity, multi-collinearity and singularity and homogeneity of variance - covariance. These limitations are discussed in detail under the heading "Discriminant analysis".

Manova revolves around research questions such as: Are changes in behaviour associated with different levels of an independent variable due to something other than random fluctuations or individual differences occurring by chance (main effects of independent variables) and do independent variables interact in their effect on behaviour (interactions among independent variables)? (Tabachnick et al, 1983, pp 226-227). According to Tabachnick et al (1983, pp 235-238) an appropriate data set for Manova should contain one or more independent variable(s) (classification variables) and two or more dependent variables (measures) on each subject or sampling unit within each combination of independent variables. Each independent variable may have two or more levels. The Manova equation for equal n can be developed through extension from Anova. Anova involves the partitioning of the total variance into two independent additive components, viz sum of squares between groups and sum of squares within groups. For factorial designs the variance between groups can be further partitioned into variance associated with the first independent variable, variance associated with the second independent variable and variance associated with the interaction between the two independent variables. Each n is the number of scores composing the relevant marginal or cell mean or  $SS_{bg} = SS_D + SS_T + SS_{DT}$  (Tabachnick et al, 1983, p 238).

Analysis of variance may also be used to conduct a profile analysis as Anova is analogous to the parallelism test, levels test and flatness test (discussed under Hotelling's  $T^2$ -test). Treatments correspond to rows, the dependent variables to columns and the interaction between columns and rows is also assessed (Harris, 1975, p 81).



Multiple comparison techniques allow the researcher to investigate post hoc hypothesis involving the means of individual groups or sets of groups. Examples of multiple comparison techniques are the Duncan test, the T-test, Tukey's test, Bonferroni test and the Scheffé-test. The Scheffé-test is the most popular and is a relatively conservative multiple comparison technique (Shavelson, 1981, p 470; Howell, 1989, p 240). Multiple comparisons by means of the Scheffé-test may be conducted regardless of whether the overall F is significant. Howell (1989, p 235) presented the formula

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{MS_{\text{error}} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

with degrees of freedom (df) equal to the number of groups - 1 and  $N_1 + N_2 - 2$  in order to perform the Scheffé-test. The specific approach used towards the calculation of the post hoc Scheffé-test, describing the data, is that of Horvath (1985, p 226). It is similar to the method described by Howell (1989, p 236-240) but differs in terms of the formula by which the critical values in the F-tables are determined. Horvath uses the normal critical F-values while Howell's approach is similar, except that the obtained F-ratio is multiplied by a factor of  $(k - 1)$  where  $k$  is equal to the number of groups or subgroups (i.e. the row-effect).

7.5.2 HOTELLING'S  $T^2$ -TEST

Hotelling's  $T^2$ -test enables the researcher to compare two groups on several variables simultaneously (De la Rey, 1978, p 71). As in the case of Student's t-test, Hotelling's  $T^2$  can be employed to test a single group or two independent groups (Harris, 1975, p 67). According to Tabachnick et al (1983, p 56) Hotelling's  $T^2$  is a special case of multivariate analysis of variance (as the t-test is a special case of univariate analysis of variance) in which two groups comprise the independent variable. Hotelling's  $T^2$  is applied to determine whether the groups differ on a set of dependent variables. Hotelling's  $T^2$  determines whether the centroids (combined averages on the dependent variables) differ for the two groups. Harris (1975, p 78) offers the following formula to compute Hotelling's  $T^2$ :

$$T^2 = [N_1N_2 / (N_1+N_2)] (\bar{X}_1 - \bar{X}_2)' S_C^{-1} (X_1 - X_2)$$

There is no evidence relating to the robustness of  $T^2$  except that large sample sizes are needed. When the dependent measures originated from a normal distribution, the computed  $T^2$ -values conform to the F-distribution (Harris, 1975, p 87).

Certain assumptions, however, have to be met before a  $T^2$ -analysis of data may be conducted (Harris, 1975, pp 85-88). The averaging together of the covariance matrices for two groups (the independent variable) before conducting a  $T^2$ -analysis of the differences between two groups, involves the implicit assumption that the

differences between  $S_1$  and  $S_2$  simply represent random fluctuations about a common population covariance matrix  $\Sigma$ . The null hypothesis ( $H_0$ ) includes both the hypothesis that  $\mu_1 = \mu_2$  and that  $\Sigma_1 = \Sigma_2$ . However, the second hypothesis is only an assumption on which the correctness of the validity of the first one depends. Rejection of the  $H_0$  thus could be due to the fact that  $\Sigma_1 \neq \Sigma_2$  rather than to non-null differences between  $\mu_1$  and  $\mu_2$ . Hotelling's  $T^2$  is more sensitive to difference in means than to differences in variances and covariances and the true significance level of  $T^2$  is unaffected by discrepancies between  $\Sigma_1$  and  $\Sigma_2$  as long as the sample sizes are fairly large and  $N_1 = N_2$  (Harris, 1975, p 85). The symbol  $\Sigma$  refers to the common population covariance matrix.

In some situations the entries in the population variance-covariance matrix are a priori specified (preplanned). The observed variances could be uniformly larger than the hypothesized values suggest. The individual differences in choice probability are inflating the response variabilities. The researcher should therefore be careful to apply formulas for the mean and variance of a multi-nominal distribution to situations where the assumption that all  $S_g$  have the same generating probability (ties) is unlikely to be met. According to Harris (1975, p 86) the formula for  $T^2$  is easily corrected to known covariance formulas simply by substituting  $\Sigma$  for  $S$  or  $S_c$ . The significance of the resulting  $T^2$  is then obtained from the chi-square table with  $p$  degrees of freedom. Another assumption on which Hotelling's  $T^2$  is based is that the vectors of outcomes of variables are sampled from a multi-variate normal distribution. As already

stated, little is known about the robustness of  $T^2$ . For fairly large samples however, computed  $T^2$ -values conform to the F-distribution, no matter what shape the parent population takes. Hotelling's  $T^2$ -test is a suitable test to apply in profile analysis<sup>5</sup> as the overall  $T^2$ -test for two samples "lumps together two sources of differences between the two groups' response vectors (profiles): a difference in the level of the two curves and differences in the shapes of the two curves" (Harris, 1975, p 80). Methods which analyse these two sources of difference, viz level and shape, separately and in addition, provide a simple test of the flatness of the combined or pooled profile for the two groups are known as profile analysis. Three methods are available in profile analysis to test the response vectors, viz a parallelism test, the levels test and the flatness test (Harris, 1975, pp 80-81). The parallelism approach tests the hypothesis that the profiles of the two groups have the same shape that is  $\mu_{\text{slope } 1} = \mu_{\text{slope } 2} = 0$ .

In this instance the slope of each line segment making up that profile will be the same for each group. The levels approach tests the hypothesis that the profiles for the two groups are at the same mean level, that is  $\mu_{w1} - \mu_{w2} = 0$ .

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<sup>5</sup> Other methods to determine profile similarities are the method of Du Mas, the method of Du Toit, the method of Osgood and Suci and Cattell's method (Smit, 1991, pp 97-104). However, because these methods are not going to be used in the case in hand, they will not be discussed in detail.

## 7.3.3 DISCRIMINANT ANALYSIS

This implies that the aggregated mean of the means of the separate variables is identical for the two groups, which means that the difference between two group means on any variable is zero. The flatness test tests the hypothesis that the pooled profile for the two groups combined is perfectly flat. The combined means are all equal to the same value. The flatness test takes advantage of the fact that a flat profile implies that all line-segment slopes are truly zero (Harris, 1975, p 81).

These three tests are analogous to a two-way univariate analysis of variance in which treatments correspond to rows and response measures (dependent variables) correspond to columns. Harris (1975, p 81) puts it quite aptly:

"The levels test corresponds to a test of the row main effect; the flatness test to a test of the column main effect; and the parallelism test to a test of the interaction between rows and columns. Thus in profile analysis, as in two-way analysis of variance, the interaction test takes precedence with a significant departure from parallelism implying that (a) the two groups must be compared separately on each outcome measure and non-significant departures from the equal levels test hypothesis and or the flatness test hypothesis are essentially non-interpretable since the significant interaction between groups and measures implies that both are significant sources of variation". Greater attention is paid to the concept "Profile analysis" in the next section.

the researcher plans to utilize either Hotelling's  $T^2$ -test or Discriminant analysis for profile analysis.

## 7.5.3

## DISCRIMINANT ANALYSIS

A profile analysis may also be done by way of a discriminant analysis.<sup>6</sup> Nunnally (1967, p 372) views profile analysis as "a generic term for all methods concerning groupings of persons". Nunnally proceeds by advancing two major classes of problems in profile analysis, viz that in which the group composition or group membership are known in advance of the analysis and those problems where group membership is not known in advance. The purpose of the analysis in the first instance is to distinguish groups from one another on the basis of scores in a data matrix or scores obtained on a battery of tests. In the second instance the basis of the analysis is to assign individuals to groups in terms of their profile scores.

In the case in hand group membership is known in advance and the purpose of the analysis (discriminant) is to distinguish the groups on the basis of scores in the data matrix. According to Nunnally (*op cit*, 1967, pp 373-374) profiles have three characteristics, viz level, dispersion and shape. The level of the profile is defined by the mean score of the person over the variables in the profile. The dispersion refers to the extent or

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<sup>6</sup> Measures of profile analysis such as measures of profile similarity which entail clustering of variables with factor analysis, measuring the relationship with Bravais-Pearson product-moment correlation and Osgood and Suci's (1952) distance measure D will not be discussed in detail here as the researcher plans to utilize either Hotelling's  $T^2$ -test or Discriminant analysis for profile analysis.

degree of divergence from the average. The standard deviation of scores for each person may be seen as a measure of the dispersion. The shape refers to the curve, the high and low points thereof. The method used for clustering profiles in the case in hand is discriminant function analysis. Discriminant function analysis is employed when groups are defined a priori and the purpose of the analysis is to distinguish the groups from one another on the basis of scores obtained in a battery of tests or scores in a data matrix (Nunnally, 1967, p 388). Certain assumptions have to be met before discriminant function analysis can be employed. Discriminant analysis assumes that the predictor variable scores are independently and randomly sampled from a population of scores and that the sampling distribution of any linear combination of predictor variables is normally distributed. This assumption is called multi-variate normality. However, discriminant analysis is robust to failures of normality if the violation is caused by skewness rather than by outliers.

Discriminant function analysis is extremely sensitive to multi-variable outliers. Outliers are cases with extreme values on a variable or combination of variables which unduly influences the averages and variability of scores and invalidates the generalizability of the solution to the population. Therefore outliers have to be eliminated or transformed before discriminant analysis can be performed. The discriminant model also assumes a linear relationship among all predictor variables within each group. Violation

of this assumption, however, simply leads to reduced power rather than to an increase in Type I error.<sup>7</sup> The discriminant model is also based on the assumption of homogeneity of variance-covariance. If classification is the goal of the analysis this assumption has to be met. If the sample sizes are quite large, discriminant function analysis displays a robustness in respect of violation of the assumption of equal variance-covariance matrices. With unequal and/or small sample sizes, homogeneity of variance-covariance should be assessed.

Scatterplots of the scores on the first two canonical discriminant functions can also be assessed for each group separately. Scatterplots roughly equal in size give evidence of homogeneity of variance-covariance matrices. The discriminant model also assumes that two variables in a matrix should not be perfectly or almost perfectly correlated (multi-collinearity). Neither should one score be a linear or nearly linear combination of others (singularity). Multi-collinearity and singularity make the inversion of matrices unreliable (Tabachnick et al, 1983, pp 300-301). The discriminant model is set up so that the first discriminant function maximally separates two groups and the second discriminant function, which operates orthogonally to the first, then separates the remaining groups on the basis of information not accounted for by the first discriminant function (Tabachnick et al, 1983, p 295).

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<sup>7</sup> A statistical decision error which occurs when a true null hypothesis is rejected. Its probability is  $1 - \alpha$ .



According to Tabachnick et al (1983, p 295) the total number of possible discriminant functions is either one fewer than the number of groups or equal to the number of predictor variables. However, Tabachnick et al are adamant that only the first two discriminant functions significantly and reliably discriminate among groups.

The significance of a set of discriminant functions is established by partitioning the variance in the set of predictors into two sources, viz variance which is attributable to differences between groups and variance attributable to differences within groups (Tabachnick et al, 1983, p 302). Tabachnick et al advance as a fundamental formula for testing the significance, the equation

$$\sum_{ij} (Y_{1j} - GM)^2 = n \sum_j (\bar{Y}_j - GM)^2 + \sum_{ij} (Y_{1j} - \bar{Y}_j)^2$$

and use this procedure to form cross-products matrices in the following way:

$$S_{total} = S_{bg} + S_{wg} \quad (\text{Tabachnick } \underline{\text{et al}}, 1983, \text{ pp } 237, 302)$$

The total of cross-products matrices is partitioned into cross-products matrices with differences between the two groups ( $S_{bg}$ ) and differences associated with subjects within groups ( $S_{wg}$ ). A classification equation is developed for each group to classify cases into groups. According to Tabachnick et al (1983, p 306) each case has a classification score for each group. A case is assigned to the group for which it has the highest classification score. Tabachnick et al (1983, p 306) advance a classification equation

$$C_j = c_{j0} + c_{j1}Y_1 + c_{j2}Y_2 + \dots + c_{jp}Y_p.$$

A score on the classification function for group  $j$  ( $C_j$ ) is determined by multiplying the raw score on each predictor variable ( $Y$ ) by its associated classification function coefficient  $c_j$ . Then these products are summed over all predictor variables and are added to a constant  $C_{j0}$  (Tabachnick et al, 1983, p 306).

There are three types of discriminant function analysis, viz direct discriminant function analysis, hierarchical discriminant function analysis and stepwise discriminant function analysis. The direct discriminant function solves equations simultaneously on the basis of all predictor variables. All the predictor variables enter the equations at once and the dependent variables are considered simultaneously. The hierarchical mode evaluates contributions to group discrimination by predictor variables as they enter the equations in some priority order which is determined by the researcher. This enables the researcher to assess the predictive power of each variable. The researcher may thus determine if the classification of cases to groups improves by adding a specific variable (or a set of variables). When prior variables are viewed as co-variates and the added variable as a dependent variable, this can be seen as an analysis of the covariance. Stepwise discriminant function analysis refers to the determination of the order of entry of variables into the discriminating equation by means of available statistical criteria. The researcher has no a priori reason for ordering entry of variables (Tabachnick et al, 1983, pp 309-313). Stepwise analysis is used for the case in hand. As the researcher does not have

a priori reason for ordering the entry of variables into the discriminant equations, statistical criteria, which are available with the stepwise function, have to be applied to determine the order of entry.

The maximum number of discriminant functions extracted within a single discriminant analysis is the lesser of either the number of groups minus one, or equal to the number of predictor variables. However, not all the functions may carry important information. It happens quite frequently that the first few discriminant functions account for the major share of discriminating power with no additional information forthcoming from the remaining functions (Tabachnick et al, 1983, p 318).

Discriminant function plots may be used to interpret the discriminant functions. The discriminant functions are presented by way of pairwise plots of group centroids on all significant discriminant functions. These centroids are the means of obtaining the discriminant scores for each group on each dimension. A discriminant function plot is simply a plot of the canonical discriminant functions evaluated at group means (Tabachnick et al, 1983, pp 313, 319).

Discriminant functions may also be interpreted by examining the loadings of predictor variables on them. Loading matrices are basically factor loading matrices. These factor loading matrices contain correlations between predictor variables and each of the discriminant functions (also called canonical variables) which enable the

researcher to name and interpret the functions. Mathematically, the loading matrix "is the pooled within group correlation matrix multiplied by the matrix of standardized discriminant function coefficients" (Tabachnick et al, 1983, p 320).

#### 7.5.4 STUDENT'S T-TEST

Like Hotelling's  $T^2$ -test, Student's t-test is also an inferential statistic to test for significant differences between two groups. The two groups may be dependent or independent. Student's t-test enables the researcher to decide whether observed differences between two sample means are caused by chance or represent a true difference between populations (Shavelson, 1981, p 419). De la Rey (1978, p 71) states the following assumptions which have to be met before the t-test can be used:

1. The scores in the respective populations must be normally distributed.
2. As the t-test is based on sample means, the two samples must be big and of equal or almost equal size.
3. The measurements must be on interval or ratio level.
4. The scores in the groups must be randomly sampled from their respective populations.

The use of the t-test also imposes a number of requirements on the collection of data:

1. There is one independent variable with two levels (i.e. groups).
2. A subject appears in one and only one of the groups.

3. The levels of the independent variable may differ from one another either qualitatively or quantitatively (Shavelson, 1981, p 421).

Applied to test hypotheses, the purpose of the t-test is to decide whether or not to reject the null hypothesis which is a probabilistic decision as it cannot be made with complete certainty. To determine the probability of observing the difference between the sample means of the two groups under the assumption that the null hypothesis ( $H_0$ )<sup>8</sup> is true, a significance test to decide whether the observed sample difference in means has a low probability of occurring in the populations, has to be performed. Bohrnstedt et al (1988, pp 204-205) advance the formula for doing this:

$$s^2 = \frac{(N_1 - 1)S_1^2 + (N_2 - 1)S_2^2}{N_1 + N_2 - 2}$$

where  $N_1 + N_2 - 2$  are the degrees of freedom which are associated with  $s^2$ . The value of  $t$  is calculated by applying the formula

$$t_{(N_1+N_2-2)} = \frac{(\bar{Y}_2 - \bar{Y}_1) - (\mu_2 - \mu_1)}{s \sqrt{\frac{1}{N_1} + \frac{1}{N_2}}}$$

$$= \frac{\bar{Y}_2 - \bar{Y}_1}{\sqrt{\frac{s^2}{N_1} + \frac{s^2}{N_2}}}$$

---

<sup>8</sup> Null hypothesis ( $H_0$ ) = no difference between the means of two groups.

Shavelson (1981, p 420) however advances a more simplified formula to determine the t-value

$$t_{\bar{X}_1 - \bar{X}_2} \text{ (observed)} = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{S \sqrt{\frac{1}{N_1} + \frac{1}{N_2}}}$$

Student's t-test assumes that the distribution of variables in the populations from which the samples are drawn, is normal. But it also assumes that the variances in the populations from which the samples are drawn are equal ( $\sigma_1^2 = \sigma_2^2$ ). This is known as homogeneity of variance (Ferguson, 1981, pp 179, 245). According to Ferguson (1981, p 245), moderate departures from homogeneity should not have a serious effect on the inferences drawn from the data. Gross departures from homogeneity, however, may lead to serious errors in the results. Ferguson (1981, p 245) recommends that under circumstances of gross departures from homogeneity, a transformation of the variable which may lead to greater uniformity of variance be used or a nonparametric procedure be applied. Ferguson (1981, p 182) also advances a formula when testing the difference between means for independent samples, assuming homogeneity of variance. A single estimate  $S^2$  is used in calculating the t-value:

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{\frac{S^2}{N_1} + \frac{S^2}{N_2}}}$$

However, should the two population variances be different ( $\sigma_1^2 \neq \sigma_2^2$ ), two variance estimates are obtained, viz  $S_1^2$  and  $S_2^2$  which are estimates of  $\sigma_1^2$  and  $\sigma_2^2$ . The difference is divided by the standard error of the difference and t is computed simply by using the separate variance estimate. The resulting ratio is

$$t' = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

This ratio ( $t'$ ) is neither normal nor does it approach a t-distribution.

#### 7.5.5 NON-PARAMETRIC STATISTICS

Two non-parametric statistics are considered, viz Kruskal-Wallis one-way analysis of variance and the Mann-Whitney U-test. Applying non-parametric statistics one or more of certain assumptions have to be met (De la Rey, 1978, p 113):

1. The distribution of scores has to be skewed.
2. Measurement must be on nominal or ordinal level.
3. The sample size must be small ( $N \leq 30$ ).
4. Situations where it is impossible to make certain assumptions in regard to the sample.
5. Situations where it is impossible to realize certain research aims because appropriate parametric statistics are not available.

## 7.5.5.1 KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE

Kruskal-Wallis one-way analysis of variance is applied to help to decide if  $k$  independent samples from different populations differ significantly. The samples must be more than two independent samples. The decision is also probabilistic as the problem according to Siegel (1956, p 84) is to determine whether differences among samples represent merely chance variations or signify genuine population differences. Siegel (1956, p 184) observes that the Kruskal-Wallis statistic tests the  $H_0$ , that the  $k$ -samples come from the same population or from identical populations with respect to averages.

In the computation of the Kruskal-Wallis test the observations or scores are all ranked in a single series. Siegel (1956, p 185) supplies the following formula to calculate the Kruskal-Wallis statistic ( $H$ ) and observes that if the null-hypothesis ( $H_0$ ) is true, then  $H$  is distributed as chi-square with degrees of freedom =  $k - 1$ , provided that the sizes of the various  $k$ -samples are not too small:

$$H = \frac{12}{N(N+1)} \sum_{j=1}^k \frac{R_j^2}{n_j} - 3(N+1)$$

where  $k$  = number of samples

$n_j$  = number of cases in  $j$ th sample

$N = \sum n_j$ , the number of cases in all samples combined

$R_j$  = sum of ranks in the  $j$ th sample

$\sum_{j=1}^k$  = directs one to sum over the  $k$  samples.



## 7.5.5.2 MANN-WHITNEY U-TEST

The Mann-Whitney U-test is a well-known distribution-free test for two independent samples. Although it is a non-parametric test for comparing the central tendency of two independent samples, it may also be applied to normally distributed populations. Instead of computing means as the sample statistic, however, the Mann-Whitney U-test is based on the ranking of sample scores. Ranking is a sophisticated mathematical operation and can be performed at ordinal level data. The Mann-Whitney U-test tests the  $H_0$  that the two samples were randomly drawn from identical populations. This test is especially sensitive to population differences in central tendency.

This  $H_0$  is broader than the  $H_0$  tested by the corresponding t-test which deals with means of the two samples. The  $H_0$  tested by the Mann-Whitney U-test is based on the assumption that the two populations have the same shape and dispersion.

The logic of the Mann-Whitney U-test is quite easy to understand. To compute U, the scores from both samples are pooled and ranked from highest to lowest. Tied observations are then assigned the mean of the rank position they would have occupied had there been no ties. The ranks of observations from group 1 are then summed. Thereupon the ranks for the two samples are totalled and compared. The statistic used in this test, viz the U-value

is then given by the number of times a score in one group (with  $n_2$  cases) precedes a score in the other group (with  $n_1$  cases) in the ranking.

If the two samples represent populations not significantly different from each other, then the total ranks should be similar in value. Tied scores are assigned to the average of the ranks they would have had if they had not been tied. The formula to compute U is

$$U = N_1 N_2 + \frac{N_1 (N_1 + 1)}{2} - \Sigma R_1$$

where  $\Sigma R_1$  = the sum of ranks for sample 1 (Siegel, 1956, p 120).

On determining the value of U, the test of significance has to be conducted. A z-score is obtained with the aid of the formula

$$Z \text{ (obtained)} = \frac{U - \mu_u}{\sigma_u}$$

where U = the sample statistic

$\mu_u$  = the mean of the sampling distribution of sample U's

$\sigma_u$  = the standard deviation of the sampling distribution of sample U's (Siegel, 1956, p 121),

to find the critical region as marked by Z (critical). Based on Z (critical) the researcher makes a decision to reject or to accept the  $H_0$  of no difference (Healy, 1990, pp 193-197; Howell, 1989, pp 300-305).

#### 7.5.6 CORRELATIONAL STATISTICS

Ott et al (1990, p 417) define correlation as a "measure of the strength of the relationship between two variables x and y". The value so

obtained is called the coefficient of linear correlation, or simply the correlation coefficient. The stronger the correlation, the better x predicts y. The population correlation coefficient  $r$  (rho) is computed as

$$r = \frac{S_{xy}}{\sqrt{S_{xx} \cdot S_{yy}}}$$

This is called the Bravais-Pearson product-moment correlation coefficient. Some textbooks present the formula as

$$r_{xy} = \sqrt{R_{Y.X}^2}$$

(Bohrnstedt et al, 1988, p 271)

or

$$r = \frac{\Sigma_{xy}}{\sqrt{\Sigma x^2 \cdot \Sigma y^2}}$$

(Du Toit, 1963, p 74).

The Bravais-Pearson product-moment correlation may have a positive or negative sign attached to it to indicate the direction of the correlation. The value of  $r$  can range between -1,00 for a perfect inverse association to +1,00 for a perfect positive correlation with zero ( $r = 0$ ) indicating no relationship at all. Bohrnstedt et al (1988, p 271) see the usefulness of the correlation coefficient in its communication of directionality and magnitude of the association. Ott et al (1990, pp 420-422) note several interpretations of the coefficient of correlation:

1. A correlation coefficient equal to 0,5 does not mean that the strength of the relationship between two variables (x and y) is halfway between no correlation and perfect correlation. The more closely x and y are linearly related, the more the variability in the y-values can be explained by variability in the x-values and the closer  $r^2$  will be to 1. If  $r = 0,50$  the independent variable x is accounting for  $r^2 = 0,25$  or 25% of the total variation in the y-values.  $r^2$  is called the coefficient of determination.<sup>9</sup>
2. X and y could be perfectly related in some way other than in a linear manner when  $r = 0$  or a very small value.
3. Correlations are difficult to add up. The sum of coefficients of correlation does not account for the variability of the y-values about their sample mean.

Spearman's correlation coefficient for ranked data ( $r_s$ ) may also be calculated. This coefficient of correlation is based on ranked data. Ranking entails separate ranking of a number of items on two dimensions. Based on this ranking, the

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<sup>9</sup> The coefficient of determination is a proportional reduction in error statistic (a characteristic of some measures of association which allows the calculation of reduction in errors predicting the dependent variable) for linear regression which expresses the amount of variation in the dependent variable explained or accounted for by the independent variable (Bohrnstedt et al, 1988, p 269).

correlation between the two sets of ranks is determined.<sup>10</sup> Howell (1989, p 110) presents the formula for the calculation of Spearman's rho ( $r_s$ ) as:

$$r_s = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$

#### 7.5.7 DESCRIPTIVE STATISTICS

Mason et al (1989, p 428) define descriptive statistics as statistics used to summarize data. Bohrnstedt et al (1988, pp 66-81) divide descriptive statistics into measures of central tendency and measures of variation.

##### 7.5.7.1 MEASURES OF CENTRAL TENDENCY

The mode, the median and the mean are measures of central tendency. The mode is the value or category in a frequency distribution that has the largest number, or percentage of cases. The median refers to the value or score that exactly divides an ordered frequency distribution into equal halves, viz the outcome is associated with the 50th percentile. The most frequently used measure of central tendency is the mean which is commonly called the average. The mean is the sum of all scores in a distribution divided by the

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<sup>10</sup> Ranked data is data for which the observations have been replaced by their numerical ranks from lowest to highest and Spearman's correlation ( $r_s$ ) is a correlation coefficient based on ranked data.

number of scores, viz the mean is the arithmetic average. In this research the mean is the measure of central tendency which may be applied to interpret the results of t-scores, discriminant analysis and one-way and other approaches to analysis of variance.

#### 7.5.7.2 MEASURES OF VARIATION

Measures of variation calculated and presented are the range, variance, standard error and standard deviation. The range is an indication of the dispersion based on the difference between the largest and the smallest outcomes in a distribution. The variance is a measure of dispersion for continuous variables indicating an average of squared deviations of scores about the mean and the standard deviation is the square root of the variance and is also used to describe a dispersion of a distribution. The usual way of assigning meaning to the standard deviation is in terms of how many scores fall no more than a standard deviation above or below the mean. For a normal distribution exactly two-thirds of observations lie within one standard deviation of the mean. The standard deviation is basically a measure of the average of the deviations of each score from the mean. The standard error of the mean refers to the standard deviation of sample means in a sampling distribution. It provides information about the amount of error likely to be made by inferring the value of the population mean from the sample mean. The greater the variability among sample means, the greater the chance that inferences about the population mean from a single sample mean will be in error (Shavelson, 1981, p 305).

#### 7.5.7.3 FREQUENCY TABLES

Frequency tables comprise of information about the frequencies across values for biographical variables. The percentage and cumulative percentage will be used to describe and summarize the sample.

#### 7.5.7.4 CROSSTABULATION

A frequency distribution is a useful display of the quantitative attributes of continuous variables or the qualitative attributes of discrete variables. But a crosstabulation (joint contingency table) is "a tabular display of the joint frequency distribution of two discrete variables which has  $r$  rows and  $c$  columns" (Bohrnstedt *et al*, 1988, p 101). Thus a crosstabulation indicates the joint outcomes of two variables. The cells which comprise the body of any table show these joint outcomes of two variables. Bohrnstedt *et al* (1988, p 103) view a cell as "an intersection of a row and a column in a crosstabulation of two or more variables". Marginal distributions consisting of row marginals and column marginals are frequency distributions of each of two crosstabulated variables. Row marginals are the row totals and column marginals are the column totals.

### 7.6 CONCLUSIONS

In this chapter the research design was discussed. Survey research was discussed in detail and related to the aim of this study. Attention was paid to the process of survey research. The method and procedures for administering the questionnaire and data-collection

were discussed. The population was demarcated and the sampling methods and procedure were discussed in detail. Attention was also paid to ascertain an appropriate sample size. Descriptive and inferential statistical methods were explained. The various statistical methods consist of descriptive statistics, different approaches to the analysis of variance, profile analysis (discriminant analysis), the Student's t-test, Hotelling's  $T^2$ -test, non-parametric inferential statistics, e.g. Kruskal-Wallis one-way analysis of variance, and Mann-Whitney U-test and correlational statistics which entail the parametric Bravais-Pearson product-moment correlation for normally distributed scores and Spearman's rank correlation which is a non-parametric correlation applicable to ranked data.

## 8.2 FREQUENCY DISTRIBUTION

Frequency distributions are part and parcel of descriptive statistics. Healy (1990, p 24) views frequency distributions as tables summarizing the distribution of a variable by reporting "the number of cases contained in each category". It is a form of classification and description of numbers which assists the researcher in interpreting the information obtained and to understand the important features of the data (Peryson, 1981, p 17). Ott et al (1990, p 697) define a frequency table as "a table used to summarize how many measurements in a set fall into each of the sub-intervals (or classes)". Frequency tables presented in this chapter also contain the cumulative percentage frequencies which are obtained by successively adding the individual percentages. The primary purpose of this cumulative percentage column is



## CHAPTER 8

## DESCRIPTION OF SAMPLE CHARACTERISTICS

## 8.1 INTRODUCTION

A description of the sample is presented in this chapter. The dispersion of subjects across demographic variables such as sex, language, religion, educational qualifications, formal schooling (education received) income, occupational level, age, country of origin, ethnicity and type of enterprise in which they are employed is described and summarized by way of frequency tables. The general characteristics of the sample will be evident from these frequency tables.

## 8.2 FREQUENCY DISTRIBUTION

Frequency distributions are part and parcel of descriptive statistics. Healy (1990, p 24) views frequency distributions as tables summarizing the distribution of a variable by reporting "the number of cases contained in each category". It is a form of classification and description of numbers which assists the researcher in interpreting the information obtained and to understand the important features of the data (Ferguson, 1981, p 17). Ott et al (1990, p 697) define a frequency table as "a table used to summarize how many measurements in a set fall into each of the sub-intervals (or classes)". Frequency tables presented in this chapter also contain the cumulative percentage frequencies which are obtained by successively adding the individual percentages. The primary purpose of this cumulative percentage column is

to ascertain the percentage of values falling below (or above) a given score or class interval in the distribution of what percentage of values is "greater than" or "less than" a specified value.

### 8.3 DESCRIPTION OF THE SAMPLE BY MEANS OF FREQUENCY TABLES

Frequency Tables 8.1 through 8.11 present descriptions of the sample across the demographic variables. The values are tabled against the frequency of occurrence.

Table 8.1: SEX DISTRIBUTION OF THE TOTAL GROUP.

Sex	Frequency	Percentage	Cumulative Percentage
Male	186	86,9	86,9
Female	28	13,1	100,00
Total	215	100,00	-----

Table 8.1 shows the distribution of the sample across the sexes. The acquired sample is predominantly male in its composition. Because of the huge inequality in distribution between the sexes it will not be advisable to use this variable as an independent variable in the data analysis.

The frequency distribution according to language is presented in Table 8.2.

The frequency distribution of subjects according to religion is presented in Table 8.3.

Table 8.2: FREQUENCY DISTRIBUTION OF LANGUAGES.

Language	Frequency	Percentage	Cum. Percentage
Afrikaans	107	50,2	50,2
English	24	11,3	61,5
North Sotho	35	16,4	77,9
South Sotho	19	8,9	86,9
Xhosa	9	4,2	91,1
Zulu	2	0,9	92,0
Other	17	8,0	100,00
Total	215	100,00	----

The distribution of the sample across language is predominantly White in origin, with 61,5% of the subjects belonging to this ethnic group. Furthermore, Blacks are also under-represented in the sample. Comparison between Afrikaners, Anglo-Saxons and an aggregale of Africans from various ethnic groups is possible. Also the small number of Zulu subjects (N=2) rules out any possibility of a significant comparison between them and the Xhosas. The results of such a comparison should have had important implications for organizational and political policy. Most of the subjects included under the category "other" were Tswanas (N=11). The rest were citizens of Zambia and Mozambique. With a view to comparing language groups, North and South Sothos were grouped together with the remaining black ethnic group combined, comprising 25,4% and 13,1% of the sample. This regrouping results in four groups viz, Afrikaners, Anglo-Saxons, Sothos and Other Blacks.

The frequency distribution of subjects according to religion is presented in Table 8.3.

Educational qualifications may have quite an effect on the value systems of the subjects. The distribution of educational qualification is presented in Table 8.4.

Table 8.3: FREQUENCY DISTRIBUTION ACCORDING TO RELIGION.

Religion	Frequency	Percentage	Cumulative Percentage
Anglican	6	2,9	2,9
NGK/DRC	53	25,2	28,1
Methodist	17	8,1	36,2
Presbyterian	9	4,3	40,5
Pentecostal	12	5,7	46,2
Catholic	9	4,3	50,5
Reformed	20	9,5	60,0
Apostolic	18	8,6	68,6
Lutheran	4	1,9	70,5
Zionist	12	5,6	76,2
DRC Mis.	11	5,2	81,4
Independent	4	1,9	83,3
Islamic	1	0,5	83,5
N.H. Church	19	9,0	92,9
Other	15	7,1	100,0
Total	215	100,0	----

According to Table 8.3 subjects belonging to the three Afrikaans churches are by far in the majority, comprising 43,7% of the sample. A recoding was done to obtain better comparability between the denominations. Anglicans and Catholics were grouped together comprising 7,2% of the total sample as were members of the two Dutch Reformed Churches (i.e. 30,4%). Members of the Reformed Church and the "Nederduits Hervormde" Church formed a group (i.e. 18,5%). The remaining religions - Lutheran, Zionist, Independent Churches, Islam and Others - were grouped together in one group (i.e. 17%). Methodists and Presbyterians were grouped (i.e. 12,4%) together as were confessors of the Pentacostal and Apostolic faiths (i.e. 14,3%).

Educational qualifications may have quite an effect on the value systems of the subjects. The distribution of educational qualification is presented in Table 8.4.

distribution of subjects across years of formal school education received.

Table 8.4: FREQUENCY DISTRIBUTION ACCORDING TO YEARS OF EDUCATIONAL QUALIFICATIONS.

Qualification	Frequency	Percentage	Cumulative Percentage
Illiterate	13	6,0	6,0
Std 5 or lower	11	5,1	11,2
Std 6	7	3,3	14,4
Std 8	40	18,6	33,0
Std 10	112	52,1	85,1
B - degree	20	9,3	94,4
Honours	8	3,7	98,1
Masters	4	1,9	100,0
Total	215	100,0	----

An analysis of Table 8.4 reveals that subjects with a matric qualification were by far in the majority. Table 8.4 reflects the diversity and inequality in educational standards in South Africa. However, because of a preponderance of white subjects, the intervals Std 8 and matric which comprises 70,7% of the total sample, are predominant. A recoding of categories was done to enable the researcher to do an analysis of variance. All the categories of Std 8 and lower were grouped together as were all subjects with degrees. This recoding resulted in three groups, viz those with educational qualifications of Std 8 and lower including illiterates which comprises 33% of the total sample, subjects with matric (i.e. 52,1%) and graduates (i.e. 14,9%).

Educational qualifications are closely related to number of years schooling received. The number of years schooling received actually points to the number of years of formal school education which was completed. Only the number of years a course should officially take, should have been taken into consideration. Table 8.5 presents the frequency distribution of subjects across years of formal school education received.

Table 8.5: FREQUENCY DISTRIBUTION ACCORDING TO YEARS OF FORMAL SCHOOL EDUCATION RECEIVED.

No of years	Frequency	Percentage	Cumulative Percentage
10 years or less	44	21,1	21,1
11 years	18	8,6	29,7
12 years	77	36,8	66,5
13 years	16	7,7	74,2
14 years	21	10,0	84,2
15 years	11	5,3	89,5
16 years	9	4,3	93,8
17 years	6	2,9	96,7
18 years	7	3,3	100,0
Total	215	100,0	----

The diversity and inequality in the educational system in the Republic of South Africa are also evident from Table 8.5. By far the minority of subjects (15,8%) have completed formal school education up to university level. The highest frequency of subjects namely 77 (36,8% of the total sample) completed the full 12 years of schooling. The average number of years of formal schooling is 12 - the number of years it usually takes to complete matric. Again, it has to be taken into consideration that subjects are predominantly white. A recoding of categories was done resulting in three groups, viz those with 11 years or less of formal schooling received (i.e. 29,7% of the sample), those with 12 years of formal schooling (schooling up to matric level) which comprises 36,8% of the sample and then a group with some tertiary education (i.e. 33,5%). The distribution of subjects across income is presented in Table 8.6.

Table 8.6: FREQUENCY DISTRIBUTION ACCORDING TO INCOME  
IN RAND PER ANNUM.

Income categories	Frequency	Percentage	Cumulative Percentage
1 000 or less	11	5,2	5,2
1 001 - 3 000	12	5,7	10,8
3 001 - 5 000	6	2,8	13,7
5 001 - 10 000	24	11,3	25,0
10 001 - 15 000	9	4,2	29,2
15 001 - 18 000	7	3,3	32,5
18 001 - 24 000	18	8,5	41,0
24 001 - 30 000	25	11,8	52,8
30 001 - 45 000	34	16,0	68,9
45 001 - 60 000	50	23,6	92,5
60 001 - 80 000	12	5,7	98,1
80 001 -120 000	4	1,9	100,0
Total	215	100,0	----

Table 8.6 reveals quite an unequal income between subjects which is indicative of the social inequality in South African society and the poverty prevailing among certain substrata of this society. The primary causes of this social inequality and poverty may be traced back to the historical development of South Africa, religious and cultural views holding the Blacks as an inferior and subjugated people, the poor and inferior education system and a labour relations system barring Blacks from advanced, higher paid job categories and the necessary training to be promoted to these categories. The possible influence of locus of control must also not be underrated.

The mode of this income distribution is approximately R52 500 which is the income interval in which the highly trained and educated subjects are positioned. The average income is  $\pm$  R27 700. It should be taken into consideration that the subjects in the lower income intervals usually are Blacks with an inferior education and training and with limited prospects of advancement to higher paid job categories. Categories

were also regrouped to obtain a more adequate distribution of subjects enabling the researcher to do an analysis of variance. The regrouping resulted in categories R5 000 and lower forming one group (i.e. 13,7% of the sample), subjects with an income of greater or equal to R5 001 and lesser or equal to R30 000 form another group (i.e. 39,1%), subjects with an income between R30 001 and R45 000 form a third group (i.e. 16,0%) and all subjects with an income above R45 001 were grouped together (i.e. 31,2%).

Table 8.7 presents the distribution of subjects across occupational level.

Table 8.7: FREQUENCY DISTRIBUTION ACCORDING TO OCCUPATIONAL LEVEL.

Category	Frequency	Percentage	Cumulative Percentage
Executive	1	0,5	0,5
Middle Manager	44	21,0	21,4
Supervisor	56	26,7	48,1
Consultant	9	4,3	52,4
Administrative	37	17,6	70,0
Artisan	10	4,8	74,8
Semi-skilled	19	9,0	83,8
Unskilled	34	16,2	100,0
Total	215	100,0	----

Table 8.7 shows that top management is poorly represented in the sample. It is therefore impossible to investigate the work values of South African executives and other top managers. However, meaningful inferences could be drawn about the work values of middle management, professionals, general workers as well as workers of the lower levels.

In this instance a recoding was also done resulting in middle management and consultants grouped together



(i.e. 25,3% of the sample) and all the labourers (artisans, semi-skilled and unskilled) forming a group (i.e. 30%). Supervisors formed a group on their own (i.e. 26,7%) as did the administrative staff (i.e. 17,6%).

The distribution of subjects across age takes the shape of a normal curve. This distribution is presented in Table 8.8.

Table 8.8: FREQUENCY DISTRIBUTION ACCORDING TO AGE.

Age category	Frequency	Percentage	Cumulative Percentage
18 years & younger	1	0,5	0,5
19 - 21	9	4,2	4,7
22 - 25	26	12,3	17,0
26 - 30	66	31,1	48,1
31 - 45	83	39,2	87,3
46 - 55	18	8,5	98,8
Over 55	9	4,2	100,0
Total	215	100,0	----

According to Table 8.8 the subjects were evenly distributed between the young and the aged. The average age of the subjects is 27 years which is quite young. However, the mode (the value of the response category in a frequency distribution which has the largest number or percentage of cases) is 38,5 years which indicates that the sample consists mainly of adults of middle age.

In order to do an analysis of variance a recoding of categories was done. This recoding resulted in four groups, viz a group comprising subjects in the age bracket 19 years of age and older and 25 years of age and younger (i.e. 16,5% of the sample), subjects whose ages vary between 26 and 30 (i.e. 31,1%) those in the

age bracket 31 to 45 (i.e. 39,2%) and a group consisting of subjects older than 46 years of age (i.e. 12,7%).

Table 8.9 presents the distribution of subjects across country of origin.

Table 8.9: FREQUENCY DISTRIBUTION ACROSS COUNTRY OF ORIGIN.

Country	Frequency	Percentage	Cumulative Percentage
South Africa	186	87,3	87,3
Lesotho	8	3,8	91,1
Zambia	2	0,9	92,0
Namibia	1	0,5	92,5
England	6	2,8	95,3
U S A	1	0,5	95,8
Northern Europe	3	1,4	97,2
Self Governing States	6	2,8	100,0
Total	213	100,0	----

Table 8.9 shows that the vast majority of subjects hail from South Africa. As there is not a single subject from Southern Europe, Eastern Europe, Japan, Taiwan, Hong Kong, Korea, South America, Mozambique, Botswana, Zaire and insignificant numbers from Zambia and the Anglo-Saxon countries, it is impossible to investigate and compare Latin, Nordic, post-Confucian and Anglo-Saxon cultures in the South African context and to investigate the influence of latitude on the value system. A recoding was done resulting in two groups, viz those subjects who hail from South Africa comprising 87,3% of the sample and those originating from other countries (i.e. 12,7% of the sample).

Table 8.10 presents the distribution of subjects across ethnic groups.

Table 8.10: FREQUENCY DISTRIBUTION ACROSS ETHNIC GROUPS.

ENTERPRISES

Ethnic category	Frequency	Percentage	Cumulative Percentage
Afrikaans	105	53,0	53,0
English	20	10,1	63,1
Brown	1	0,5	63,6
Xhosa	8	4,0	67,7
Sotho	46	23,2	90,9
Tswana	16	8,1	99,0
Zulu	2	1,0	100,0
Missing	17	----	----
Total	215	100,0	----

Again a comparison between Afrikaans and English speaking whites is possible. Grouping of ethnically-related subjects is required to make any further comparisons meaningful. Note also the great inequalities in sizes of the three groups. An investigation into the value patterns of the different Black groups is also impossible because of limited as well as unequal sizes of the groups. However, an investigation to determine significant differences between the Whites and Blacks, if any, is possible. A recoding was done resulting in three groups, viz the Afrikaners comprising of 53% of the sample, the English Whites comprising 10,1% of the sample and the third group consisting of all the Africans (Xhosa, Sotho, Tswana and Zulu) comprising 36,3% of the sample).

The research was conducted at a private company and at a semi-state corporation to determine if any significant differences exist in the value systems of private enterprise and semi-state controlled corporations.

Subjects predominantly have a high school qualification. Table 8.11 presents the distribution of subjects across enterprises. In regard to income, most subjects

Table 8.11: FREQUENCY DISTRIBUTION ACCORDING TO  
ENTERPRISES.

Category	Frequency	Percentage	Cumulative Percentage
Private Enterprise	108	50,2	50,2
Semi-state	107	49,8	100,0
Total	215	100,0	----

The even distribution of subjects between the two groups, viz a freemarket enterprise and a parastatal organization, makes a comparison of these groups possible. Possible statistical techniques to do this comparison may be Hotelling's  $T^2$ -test, Anova or Discriminant analysis.

#### 8.4 SUMMARY

It is evident from the preceding discussion that the sample is predominant male, white, Afrikaans-speaking with a Calvinistic orientation. Most subjects belong either to the Dutch Reformed Church or to its two Afrikaans sister churches. English-speaking whites are fewer in number than Afrikaans subjects and apparently mostly members of the Methodist Church. Members of the High Church of England (Anglican) are by far in the minority. These religious orientations and affiliations may have an influence on subjects' value systems. Black subjects belong to different ethnic groups but are inadequately represented in the respective groups which necessitates the regrouping of these ethnically-related subjects.

Subjects predominantly have a high school qualification (Std 8 - Std 10) with approximately 12 years of formal school education. In regard to income, most subjects

are in the higher to middle-income groups with occupations ranging from middle-management to lower-level work. The vast majority of the subjects are adults of middle-age who ought to be settled and have stable work, social and family lives. Their opinions and attitudes should also be well-formed and stable. The majority of the sample by far are South African citizens.

In this chapter the results of the statistical analysis of data are presented. Descriptive statistics are used to record the numerical properties of the various distributions. The arithmetic mean is a statistic of location and the standard deviation is a statistic of dispersion among the distribution around the mean as index of locality. Correlation statistics are employed to ascertain the relationship, if any, between the dimensions of the Work Value Survey of Hofstede and the Locus of Control-scale, as refined by Levenson. The free-market and parastatal sectors of the mining industry are compared by means of a discriminant analysis and multiple analysis of variance. The main independent variables such as language, religion, etc. and where applicable, their two-way interactions are also compared and investigated by multiple analysis of variance in combination with Scheffé tests.

## 9.2 PRESENTATION OF RESULTS

The presentation of the data obtained from the survey is the major contribution towards this study of South Africans' work values. The scientific data will be discussed under headings referring to various dimensions measured by the Value Survey Module and the Activism and Powerful Others-scales. Ten independent variables have been identified and divided into two groups and analysed separately. The first table regarding the analysis of variance of a dependent variable is in regard to the four independent variables

## CHAPTER 9

## PRESENTATION OF RESULTS

## 9.1 INTRODUCTION

In this chapter the results of the statistical analysis of data are presented. Descriptive statistics are used to record the numerical properties of the various distributions. The arithmetic mean is a statistic of location and the standard deviation is a statistic of dispersion among the distribution around the mean as index of locality. Correlation statistics are employed to ascertain the relationship, if any, between the dimensions of the Work Value Survey of Hofstede and the Locus of Control-scale, as refined by Levenson. The freemarket and parastatal sectors of the mining industry are compared by means of a discriminant analysis and multiple analysis of variance. The main independent variables such as language, religion, etc. and where applicable, their two-way interactions are also compared and investigated by multiple analysis of variance in combination with Scheffé tests.

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relating to culture. The six independent variables in the second table relate to circumstances and conditions within the organization.

### 9.2.1 DIMENSION INDIVIDUALISM

The individualism scale is designed to describe the extent of individualism observed in the sample. A crosstabulation between class intervals of scores on the individualism dimension and language group is presented in Table 9.1.

Table 9.1: TABLE OF INDIVIDUALISM BY LANGUAGE GROUP.

Individualism	Language group				
	Afrikaans	English	Sotho	African Vernacular: Other	Total
Frequency Percent Row Pct Col Pct	1	2	3	4	
9 - 11	36 22,09 58,06 46,75	3 1,84 4,84 14,29	12 7,36 19,35 25,00	11 6,75 17,74 64,71	62 38,04
12 - 14	23 14,11 41,07 29,87	11 6,75 19,64 52,38	18 11,04 32,14 37,50	4 2,45 7,14 23,53	56 34,36
15 - 17	6 3,68 27,27 7,79	4 2,45 18,18 19,05	12 7,36 54,55 25,00	- - - -	22 13,50
18 - 20	2 1,23 40,00 2,60	- - - -	3 1,84 60,00 6,25	- - - -	5 3,07
21 - 23	1 0,61 33,33 1,30	1 0,61 33,33 4,76	1 0,61 33,33 2,08	- - - -	3 1,84
24 - 26	4 2,45 44,44 5,19	1 0,61 11,11 4,76	2 1,23 22,22 4,17	3 1,23 22,22 11,76	9 5,52

Table 9.1 (continued)

27 ≥	5 3,07 83,33 6,49	1 0,61 16,67 4,76	- - - -	- - - -	6 3,68
Total	77 47,24	21 12,88	48 29,45	17 10,43	163 100,00
Frequency Missing = 52					

According to Table 9.1 the scores tend to aggregate in the lower class intervals which indicates a tendency towards individualism among the subjects.

Descriptive statistics with regard to individualism for the ten independent variables, viz language, religion, education, years of formal schooling received, income, occupational level, age group, country of origin, ethnicity and sector of the economy employed in, are presented in Table 9.2.

Table 9.2: DESCRIPTIVE STATISTICS: INDIVIDUALISM.

Variables	Mean	Std Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	11,85	5,52	0,54	2,91	1,81	107
English	14,00	5,31	1,08	3,15	1,50	24
Sotho	13,31	3,99	0,56	2,38	1,30	54
Vernacular: Other	11,00	4,79	0,98	5,25	2,24	28
Anglican/ Catholic	13,79	4,82	1,29	2,41	1,79	15
Dutch Reformed	12,22	5,19	0,65	3,99	1,92	64
Methodist/ Presbyterian	12,62	5,11	1,00	4,49	1,66	26
Pentacostal/ Apostolic	12,64	5,18	0,98	2,92	1,66	30
Afrikaans Sister Churches	11,13	4,60	0,75	4,96	1,98	39
Religion: Other	13,18	5,67	0,99	0,62	1,19	36



Table 9.2 (continued)

Std. 8 and Lower	12,28	4,47	0,56	4,98	1,92	71
Std. 10	12,72	5,39	0,51	1,72	1,38	112
Graduates	11,31	5,26	0,93	4,99	2,25	32
11 years and less of schooling	11,98	3,47	0,46	7,78	2,14	62
12 years of schooling	12,57	5,66	0,65	1,46	1,41	77
13 years or more of schooling	12,38	5,64	0,68	2,37	1,62	70
Income: R5 000 pa and less	13,13	4,91	1,00	1,65	1,29	29
R5 001-R30 000	12,09	4,34	0,48	3,05	1,50	83
R30 001-R45 000	12,21	5,65	0,97	3,34	1,87	34
R45 001-R80 000	12,21	5,42	0,69	3,37	1,81	62
Labourers	12,02	3,67	0,49	1,10	0,91	64
Administrative workers	12,32	5,15	0,85	2,13	1,49	37
Management and consultants	12,51	5,87	0,81	1,96	1,69	53
Supervisors	12,57	5,77	0,77	2,52	1,59	56
Age: 19 - 25	13,15	5,05	0,87	2,16	1,38	35
26 - 30	12,31	5,28	0,67	1,67	1,38	66
31 - 45	12,32	5,49	0,61	3,00	1,79	83
46 + above	11,82	3,78	0,73	7,00	1,86	27
South Africa	12,39	5,31	0,40	2,22	1,54	186
Other countries	11,78	2,04	0,43	-0,73	-0,34	24
Afrikaners	11,80	5,49	0,54	3,15	1,86	105
Anglo-Saxons	14,45	6,01	1,35	1,24	1,06	20
Blacks	12,69	4,25	0,53	1,95	1,22	72
Freemarket	12,84	4,95	0,49	2,84	1,63	108
Parastatal	11,89	5,22	0,51	3,04	1,68	107

N = 215

An analysis of the content of Table 9.2 reveals that the scores according to individualism are not normally distributed. A value of 0 for skewness indicates a normal distribution (Norusis, 1983, p 40). In general, irrespective of the independent variable concerned, the distribution is positively

skewed or skewed to the right as the tail of the distribution is towards larger values. Only in regard to variable "Country of origin: other" is the distribution negatively skewed. An analysis of the values for kurtosis reveals that, in general, the distribution is more peaked than normal, in other words, the distribution is leptokurtic. Only in regard to "Country of origin: other" is the distribution platikurtic (value < 0). The standard deviations are quite high which is also an indication of the skewness of distributions. The standard error is the standard deviation of a sampling distribution of means (Bohrnstedt and Knoke, 1988, p 500; Shavelson, 1981, p 305) and is an index of the extent the sample means vary about the population means. Table 9.2 reveals that the standard error of the mean is generally low. The observed means of most of the subgroups are good indices of the comparable population means. Therefore inferences about the population mean may be drawn with at least a certain amount of confidence.

Four of the ten independent variables mentioned above (immediately after the presentation of Table 9.1) were suitable for use in a factorial analysis of variance. The influence of these four main factors and their interaction effects on individualism was investigated and the calculations pertaining to this analysis of variance are presented in Table 9.3.

Table 9.3: ANOVA: INDIVIDUALISM BY CULTURAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr	F
Model	29	739,91	25,51	0,91	0,6026	
Error	152	4262,66	28,04			
Corrected Total	181	5002,57				
	R-square	C.V.	Root MSE	IDV Mean		
	0,147905	42,61	5,30	12,43		
Source	DF	Anova SS	Mean Square	F Value	Pr	F
LANG	3	277,19	92,40	3,29	0,0222*	
REL	5	136,39	27,28	0,97	0,4364	
COUNT	1	0,01	0,01	0,00	0,9860	
ETHN	2	119,94	59,97	2,14	0,1214	
LANG*REL	12	132,69	11,06	0,39	0,9640	
LANG*COUNT	2	34,63	17,32	0,62	0,5407	
REL*COUNT	4	39,05	9,76	0,35	0,8450	

\*p ≤ 0,05

With reference to Table 9.3 the overall effect proved to be non-significant ( $F = 0,91$ ,  $p = 0,6026 > p = 0,05$ ). However, the independent variable language group, proved significant, with  $F = 3,29$  and  $p = 0,0222 < p = 0,05$ . The remaining three independent variables were also non-significant whilst no significant interactions at all, were observed.

The single significant independent variable, language group, necessitated the use of the Scheffé test to test for significant post-hoc comparisons among any two of the four language groups. The four language groups necessitated six pairwise comparisons. However, only four comparisons provided significant results.

The first comparison, namely that between Afrikaans and English speaking subjects, yielded a significant Scheffé value of 3,232. It portrays a significant difference ( $F' = 3,232 > F = 2,65$  with 3 and 129 degrees of freedom). Secondly, Afrikaans speaking subjects were compared with Sotho speaking subjects ( $F' = 2,728, F = 2,65$  with 3 and 159 degrees of freedom). This also proved significant. When Afrikaans speaking subjects were thirdly compared with speakers of vernacular languages, the comparison was non-significant ( $F' = 0,572, p > 0,05$ ). Fourthly, the comparison English vs Sotho speaking, yielded a  $F'$ -ratio of 0,282 which is non-significant. The fifth comparison between English and vernacular users yielded a Scheffé value of 4,148 ( $F' = 4,148 > F = 2,79$  with 3 and 50 degrees of freedom). This fifth comparison again was significant. Finally, Sotho speaking subjects were compared with users of vernacular languages. The Scheffé-ratio was equal to 3,510 ( $F' = 3,51 > F = 2,68$  with 3 and 80 degrees of freedom). This comparison was also significant. In two of the four significant comparisons Afrikaans speaking subjects were involved. The Afrikaans speaking and vernacular language groups generally had lower individualism scores than the English and Sotho speaking subgroups.

Calculations pertaining to the six factors relating to the organization and their two-way interaction effects are presented in Table 9.4.

respect of individualism. The overall  $F'$ -ratio of 0,90 is also non-significant ( $p = 0,688 > p = 0,05$ ). No significant differences exist for two-way interactions.

Table 9.4: ANOVA: INDIVIDUALISM BY ORGANIZATIONAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	92	2340,73	25,44	0,90	0,6884
Error	86	2427,79	28,23		
Corrected Total	179	4768,53			
	R-square	C.V.	Root MSE	IDV Mean	
	0,49	43,03	5,31	12,35	
Source	DF	Anova SS	Mean Square	F Value	Pr F
QUAL	2	27,97	13,99	0,50	0,6110
AGE	3	40,07	13,36	0,47	0,7018
YSCH	2	2,06	1,03	0,04	0,9642
INCOME	3	16,87	5,62	0,20	0,8967
CAR	3	8,14	2,71	0,10	0,9620
GROUP	1	25,11	25,11	0,89	0,3483
QUAL*AGE	6	195,25	32,54	1,15	0,3393
QUAL*YSCH	4	79,08	19,77	0,70	0,5938
QUAL*INCOME	5	118,77	23,75	0,84	0,5240
QUAL*CAR	5	108,19	21,64	0,77	0,5764
AGE*YSCH	6	171,83	28,64	1,01	0,4214
AGE*INCOME	9	142,46	15,83	0,56	0,8255
AGE*CAR	9	204,77	22,75	0,81	0,6119
YSCH*INCOME	6	169,33	28,22	1,00	0,4309
YSCH*CAR	6	93,54	15,59	0,55	0,7670
INCOME*CAR	9	396,16	44,02	1,56	0,1406
QUAL*GROUP	2	71,16	35,58	1,26	0,2887
AGE*GROUP	3	45,79	15,26	0,54	0,6557
YSCH*GROUP	2	154,28	77,14	2,73	0,0707
INCOME*GROUP	3	206,00	68,67	2,43	0,0705
CAR*GROUP	3	63,90	21,30	0,75	0,5227

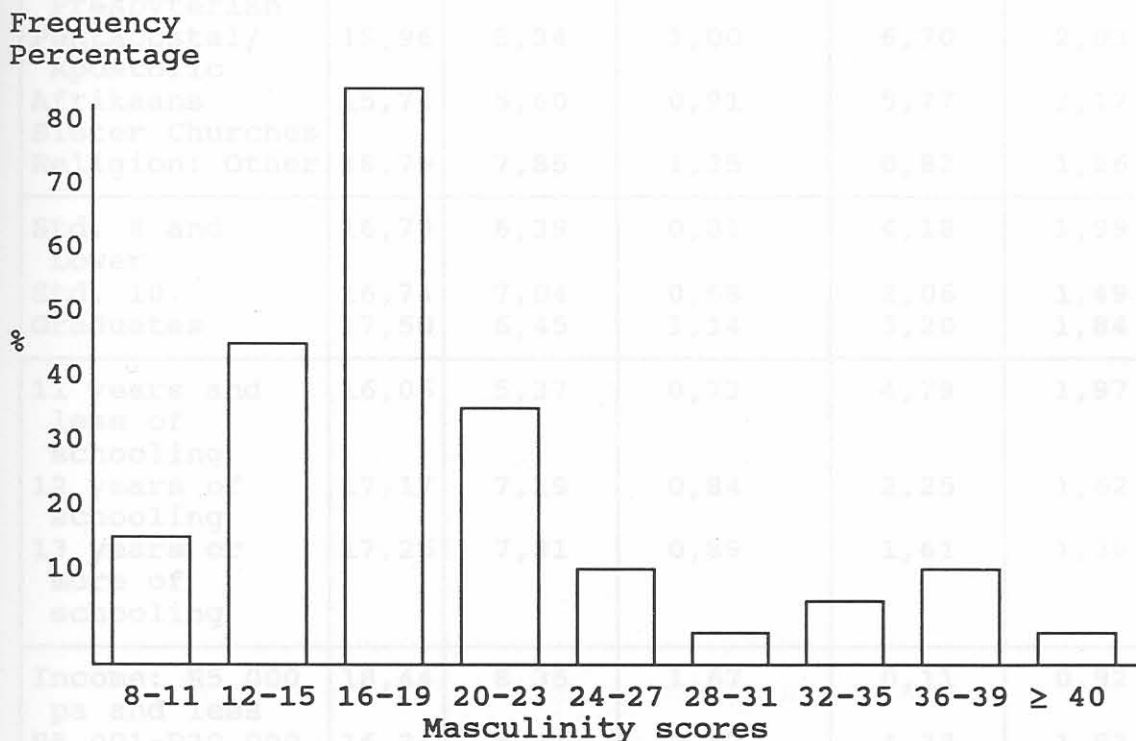
$p \leq 0,050$

An analysis of the information in Table 9.4 reveals that no significant differences are prevalent among the six independent variables in respect of individualism. The overall F-ratio of 0,90 is also non-significant ( $p = 0,6884 > p = 0,05$ ). No significant differences exist for two-way interactions.

9.2.2 DIMENSION MASCULINITY with regard to masculinity for the ten independent variables referred to in

The Masculinity scale is designed to describe the extent to which masculinity or its opposite pole femininity, are the dominant sex role patterns observed in the sample. The shape of the distribution of scores on the masculinity dimension is visually presented by means of a barchart in Figure 9.1. The categories of scores on the masculinity dimension are arrayed along the horizontal axis and the frequencies (percentages) along the vertical axis.

Figure 9.1: BARCHART: MASCULINITY DIMENSION.



According to Figure 9.1 the scores tend to aggregate in the lower class intervals which indicate a tendency toward masculinity among the subjects.

Descriptive statistics with regard to masculinity for the ten independent variables referred to in section 9.2.1 are presented in Table 9.5.

Table 9.5: DESCRIPTIVE STATISTICS: MASCULINITY.

Variables	Mean	Std.Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	16,69	6,75	0,66	2,82	1,75	107
English	18,42	7,48	1,53	2,50	1,58	24
Sotho	17,36	6,54	0,95	2,58	1,54	54
Vernacular: Other	15,44	6,47	1,35	3,68	1,64	28
Anglican/ Catholic	18,15	8,15	2,26	1,58	1,47	15
Dutch Reformed	17,29	6,79	0,89	2,22	1,54	64
Methodist/ Presbyterian	15,96	7,37	1,47	4,20	1,87	26
Pentacostal/ Apostolic	15,96	5,34	1,00	6,70	2,03	30
Afrikaans Sister Churches	15,74	5,60	0,91	5,77	2,17	39
Religion: Other	18,79	7,85	1,35	0,82	1,26	36
Std. 8 and Lower	16,79	6,39	0,81	4,18	1,99	71
Std. 10	16,74	7,04	0,68	2,06	1,49	112
Graduates	17,50	6,45	1,14	3,20	1,84	32
11 years and less of schooling	16,06	5,37	0,73	4,79	1,97	62
12 years of schooling	17,17	7,29	0,84	2,25	1,62	77
13 years or more of schooling	17,25	7,31	0,89	1,61	1,38	70
Income: R5 000 pa and less	18,44	8,35	1,67	0,11	0,92	29
R5 001-R30 000	16,24	5,81	0,67	4,38	1,83	83
R30 001-R45 000	16,03	6,47	1,11	4,66	2,14	34
R45 001-R80 000	17,11	6,98	0,89	2,88	1,71	62
Labourers	16,86	5,78	0,78	2,12	1,31	64
Administrative workers	16,41	6,80	1,17	4,86	2,16	37
Management and Consultants	18,04	7,08	0,98	1,41	1,47	53
Supervisors	16,11	7,45	1,02	3,12	1,80	56

Table 9.5 (continued) in these categories are few. As

Age: 19 - 25	17,29	6,72	1,21	3,07	1,81	35
26 - 30	17,66	7,08	0,90	1,18	1,20	66
31 - 45	17,08	7,21	0,81	2,58	1,73	83
46 & above	14,00	3,23	0,65	0,99	-0,02	27
South Africa	17,13	6,99	0,53	2,19	1,60	186
Other countries	14,70	4,23	0,88	0,87	0,76	24
Afrikaners	16,68	6,78	0,67	2,75	1,74	105
Anglo-Saxons	18,60	8,02	1,79	1,98	1,55	20
Blacks	17,34	6,69	0,86	2,13	1,42	72
Freemarket	16,50	6,96	0,70	3,02	1,80	108
Parastatal	17,25	6,50	0,65	2,34	1,50	107

N = 215

Table 9.5 shows that the scores according to masculinity also do not have the shape of a normal distribution. Except for the age group 46 and above which is negatively skewed, the distributions are skewed to the right (values > 0). These distributions are leptokurtic as well. The values for kurtosis indicate that the distribution is more peaked than normal. As was the case with individualism, the standard deviations are quite high which confirms that the distribution is skewed. The standard error of the means, with 13 exceptions, is generally low. The observed means of most of the subgroups are good indices of the comparable population means. Therefore inferences about the population mean may be drawn with at least a certain amount of confidence. The exceptions refer to vernacular/other, English speakers, Methodists/Presbyterians, religion other, Anglican/Catholic, graduates, income of R5 000 per annum or less, income of R30 001-R45 000, administrative workers, supervisors, age-group 19-25, and Anglo-Saxons. It is conspicuous that, in general,



the subjects in these categories are few. As there is much variability among these means, it is possible that inferences about the population mean will be in error, although analysis of variance analysis is quite robust in terms of deviations from the mean as it mainly requires a breakdown of sums of squares of various origins.

The influence of the 10 independent variables, viz language, religion, education, years of formal schooling received, income, occupational level, age group, country of origin, ethnicity and economic sector employed in and their two-way interactions on the dependent variable masculinity was also investigated by means of a factorial analysis of variance. The calculations pertaining to these analyses are presented in Tables 9.6 and 9.7.

Table 9.6: ANOVA: MASCULINITY BY CULTURAL FACTORS.

Dependent Variable: MAS		Sum of Squares	Mean Square	F Value	Pr	F
Source	DF	Anova SS	Mean Square	F Value	Pr	F
Model	29	1357,03	46,79	0,96	0,5360	
Error	147	7194,44	48,94			
Corrected Total	176	8551,47				
	R-square	C.V.	Root MSE	MAS Mean		
	0,158690	40,69	6,99	17,19		
Source	DF	Anova SS	Mean Square	F Value	Pr	F
LANG	3	214,11	71,37	1,46	0,2284	
REL	5	321,73	64,35	1,31	0,2609	
COUNT	1	23,60	23,60	0,48	0,4886	
ETHN	2	44,66	22,33	0,46	0,6346	
LANG*REL	12	367,51	30,63	0,63	0,8178	
LANG*COUNT	2	114,56	57,28	1,17	0,3131	
REL*COUNT	4	270,87	67,72	1,38	0,2424	
YSCH*GROUP	2	430,83	215,42	3,95	0,0230*	
INCOME*GROUP	3	233,41	77,80	1,43	0,2409	
CAR*GROUP	3	6,56	2,19	0,04	0,9892	

\* p ≤ 0,05

An analysis of the information in Table 9.6 reveals that the overall F-ratio for masculinity is insignificant ( $F = 0,96$  and  $p = 0,5360$ ). No significant differences are prevalent among the four main factors, viz language, religion, country of origin and ethnicity or two-way interaction effects.

Calculations pertaining to the main factors, viz education, age, years of formal schooling received, income, occupational level and economic sector employed in and their two-way interactions are presented in Table 9.7.

Table 9.7: ANOVA: MASCULINITY BY ORGANIZATIONAL FACTORS.

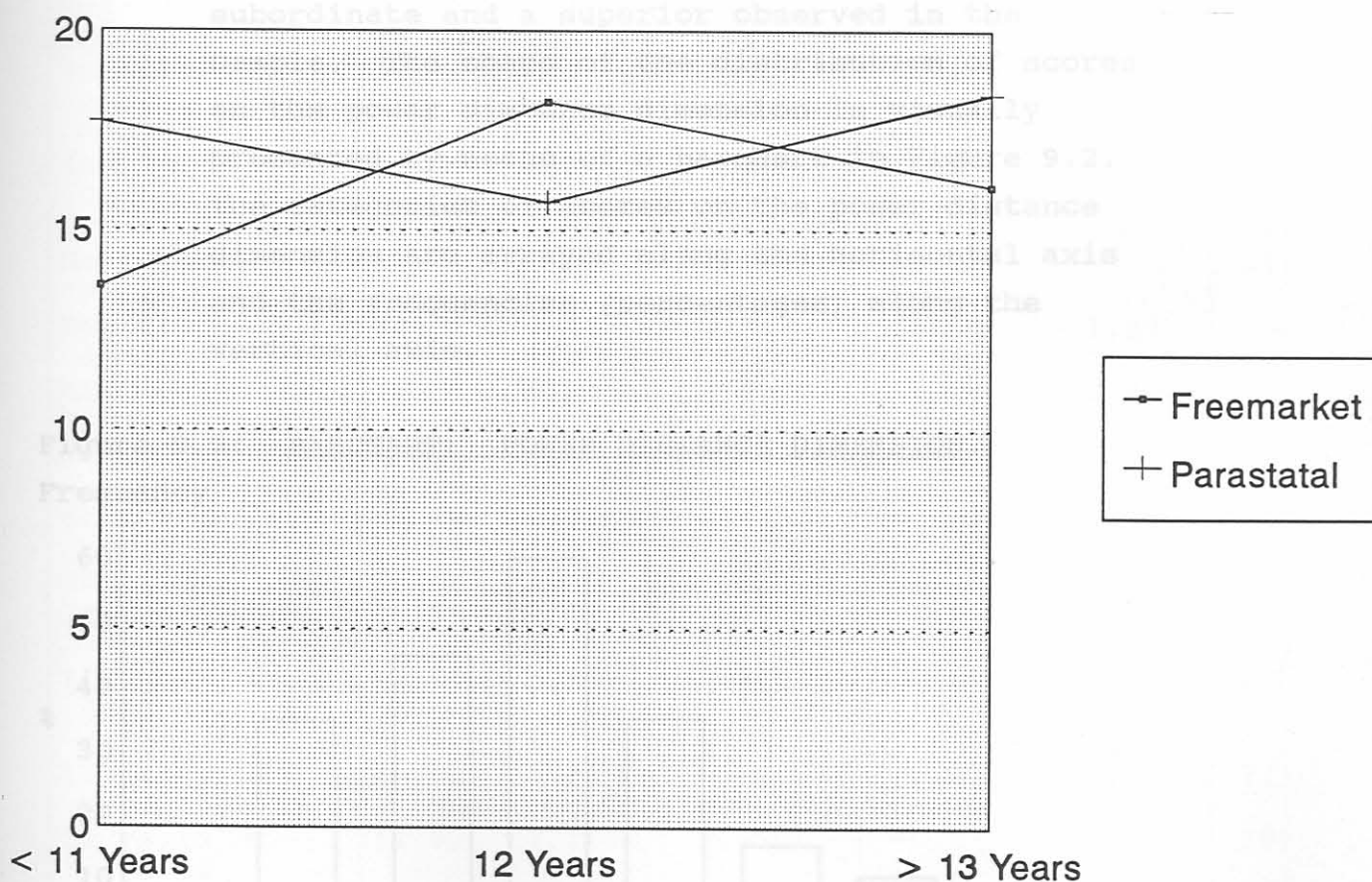
Source	DF	Sum of Squares	Mean Square	F Value	Pr	F
Model	92	4015,64	43,65	0,80	0,8505	
Error	82	4471,24	54,53			
Corrected Total	174	8486,88				
	R-square	C.V.	Root MSE	MAS Mean		
	0,47	43,64	7,38	16,92		
Source	DF	Anova SS	Mean Square	F Value	Pr	F
QUAL	2	19,38	9,69	0,18	0,8375	
AGE	3	247,26	82,42	1,51	0,2177	
YSCH	2	24,40	12,20	0,22	0,8000	
INCOME	3	89,22	29,74	0,55	0,6526	
CAR	3	133,75	44,58	0,82	0,4878	
GROUP	1	28,86	28,86	0,53	0,4690	
QUAL*AGE	6	367,93	61,32	1,12	0,3554	
QUAL*YSCH	4	276,69	69,17	1,27	0,2891	
QUAL*INCOME	5	213,63	42,73	0,78	0,5644	
QUAL*CAR	5	45,95	9,19	0,17	0,9735	
AGE*INCOME	9	167,45	18,61	0,34	0,9584	
AGE*CAR	9	190,81	21,20	0,39	0,9373	
YSCH*INCOME	6	401,77	66,96	1,23	0,3005	
YSCH*CAR	6	206,57	34,43	0,63	0,7047	
INCOME*CAR	9	512,67	56,96	1,04	0,4124	
QUAL*GROUP	2	52,31	26,15	0,48	0,6207	
AGE*GROUP	3	101,23	33,74	0,62	0,6048	
YSCH*GROUP	2	430,83	215,42	3,95	0,0230*	
INCOME*GROUP	3	233,41	77,80	1,43	0,2409	
CAR*GROUP	3	6,56	2,19	0,04	0,9892	

\*  $p \leq 0,05$

The information in Table 9.7 shows that no significant differences are prevalent among the six main independent variables referred to above in respect of masculinity. The overall F-ratio of 0,80 is insignificant with  $p = 0,8505$  ( $> p = 0,05$ ). Only the two-way interaction years of formal schooling received by economic sector (group) was significant.

This two-way interaction is visually presented by means of graphs in Graph 9.1.

Graph 9.1: INTERACTION EFFECTS BETWEEN YEARS OF FORMAL SCHOOLING RECEIVED AND SECTOR OF THE ECONOMY EMPLOYED IN ON MASCULINITY.



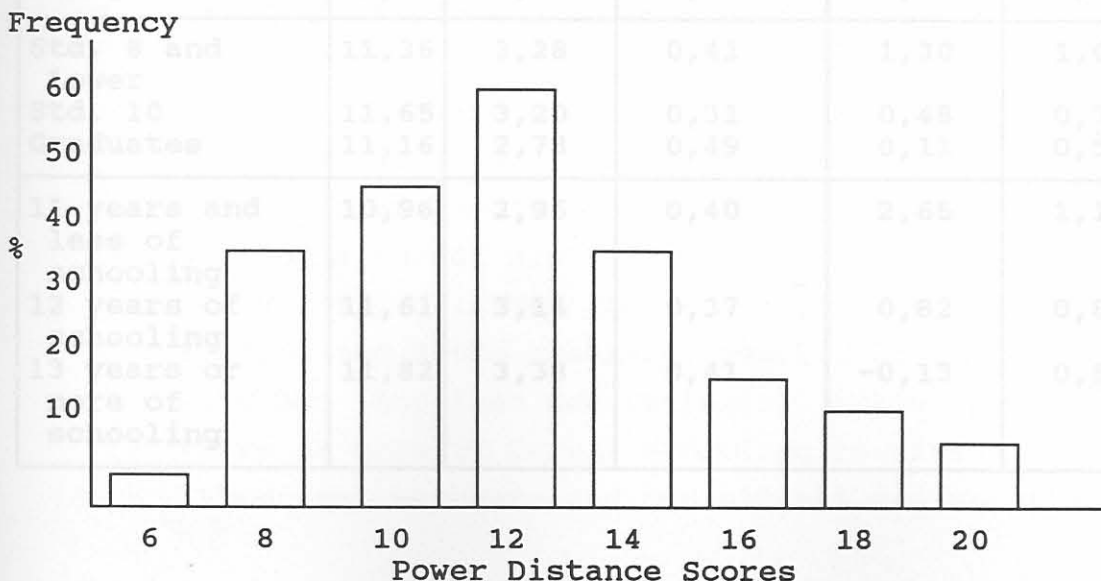
An analysis of Graph 9.1 reveals that matriculants (subjects with 12 years of formal schooling received) in the freemarket sector are conspicuously less inclined to masculinity than matriculants in the parastatal sector. Subjects in the freemarket sector with an education lower than matric (11 years or less of formal schooling received) or exposed to tertiary education (13 years of more of formal schooling received) tend toward masculinity. The opposite describes the trend in the parastatal sector of the economy.

Table 9.2: DESCRIPTIVE STATISTICS: POWER DISTANCE

9.2.3 DIMENSION POWER DISTANCE

The power distance scale is designed to describe the extent of the power distance between a subordinate and a superior observed in the sample. The shape of the distribution of scores on the power distance dimension is visually presented by means of a barchart in Figure 9.2. The categories of scores on the power distance dimension are arrayed along the horisontal axis and the frequencies (percentages) along the vertical axis.

Figure 9.2: BARCHART: POWER DISTANCE DIMENSION.



According to Figure 9.2 the scores tend to aggregate in the lower class intervals which indicate a great power distance between subordinate and superior among the subjects. Descriptive statistics with regard to power distance for the 10 main factors, viz language, religion, education, years of formal schooling received, income, occupational level, age group, country of origin, ethnicity and economic sector employed in, are presented in Table 9.8.

Table 9.8: DESCRIPTIVE STATISTICS: POWER DISTANCE.

Variables	Mean	Std.Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	11,36	3,06	0,31	1,32	0,99	107
English	12,00	3,38	0,69	-0,03	0,51	24
Sotho	11,88	3,23	0,46	-0,04	0,53	54
Vernacular: Other	10,76	3,30	0,66	2,78	1,33	28
Anglican/ Catholic	12,50	3,35	0,89	-0,73	0,12	15
Dutch Reformed	11,12	2,88	0,38	0,43	0,85	64
Methodist/ Presbyterian	11,04	3,21	0,63	0,68	0,90	26
Pentacostal/ Apostolic	11,71	3,63	0,69	2,45	1,47	30
Afrikaans Sister Churches	11,17	2,71	0,45	0,19	0,40	39
Religion: Other	12,24	3,46	0,60	0,54	0,71	36
Std. 8 and Lower	11,36	3,28	0,41	1,30	1,00	71
Std. 10	11,65	3,20	0,31	0,48	0,77	112
Graduates	11,16	2,78	0,49	0,11	0,59	32
11 years and less of schooling	10,96	2,96	0,40	2,65	1,19	62
12 years of schooling	11,61	3,14	0,37	0,82	0,82	77
13 years or more of schooling	11,82	3,38	0,41	-0,13	0,59	70

Table 9.8 (continued)

Income: R5 000 pa and less	12,22	3,49	0,73	-0,73	0,14	29
R5 001-R30 000	11,29	3,02	0,34	1,53	0,96	83
R30 001-R45 000	11,27	2,99	0,52	0,03	0,56	34
R45 001-R80 000	11,25	2,92	0,38	0,74	0,84	62
Labourers	11,83	2,94	0,40	-0,34	0,31	64
Administrative workers	11,83	3,49	0,58	0,67	0,77	37
Management and Consultants	11,75	2,89	0,40	-0,46	0,37	53
Supervisors	10,96	3,46	0,47	2,49	1,56	56
Age: 19 - 25	12,61	3,51	0,61	0,97	1,01	35
26 - 30	11,48	2,95	0,38	0,26	0,63	66
31 - 45	11,16	3,20	0,37	0,08	0,69	83
46 & above	11,07	2,95	0,57	3,75	1,52	27
South Africa	11,47	3,19	0,24	0,52	0,82	186
Other countries	11,30	2,31	0,48	0,28	-0,14	24
Afrikaners	11,32	3,08	0,31	1,31	1,01	105
Anglo-Saxons	12,25	3,37	0,75	0,30	0,44	20
Blacks	11,45	3,18	0,40	0,04	0,65	72
Freemarket	11,45	2,91	0,29	0,82	0,87	108
Parastatal	11,51	3,39	0,34	0,58	0,80	107

N = 215

The information in Table 9.8 shows that the scores according to power distance are also not normally distributed. Except for country of origin: other, the distributions are positively skewed or skewed to the right. Only values in regard to country of origin: other are  $< 0$  and thus negatively skewed. The kurtosis clearly indicates that the peak of the distribution is not mesokurtic, namely the peak of a normal distribution. The peak is platykurtic (flatter than normal) in regard to English and Sotho speakers, members of the high Churches (Anglican and Catholic), subjects with 13 years or more of formal schooling received, labourers, managers and consultants and country

of origin other. In regard to the other variables the distribution of scores is leptokurtic (values > 0). The large standard deviations confirm that the scores are not normally distributed. However, the standard error of the mean is generally low, which is indicative of small variability among the sample means. This implies that the observed means of most subgroups are good indices of the comparable population means. Therefore inferences about the population mean may be drawn with at least a certain amount of confidence. The influence of the 10 independent variables referred to above and their two-way interactions on the dependent variable power distance was also investigated by means of a factorial analysis of variance. The calculations pertaining to these factorial analyses are presented in Tables 9.9 and 9.10.

Data in regard to the four main factors, viz language, religion, country of origin and ethnicity and their two-way interactions on power distance are presented in Table 9.9.

Table 9.9: ANOVA: POWER DISTANCE BY CULTURAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	29	245,36	8,46	0,83	0,7122
Error	146	1484,64	10,17		
Corrected Total	175	1729,99			
	R-square	C.V.	Root MSE	PDIST Mean	
	0,141825	27,72	3,19	11,51	
Source	DF	Anova SS	Mean Square	F Value	Pr F
LANG	3	59,50	19,83	1,95	0,1241
REL	5	47,20	9,44	0,93	0,4645
COUNT	1	0,92	0,92	0,09	0,7642
ETHN	2	14,07	7,04	0,69	0,5023
LANG*REL	12	85,62	7,13	0,70	0,7480
LANG*COUNT	2	4,16	2,08	0,20	0,8152
REL*COUNT	4	33,88	8,47	0,83	0,5063

The information in Table 9.9 shows that no significant differences are prevalent among the four main independent variables in respect of power distance. The overall F-ratio of 0,83 is also insignificant ( $p = 0,7122 > p = 0,05$ ). Also, no significant two-way interaction could be detected.

Data in regard to the main factors, viz education, age group, years of formal schooling received, income, occupational level and economic sector employed in, and their two-way interactions on power distance are presented in Tabel 9.10.

Table 9.10: ANOVA: POWER DISTANCE BY ORGANIZATIONAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	92	839,98	9,13	0,88	0,7300
Error	81	843,31	10,41		
Corrected Total	173	1683,29			
	R-square	C.V.	Root MSE	PDIST Mean	
	0,50	28,14	3,23	11,47	
Source	DF	Anova SS	Mean Square	F Value	Pr F
QUAL	2	1,53	0,77	0,06	0,9372
AGE	3	49,91	16,64	1,60	0,1963
YSCH	2	7,10	3,55	0,34	0,7119
INCOME	3	17,01	5,67	0,54	0,6531
CAR	3	30,16	10,05	0,97	0,4132
GROUP	1	1,21	1,21	0,12	0,7341
QUAL*AGE	6	85,32	14,22	1,37	0,2384
QUAL*YSCH	4	25,94	6,48	0,62	0,6475
QUAL*INCOME	5	30,89	6,18	0,59	0,7050
QUAL*CAR	5	40,17	8,03	0,77	0,5730
AGE*YSCH	6	66,31	11,05	1,06	0,3925
AGE*INCOME	9	24,53	2,73	0,26	0,9829
AGE*CAR	9	90,20	10,02	0,96	0,4769
YSCH*INCOME	6	48,88	8,15	0,78	0,5861
YSCH*CAR	6	59,28	9,88	0,95	0,4651
INCOME*CAR	9	123,11	13,68	1,31	0,2428
QUAL*GROUP	2	35,65	17,82	1,71	0,1870
AGE*GROUP	3	22,74	7,58	0,73	0,5382
YSCH*GROUP	2	22,64	11,32	1,09	0,3420
INCOME*GROUP	3	34,43	11,48	1,10	0,3531
CAR*GROUP	3	23,15	7,72	0,74	0,5305



The information in Table 9.10 shows that no significant differences are prevalent among the six independent variables in respect of power distance. The overall F-ratio also proves to be insignificant ( $F = 0,88$ ,  $p = 0,7300 > p = 0,05$ ). Also no significant two-way interaction was detected.

#### 9.2.4 DIMENSION UNCERTAINTY AVOIDANCE

The uncertainty avoidance scale is designed to describe the extent of uncertainty observed in the sample. A crosstabulation between class intervals of scores on the uncertainty avoidance dimension and language is presented in Table 9.11.

Table 9.11: TABLE OF UNCERTAINTY AVOIDANCE BY LANGUAGE GROUP.

Uncertainty Avoidance	Language group				
	Afrikaans	English	Sotho	African vernacular Other	Total
Frequency Percent Row Pct Col Pct	1	2	3	4	
≤ 8	3 1,41 33,33 2,80	- - - -	3 1,41 33,33 5,56	3 1,41 33,33 10,71	9 4,23
9 - 11	6 2,82 50,00 5,61	- - - -	3 1,41 25,00 5,56	3 1,41 25,00 10,71	12 5,63
12 - 14	23 10,80 46,00 21,50	- - - -	16 7,51 32,00 29,63	11 5,16 22,00 39,29	50 23,47
15 - 17	28 13,15 45,16 26,17	13 6,10 20,97 54,17	16 7,51 25,81 29,63	5 2,35 8,06 17,86	62 29,11

Table 9.11 (continued)

18 - 20	28 13,15 65,12 26,17	2 0,94 4,65 8,33	10 4,69 23,26 18,52	3 1,41 6,98 10,71	43 20,19
21 - 23	4 1,88 26,67 3,74	6 2,82 40,00 25,00	3 1,41 20,00 5,56	2 0,94 13,33 7,14	15 7,04
24 - 26	12 5,63 80,00 11,21	1 0,47 6,67 4,17	1 0,47 6,67 1,85	1 0,47 6,67 3,57	15 7,04
27 - 29	2 0,94 40,00 1,87	2 0,94 40,00 8,33	1 0,47 20,00 1,85	- - - -	5 2,35
30 ≥	1 0,47 50,00 0,93	- - - -	1 0,47 50,00 1,85	- - - -	2 0,94
Total	107 50,23	24 11,27	54 25,35	28 13,15	213 100,00
Frequency Missing = 2					

According to Table 9.11 the scores tend to aggregate in the lower and mid-range class intervals which indicates a tendency towards security and stability, i.e. avoidance of uncertainty.

Descriptive statistics with regard to uncertainty avoidance for the 10 independent variables mentioned above are presented in Table 9.12.

Table 9.12: DESCRIPTIVE STATISTICS: UNCERTAINTYAVOIDANCE.

Variables	Mean	Std.Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	17,40	4,44	0,43	0,23	0,66	107
English	19,04	4,17	0,85	0,26	1,06	24
Sotho	16,27	4,42	0,61	1,80	0,91	54
Vernacular: Other	15,28	3,86	0,77	1,31	1,21	28
Anglican/ Catholic	18,71	4,98	1,33	-1,07	0,61	15
Dutch Reformed	17,61	4,15	0,53	-0,18	0,31	64
Methodist/ Presbyterian	16,40	4,66	0,93	0,82	1,03	26
Pentacostal/ Apostolic	16,21	3,47	0,64	1,69	1,15	30
Afrikaans Sister Churches	16,50	3,77	0,61	0,98	0,84	39
Religion: Other	17,69	5,34	0,90	0,59	1,04	36
Std. 8 and Lower	15,97	4,05	0,50	2,52	1,09	71
Std. 10	16,97	4,46	0,43	0,53	0,79	112
Graduates	19,38	4,22	0,75	-0,63	0,43	32
11 years and less of schooling	16,02	3,95	0,51	1,24	0,55	62
12 years of schooling	17,35	4,24	0,49	0,73	0,88	77
13 years or more of schooling	17,65	4,91	0,59	-0,14	0,67	70
Income: R5 000 pa and less	17,89	5,08	1,00	0,19	0,56	29
R5 001-R30 000	19,94	3,56	0,40	2,27	0,99	83
R30 001-R45 000	16,18	4,03	0,69	0,52	0,80	34
R45 001-R80 000	18,03	4,77	0,61	-0,37	0,41	62
Labourers	16,30	3,93	0,51	0,97	0,46	64
Administrative workers	16,22	4,22	0,74	4,37	1,95	37
Management and Consultants	18,69	4,64	0,64	-0,52	0,21	53
Supervisors	16,86	4,40	0,59	0,25	0,81	56

Table 9.12 (continued)

Age: 19 - 25	17,53	4,31	0,74	2,07	1,41	35
26 - 30	17,56	4,44	0,56	-0,28	0,46	66
31 - 45	17,06	4,59	0,51	0,53	0,92	83
46 & above	15,33	3,82	0,74	-0,11	-0,21	27
South Africa	17,00	4,53	0,34	0,55	0,81	186
Other countries	18,83	3,58	0,75	0,01	0,23	24
Afrikaners	17,32	4,39	0,43	0,38	0,72	105
Anglo-Saxons	18,65	4,33	0,97	1,00	1,42	20
Blacks	16,19	4,36	0,53	1,39	0,99	72
Freemarket	16,84	4,27	0,42	0,93	1,04	108
Parastatal	17,19	4,56	0,45	0,34	0,55	107

N = 215

An analysis of the content of Table 9.12 reveals that the scores according to uncertainty avoidance are also not normally distributed. Neither the skewness nor the kurtosis equals 0. The distributions are positively skewed except for the age group 46 years and above which is skewed to the left. The values for kurtosis indicate that the peak of the distribution is either leptokurtic (the distribution is more peaked as the values are  $> 0$ ) or the distribution is platykurtic (peak flatter than normal) as the values are  $< 0$ . This holds for the Anglican/Catholic Churches, Dutch Reformed Churches, graduates, subjects with 13 years or more of formal schooling received, subjects with an income of R45 001 to R80 000, managers and consultants, and subjects in the age group 46 years and above. The large standard deviations are also indicative of a skewed distribution. The standard error fluctuates between large and small. The standard error provides information about the amount of error likely to be made by inferring the value of the population mean from a sample mean. The greater the variability among sample means, the greater

the chance that the inference about the population mean from a single sample mean will be in error. In regard to uncertainty avoidance it is possible that some inferences about the population mean may be in error as there is quite a variability among sample means.

The influence of the 10 independent variables and their two-way interactions in respect of uncertainty avoidance was also investigated by means of a factorial analysis of variance. The calculations pertaining to these analyses are presented in Tables 9.13 and 9.14.

Data in regard to the four main factors, viz language, religion, country of origin and ethnicity and their two-way interactions with uncertainty avoidance are presented in Table 9.13.

Table 9.13: ANOVA: UNCERTAINTY AVOIDANCE BY CULTURAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	29	700,05	24,14	1,32	0,1424
Error	153	2791,70	18,25		
Corrected Total	182	3491,75			
	R-square	C.V.	Root MSE	UNVOI Mean	
	0,200487	24,88	4,27	17,17	
Source	DF	Anova SS	Mean Square	F Value	Pr F
LANG	3	123,24	41,08	2,25	0,0846
REL	5	116,90	23,38	1,28	0,2748
COUNT	1	4,74	4,74	0,26	0,6110
ETHN	2	79,63	39,82	2,18	0,1163
LANG*REL	12	239,69	19,97	1,09	0,3684
LANG*COUNT	2	68,37	34,18	1,87	0,1571
REL*COUNT	4	67,47	16,87	0,92	0,4514

An analysis of the information in Table 9.13 reveals that no significant differences are prevalent among the four main independent variables, viz language, religion, country of origin and ethnicity in respect of uncertainty avoidance. The overall F-ratio of 1,32 was also insignificant ( $F = 1,32, p = 0,1424 > p = 0,05$ ). No significant two-way interaction was detected.

Data in regard to the main factors, viz education, age group, years of formal schooling received, income, occupational level and economic sector employed in and their two-way interactions with uncertainty avoidance are presented in Table 9.14.

Table 9.14: ANOVA: UNCERTAINTY AVOIDANCE BY ORGANIZATIONAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	87	2176,77	25,02	1,84	0,0021
Error	92	1252,23	13,61		
Corrected Total	179	3429,00			
	R-square	C.V.	Root MSE	UNVOI Mean	
	0,63	21,49	3,69	17,17	
Source	DF	Anova SS	Mean Square	F Value	Pr F
QUAL	2	143,30	71,65	5,26	0,0068*
AGE	3	68,40	22,80	1,68	0,1778
YSCH	2	29,28	14,64	1,08	0,3453
INCOME	3	140,58	46,86	3,44	0,0200*
CAR	3	176,95	58,98	4,33	0,0067*
GROUP	1	15,31	15,31	1,12	0,2917
QUAL*AGE	6	225,53	37,59	2,76	0,0163*
QUAL*YSCH	4	265,47	66,37	4,88	0,0013*
QUAL*INCOME	5	62,08	12,42	0,91	0,4767
AGE*YSCH	6	170,60	28,43	2,09	0,0619
AGE*INCOME	9	81,35	9,04	0,66	0,7392
AGE*CAR	9	163,32	18,15	1,33	0,2308
YSCH*INCOME	6	185,79	30,97	2,28	0,0430*
YSCH*CAR	6	80,11	13,35	0,98	0,4428
INCOME*CAR	9	47,41	5,27	0,39	0,9386
QUAL*GROUP	2	32,57	16,29	1,20	0,3069
AGE*GROUP	3	57,72	19,24	1,41	0,2439
YSCH*GROUP	2	103,97	51,98	3,82	0,0255*
INCOME*GROUP	3	62,98	20,99	1,54	0,2088
CAR*GROUP	3	64,04	21,35	1,57	0,2024

The information in Table 9.14 shows that significant differences are prevalent among the six main independent variables in respect of uncertainty avoidance. The overall F-ratio is significant ( $F = 1,84, p = 0,0021 < p = 0,05$ ). This ratio however does not pinpoint the particular independent variables concerned. Three of the six main factors in the survey did show significant differences. The first of these is educational qualifications ( $F = 5,26, p = 0,0068$ ). Secondly, income provided significant differences ( $F = 3,44, p = 0,0200$ ). The third significant variable was occupational level ( $F = 4,33, p = 0,0067$ ). Significant two-way interactions were also detected. The first of these are qualifications by age ( $F = 2,76, p = 0,0163$ ). Secondly, the interaction educational qualification by years of formal schooling received was also significant ( $F = 4,88, p = 0,0013$ ). The third significant two-way interaction was between years of formal schooling received by income ( $F = 2,28, p = 0,0430$ ). Fourthly, the two-way interaction years of formal schooling received by group (sector of the economy employed in) was also significant ( $F = 3,82, p = 0,0255$ ).

In regard to the main factors educational qualifications, income and occupational level post hoc comparisons were done by means of a Scheffé-test.

In regard to educational qualifications, the lower educated group (Std 8 and lower) was compared with matriculants. In this comparison  $t$  equals 1,79 so that  $F' = 3,19$  ( $t^2$ ) which with 2 and 181 degrees of freedom (df) is significant ( $F' = 3,19 > F = 3,04$  with 2 and 181 df  $p$  being <

0,05). The second comparison, namely that between the lower educated group and the graduates yielded a  $F'$  value of 18,85. It portrays a significant difference ( $F' = 18,85 > F = 3,07$  with 2 and 101 df,  $p < 0,05$ ). Thirdly, the matriculants were compared with the graduates. This comparison yielded a Scheffé-value of 10,62 which proved significant ( $F' = 10,62, > F = 3,04$  with 2 and 142 df,  $p$  being  $< 0,05$ ).

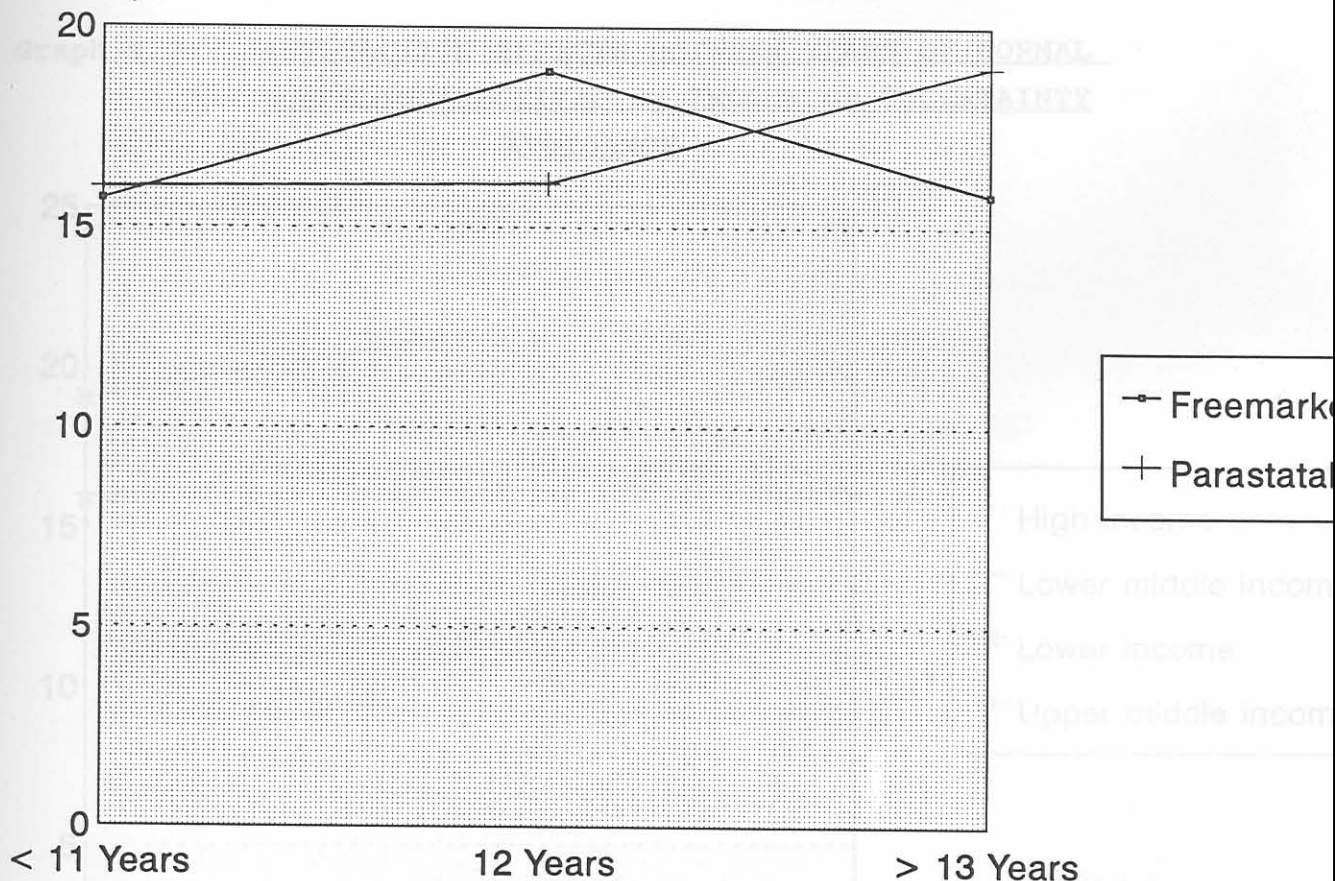
In regard to the main factor income the lower income group was compared with the lower middle class. This comparison yielded a  $F'$  value of 6,631 which portrays a significant difference between the two groups ( $F' = 6,631 > F = 2,45$  with 3 and 110 df,  $p < 0,05$ ). The second comparison, viz between the lower income group and the upper middle income group yielded a Scheffé-value of 3,363 which is significant ( $F' = 3,363 > F = 2,76$  with 3 and 61 df,  $p < 0,05$ ). Thirdly, the lower income group was compared with the high income group ( $F' = 0,028 < F = 2,68$  with 3 and 89 df,  $p > 0,05$ ). This comparison proved non-significant. Subjects in the lower middle income group were compared with members of the upper middle income group. This comparison yielded a  $F'$  value of 25,055. It portrays a significant difference ( $F' = 25,055 > F = 2,68$  with 3 and 115 df,  $p < 0,05$ ). The fifth comparison, viz between the lower middle class and the high income group yielded a  $F'$  ratio of 9,513 which is significant ( $F' = 9,513, > F = 2,65$  with 13 and 143 df,  $p < 0,05$ ). Finally, the upper middle income group was compared with the high income group. The Scheffé-ratio was equal to 5,522 which portrays a significant difference. ( $F' = 5,522, > F = 2,68$  with 3 and 94 df,  $p < 0,05$ ).



Graph 9.1 In regard to the occupational level (career level) the group comprising the artisans, semi-skilled and unskilled labour was compared with the administrative staff by means of the Scheffé-test. In this comparison  $t$  equals 0,05 so that  $t^2 = 0,011$  ( $F'$ ) which with 3 and 99 df is non-significant ( $F' = 0,011$ ,  $< F = 2,68$  with 3 and 99 df,  $p > 0,05$ ). Secondly, the labourers were compared with the group comprising managers and consultants. In this comparison a  $t$ -value of 3,488 was obtained so that  $F' = 12,168$  ( $t^2$ ) which with 3 and 115 df is significant ( $F' = 12,168$ ,  $> F = 2,68$  with 3 and 115 df,  $p < 0,05$ ). When the labourers were thirdly compared with supervisors, the comparison was non-significant ( $F' = 0,688$ ,  $< F = 2,68$  with 3 and 118 df,  $p > 0,05$ ). The administrative staff were also compared with the managers and consultants. This comparison portrays a significant difference ( $F' = 9,767$ ,  $> F = 2,68$  with 3 and 88 df,  $p < 0,05$ ). The comparison between the administrative personnel and the superiors yielded a Scheffé-value of 0,671 which is non-significant ( $F' = 0,671$ ,  $< F = 2,68$  with 3 and 91 df,  $p > 0,05$ ). Lastly, the managers and consultants were compared with the supervisors. In this comparison a  $t$ -value of 2,588 was obtained so that  $F' = 6,700$  ( $t^2$ ) which with 3 and 107 df is significant ( $F' = 6,700$ ,  $> F = 2,68$  with 3 and 107 df,  $p < 0,05$ ).

The significant two-way interactions are visually presented by means of graphs. Graph 9.2 represents the two-way interaction years of formal schooling received by economic sector.

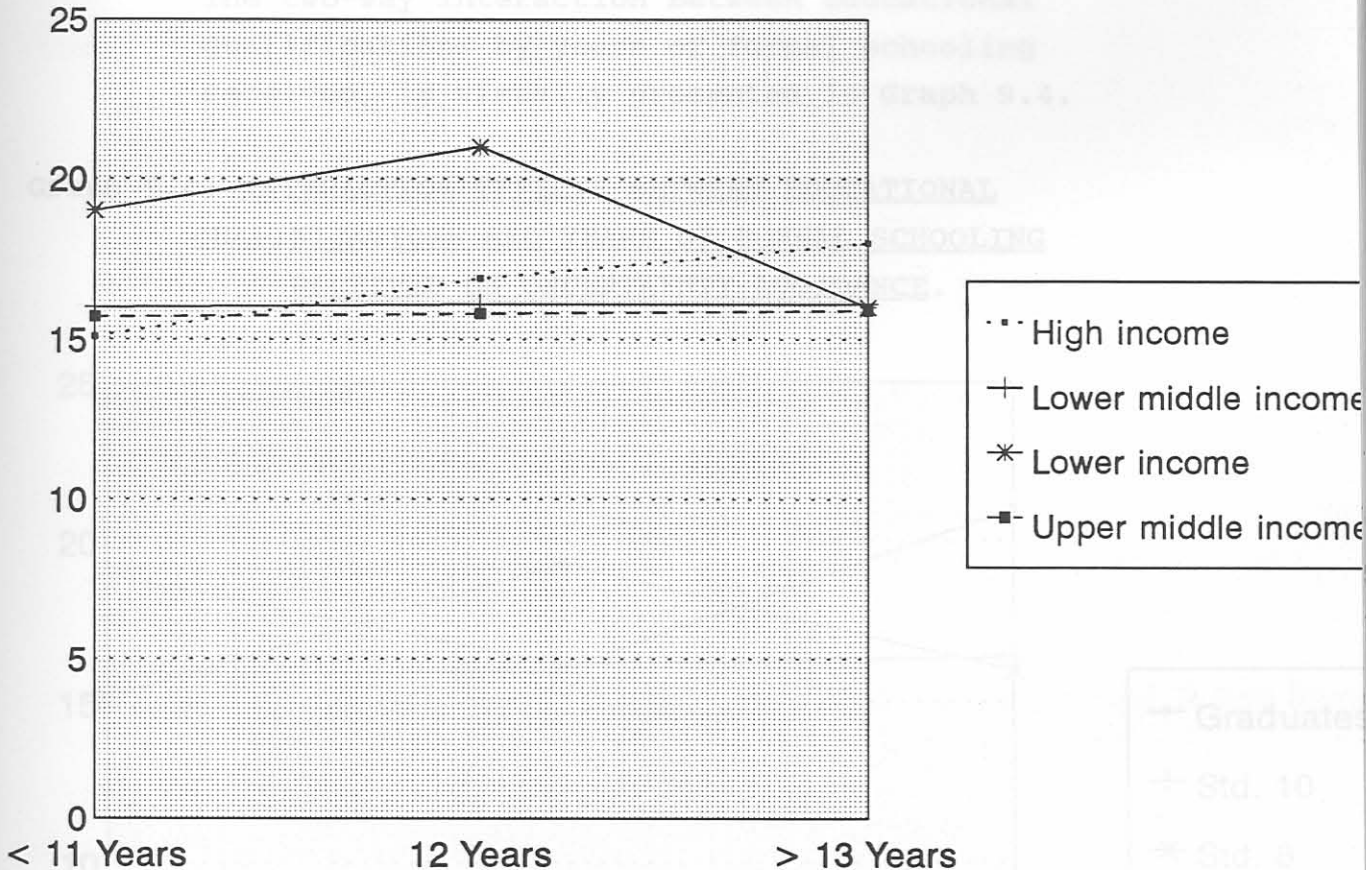
Graph 9.2: INTERACTION EFFECTS BETWEEN YEARS OF FORMAL SCHOOLING RECEIVED AND SECTOR OF THE ECONOMY EMPLOYED IN ON UNCERTAINTY AVOIDANCE.



The information in Graph 9.2 shows that subjects with 12 years of formal schooling received (matriculants) employed in the freemarket sector are more inclined to face risk and uncertainty than matriculants employed in the parastatal sector. However, subjects employed in the freemarket sphere with 11 years or less of formal schooling or exposed to tertiary education (13 years or more of formal schooling received), were more inclined toward uncertainty avoidance. The opposite describes the trend in the parastatal sector of the economy.

The two-way interaction years of formal schooling received by income is visually represented in Graph 9.3.

Graph 9.3: INTERACTION EFFECTS BETWEEN YEARS OF FORMAL SCHOOLING RECEIVED BY INCOME ON UNCERTAINTY AVOIDANCE.

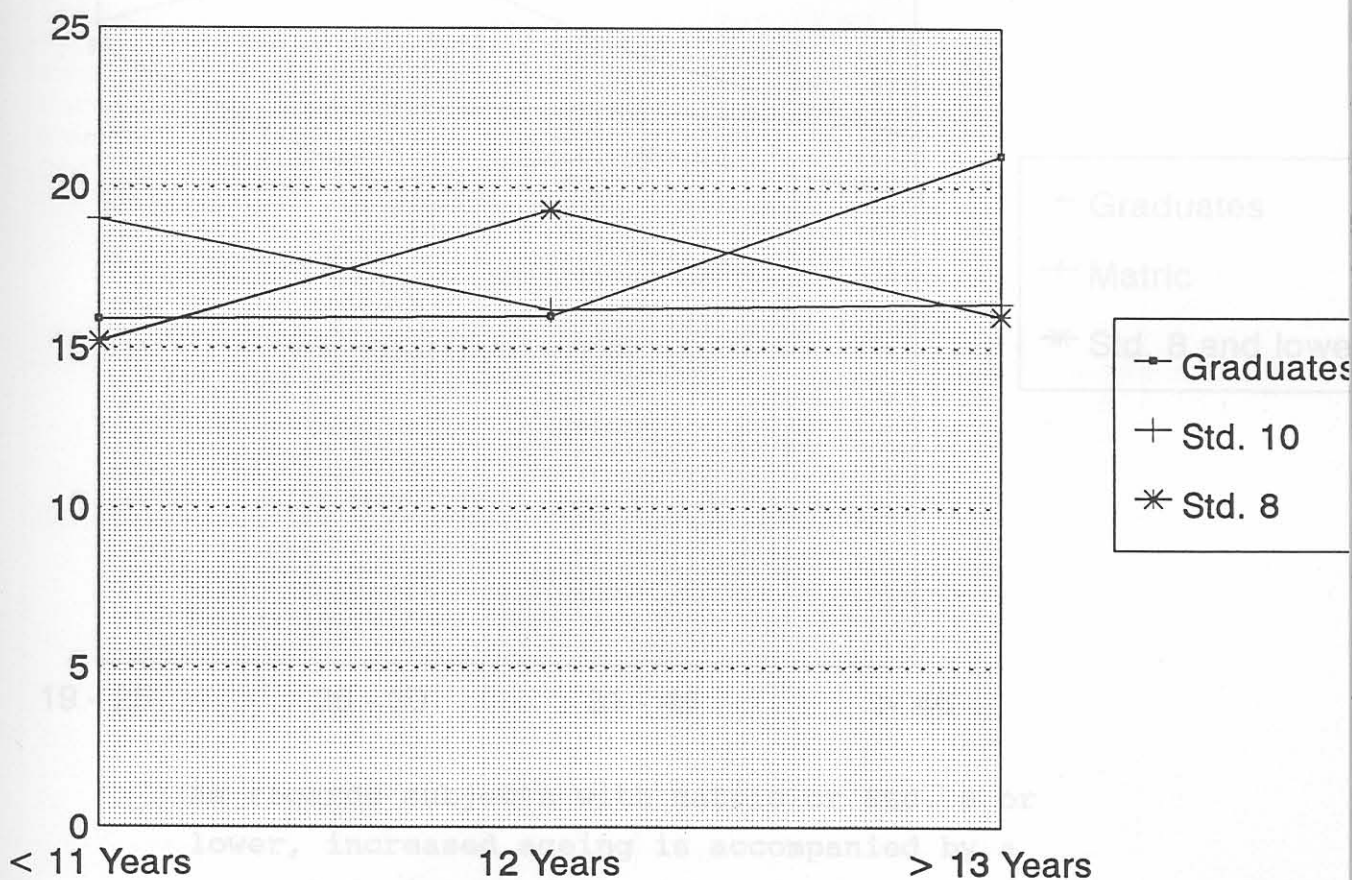


Four trends are noticeable in Graph 9.3. Firstly, the lower and upper middle income groups, irrespective of number of years of formal schooling received, tended towards avoidance of uncertainty, i.e. the pursuit of stability and security. The lower income group with 11 years or less or more than 12 years of formal schooling, also tended more towards uncertainty avoidance. Thirdly, subjects with a lower income and exactly 12 years of formal schooling, tended the most of all towards exposing themselves to uncertainty and

risk. Fourthly, the high income group with more than 12 years of formal schooling received (i.e. post-matriculation, when compared with high earners with less than 12 years of formal schooling, were more inclined to uncertainty and risk. Group with Std. 8 and lower were more inclined to avoiding risk and uncertainty.

The two-way interaction between educational qualifications by years of formal schooling received, is visually presented in Graph 9.4.

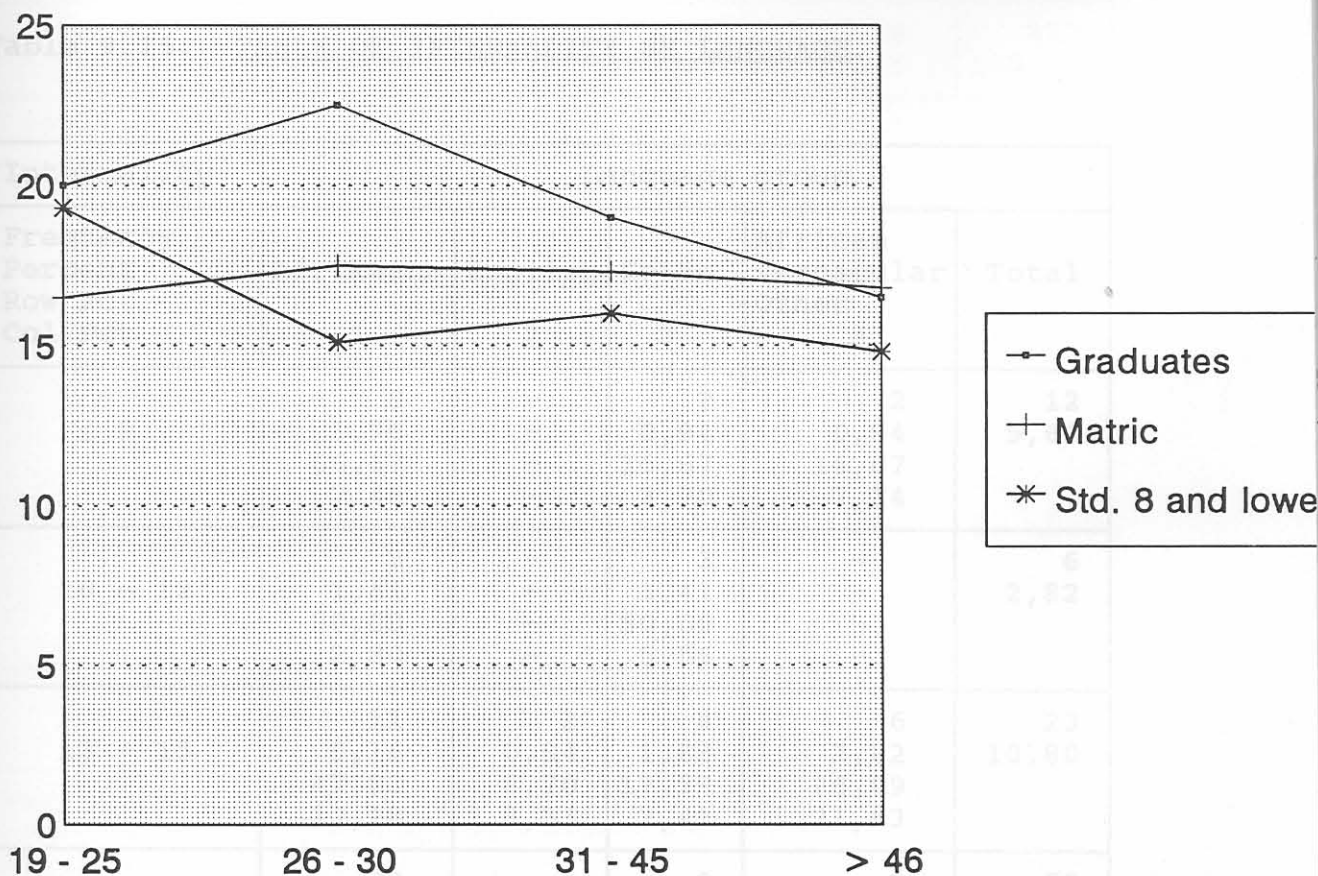
Graph 9.4: INTERACTION EFFECTS BETWEEN EDUCATIONAL QUALIFICATIONS AND YEARS OF FORMAL SCHOOLING RECEIVED ON UNCERTAINTY AVOIDANCE.



lower, increase in uncertainty avoidance is accompanied by a general desire to face risk and uncertainty. The argument also holds for matriculants with the exception of the 26 to 30 years age group. Subjects in the 25 to 30 years age group with matric were the most inclined to face uncertainty and risk.

Three subgroups, each with 13 or more years of formal schooling, are conspicuous. Of these three groups, the graduates with longer educational exposure are more inclined to facing risk and uncertainty whereas the Std. 10 group as well as the group with Std. 8 and lower were more inclined to avoiding risk and uncertainty.

Graph 9.5: INTERACTION EFFECTS BETWEEN EDUCATIONAL QUALIFICATIONS AND AGE ON UNCERTAINTY AVOIDANCE.



As regards subjects with matric or Std. 8 or lower, increased ageing is accompanied by a general desire to face risk and uncertainty. The argument also holds for matriculants with the exception of the 26 to 30 years age group. Subjects in the 26 to 30 years age group with matric were the most inclined to face uncertainty and risk.

## 9.2.5 DIMENSION INTERNALITY

The dimension internality is measured by the Activism and Powerful Others-scale. Internality indicates the extent to which subjects in the sample believe that events are contingent upon their own behaviour.

A crosstabulation between class intervals of scores on the internality dimension and language is presented in Table 9.15.

Table 9.15: TABLE OF INTERNALITY BY LANGUAGE.

Internality	Language group				
	Afrikaans	English	Sotho	African vernacular Other	Total
Frequency Percent Row Pct Col Pct	1	2	3	4	
≤ 9	8 3,76 66,67 7,48	- - - -	2 0,94 16,67 3,70	2 0,94 16,67 7,14	12 5,63
10 - 12	3 1,41 50,00 2,80	- - - -	3 1,41 50,00 5,56	- - - -	6 2,82
13 - 15	11 5,16 47,83 10,28	2 0,94 8,70 8,33	4 1,88 17,39 7,41	6 2,82 26,09 21,43	23 10,80
16 - 18	32 15,02 64,00 29,91	6 2,82 12,00 25,00	9 4,23 18,00 16,67	3 1,41 6,00 10,71	50 23,47
19 - 21	26 12,21 47,27 24,30	6 2,82 10,91 25,00	17 7,98 30,91 31,48	6 2,82 10,91 21,43	55 25,82
22 - 24	13 6,10 41,94 12,15	2 0,94 6,45 8,33	9 4,23 29,03 16,67	7 3,29 22,58 25,00	31 14,55

Table 9.15 (continued)

25 - 27	10 4,69 43,48 9,35	4 1,88 17,39 16,67	6 2,82 26,09 11,11	3 1,41 13,04 10,71	23 10,80
28 - 30	2 0,94 22,22 1,87	2 0,94 22,22 8,33	4 1,88 44,44 7,41	1 0,47 11,11 3,57	9 4,23
31 ≥	2 0,94 50,00 1,87	2 0,94 50,00 8,33	- - - -	- - - -	4 1,88
Total	107 50,23	24 11,27	54 25,35	28 13,15	213 100,00
Frequency Missing = 2					

According to Table 9.15 the scores tend to aggregate in the middle class intervals which indicates a tendency to be unsure about the subjects' control and influence of their own lives.

Descriptive statistics with regard to internality for the 10 independent variables referred to above are presented in Table 9.16.

Table 9.16: DESCRIPTIVE STATISTICS: INTERNALITY.

Variables	Mean	Std.Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	18,22	4,62	0,46	1,18	0,70	107
English	20,63	5,30	1,08	-0,62	0,71	24
Sotho	19,10	4,53	0,63	-0,20	-0,06	54
Vernacular: Other	19,00	4,45	0,87	-0,90	-0,02	28
Anglican/ Catholic	18,00	4,90	1,31	0,06	0,35	15
Dutch Reformed	18,38	4,58	0,59	0,98	0,58	64
Methodist/ Presbyterian	18,58	4,91	0,96	1,43	0,91	26
Pentacostal/ Apostolic	16,69	3,93	0,73	-0,58	0,23	30

Table 9.16 (continued)

Afrikaans Sister Churches	18,29	3,88	0,66	0,42	-0,28	39
Religion: Other	20,06	5,79	0,98	-0,62	-0,30	36
Std. 8 and Lower	19,21	4,62	0,57	-0,69	-0,03	71
Std. 10	18,88	4,73	0,46	-0,61	0,50	112
Graduates	17,87	4,56	0,82	3,71	1,62	32
11 years and less of schooling	19,49	4,25	0,55	-0,37	-0,03	62
12 years of schooling	18,45	3,87	0,45	1,79	0,86	77
13 years or more of schooling	18,48	5,60	0,68	0,06	0,57	70
Income: R5 000 pa and less	18,96	4,36	0,84	-0,35	0,02	29
R5 001-R30 000	19,54	4,85	0,54	-0,01	0,11	83
R30 001-R45 000	19,00	4,86	0,83	1,01	0,91	34
R45 001-R80 000	17,58	4,49	0,59	1,63	0,92	62
Labourers	19,59	4,64	0,59	-0,44	0,02	64
Administrative workers	19,31	4,19	0,71	-0,32	0,62	37
Management and Consultants	17,90	4,69	0,65	1,96	0,75	53
Supervisors	18,67	4,50	0,68	0,61	0,70	56
Age: 19 - 25	19,91	5,57	0,97	-0,09	0,27	35
26 - 30	18,49	4,89	0,60	-0,16	0,14	66
31 - 45	18,54	4,28	0,49	1,05	0,95	83
46 & above	19,30	4,13	0,80	1,26	0,49	27
South Africa	18,82	4,51	0,34	0,58	0,47	186
Other countries	19,17	5,81	1,21	-0,58	0,40	24
Afrikaners	18,28	4,61	0,46	1,22	0,67	105
Anglo-Saxons	20,25	4,94	1,11	-0,15	1,70	20
Blacks	19,36	4,28	0,52	-0,47	0,08	72
Freemarket	18,67	4,86	0,48	0,56	0,62	108
Parastatal	19,00	4,49	0,44	0,11	0,30	107

N = 215



The information in Table 9.16 shows that in regard to internality the distributions of scores are also skewed. The distribution is largely positively skewed (values are  $> 0$ ) with a few values skewed to the left (values  $< 0$ ). However, regarding the values for the Sotho language, other vernaculars, educational qualification of Std. 8 and lower, 11 years and less of formal schooling received, income of R5 000 pa and less and labourers, the distribution may be normal as measures of skewness (and kurtosis) do not need to be exactly zero but will fluctuate around zero because of sampling variation (Norusis, 1983, p 40). However, measures of kurtosis also indicate a deviation from the normal distribution. For the Afrikaans language, Methodist/Presbyterian churches, Dutch Reformed Churches, graduates, subjects with 12 years of formal schooling, subjects in the income brackets R30 001 to R45 000 and R45 001 to R80 000, managers and consultants, age brackets 31 years to 45 years and 46 years and above, country of origin (other) and Anglo-Saxons, the distribution is quite peaked (leptokurtic). The peak is flatter than that of a normal distribution (platykurtic) for the African languages, Pentacostal/Apostolic faiths, Religion other, Matric and lower educational qualifications, 11 years or less of formal schooling received, lower income brackets, labourers and administrative workers, younger employees, subjects hailing from other countries, Anglo-Saxons and Blacks. Again the standard deviation is quite large which confirms that the distribution is not normal. The standard errors indicate some variability among the sample means, implying that inferences about the population mean should be treated with some care.

The influence of the 10 independent variables, viz language, religion, educational qualifications, years of formal schooling received, income, occupational level, age group, country of origin, ethnicity and economic sector employed in as well as their two-way interactions on the dependent variable internality, was also investigated by means of a factorial analysis of variance. Calculations pertaining to the four main factors relating to culture and their two-way interaction effects are presented in Table 9.17.

Table 9.17: ANOVA: INTERNALITY BY CULTURAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	29	906,58	31,26	1,64	0,0295
Error	150	2851,40	19,01		
Corrected Total	179	3758,06			
	R-square	C.V.	Root MSE	INTERL	Mean
	0,241236	23,03	4,36	12,43	
Source	DF	Anova SS	Mean Square	F Value	Pr F
LANG	3	118,25	39,42	2,07	0,1061
REL	5	110,91	22,18	1,17	0,3282
COUNT	1	37,11	37,11	1,95	0,1644
ETHN	2	92,03	46,01	2,42	0,0923
LANG*REL	12	161,02	13,42	0,71	0,7440
LANG*COUNT	2	234,02	117,01	6,16	0,0027*
REL*COUNT	4	153,24	38,31	2,02	0,0952

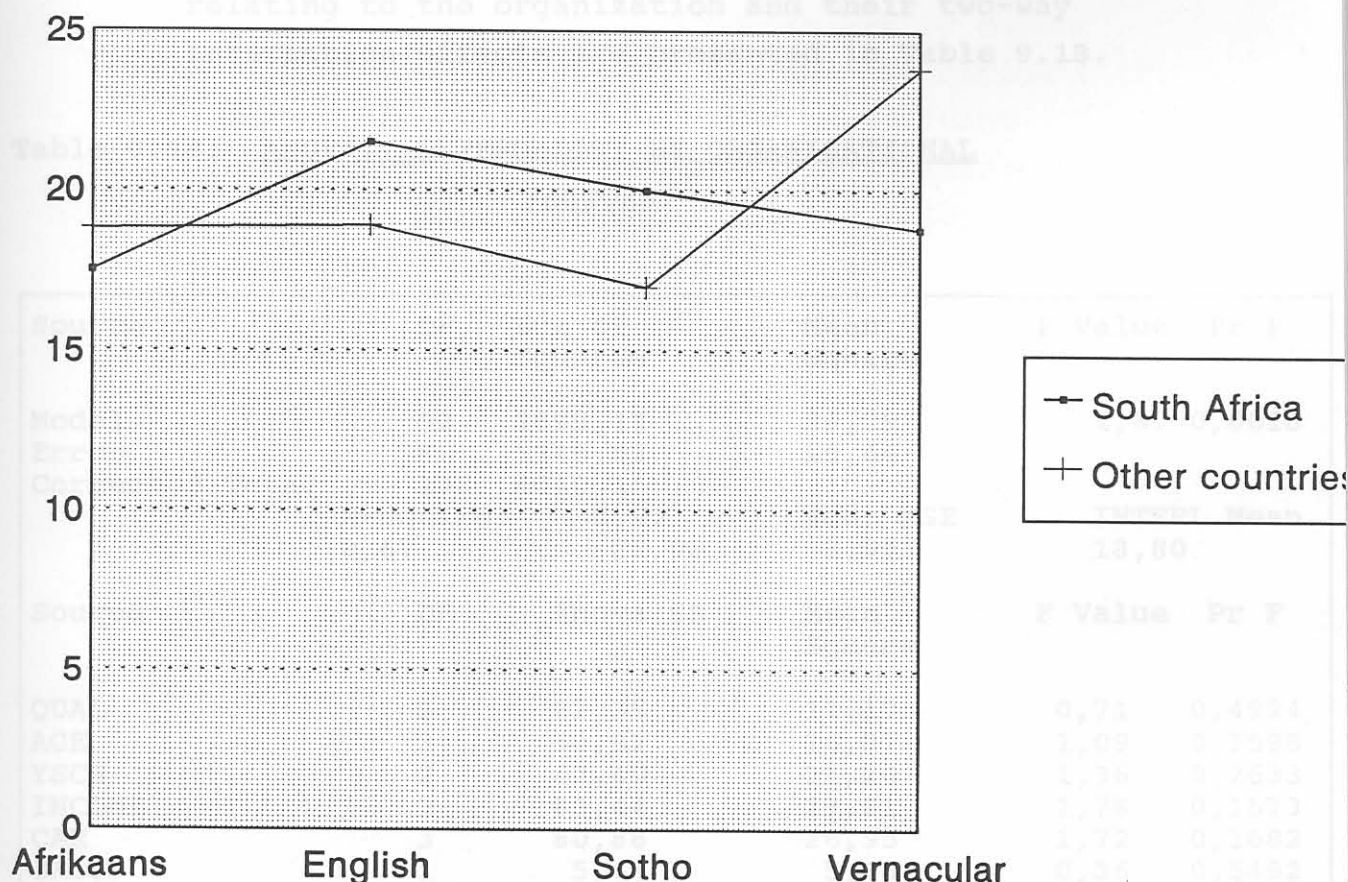
\*p ≤ 0,05

The information in Table 9.17 shows that significant differences exist for the two-way interaction language by country of origin in respect of internality ( $F = 6,16$ ,  $p = 0,0027$ ). The overall F-ratio is significant ( $F = 1,64$ ,  $p = 0,0295 < p = 0,05$ ). This ratio however does not pinpoint the particular two-way interaction concerned.

No significant differences are prevalent among the four main independent variables in respect of internality.

The two-way interaction language by country of origin is visually presented in Graph 9.6.

Graph 9.6: INTERACTION EFFECTS BETWEEN LANGUAGE AND COUNTRY OF ORIGIN ON INTERNALITY.



An analysis of Graph 9.6 reveals that subjects tend to be unsure about their control and influence of their own lives as the scores tend to aggregate towards the middle class-intervals.

However, English speaking subjects, irrespective of country of origin, show an increased uncertainty about their control of their own lives. Also, subjects from other countries using

\* p ≤ 0,05

a vernacular, showed an increased uncertainty about their control of their own lives. Subjects originating from South Africa and using a vernacular, showed a decreased uncertainty. Sotho speaking subjects originating from other countries were the least unsure about their control and influence of their own lives.

Calculations pertaining to the six factors relating to the organization and their two-way interaction effects are presented in Table 9.18.

Table 9.18: ANOVA: INTERNALITY BY ORGANIZATIONAL FACTORS.

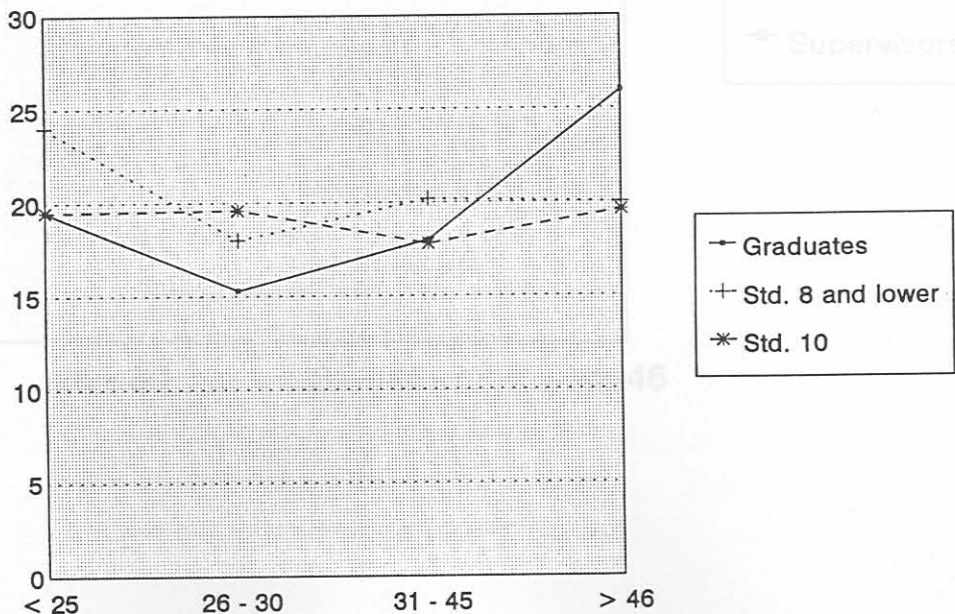
Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	92	2695,13	29,29	1,87	0,0018
Error	86	1345,02	15,64		
Corrected Total	178	4040,16			
	R-square	C.V.	Root MSE	INTERL Mean	
	0,67	21,03	3,95	18,80	
Source	DF	Anova SS	Mean Square	F Value	Pr F
QUAL	2	22,35	11,17	0,71	0,4924
AGE	3	50,92	16,97	1,09	0,3598
YSCH	2	42,40	21,20	1,36	0,2633
INCOME	3	83,44	27,81	1,78	0,1573
CAR	3	80,86	26,95	1,72	0,1682
GROUP	1	5,66	5,66	0,36	0,5492
QUAL*AGE	6	307,09	51,18	3,27	0,0060*
QUAL*YSCH	4	25,20	6,30	0,40	0,8061
QUAL*INCOME	5	110,60	22,12	1,41	0,2272
QUAL*CAR	5	176,49	35,30	2,26	0,0558
AGE*YSCH	6	179,85	29,97	1,92	0,0872
AGE*INCOME	9	228,43	25,38	1,62	0,1214
AGE*CAR	9	337,04	37,45	2,39	0,0180*
YSCH*INCOME	6	130,76	21,79	1,39	0,2265
YSCH*CAR	6	21,18	4,53	0,23	0,9674
INCOME*CAR	9	151,64	16,85	1,08	0,3878
QUAL*GROUP	2	169,70	84,85	5,43	0,0060*
AGE*GROUP	3	53,58	17,86	1,14	0,3369
YSCH*GROUP	2	39,74	19,87	1,27	0,2859
INCOME*GROUP	3	401,66	133,89	8,56	0,0001*
CAR*GROUP	3	76,56	25,52	1,63	0,1880

\*  $p \leq 0,05$

An analysis of the information in Table 9.18 reveals that no significant differences are prevalent among the six main independent variables in respect of internality. However, the overall F-ratio of 1,87 is significant at the 0,0018 level. Significant two-way interactions were detected. The first of these is educational qualifications by age ( $F = 3,27, p = 0,0060$ ). Secondly, the two-way interaction age by career level (occupational level) was also significant ( $F = 2,39, p = 0,0180$ ). The third significant two-way interaction was educational qualifications by economic sector ( $F = 5,43, p = 0,0060$ ). Lastly, the two-way interaction income by economic sector also proved significant ( $F = 8,56, p = 0,0001$ ).

These significant two-way interactions are presented visually by means of graphs. The two-way interaction between educational qualifications by age, is presented in Graph 9.7.

Graph 9.7: INTERACTION EFFECTS BETWEEN EDUCATIONAL QUALIFICATIONS BY AGE ON INTERNALITY.

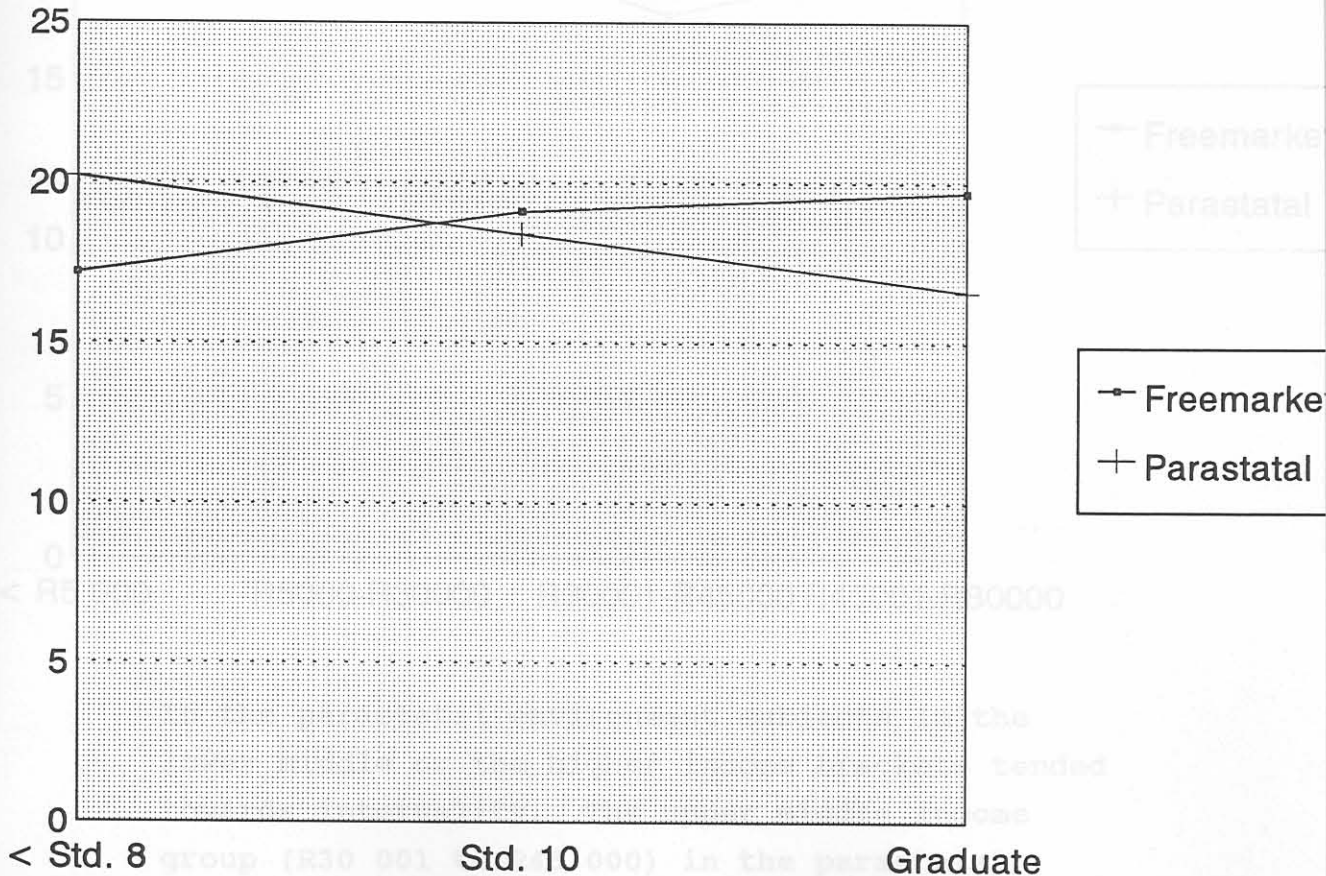




Administrative staff of the age group 26 to 30 years, were less inclined toward internality. Marked differences among occupational levels occurred beyond the age of 45. In this age category, managers and to a lesser extent administrative staff, revealed a tendency to be less favourably disposed towards internality whereas labourers and especially supervisors tended toward internality.

The two-way interaction between educational qualifications by sector of the economy employed in, is presented in Graph 9.9.

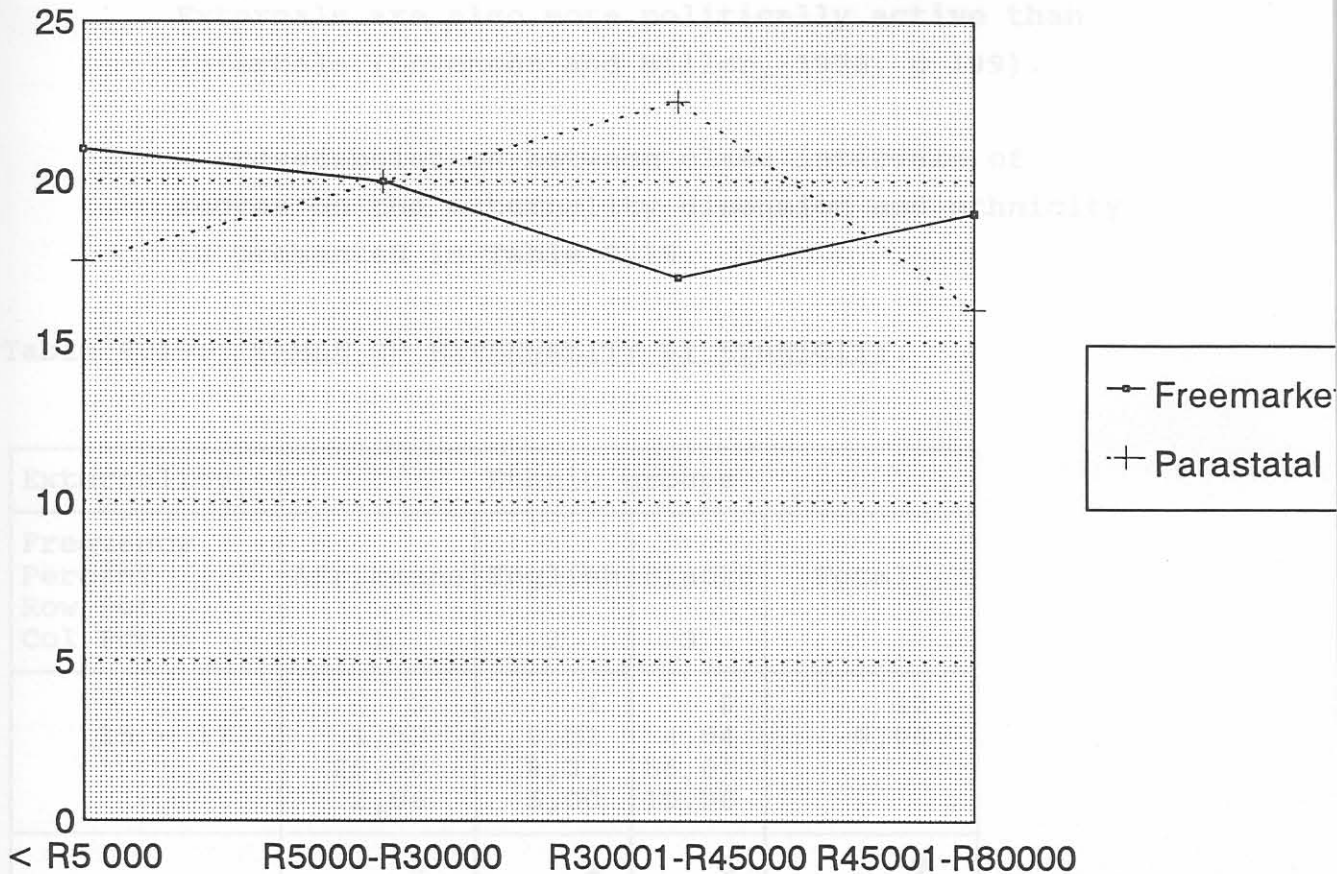
Graph 9.9: INTERACTION EFFECTS BETWEEN EDUCATIONAL QUALIFICATIONS BY SECTOR OF THE ECONOMY ON INTERNALITY.



Graduates in the parastatal environment tended more toward internality than graduates in the freemarket sector. The reverse pattern holds for subjects with Std. 8 or lower.

The two-way interaction between income by sector of the economy employed in, is presented in Graph 9.10.

Graph 9.10: INTERACTION EFFECTS BETWEEN INCOME AND SECTOR OF THE ECONOMY ON INTERNALITY.



In the parastatal environment subjects in the lower middle or the higher income brackets tended towards internality. The upper middle income group (R30 001 to R45 000) in the parastatal sector were less favourable disposed towards



internality. Subjects in the freemarket sector with lower or upper middle incomes tended more to internality whereas the lower middle income and high income groups were less inclined to internality.

#### 9.2.6 DIMENSION EXTERNALITY

The dimension externality is also measured by means of the Activism and Powerful Others-scale. Externality indicates the degree to which the subjects feel that events are beyond their own control and are determined by fate and/or chance. Externals are also more politically active than internals (Levenson and Miller, 1976, p 199).

A crosstabulation between class intervals of scores on the externality dimension and ethnicity is presented in Table 9.19.

Table 9.19: TABLE OF EXTERNALITY BY ETHNICITY.

Externality	Ethnic groups			
	Afrikaans	English	Blacks	Total
Frequency Percent Row Pct Col Pct	1	2	3	
15 - 17	3 1,52 25,00 2,86	1 0,51 8,33 5,00	8 4,04 66,67 10,96	12 6,06 100,00
18 - 20	2 1,01 22,22 1,90	1 0,51 11,11 5,00	6 3,03 66,67 8,22	9 4,55

Table 9.19 (continued)

21 - 23	- - -	- - -	11 5,56 100,00 15,07	11 5,56
24 - 26	8 4,04 38,10 7,62	3 1,52 14,29 15,00	10 5,05 47,62 13,70	21 10,61
27 - 29	12 6,06 46,15 11,43	2 1,01 7,69 10,00	12 6,06 46,15 16,44	26 13,13
30 - 32	21 10,61 56,76 20,00	2 1,01 5,41 10,00	14 7,07 37,84 19,18	37 18,69
33 - 35	25 12,63 69,44 23,81	4 2,02 11,11 20,00	7 3,54 19,44 9,59	36 18,18
36 - 38	21 10,61 72,41 20,00	6 3,03 20,69 30,00	2 1,01 6,90 2,74	29 14,65
39 - 41	10 5,05 83,33 9,52	1 0,51 8,33 5,00	1 0,51 8,33 1,37	12 6,06
42 - 44	3 1,52 60,00 2,86	- - - -	2 1,01 40,00 2,74	5 2,53
Total	105 53,03	20 10,10	73 36,87	198 100,00

Frequency Missing = 17

According to Table 9.19 the scores tend to aggregate in the higher class intervals which indicates a tendency away from externality.

Descriptive statistics with regard to externality for the 10 independent variables referred to above are presented in Table 9.20.

Table 9.20: DESCRIPTIVE STATISTICS: EXTERNALITY.

Variables	Mean	Std Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	33,15	4,88	0,48	-0,01	-0,30	107
English	32,00	5,98	1,25	-0,28	-0,78	24
Sotho	27,77	5,50	0,76	-0,34	-0,24	54
Vernacular: Other	28,84	7,06	1,41	-0,03	-0,14	28
Anglican/ Catholic	31,00	7,48	2,00	-1,14	-0,14	15
Dutch Reformed	31,90	5,47	0,71	-0,29	-0,35	64
Methodist/ Presbyterian	29,96	6,44	1,26	-0,11	-0,04	26
Pentacostal/ Apostolic	29,73	6,95	1,36	-0,16	-0,22	30
Afrikaans Sister Churches	33,14	3,74	0,62	0,14	-0,41	39
Religion: Other	29,81	6,32	1,05	-0,16	-0,23	36
Std. 8 and Lower	27,08	5,83	0,73	-0,54	-0,21	71
Std. 10	31,46	5,81	0,56	0,15	-0,34	112
Graduates	34,00	5,04	0,89	2,24	-1,11	32
11 years and less of schooling	28,75	5,44	0,72	-0,55	-0,16	62
12 years of schooling	32,12	5,67	0,66	1,10	-0,86	77
13 years or more of schooling	32,35	5,85	0,70	-0,32	-0,25	70
Income: R5 000 pa and less	28,42	6,09	1,19	0,23	0,38	29
R5 001-R30 000	29,46	5,89	0,67	-0,20	0,02	83
R30 001-R45 000	32,27	5,31	0,91	1,83	-1,16	34
R45 001-R80 000	33,62	4,63	0,60	0,16	-0,48	62
Labourers	28,71	5,98	0,78	-0,12	0,10	64
Administrative workers	29,91	5,57	0,96	-0,13	-0,54	37
Management and Consultants	33,98	4,81	0,67	1,38	-0,96	53
Supervisors	31,78	5,98	0,81	0,27	-0,41	56

Table 9.20 (continued)

Age: 19 - 25	31,13	6,71	1,19	-0,80	-0,14	35
26 - 30	30,75	5,86	0,73	-0,40	-0,06	66
31 - 45	31,73	5,20	0,59	0,85	-0,66	83
46 & above	30,19	7,04	1,36	-0,27	-0,55	27
South Africa	31,09	5,89	0,46	-0,19	-0,29	186
Other countries	32,09	5,63	1,17	-0,29	-0,82	24
Afrikaners	33,15	4,84	0,48	0,08	-0,31	105
Anglo-Saxons	31,90	5,00	1,19	-0,11	-0,71	20
Blacks	27,54	6,02	0,74	0,07	0,29	72
Freemarket	30,80	5,99	0,59	-0,25	-0,42	108
Parastatal	31,44	5,84	0,58	-0,02	-0,34	107

N = 215

Table 9.20 shows that the scores in regard to externality is somewhat negatively skewed or skewed to the left. In other words the tail of the distribution is toward smaller values. Also, the peak of the distribution for most measures is flatter than that of a normal distribution. However, for some measures such as Std. 10, graduates, the income bracket R30 001 - R45 000 and management and consultants, the distribution is more peaked than in a normal distribution. The standard error indicates some variability among sample means which implies that the observed means of most of the subgroups are deviant to some extent from the comparable population means and therefore inferences about the population cannot be drawn with absolute confidence. The large standard deviations confirm that the distributions are skewed.

The influence of the 10 independent variables and their two-way interactions in respect of externality was also investigated by means of a factorial analysis of variance. Calculations pertaining to these analyses are presented in

Tables 9.21 and 9.22.

Data relating to the four main factors in regard to culture are presented in Table 9.21.

Table 9.21: ANOVA: EXTERNALITY BY CULTURAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	29	3428,96	118,24	5,93	0,0001*
Error	149	2972,69	19,95		
Corrected Total	178	6401,64			
	R-square	C.V.	Root MSE	EXTERL Mean	
	0,535637	14,39	4,47	31,04	
Source	DF	Anova SS	Mean Square	F Value	Pr F
LANG	3	1139,26	379,75	19,03	0,0001*
REL	5	381,14	76,23	3,82	0,0028*
COUNT	1	16,41	16,41	0,82	0,3659
ETHN	2	1232,04	616,02	30,88	0,0001*
LANG*REL	12	112,11	9,34	0,47	0,9305
LANG*COUNT	2	179,28	89,64	4,49	0,0127*
REL*COUNT	4	368,72	92,18	4,62	0,0015*

\*p ≤ 0,05

An analysis of the information in Table 9.21 reveals that significant differences are prevalent among the four main independent variables in respect of externality. The overall F-ratio of 5,93 is significant at the 0,0001 level. This ratio, however does not pinpoint the particular independent variables concerned. The first of these is language (F = 19,03, p = 0,0001). Secondly, religion also provided significant differences (F = 3,82, p = 0,0028). The third significant variable was ethnicity (F = 30,88, p = 0,0001). Significant two-way interactions were also detected between religion by country of origin (F = 4,62, p = 0,0015) and language by country of origin (F = 4,49, p = 0,0127).

In regard to language, the Afrikaans group was compared with the Sotho-speaking group by means of the Scheffé-test. In this comparison  $t$  equals 7,216 so that  $F' = 52,068$  ( $t^2$ ) which with 3 and 159 df is significant ( $F' = 52,068 > F = 2,65$  with 3 and 159 df,  $p$  being  $< 0,05$ ). The Afrikaans group was also compared with the group of subjects speaking an African vernacular. This comparison yielded a  $t$ -value of 4,55 so that  $F' = 20,664$  ( $t^2$ ) which with 3 and 133 df is significant ( $F' = 20,664 > F = 2,68$  with 3 and 117 df,  $p$  being  $< 0,05$ ). The Afrikaans group was also compared with the English speakers by means of a Scheffé-test. This comparison yielded a  $t$ -value of 1,140 so that  $F' = 1,230$  ( $t^2$ ) which with 3 and 129 df is non-significant ( $F' = 1,230 < F = 2,68$  with 3 and 129 df,  $p$  being  $> 0,05$ ). In the fourth comparison, the English speaking whites were compared with the Sothos. This comparison yielded a  $t$ -value of 3,860 so that  $F' = 14,902$  which with 3 and 76 df is significant ( $F' = 14,902 > F = 2,76$  with 3 and 76 df,  $p$  being  $< 0,05$ ). Fifthly, the English speaking whites were compared with the Blacks using an African vernacular. This comparison yielded a  $t$ -value of 2,543 so that  $F' = 6,468$  which with 3 and 50 df is significant ( $F' = 6,468 > F = 2,79$  with 3 and 50 df,  $p$  being  $< 0,05$ ). Lastly, the Sothos were compared with the Blacks using an African vernacular. This comparison yielded a  $t$ -value of 1,028 so that  $F' = 1,059$  ( $t^2$ ) which with 3 and 80 df is insignificant ( $F' = 1,059 < F = 2,76$  with 3 and 80 df,  $p$  being  $> 0,05$ ). The Dutch Reformed churches were also compared with the

Post hoc comparisons were also done in regard to religion by means of the Scheffé-test. The High Churches (Anglican and Roman Catholic) were compared with the Dutch Reformed Church. In this comparison a t-value of 0,702 was obtained so that  $t^2 (F') = 0,493$  which with 5 and 77 df is non-significant ( $F' = 0,493 < F = 2,37$  with 5 and 77 df, p being  $> 0,05$ ). The High Churches were also compared with the Methodist/Presbyterian churches. This comparison yielded a t-value of 0,718 so that  $F' = 0,516 (t^2)$  which with 5 and 39 df is insignificant ( $F' = 0,516 < F = 2,45$  with 5 and 39 df, p being  $> 0,05$ ). Thirdly, the High Churches were compared with the Pentacostal/Apostolic group. A t-value of 0,899 was obtained so that  $F' = 0,808 (t^2)$  which with 5 and 43 df is insignificant ( $F' = 0,808 < F = 2,45$  with 5 and 43 df, p being  $> 0,05$ ). A comparison between the Anglican/Roman Catholic Churches and the Dutch Reformed Sister Churches (Gereformeerde en Nederduitsche-Hervormende) yielded a t-value of 1,577 so that  $F' = 2,487 (t^2)$  which with 5 and 52 df is significant ( $F' = 2,487 > F = 2,40$  with 5 and 52 df, p being  $< 0,05$ ).

A comparison between the High Churches (Anglican and Roman Catholic) and Religion Other yielded a t-value of 0,867 so that  $F' = 0,752 (t^2)$  which with 5 and 49 df is non-significant ( $F' = 0,752 < F = 2,40$  with 5 and 49 df, p being  $> 0,05$ ). A comparison between the Dutch Reformed Churches and the Methodist/Presbyterian group yielded a t-value of 1,868 so that  $F' = 3,488 (t^2)$  which with 5 and 88 df is significant ( $F' = 3,488 > F = 2,37$  with 5 and 88 df, p being  $< 0,05$ ). The Dutch Reformed churches were also compared with the

Pentacostal/Apostolic faiths. This comparison yielded a t-value of 2,196 so that  $F' = 4,821$  which with 5 and 92 df is significant ( $F' = 4,821 > F = 2,29$  with 5 and 92 df, p being  $< 0,05$ ). A comparison between the Dutch Reformed Church and the Dutch Reformed Sister Churches yielded a t-value of 1,367 so that  $F' = 1,868$  ( $t^2$ ) which with 5 and 101 df is non-significant ( $F' = 1,868 < F = 2,29$  with 5 and 101 df, p being  $> 0,05$ ). A comparison between the Dutch Reformed Churches and Other Religions yielded a t-value of 2,246 so that  $F' = 5,045$  ( $t^2$ ) which with 5 and 98 df is significant ( $F' = 5,045 > F = 2,29$  with 5 and 98 df, p being  $< 0,05$ ).

The Methodist/Presbyterian Churches were compared with the Pentacostal/Apostolic Churches. A t-value of 0,192 was obtained so that  $F' = 0,037$  ( $t^2$ ) which with 5 and 54 df is non-significant ( $F' = 0,037 < F = 2,40$  with 5 and 54 df, p being  $> 0,05$ ). In a comparison between the Methodist/Presbyterian Churches and the Dutch Reformed Sister Churches a t-value of 2,812 was obtained so that  $F' = 7,907$  ( $t^2$ ) which with 5 and 63 df is significant ( $F' = 7,907 > F = 2,37$  with 5 and 63 df, p being  $< 0,05$ ). The Methodist/Presbyterian Churches were also compared with the group comprising other religions (Lutheran, Zionist, Independent Churches, Islamic and Others). This comparison yielded a t-value of 0,130 so that  $F' = 0,017$  ( $t^2$ ) which with 5 and 60 df is non-significant ( $F' = 0,017 < F = 2,37$  with 5 and 60 df, p being  $> 0,05$ ).

A comparison between the Pentacostal/Apostolic Churches and the Dutch Reformed Sister Churches

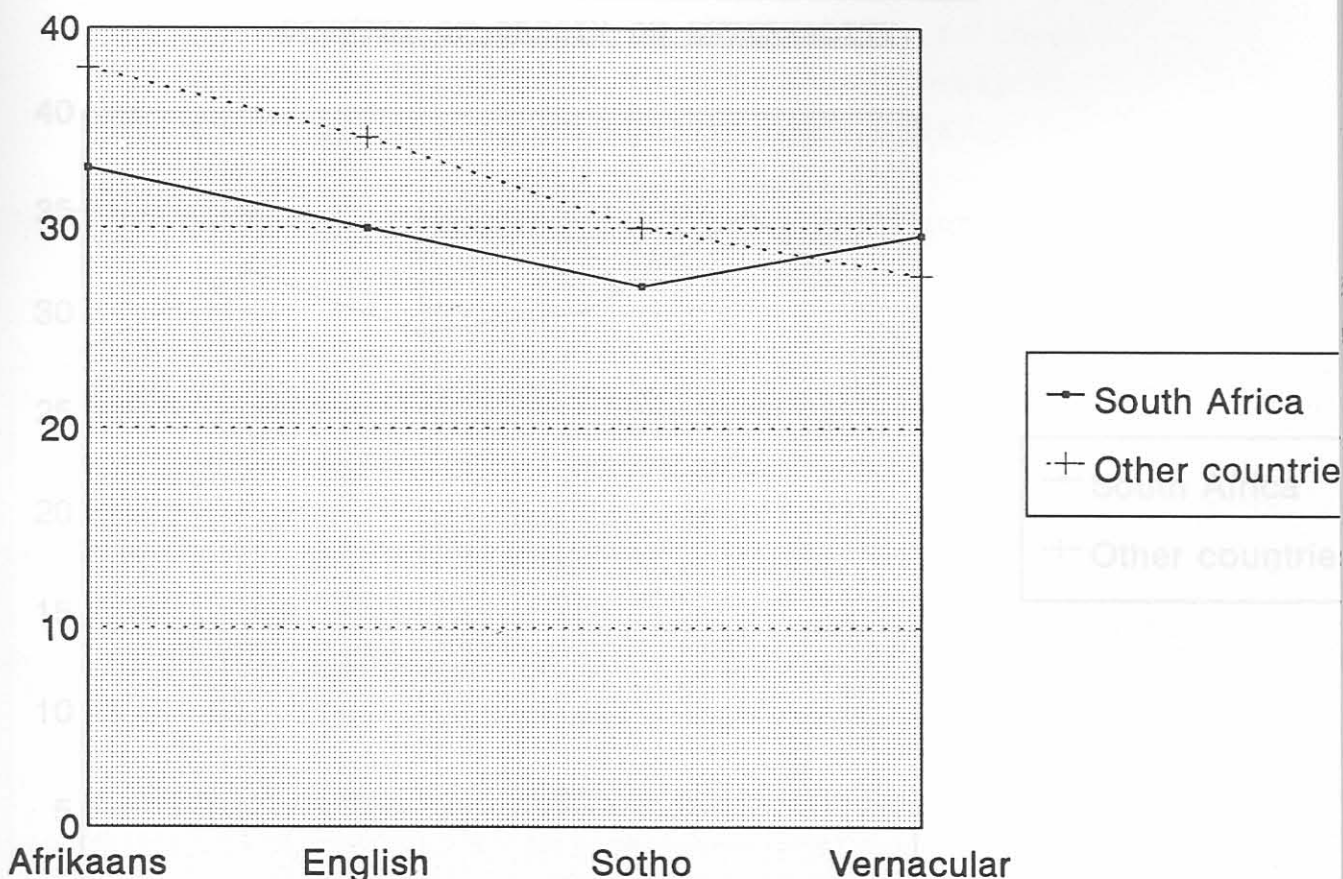


yielded a t-value of 3,144 so that  $F' = 9,883$  ( $t^2$ ) which with 5 and 67 df is significant ( $F' = 9,883 > F = 2,37$  with 5 and 67 df, p being  $< 0,05$ ). A comparison between the Pentacostal/Apostolic Churches and Other Religions yielded a t-value of 0,072 so that  $F' = 0,005$  which with 5 and 64 df is non-significant ( $F' = 0,005 < F = 2,37$  with 5 and 60 df, p being  $> 0,05$ ). Finally, the Dutch Reformed Sister Churches were compared with other religions (Lutheran, Zionist, Independent Churches, Islamic and Others). In this comparison a t-value of 3,226 was obtained so that  $F' = 10,405$  ( $t^2$ ) which with 5 and 75 df is significant ( $F' = 10,405 > F = 2,37$  with 5 and 75 df, p being  $< 0,05$ ).

The Scheffé-test was also applied to do post hoc comparisons in regard to the three ethnic groups. In regard to ethnicity, the Afrikaners were compared with the English speaking group (Anglo-Saxons). This comparison yielded a t-value of 1,147 so that  $F' = 1,316$  ( $t^2$ ) which with 2 and 123 df is non-significant ( $F' = 1,316 < F = 3,07$  with 2 and 123 df, p being  $> 0,05$ ). A comparison between the Afrikaners and the Blacks (comprising Xhosas, Sothos, Tswanas and Zulus) yielded a t-value of 8,209 so that  $F' = 67,380$  ( $t^2$ ) which with 2 and 175 df is significant ( $F' = 67,380 > F = 3,04$  with 2 and 175 df, p being  $< 0,05$ ). Finally, English speaking whites were compared with blacks. In this comparison a t-value of 3,862 was obtained so that  $F' = 14,914$  ( $t^2$ ) which with 2 and 90 df is significant ( $F' = 14,914 > F = 3,07$  with 2 and 90 df, p being  $< 0,05$ ).

The significant two-way interaction are visually presented by means of graphs. The two-way interaction between language by country of origin, is presented in Graph 9.11.

Graph 9.11: INTERACTION EFFECTS BETWEEN LANGUAGE BY COUNTRY OF ORIGIN ON EXTERNALITY.

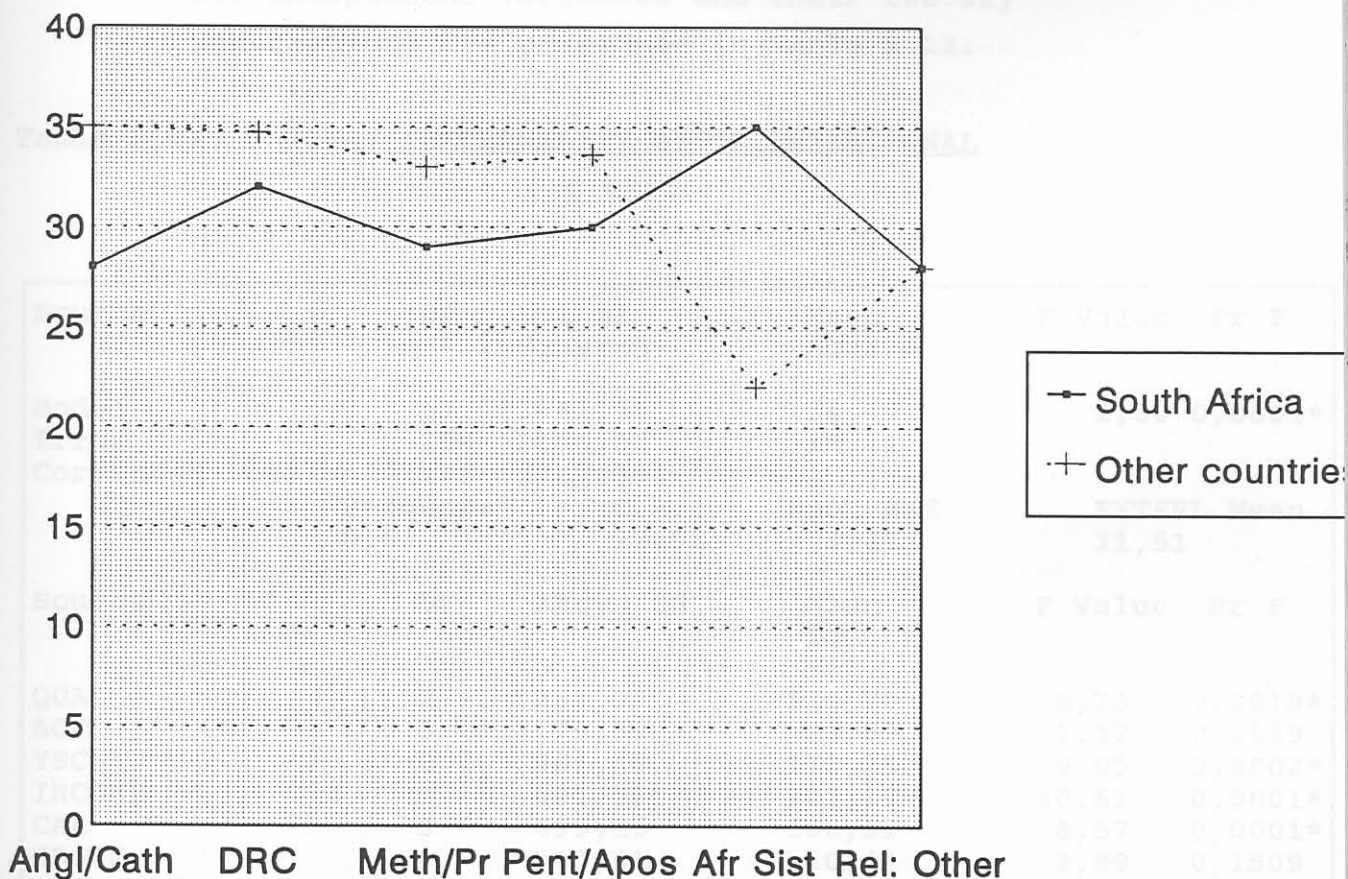


Afrikaans speaking subjects, either having South Africa or another country of origin, conspicuously tended to not being sensitive to external powers and influences. English speaking subjects scored slightly lower but also showed a lack of sensitiveness for external forces. Black subjects, either Sotho or vernacular speaking,

generally scored lower than both English and Afrikaans subjects. However, their scores indicate an obvious trend away from being aware of external forces and powerful others.

The two-way interaction between religion and country of origin, is presented in Graph 9.12.

Graph 9.12: INTERACTION EFFECTS BETWEEN RELIGION BY COUNTRY OF ORIGIN ON EXTERNALITY.



Three trends are discernible. Subjects with South Africa as country of origin and being Anglican or Catholic, tend to be less reliant on external forces and powerful others when compared to Anglicans and Catholics with another country of origin. Subjects belonging to the Afrikaans,

\* p = 0,05

Sister Churches and having another country as country of origin, when compared with their brethren of South African origin, were more inclined to externality, i.e. greater awareness of external influences and powerful others.

The influence of the six main factors relating to the organization and their two-way interactions with respect to externality was also investigated. Calculations pertaining to these six independent variables and their two-way interactions are presented in Table 9.22.

Table 9.22: ANOVA: EXTERNALITY BY ORGANIZATIONAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	67	3641,70	54,35	2,80	0,0001*
Error	108	2096,30	19,41		
Corrected Total	175	5737,99			
	R-square	C.V.	Root MSE	EXTERL Mean	
	0,63	13,98	4,41	31,51	
Source	DF	Anova SS	Mean Square	F Value	Pr F
QUAL	2	261,39	130,70	6,73	0,0018*
AGE	3	79,77	26,59	1,37	0,2559
YSCH	2	351,48	175,74	9,05	0,0002*
INCOME	3	621,38	207,13	10,67	0,0001*
CAR	3	499,16	166,39	8,57	0,0001*
GROUP	1	40,61	40,61	2,09	0,1509
QUAL*AGE	6	271,30	45,22	2,33	0,0373*
QUAL*YSCH	4	64,50	16,12	0,83	0,5085
AGE*YSCH	6	103,16	17,19	0,89	0,5081
AGE*INCOME	9	285,65	31,74	1,64	0,1142
AGE*CAR	9	317,77	35,31	1,82	0,0728
YSCH*CAR	6	63,37	10,56	0,54	0,7736
QUAL*GROUP	2	173,45	86,72	4,47	0,0137*
AGE*GROUP	3	194,60	64,87	3,34	0,0220*
YSCH*GROUP	2	60,08	30,04	1,55	0,2174
INCOME*GROUP	3	38,42	12,81	0,66	0,5786
CAR*GROUP	3	215,61	71,87	3,70	0,0140*

\* p = 0,05

The information in Table 9.22 shows that significant differences are prevalent among the six main independent variables in respect of externality. The overall F-ratio of 2,80, is significant at the 0,0001 level. This ratio does not however, pinpoint the particular independent variables concerned. Four of the six main factors in the survey showed significant differences. The first is educational qualifications ( $F = 6,73, p = 0,0018$ ). Secondly, years of formal schooling received also provided significant differences ( $F = 9,05, p = 0,0002$ ). The third significant variable was income ( $F = 10,67, p = 0,0001$ ). Lastly, career level also provided significant differences ( $F = 8,57, p = 0,0001$ ). Significant two-way interactions existed between educational qualifications and age, educational qualifications and economic sector (group) age and economic sector and occupational level and economic sector. Again post hoc comparisons between the different subgroups in regard to educational qualifications, years of formal schooling received, income and occupational level (career level) were done by means of the Scheffé-test. The group with an educational qualification of Std 8 and lower was compared with the group of matriculants. A t-value of 6,554 was obtained so that  $F' = 42,948 (t^2)$  which with 2 and 181 df is significant ( $F' = 42,948 > F = 3,04$  with 2 and 181 df,  $p$  being  $< 0,05$ ). Secondly, the group with educational qualifications of Std 8 and lower was compared with the graduates. This comparison yielded a t-value of 7,377 so that  $F' = 54,420 (t^2)$  which with 2 and 101 df is significant ( $F' = 54,420 > F = 3,07$  with 2 and 101 df,  $p$  being  $< 0,05$ ). Lastly, the matriculants were

compared with the graduates. A t-value of 2,876 was obtained so that  $F' = 8,273 (t^2)$  which with 2 and 142 df is significant ( $F' = 8,273 > F = 3,07$  with 2 and 142 df,  $p$  being  $< 0,05$ ).

The group comprising subjects with 11 years and less of formal schooling received, was compared with the group comprising subjects with 12 years of formal schooling received. A t-value of 4,483 was obtained so that  $F' = 20,096 (t^2)$  which with 2 and 137 df is significant ( $F' = 20,096 > F = 3,07$  with 2 and 137 df,  $p$  being  $< 0,05$ ). The second comparison was between the group comprising subjects with 11 years or less of formal schooling received and the group comprising those subjects with 13 years or more of formal schooling received. This comparison yielded a t-value of 4,685 so that  $F' = 21,953 (t^2)$  which with 2 and 130 df is significant ( $F' = 21,953 > F = 3,07$  with 2 and 130 df,  $p$  being  $< 0,05$ ). Finally, the group comprising subjects with 12 years of formal schooling was compared with those with 13 year or more of formal schooling received. A t-value of 0,316 was obtained so that  $F' = 0,0999 (t^2)$  which with 2 and 145 df is non-significant ( $F' = 0,0999 < F = 3,07$  with 2 and 145 df,  $p$  being  $> 0,05$ ).

In regard to income, the group comprising subjects with an income of R5 000 per annum and less was compared with the group comprising subjects with an annual income of between R5 001 and R30 000. This comparison yielded a t-value of 1,094 so that  $F' = 1,198 (t^2)$  which with 3 and 110 df is non-significant ( $F' = 1,198 < F = 2,68$  with 3 and 110 df,  $p$  being  $> 0,05$ ). Secondly, the low

income group (R5 000 per annum and less) was compared with the upper middle income group (R30 001 to R45 000). This comparison yielded a t-value of 3,457 so that  $F' = 11,952$  ( $t^2$ ) which with 3 and 61 df is significant ( $F' = 11,952 > F = 2,76$  with 3 and 61 df, p being  $< 0,05$ ). Thirdly, the low income group was compared with the high income group (R45 001 to R80 000). This comparison yielded a t-value of 5,246 so that  $F' = 27,525$  ( $t^2$ ) which with 3 and 89 df is significant ( $F' = 27,525 > F = 2,76$  with 3 and 89 df, p being  $< 0,05$ ). The lower middle income group (R5 001 to R30 000) was also compared with the upper middle income group (R30 001 to R45 000). A t-value of 3,132 was obtained so that  $F' = 9,812$  ( $t^2$ ) which with 3 and 115 df is significant ( $F' = 9,812 > F = 2,68$  with 3 and 115 df, p being  $< 0,05$ ). Fifthly, the lower middle income group was also compared with the high income group. This comparison yielded a t-value of 5,625 so that  $F' = 31,642$  which with 3 and 143 df is significant ( $F' = 31,642 > F = 2,68$  with 3 and 143 df, p being  $< 0,05$ ). Lastly, the upper middle income group was compared with the high income group (R45 001 to R80 000). A t-value of 1,436 was obtained so that  $F' = 2,062$  which with 3 and 94 df is non-significant ( $F' = 2,062 < F = 2,68$  with 3 and 94 df, p being  $> 0,05$ ).

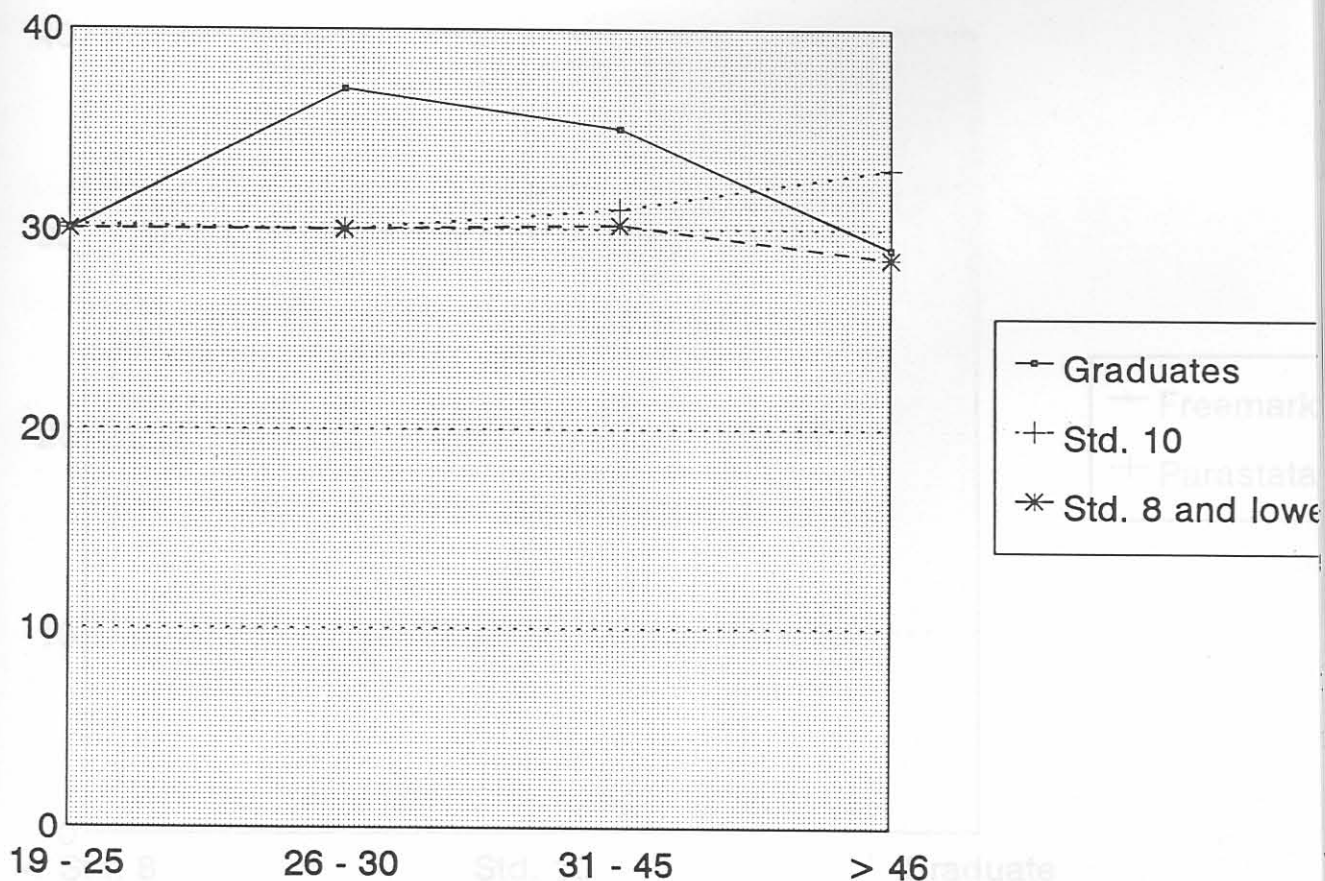
In regard to occupational level (career level), the group comprising labourers (skilled and semi-skilled and artisans) was compared with administrative workers. This comparison yielded a t-value of 1,319 so that  $F' = 1,739$  ( $t^2$ ) which

with 3 and 99 df is non-significant ( $F' = 1,739 < F = 2,68$  with 3 and 99 df,  $p$  being  $> 0,05$ ). Secondly, the group of labourers was compared with the managers and consultants. This comparison yielded a  $t$ -value of 6,441 so that  $F' = 41,486$  ( $t^2$ ) which with 3 and 115 df is significant ( $F' = 41,486 > F = 2,68$  with 3 and 115 df,  $p$  being  $< 0,05$ ). Thirdly, the labourers were compared with the supervisors. In this comparison a  $t$ -value of 3,808 was obtained so that  $F' = 14,502$  ( $t^2$ ) which with 3 and 118 df is significant ( $F' = 14,502 > F = 2,68$  with 3 and 118 df,  $p$  being  $< 0,05$ ). Fourthly, the administrative group was compared with the managers and consultants. This comparison yielded a  $t$ -value of 4,360 so that  $F' = 19,014$  ( $t^2$ ) which with 3 and 88 df is significant ( $F' = 19,014 > F = 2,76$  with 3 and 88 df,  $p$  being  $< 0,05$ ). The administrative staff and the supervisors were also compared. A  $t$ -value of 2,004 was obtained so that  $F' = 4,014$  ( $t^2$ ) which with 3 and 91 df is significant ( $F' = 4,014 > F = 2,68$  with 3 and 91 df,  $p$  being  $< 0,05$ ). Lastly, the group comprising managers and consultants was compared with the supervisors. This comparison yielded a  $t$ -value of 2,606 so that  $F' = 6,790$  ( $t^2$ ) which with 3 and 107 df is significant ( $F' = 6,790 > F = 2,68$  with 3 and 107 df,  $p$  being  $< 0,05$ ). The significant two-way interactions are visually presented by means of graphs.

The two-way interaction between educational qualifications and age group is presented in Graph 9.13.



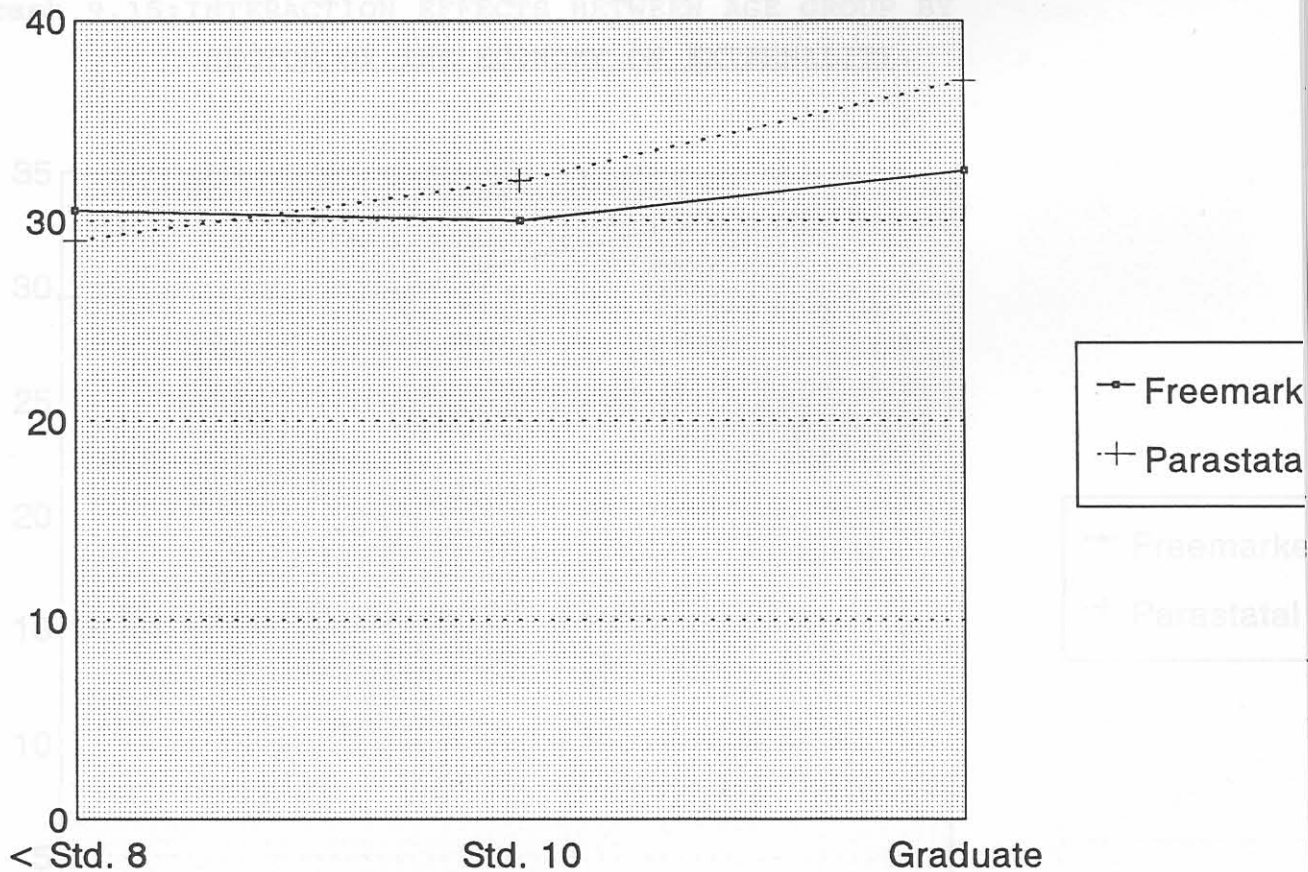
Graph 9.13: INTERACTION EFFECTS BETWEEN EDUCATIONAL QUALIFICATIONS BY AGE GROUP ON EXTERNALITY.



Graduates in the age group 26 to 30 years, are less prone to external forces and powerful others when compared with other subgroups. Beyond the age of 45 years, both the graduates and subjects with Std. 8 or less showed an increased sensitivity for externality. However, matriculants in this age group tend to become somewhat less sensitive to externality.

The two-way interaction between educational qualifications and sector of the economy employed in, is presented in Graph 9.14.

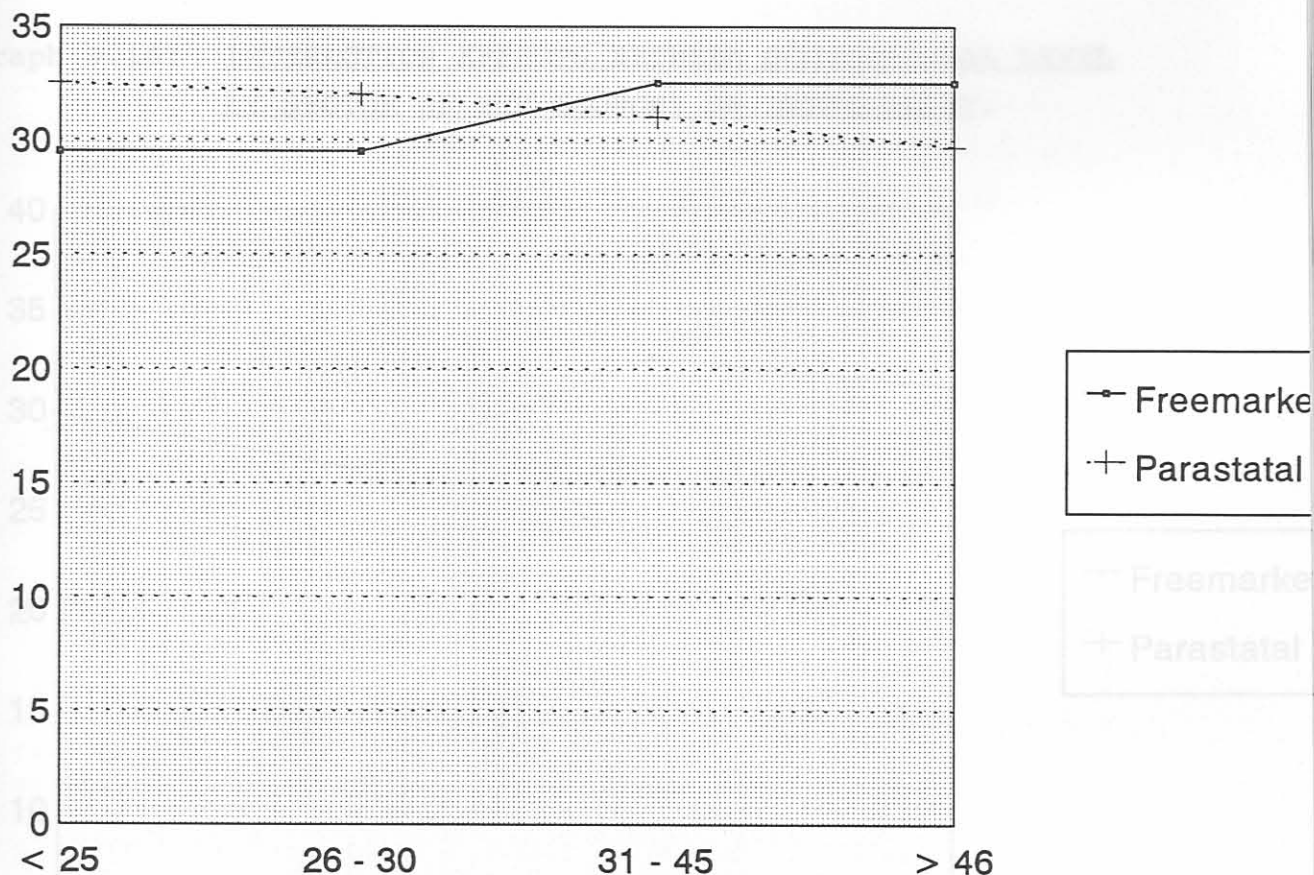
Graph 9.14: INTERACTION EFFECTS BETWEEN EDUCATIONAL  
sector QUALIFICATIONS BY SECTOR OF THE presented in  
 Graph 9.15 ECONOMY ON EXTERNALITY.



In the parastatal environment subjects with Std. 8 or lower tended more to externality while their graduate counterparts were obvious less sensitive to external influences. Rather slight differences occurred in the freemarket sector with graduates again tending to less sensitivity. The scores of these graduates in the freemarket environment are lower than those of graduates in the parastatal environment.

The two-way interaction between age group by sector of the economy employed in, is presented in Graph 9.15.

Graph 9.15: INTERACTION EFFECTS BETWEEN AGE GROUP BY SECTOR OF THE ECONOMY ON EXTERNALITY.

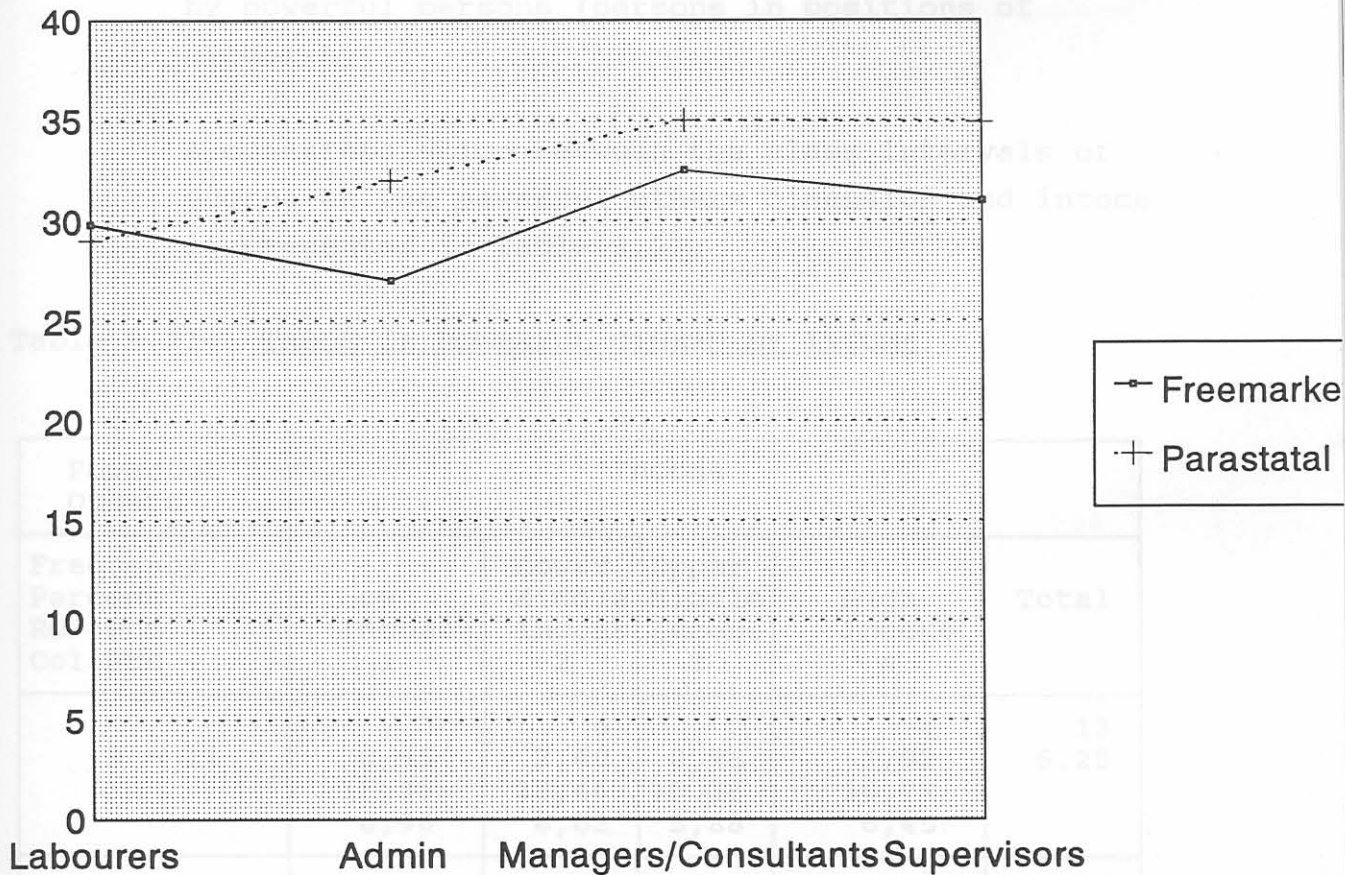


In the parastatal sphere, subjects of 30 years of age and younger, were obviously less sensitive to external forces and powerful others than their counterparts in the same age bracket in the freemarket sector. Beyond the age of 45, subjects in the parastatal environment tended to be more sensitive to external forces and powerful others while subjects in the same age category in the

freemarket environment tended to be less inclined to externality, i.e. a lesser awareness of external forces and powerful others.

The two-way interaction between occupational level (career level) and economic sector employed in, is presented in Graph 9.16.

Graph 9.16: INTERACTION EFFECTS BETWEEN OCCUPATIONAL LEVEL BY SECTOR OF THE ECONOMY ON EXTERNALITY.



In the parastatal sphere managers/consultants and supervisors tended to be less sensitive to externality whereas the administrative staff and especially the labourers were more sensitive. Administrative staff in the freemarket environment

were rather sensitive to external forces while managers/consultants and supervisors were less so inclined.

### 9.2.7 DIMENSION POWERFUL OTHERS

Powerful Others is the third dimension being measured by means of the Activism and Powerful Others-scale of Levenson (1974). The dimension "Powerful Others" indicates the extent to which subjects believe that their lives are controlled by powerful persons (persons in positions of authority).

A crosstabulation between the class intervals of scores on the powerful others dimension and income is presented in Table 9.23.

Table 9.23: TABLE OF POWERFUL OTHERS BY INCOME.

Powerful Others	Income				Total
	Low Income 1	Lower Middle Income 2	Upper Middle Income 3	High Income 4	
9 - 11	2 0,96 15,38 6,90	5 2,40 38,46 6,02	2 0,96 15,38 5,88	4 1,92 30,77 6,45	13 6,25
12 - 14	- - - -	3 1,44 42,86 3,61	2 0,96 28,57 5,88	2 0,96 28,57 3,23	7 3,37
15 - 17	3 1,44 10,34 10,34	17 8,17 58,62 20,48	4 1,92 13,79 11,76	5 2,40 17,24 8,06	29 13,94

Table 9.23 (continued)

18 - 20	9 4,33 22,50 31,03	19 9,13 47,50 22,89	2 0,96 5,00 5,88	10 4,81 25,00 16,13	40 19,23
21 - 23	10 4,81 23,48 34,48	15 7,21 35,71 18,07	6 2,88 14,29 17,65	11 5,29 26,19 17,74	42 20,19
24 - 26	4 1,92 11,11 13,79	10 4,81 27,78 12,05	8 3,85 22,22 23,53	14 6,73 38,89 22,58	36 17,31
27 - 29	- - - -	9 4,33 33,33 10,84	8 3,85 29,63 23,53	10 4,81 37,04 16,13	27 12,98
30 - 32	1 0,48 8,33 3,45	4 1,92 33,33 4,82	2 0,96 16,67 5,88	5 2,40 41,67 8,06	12 5,77
33 - 35	- - - -	1 0,48 50,00 1,20	- - - -	1 0,48 50,00 1,61	2 0,96
Total	29 13,94	83 39,90	34 16,35	62 29,81	208 100,00
Frequency Missing = 7					

According to Table 9.23 the scores tend to aggregate in the higher class intervals which counter-indicates a tendency towards a belief in the role of powerful others in the subjects' lives.

Descriptive statistics with regard to powerful others for the 10 independent variables, viz language, religion, educational qualifications, years of formal schooling received, income, occupational level, age, country of origin, ethnicity and economic sector employed in (group) are presented in Table 9.24.

Table 9.24: DESCRIPTIVE STATISTICS: POWERFUL OTHERS.

Variables	Mean	Std.Dev.	Std. Error	Kurtosis	Skewness	N
Afrikaans	22,22	4,90	0,49	-0,69	-0,30	107
English	22,49	5,68	1,16	-0,90	-0,10	24
Sotho	18,90	3,86	0,54	0,42	-0,11	54
Vernacular: Other	20,54	5,16	1,01	0,37	0,27	28
Anglican/ Catholic	22,64	5,60	1,50	-0,96	0,06	15
Dutch Reformed	22,15	4,85	0,63	-0,73	0,03	64
Methodist/ Presbyterian	18,85	4,86	0,95	-0,66	-0,20	26
Pentacostal/ Apostolic	21,00	4,57	0,85	-0,94	0,21	30
Afrikaans Sister Churches	21,32	5,06	0,83	-0,69	-0,20	39
Religion: Other	20,40	4,70	0,80	0,23	0,08	36
Std. 8 and Lower	19,96	3,63	0,45	0,54	0,19	71
Std. 10	21,27	5,56	0,53	-0,90	-0,12	112
Graduates	23,37	4,46	0,81	-0,18	-0,14	32
11 years and less of schooling	20,14	3,82	0,51	0,13	0,51	62
12 years of schooling	22,01	5,56	0,65	-0,60	-0,28	77
13 years or more of schooling	21,38	4,92	0,59	-0,71	-0,05	70
Income: R5 000 pa and less	20,15	3,34	0,64	1,55	0,97	29
R5 001-R30 000	20,04	5,11	0,57	-0,41	0,28	83
R30 001-R45 000	22,24	5,21	0,91	-0,39	-0,63	34
R45 001-R80 000	22,34	4,99	0,65	-0,35	-0,19	62
Labourers	20,03	4,36	0,56	1,01	0,77	64
Administrative workers	21,09	4,85	0,82	-1,30	0,12	37
Management and Consultants	22,48	4,45	0,63	-0,40	-0,05	53
Supervisors	21,20	5,72	0,76	-0,66	-0,63	56
Age: 19 - 25	21,59	5,51	0,97	-1,08	-0,13	35
26 - 30	20,68	5,35	0,66	-0,59	-0,46	66
31 - 45	21,70	4,09	0,47	-0,45	-0,18	83
46 + above	20,33	5,79	1,11	-0,36	-0,22	27

Table 9.24 (continued)

South Africa	21,06	5,00	0,38	-0,56	0,04	186
Other countries	21,61	4,96	1,03	-0,27	-0,04	24
Afrikaners	22,26	5,07	0,51	-0,73	-0,22	105
Anglo-Saxons	21,70	5,16	1,15	-1,17	-0,32	20
Blacks	19,28	4,51	0,55	0,69	0,29	72
Freemarket	20,71	5,31	0,52	-0,75	0,09	108
Parastatal	21,60	4,56	0,45	-0,23	0,01	107

N = 215

An analysis of the content of the Table 9.24 reveals that also in regard to powerful others the distribution is moderately skewed - in regard to some measures positively and in others negatively. However, scores in regard to Anglican/Catholic, Dutch Reformed, managers and consultants, 13 years or more of formal schooling received, South Africa as country of origin, country of origin: other and parastatal organization, the distribution may be normal as measures of skewness will not exactly be zero but fluctuate around zero because of sampling variation. The measures of kurtosis point to a platykurtic distribution (values < 0). The standard deviations generally are acceptable which indicate that the scores are normally distributed. The small standard errors imply that the possibilities are good for inferences about the population mean not to be in error.

The influence of the 10 independent variables referred to above and their two-way interactions in respect of the dependent variable powerful others, was also investigated by means of a factorial analysis of variance. Calculations pertaining to the four cultural variables, viz



language, religion, country of origin and ethnicity and their two-way interactions are presented in Table 9.25.

Table 9.25: ANOVA: POWERFUL OTHERS BY CULTURAL FACTORS.

Dependent Variable: POWERFUL OTHERS						
Source	DF	Sum of Squares	Mean Square	F Value	Pr F	
Model	29	1589,65	54,82	2,75	0,0001*	
Error	150	2992,93	19,95			
Corrected Total	179	4582,58				
	R-square	C.V.	Root MSE	POWER	Mean	
	0,346890	21,18	4,47		21,09	
Source	DF	Anova SS	Mean Square	F Value	Pr F	
LANG	3	430,59	143,53	7,19	0,0002*	
REL	5	323,67	64,73	3,24	0,0082*	
COUNT	1	0,001	0,001	0,00	0,9936	
ETHN	2	341,87	170,93	8,57	0,0003*	
LANG*REL	12	320,50	26,71	1,34	0,2025	
LANG*COUNT	2	78,39	39,20	1,96	0,1438	
REL*COUNT	4	94,63	23,66	1,19	0,3195	

\*p ≤ 0,05

The information in Table 9.25 shows that significant differences are prevalent among the four main independent variables in respect of powerful others. The overall F-ratio of 2,75 is significant at the 0,0001 level. This ratio however does not pinpoint the particular independent variable(s) concerned. Three of the four main factors in the survey did show significant differences. The first of these is language (F = 7,19, p = 0,0002). Secondly, religion also provided significant differences (F = 3,24, p = 0,0082). The third significant variable is ethnicity (F = 8,57, p = 0,0003). No significant two-way interaction was detected.

In regard to language, religion and ethnicity post hoc comparisons were done by means of a Scheffé-test in order to determine significant differences, if any, between the means of subgroups.

In regard to language, the Afrikaans speaking group was compared to the English speaking group. This comparison yielded a t-value of 0,268 so that  $F' = 0,072$  ( $t^2$ ) which with 3 and 129 df is non-significant ( $F' = 0,072 < F = 2,68$  with 3 and 129 df,  $p$  being  $> 0,05$ ). The Afrikaans group was also compared with the group comprising Sotho speakers. This comparison yielded a t-value of 4,453 so that  $F' = 19,828$  ( $t^2$ ) which with 3 and 159 df is significant ( $F' = 19,828 > F = 2,65$  with 3 and 159 df,  $p$  being  $< 0,05$ ). Thirdly, the Afrikaans speaking group was compared with the group using an African vernacular. A t-value of 1,772 was obtained so that  $F' = 3,140$  ( $t^2$ ) which with 3 and 133 df is significant ( $F' = 3,140 > F = 2,68$  with 3 and 133 df,  $p$  being  $< 0,05$ ). Fourthly, the English speaking group was compared with the Sotho speaking group and a t-value of 3,276 obtained. Thus  $F' = 10,734$  ( $t^2$ ) which with 3 and 76 df is significant ( $F' = 10,734 > F = 2,76$  with 3 and 76 df,  $p$  being  $< 0,05$ ). Fifthly, the English speaking group was compared with the group using an African vernacular. This comparison yielded a t-value of 1,569 so that  $F' = 2,463$  ( $t^2$ ) which with 3 and 50 df is non-significant ( $F' = 2,463 < F = 2,79$  with 3 and 50 df,  $p$  being  $> 0,05$ ). Lastly, the Sotho speakers were compared with the group using an African vernacular. This comparison yielded a t-value of 1,577 so that  $F' = 2,486$  ( $t^2$ ) which

with 3 and 80 df is non-significant ( $F' = 2,486$   
 $< F = 2,76$  with 3 and 80 df,  $p$  being  $> 0,05$ ).

In regard to religion the group comprising members of the Anglican and Catholic Churches was compared with the group comprising members of the Dutch Reformed Churches. This comparison yielded a  $t$ -value of 0,382 so that  $F' = 0,146$  ( $t^2$ ) which with 5 and 77 df is non-significant ( $F' = 0,146$   
 $< F = 2,37$  with 5 and 77 df,  $p$  being  $> 0,05$ ).

Secondly, the group comprising members of the Anglican and Catholic Churches was also compared with a group comprising members of the Methodist and Presbyterian Churches and a  $t$ -value of 2,617 was obtained so that  $F' = 6,849$  ( $t^2$ ) which with 5 and 39 df is significant ( $F' = 6,849 > F = 2,45$  with 5 and 39 df,  $p$  being  $< 0,05$ ).

Thirdly, a comparison between members of the Anglican and Catholic Churches and members of the Pentacostal and Apostolic Churches yielded a  $t$ -value of 1,161 so that  $F' = 1,348$  ( $t^2$ ) which with 5 and 43 df is non-significant ( $F' = 1,348$   
 $< F = 2,45$  with 5 and 43 df,  $p$  being  $> 0,05$ ).

Fourthly, a comparison between members of the Anglican and Catholic Churches and members of the Dutch Reformed Sister Churches yielded a  $t$ -value of 0,973 so that  $F' = 0,946$  ( $t^2$ ) which with 5 and 52 df is non-significant ( $F' = 0,946 < F = 2,40$  with 5 and 52 df,  $p$  being  $> 0,05$ ).

Fifthly, members of the Anglican and Catholic Churches were compared with members of other religions (Lutheran, Zionist, Independent Churches, Islam and Others). A  $t$ -value of 1,632 was obtained so that  $F' = 2,673$  ( $t^2$ ) which with 5 and 49 df is significant ( $F' = 2,663 > F = 2,40$  with 5 and 49 df,  $p$  being  $< 0,05$ ).

Sixthly, members of the Dutch Reformed Churches were compared with members of the Pentacostal and Apostolic faiths. This comparison yielded a t-value of 1,164 so that  $F' = 1,354 (t^2)$  which with 5 and 92 df is non-significant ( $F' = 1,354 < F = 2,29$  with 5 and 92 df, p being  $> 0,05$ ).

Seventhly, members of the Dutch Reformed Churches were compared with members of the Dutch Reformed Sister Churches. This comparison yielded a t-value of 0,915 so that  $F' = 0,836 (t^2)$  which with 5 and 101 df is non-significant ( $F' = 0,836 < F = 2,29$  with 5 and 101 df, p being  $> 0,05$ ).

Next, members of the Dutch Reformed Churches were compared with the group comprising members of the other religions referred to above. A t-value of 1,881 was obtained so that  $F' = 3,537 (t^2)$  which with 5 and 98 df is significant ( $F' = 3,537 > F = 2,29$  with 5 and 98 df, p being  $< 0,05$ ). Ninthly, members of the Dutch Reformed Churches were compared with members of the Methodist and Presbyterian Churches. This comparison yielded a t-value of 3,177 so that  $F' = 10,092 (t^2)$  which with 5 and 88 df is significant ( $F' = 10,092 > F = 2,37$  with 5 and 88 df, p being  $< 0,05$ ). Tenthly, members of the Methodist and Presbyterian Churches were compared with members of the Pentacostal and Apostolic faiths. A t-value of 1,796 was obtained so that  $F' = 3,227 (t^2)$  which with 5 and 54 df is significant ( $F' = 3,227 > F = 2,40$  with 5 and 54 df, p being  $< 0,05$ ).

Members of the Methodist/Presbyterian Churches were also compared with members of the Dutch Reformed Sister Churches. This comparison yielded

a t-value of 2,184 so that  $F' = 4,771$  ( $t^2$ ) which with 5 and 63 df is significant ( $F' = 4,771 > F = 2,37$  with 5 and 63 df,  $p$  being  $< 0,05$ ). Twelfthly, members of the Methodist and Presbyterian Churches were compared with members of other religions (as referred to earlier above). This comparison yielded a t-value of 1,348 so that  $F' = 1,818$  ( $t^2$ ) which with 5 and 60 df is non-significant ( $F' = 1,818 < F = 2,37$  with 5 and 60 df,  $p$  being  $> 0,05$ ). In the thirteenth place, members of the Pentacostal and Apostolic faiths were compared with members of Dutch Reformed Sister Churches. A t-value of 0,295 was obtained so that  $F' = 0,087$  ( $t^2$ ) which with 5 and 67 df is non-significant ( $F' = 0,087 < F = 2,37$  with 5 and 67 df,  $p$  being  $> 0,05$ ). In the fourteenth place, members of the Pentacostal and Apostolic Churches were compared with members of other religions (as referred to above). A t-value of 0,543 was obtained so that  $F' = 0,295$  ( $t^2$ ) which with 5 and 64 df is non-significant ( $F' = 0,295 < F = 2,37$  with 5 and 64 df,  $p$  being  $> 0,05$ ). Lastly, members of the Dutch Reformed Sister Churches were compared with members of other religions (Lutheran, Zionist, Independent Churches, Islam and Other religions). This comparison yielded a t-value of 0,891 so that  $F' = 0,794$  ( $t^2$ ) which with 5 and 73 df is non-significant ( $F' = 0,794 < F = 2,37$  with 5 and 73 df,  $p$  being  $> 0,05$ ).

In regard to ethnicity, the Afrikaners were compared with the English group (Anglo-Saxons). A t-value of 0,514 was obtained so that  $F' = 0,264$  ( $t^2$ ) which with 2 and 123 df is non-significant ( $F' = 0,264 < F = 3,07$  with 2 and 123 df,  $p$

being  $> 0,05$ ). Secondly, the Afrikaners were compared with the Blacks (Xhosas, Sothos, Tswanas and Zulus). This comparison yielded a t-value of 4,360 so that  $F' = 19,012$  ( $t^2$ ) which with 2 and 177 df is significant ( $F' = 19,012 > F = 3,04$  with 2 and 177 df,  $p$  being  $< 0,05$ ). Lastly, the English speaking whites were compared with the Blacks. A t-value of 2,144 was obtained so that  $F' = 4,595$  ( $t^2$ ) which with 2 and 90 df is significant ( $F' = 4,595 > F = 3,07$  with 2 and 90 df,  $p$  being  $< 0,05$ ).

Calculations pertaining to the six organizational variables, viz educational qualifications, age, years of formal schooling received, income, occupational level and economic sector employed in and their two-way interactions are presented in Table 9.26.

Table 9.26: ANOVA: POWERFUL OTHERS BY ORGANIZATIONAL FACTORS.

Source	DF	Sum of Squares	Mean Square	F Value	Pr F
Model	87	2748,57	31,59	1,78	0,0036
Error	89	1576,56	17,71		
Corrected Total	176	4325,13			
	R-square	C.V.	Root MSE	POWER	Mean
	0,64	19,70	4,21	21,37	
Source	DF	Anova SS	Mean Square	F Value	Pr F
QUAL	2	187,94	93,97	5,30	0,0067*
AGE	3	40,46	13,49	0,67	0,5187
YSCH	2	122,40	61,20	3,45	0,0359*
INCOME	3	297,56	99,19	5,60	0,0015*
CAR	3	108,49	36,16	2,04	0,1138
GROUP	1	61,79	61,79	3,49	0,0651
QUAL*AGE	6	211,78	35,30	1,99	0,0750
QUAL*YSCH	4	18,65	4,66	0,26	0,9008
QUAL*CAR	5	5,96	1,19	0,07	0,9968

Table 9.26 (continued)

AGE*YSCH	6	127,72	21,29	1,20	0,3129
AGE*INCOME	9	147,63	16,40	0,93	0,5067
AGE*CAR	9	323,64	35,96	2,03	0,0449*
YSCH*INCOME	6	100,87	16,81	0,95	0,4645
YSCH*CAR	6	108,66	18,11	1,02	0,4161
INCOME*CAR	9	82,93	9,21	0,52	0,8564
QUAL*GROUP	2	131,52	65,76	3,71	0,0283*
AGE*GROUP	3	58,79	19,60	1,11	0,3509
YSCH*GROUP	2	91,27	45,64	2,58	0,0817
INCOME*GROUP	3	74,89	24,96	1,41	0,2454
CAR*GROUP	3	445,61	148,54	8,39	0,0001*

*p ≤ 0,05
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The information in Table 9.26 shows that significant differences are prevalent among the six main independent variables in respect of powerful others. The overall F-ratio of 1,78 is significant at the 0,0036 level. This ratio however, does not pinpoint the particular independent variables concerned. Three of the six main factors in the survey showed significant differences. The first of these is educational qualifications ( $F = 5,30$ ,  $p = 0,0067$ ). Secondly, years of formal schooling completed also provided significant differences ( $F = 3,45$ ,  $p = 0,0359$ ). Income also provided significant differences ( $F = 5,60$ ,  $p = 0,0015$ ). Significant two-way interactions existed between educational qualifications by group (economic sector employed in), career level by group (economic sector employed in) and age by career level (career level = occupational level).

In regard to educational qualifications, years of formal schooling received and income, post hoc comparisons were also done by means of a Scheffé-test in order to determine significant differences, if any, between the means of the subgroups.

In regard to educational qualifications, the group comprising subjects with a Std. 8 qualification or lower was compared with matriculants. This comparison yielded a t-value of 2,052 so that  $F' = 4,211$  ( $t^2$ ) which with 2 and 181 df is significant ( $F' = 4,211 > F = 3,04$  with 2 and 181 df,  $p$  being  $< 0,05$ ). Secondly, the group with lower qualifications (Std. 8 and lower) was compared with graduates. A t-value of 3,806 was obtained so that  $F' = 14,483$  ( $t^2$ ) which with 2 and 101 df is significant ( $F' = 14,483 > F = 3,07$  with 2 and 101 df,  $p$  being  $< 0,05$ ). Lastly, the matriculants were compared with the graduates. This comparison yielded a t-value of 2,490 so that  $F' = 6,198$  ( $t^2$ ) which with 2 and 142 df is significant ( $F' = 6,198 > F = 3,07$  with 2 and 142 df,  $p$  being  $< 0,05$ ).

In regard to years of formal schooling received, the group comprising subjects with 11 years and less of formal schooling was compared with the group with exactly 12 years of formal schooling received (the number of years it normally takes to complete matric). This comparison yielded a t-value of 2,604 so that  $F' = 6,782$  ( $t^2$ ) which with 2 and 137 df is significant ( $F' = 6,782 > F = 3,07$  with 2 and 137 df,  $p$  being  $< 0,05$ ). Secondly, the group comprising subjects with 11 years and less of formal education received was compared with the group comprising subjects with 13 years or more of formal education received (the number of years it usually takes to reach an institution of tertiary education). A t-value of 1,690 was obtained so that  $F' = 2,855$  which with 2 and 130 df is non-significant ( $F' = 2,855 < F = 3,07$  with 2 and 130 df,  $p$  being  $> 0,05$ ).

143 df,  $p$  being  $< 0,05$ ). Lastly, the upper middle



Lastly, the comparison between the group comprising subjects with 12 years of formal education and the group with 13 years and/or more of formal education received, yielded a t-value of 0,906 so that  $F' = 0,822 (t^2)$  which with 2 and 145 df is non-significant ( $F' = 0,822 < F = 3,04$  with 2 and 145 df, p being  $> 0,05$ ).

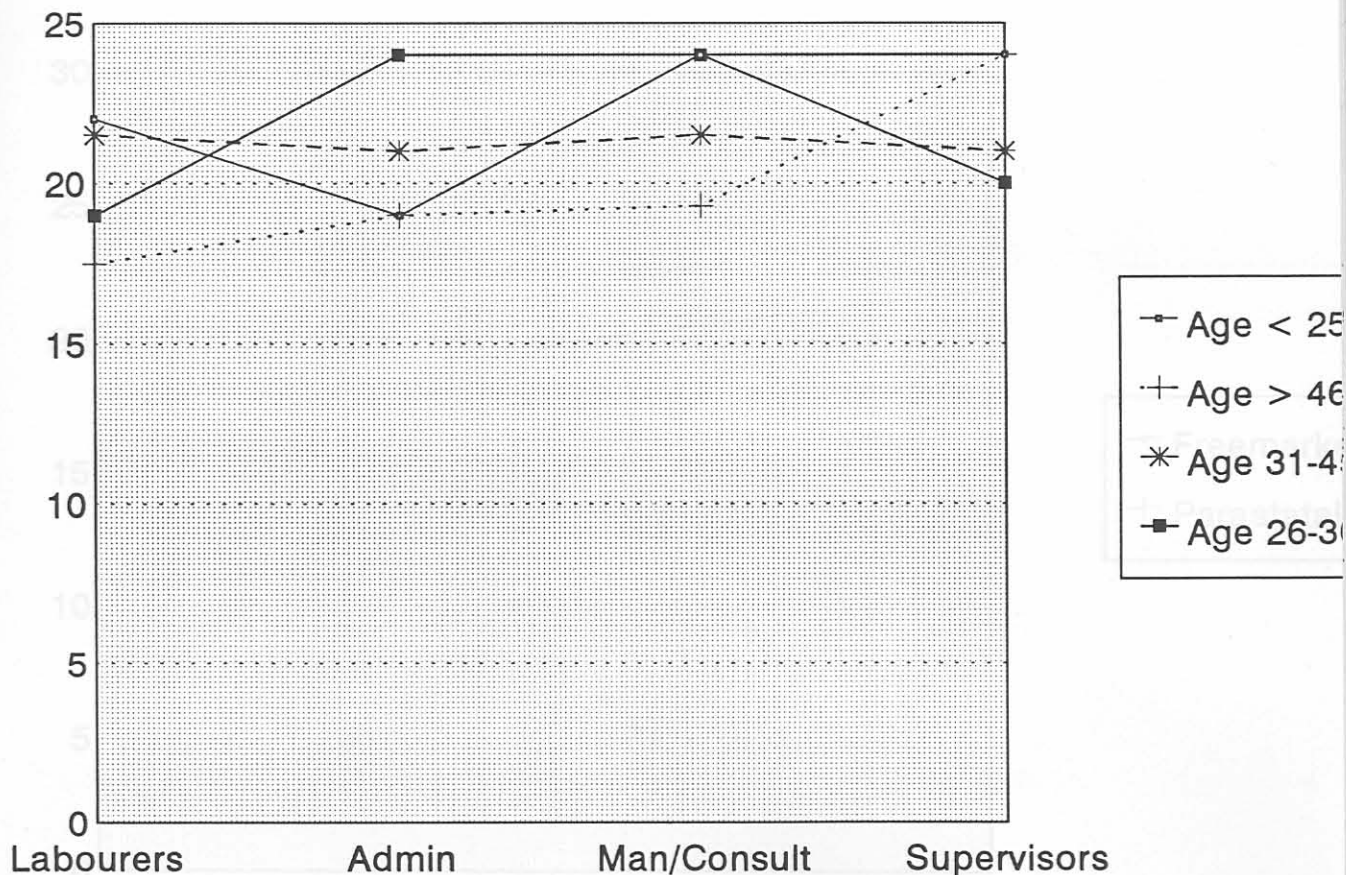
In regard to income, the group with an income of R5 000 per annum and less was compared with the lower middle income group (R5 001 to R30 000). This comparison yielded a t-value of 0,121 so that  $F' = 0,147 (t^2)$  which with 3 and 110 df is non-significant ( $F' = 0,147 < F = 2,68$  with 2 and 110 df, p being  $> 0,05$ ). Secondly, the lower income group ( $\leq$  R5 000) was compared with the upper middle income group (R30 001 to R45 000). A t-value of 1,965 was obtained so that  $F' = 3,860 (t^2)$  which with 3 and 61 df is significant ( $F' = 3,860 > F = 2,76$  with 3 and 61 df, p being  $< 0,05$ ). Thirdly, the lower income group was compared with the high income group (R45 001 to R80 000). This comparison yielded a t-value of 2,313 so that  $F' = 5,351 (t^2)$  which with 3 and 89 df is significant ( $F' = 5,351 > F = 2,68$  with 3 and 89 df, p being  $< 0,05$ ). Fourthly, the lower middle income group was compared with the upper middle income group. This comparison yielded a t-value of 2,567 so that  $F' = 6,592 (t^2)$  which with 3 and 115 df is significant ( $F' = 6,592 > F = 2,68$  with 3 and 115 df, p being  $< 0,05$ ). Fifthly, the lower middle income group was compared with the high income group. This comparison yielded a t-value of 3,256 so that  $F' = 10,601 (t^2)$  which with 3 and 143 df is significant ( $F' = 10,601 > F = 2,68$  with 3 and 143 df, p being  $< 0,05$ ). Lastly, the upper middle

income group was compared with the high income group. A t-value was obtained of 0,111 so that  $F' = 0,124 (t^2)$  which with 3 and 94 df is non-significant ( $F' = 0,124 < F = 2,68$  with 3 and 94 df, p being  $> 0,05$ ).

The significant two-way interactions are visually presented by means of graphs.

The two-way interaction between age group and occupational level (career level), is presented in Graph 9.17.

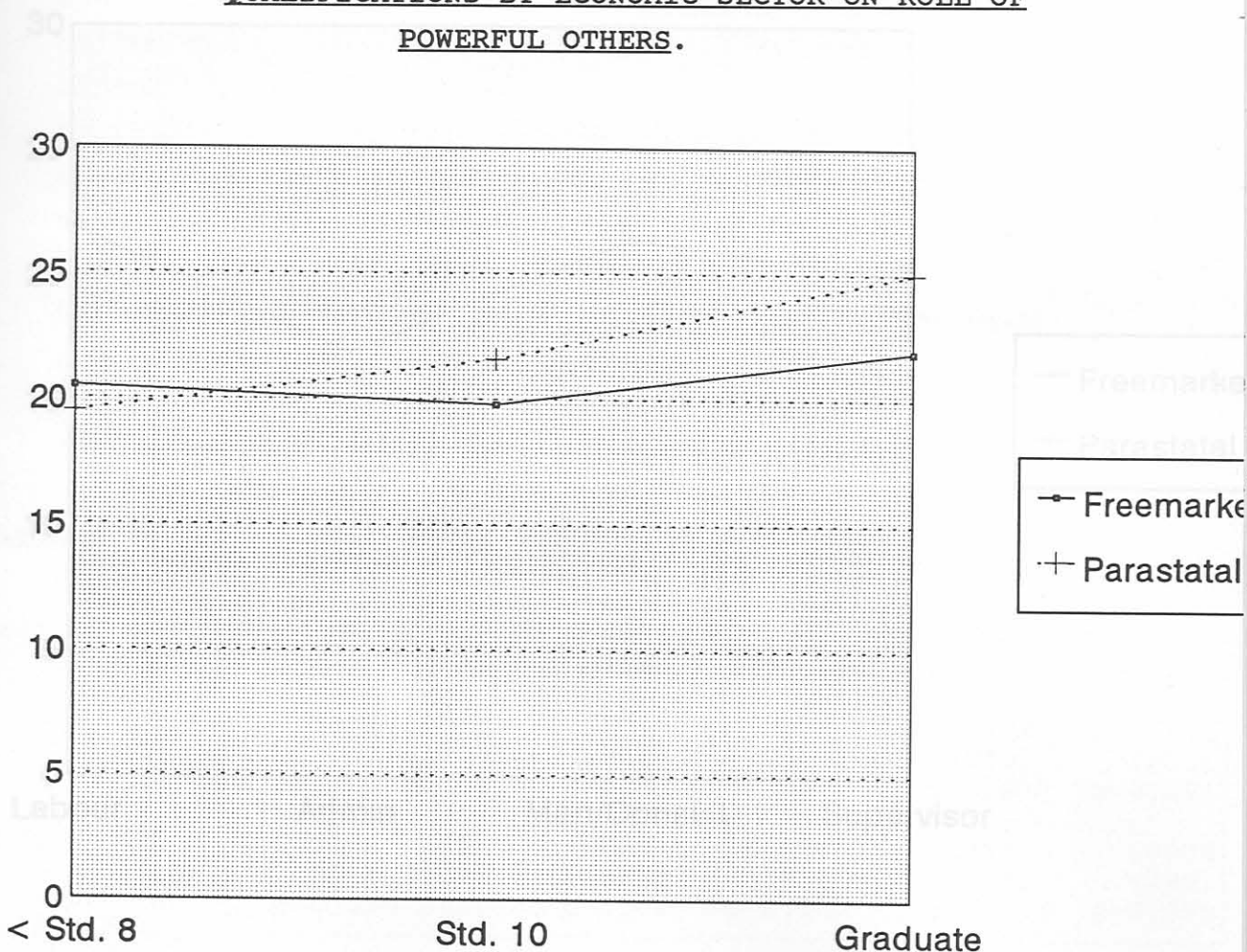
Graph 9.17: INTERACTION EFFECTS BETWEEN AGE GROUP BY OCCUPATIONAL LEVEL ON THE ROLE OF POWERFUL OTHERS.



Administrative staff as well as managers/consultants in the age group 26 to 30 tended to be less aware of the role of powerful others. Labourers and administrative staff in the age categories less than 25 years or older than 45 years, tended towards more awareness of the role of powerful others. Graph 9.17 reveals to quite an extent, a congruity between the scores of the different age groups.

The two-way interaction between educational qualifications by economic sector employed in, is presented in Graph 9.18.

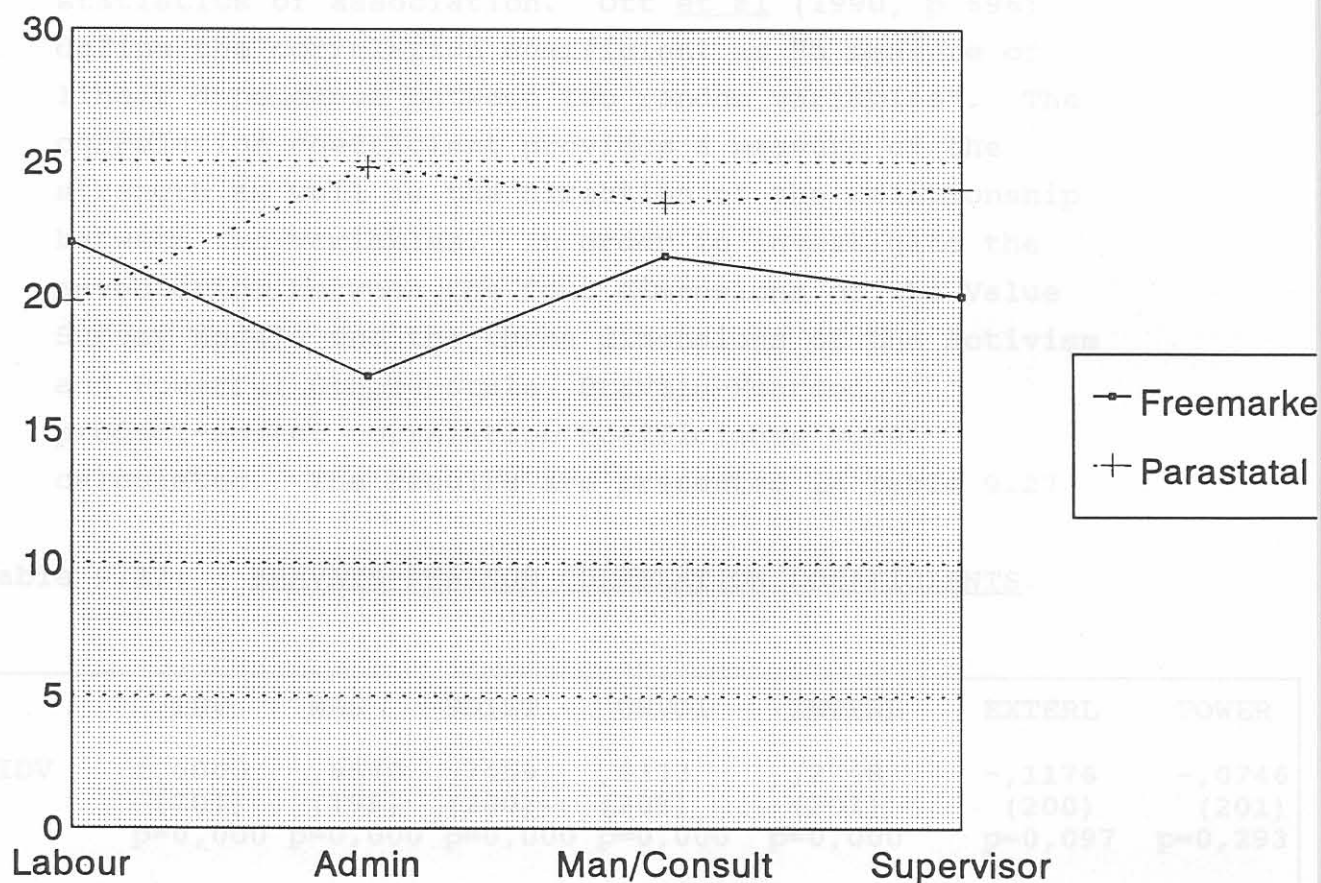
Graph 9.18: INTERACTION EFFECTS BETWEEN EDUCATIONAL QUALIFICATIONS BY ECONOMIC SECTOR ON ROLE OF POWERFUL OTHERS.



With the attainment of higher educational qualifications, subjects tended to be less aware of the role of powerful others and the reasoning holds for both the parastatal and freemarket environments, perhaps more so in the parastatal environment than in the freemarket sector.

Lastly the two-way interaction between occupational level (career level) by sector of the economy employed in, is presented in Graph 9.19.

Graph 9.19: INTERACTION EFFECTS BETWEEN OCCUPATIONAL LEVEL BY SECTOR OF THE ECONOMY ON THE INFLUENCE OF POWERFUL OTHERS.



	EXTERL	TOWER
INTV	-.1176 (200) p=0,097	-.0746 (201) p=0,293
NAS	-.0168 (194) p=0,818	.0639 (195) p=0,373

In both the parastatal and freemarket spheres awareness of the role of powerful others concurred among labourers and managers/consultants. Administrative staff and supervisors in the parastatal environment were less sensitive to powerful others than their counterparts in the freemarket sector. Supervisors and administrative staff in the freemarket environment tended towards being sensitive to the role and influence of powerful others.

### 9.3 STATISTICS OF ASSOCIATION

Methods of correlation of which the Bravais-Pearson product-moment correlation is the most common, are statistics of association. Ott *et al* (1990, p 696) define the correlation coefficient as "a measure of linear dependence between two random variables". The correlation coefficient provides a measure of the strength as well as the direction of the relationship between two variables. In order to investigate the association between the four dimensions of the Value Survey Module and the three dimensions of the Activism and Powerful Others-scale, Bravais-Pearson product-moment correlation coefficients were calculated. The results are presented in Table 9.27

Table 9.27: BRAVAIS-PEARSON CORRELATION COEFFICIENTS.

	IDV	MAS	PDIST	UNVOI	INTERL	EXTERL	POWER
IDV	1,0000 (207) p=0,000	,8840 (198) p=0,000	,7459 (200) p=0,000	,6333 (205) p=0,000	,2748 (201) p=0,000	-,1176 (200) p=0,097	-,0746 (201) p=0,293
MAS		1,0000 (201) p=0,000	,6958 (193) p=0,000	,7946 (199) p=0,000	,2088 (195) p=0,003	-,0168 (194) p=0,816	,0639 (195) p=0,375

Table 9.27 (continued)

PDIST	1,0000 (201) p=0,000	,5488 (200) p=0,000	,2058 (197) p=0,004	-,0742 (195) p=0,302	,0058 (196) p=0,935
UNVOI		1,0000 (208) p=0,000	,1528 (203) p=0,030	,1625 (202) p=0,021	,2865 (203) p=0,000
INTERL			1,0000 (205) p=0,000	-,2210 (201) p=0,002	-,0720 (202) p=0,309
EXTERL				1,0000 (204) p=0,000	,5687 (201) p=0,000
POWER					1,0000 (205) p=0,000

Table 9.27 shows low but significant correlations between internality on the one hand and individualism, power distance, uncertainty avoidance and masculinity on the other hand. Correlations between externality and powerful others and individualism, power distance and masculinity are insignificant. However, there is a slight but highly significant correlation between externality and powerful others on the one hand and uncertainty avoidance on the other. The significant correlations are all positively related.

Although Hofstede's four value dimensions are mutually high and significantly correlated, these value dimensions show a low correlation with the three subscales of Levenson's Activism and Powerful Others-scale. Internality correlates weak but significantly with individualism, power distance, uncertainty avoidance and masculinity. The correlation of 0,2865 ( $p = 0,000$ ) between powerful others and uncertainty avoidance is quite conspicuous.

## 9.4 DISCRIMINANT ANALYSIS

A discriminant analysis was conducted to investigate the extent to which work values and locus of control predict group membership among subjects working in the private and parastatal sectors of the mining industry. The standardized canonical discriminant function coefficients are used to compile value profiles for the two organizations. The results of the discriminant analysis conducted with the Wilks selection method are presented in Tables 9.28 to 9.31. The Wilks selection method is a stepwise selection method which selects the variable with the largest acceptable value (selection criterion) as the first variable to be included in the analysis.

Table 9.28: DISCRIMINANT ANALYSIS: SUMMARY TABLE OF VARIABLES SELECTED.

Step	Variable entered	Variable removed	Wilks Lambda	Signif.
1	Individualism	-	0,99317	0,2673
2	Masculinity	-	0,89652	0,0001
3	Power Distance	-	0,88676	0,0001
4	Uncertainty Avoidance	-	0,87558	0,0001

According to Table 9.28 the 4 value dimensions of individualism, masculinity, power distance and uncertainty avoidance best predict group membership in both the freemarket and a parastatal organizations. The classification function coefficients according to Fisher's linear discriminant functions, are presented in Table 9.29.

The standardized canonical discriminant function coefficients used to compile the profiles, are presented in Table 9.31.

<sup>1</sup> Large eigenvalues are associated with good functions.

Table 9.29: DISCRIMINANT ANALYSIS: CLASSIFICATION  
FUNCTION COEFFICIENTS.

Variables	Freemarket	Parastatal
Individualism	1,504	-0,663
Masculinity	- 6,757	-4,570
Power Distance	6,268	6,866
Uncertainty Avoidance	8,323	7,681
(Constant)	-12,537	-12,497

The accompanying canonical discriminant functions are presented in Table 9.30.

Table 9.30: DISCRIMINANT ANALYSIS: CANONICAL  
DISCRIMINANT FUNCTIONS.

Funct.	Eigenvalue	Canonical correlation	Wilks Lambda	Chi-square	Significance
1	0,1421	0,353	0,876	23,65	0,0001*
p=0,05					

An analysis of Table 9.30 reveals that although the eigenvalue is small<sup>1</sup>, the canonical discriminant function contributes significantly to group differences (p=0,0001). The Wilks Lambda (transformed to a chi-square value of 23,65) is only a test of the null hypothesis ( $H_0$ ) that the population means are equal and as such provides little information about the effectiveness of the discriminant function in the classification (Norusis, 1984, p 90).

The standardized canonical discriminant function coefficients used to compile the profiles, are presented in Table 9.31.

<sup>1</sup> Large eigenvalues are associated with good functions.

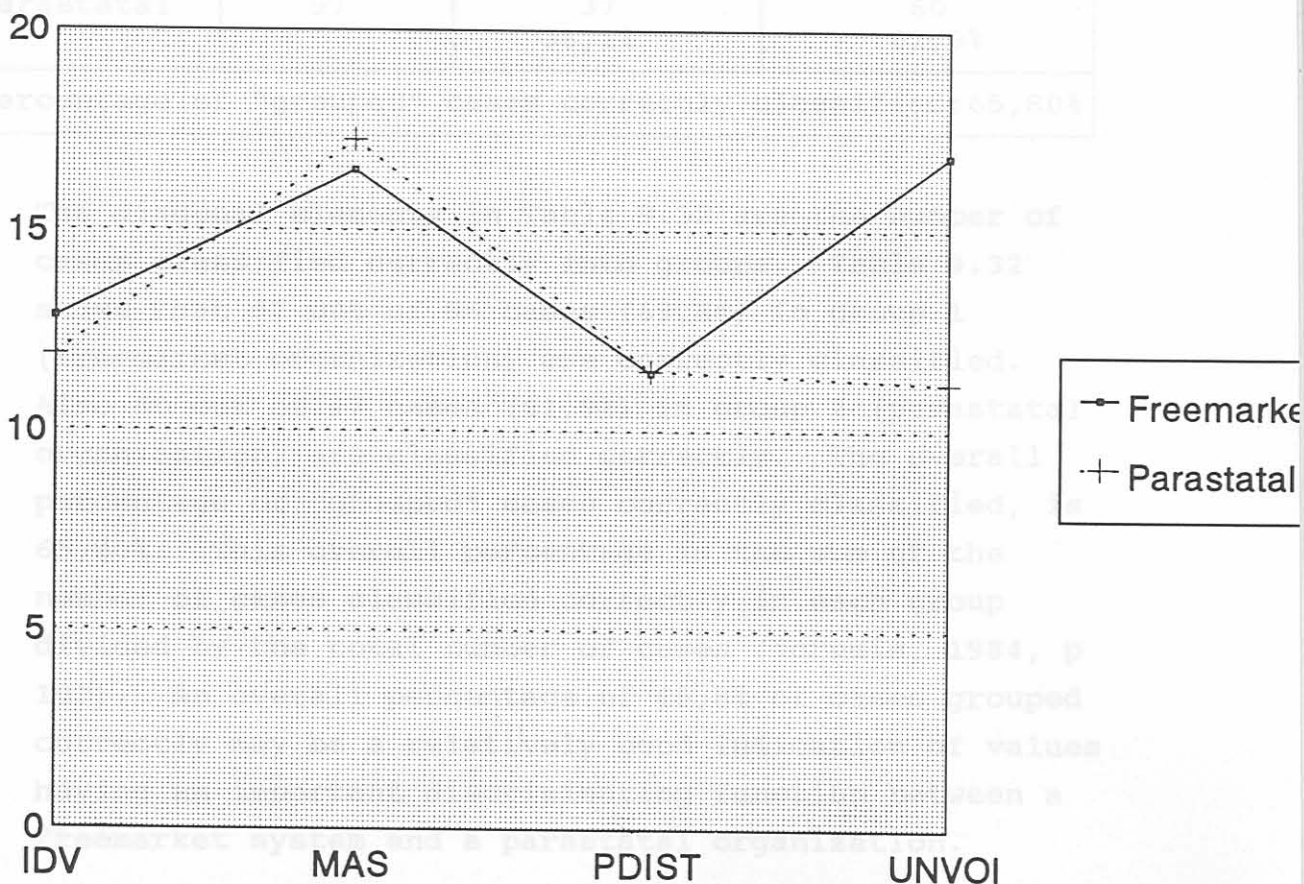


Table 9.31: DISCRIMINANT ANALYSIS: STANDARDIZED  
CANONICAL DISCRIMINANT FUNCTION.

Variables	Function 1
Individualism	2,506
Masculinity	-2,545
Power Distance	-0,490
Uncertainty Avoidance	0,559

To compile the profiles, the mean scores of the two groups on the four variables in Table 9.31 are presented graphically. The group profiles are presented in Graph 9.20.

Graph 9.20: GROUP VALUE PROFILES: FREEMARKET AND  
PARASTATAL ORGANIZATIONS.



An analysis of Graph 9.20 reveals that the parastatal organization was more inclined to individualism but displayed lower masculinity and greater power distance than the freemarket organization. However, regarding uncertainty avoidance, the freemarket organization is more inclined to face risk and uncertainty. The classification results of the discriminant analysis are presented in Table 9.32.

Table 9.32: DISCRIMINANT ANALYSIS: CLASSIFICATION

TABLE.

Actual group membership	No of cases	Predicted group membership	
		Freemarket	Parastatal
Freemarket	96	67 69,8%	29 30,2%
Parastatal	97	37 38,1%	60 61,9%
Percentage of "grouped" cases correctly classified:65,80%			

The diagonal elements in Table 9.32 are the number of cases classified correctly into groups. Table 9.32 shows that 67 out of 96 cases (69,8%) in group 1 (freemarket organization) are correctly classified. Also 60 out of 97 cases (61,9%) in group 2 (parastatal organization) are classified correctly. The overall percentage of "grouped" cases correctly classified, is 65,80%. This overall percentage is the sum of the number of cases classified correctly in each group divided by the total number of cases (Norusis, 1984, p 103). An overall percentage of 65,8% of cases grouped correctly may be a relatively good indication of values having an important discriminating function between a freemarket system and a parastatal organization.

## 9.5 SUMMARY

The result of the data analysis by means of statistical techniques are presented in this chapter. Descriptive statistics for all seven dependent variables across the independent variables showed that the distribution was to a smaller or larger extent skewed and that the peak of the distribution is not mesokurtic. The somewhat large standard deviations confirm that the distribution was skewed. The standard error indicated a low to moderate variability among the sample means implying that there was a reasonable possibility that inferences about the population mean from the sample mean, will not be in error. Bravais-Pearson product-moment correlation coefficients between the four value dimensions and the three dimensions of the Locus of Control-scale were also calculated, denoting small but significant correlations between internality and the four value dimensions, and between uncertainty avoidance and externality and powerful others. The profile analysis produced obvious differences in the value profiles of the freemarket and parastatal organizations. The classification table for the discriminant function analysis indicated that 65% of the "grouped cases" were correctly classified. An analysis of variance proved that the main independent variables, viz language, religion, country of origin, ethnicity, qualifications, years of formal schooling received, income, career level, age and economic sector employed in and their two-way interactions had some significant influences on the dependent variables, viz power distance, uncertainty avoidance, masculinity, individualism, internality, externality and powerful others. Conclusions drawn from these findings and recommendations for practical policy, will be discussed in Chapter 10.

on's three dimensions of locus of control, viz internality, externality and powerful others,

## CHAPTER 10

## CONCLUSIONS AND RECOMMENDATIONS:

## PSYCHOLOGICAL CONTRIBUTIONS

## TO POLICY APPROACHES AND FORMULATIONS

## 10.1 INTRODUCTION

The core of the cultural diversity which is so characteristic of the South African society, is a complex array of human values which is of particular relevance to the work place. It is at the work place, more than anywhere else, where the different interest groups with different cultural and value systems, are in interaction with another. As was pointed out earlier in the study, the exploration and study of work related values have consequences for organizational policy formulation in a number of areas, i.e. industrial democracy, leadership, decision-making, management, motivation as well as company ownership and control. It also has implications for other economical, political and social policies.

The main aim of this study was to do a comprehensive analysis of work values (Hofstede's Work Values) expressed by means of the Value Survey Module as well as the loci of control (Rotter's Locus of Control), as expressed by Levenson's (1974) Activism and Powerful Others-scale, utilizing a particular part of the labour force in the South African mining industry, namely a labour unit which is presently involved in an industrial training scheme. Hofstede's four value dimensions, viz individualism, uncertainty avoidance, masculinity and power distance and Levenson's three dimensions of locus of control, viz internality, externality and powerful others,

served as dependent variables. The independent variables were divided into two groups, viz those factors relating to culture and those relating to organizations. The cultural factors were language, religion, country of origin and ethnicity. The organizational factors consisted of educational qualifications, years of formal schooling received, age, income, occupational level and sector of the economy employed in.

The independent as well as dependent variables were observed to determine their impact on the structure and functioning of organizations and industry, on economic growth and on the political context that allows for such economic growth and industrial development and to redress the asymmetry in relations between the so-called "haves" and the "have-nots".

## 10.2 CONCLUSIONS BASED ON THE LITERATURE STUDY

Change in the Republic of South Africa (RSA) is obviously necessary. South Africans themselves have to develop domestic accord. Successful domestic reforms require a purposeful engagement of the international community as well. Sanctions have definitely accelerated the pace of political change but unfortunately at the cost of increasing internal unrest. Pressing economic considerations make it impossible for the RSA to turn its back on the world community because the only way to lessen domestic turbulence and halt the slide towards political oblivion is to seek international markets and engage expeditiously in international trade which will hopefully stimulate economic growth which is a prerequisite for a stable democratic government.

However, the underlying problem is the accommodation of the different cultures in a constitutional/social system in order to live in harmony and peace and also to produce a stable and productive labour force. Cultural differences are deep-seated, thus leading to the creation of groups which either fit or don't fit in social, organizational and corporate life. The individual has to link up with these limitations. A unitary state, federation or confederation are options to be considered as possible ways to resolve the multi-cultural conflict and to accommodate the different cultures with their conspicuous group differences. Of course, psychology cannot pass judgement on the suitability of constitutional models but it is the privilege and duty of psychologists to judge human behaviour and to put human behaviour in perspective in a given constitutional model, and to strive for the improvement of the quality of life, especially work life, especially in regard to values held collectively by both a particular cultural group and different cultural groups. Values and value structures bring about the parameters for and influence the actions and behavioural patterns of people and groups and are also responsible for the social changes which take place over time. For example, Blacks from the rural areas with value systems alien to Western technology, have to adapt to this technological culture.

Moreover, technological advances have an influence on the composition of the labour force: for example, the change from the so-called "fordism", derived from the system of mass-production pioneered by Henry Ford, to an entire new system of production increasingly based on the quick transmitting, storing and retrieving of data, minimizing the amount of space necessary for productive activity and the cutting down on the deployment of human labour. Technology has thus had a marked influence on the labour force, leading to big changes in this force's structure. The potential

workplace is shrinking as technological advances cause a decline of manual jobs in manufacturing. The introduction of mechanised mining into the gold mining industry is leading to radical changes in mine layout and, together with improved stoping techniques, are expected to improve labour productivity substantially. Productivity is another key factor in the fight against rising costs. The increased stabilisation of the labour force with trained workers returning on a planned basis to the same mines and even the same shafts, has already produced a degree of improvement in productivity.

Hofstede's four value dimensions, viz power distance, individualism, uncertainty avoidance and masculinity as well as the three dimensions of the locus of control, viz internality, externality and powerful others, do have some possible effects on and consequences for the South African situation. The great power distance between superior and subordinate and that between the more powerful and the less powerful are problems in the present set-up. As the different cultural groups have different power status, they also have different perceptions in regard to equality and thus their experience of equality in the South African society also differ. A small power distance is necessary to maximise individual access to government, allowing greater participation by the electorate in decisions affecting their life choices.

The privileged cultural group (Whites) with their high power status, performing the role of the powerful, has access to the structures of government, better educational opportunities and also more lucrative jobs in commerce and industry. However, the higher income of Whites leads to overtaxation and

consequent underproductiveness. The result is a weak pro-industrial directedness, both among the white in-group and the black out-group, albeit for different reasons. The underlying challenge is the narrowing of the power distance gap.

The Blacks, however, in turn want to reduce the power basis of the Whites and to replace the white dominated industrial set-up with their own model. Blacks view white people as in command of scarce resources and they question the legitimacy of the (white) system which they link to inequality and oppression. Blacks view mass action as the ideal modus operandi to break down the power distance between themselves and Whites. This strategy is the long-deliberated policy of "rolling mass action", designed and developed to forcibly remove any government from power. The mass action strategy was originally intended to reinforce the negotiation process at Codesa. Its proponents believed that it would give Blacks an outlet for their frustrations as well as the reassurance that the "leaders of the people" were fully in touch with the popular opinion. However, misdirected and ill-conceived mass action has caused a revolutionary fervour that already on a limited scale, has led to violent confrontation in Boipatong and Bisho, with a possibility of similar developments in Ulundi, Mmbatho and elsewhere - so characteristic of the revolutionary zeal and fire of the African National Congress (ANC) in the forties and fifties.

The individualism - collectivism dimension, which is in keeping with the capitalism - socialism confrontation in the RSA causes obvious problems in the South African situation. Again, the psychologist cannot judge the appropriateness of economic models



for the South African situation but can put human behaviour in perspective in regard to values held by the different cultural groups and the relation of these values to economic models. Although socialism is discredited all over the world, it is still popular within a big section of the African National Congress/South African Communist Party/Confederation of South African Trade Unions - alliance (ANC/SACP/Cosatu-alliance). The popularity of socialism may be traced to the root causes of poverty, i.e. the conquest of the indigenous people which determined the distribution of land between Whites and Blacks and a tailor-made but inferior and inadequate educational system for Blacks which did not prepare them adequately for entry into modern industrial life.

In regard to uncertainty avoidance, the perceptions on the short and long term differ. There is a long term tendency towards security and stability in developed sectors of a country, i.e. to avoid uncertainty. This tendency towards security and stability, noticeable in a high uncertainty avoidance index, ought to go hand in hand with an upsurge in nationalism and conservatism and tolerance for law and order. Whites may have accepted the inevitability of majority rule when they voted "yes" in the March 1992 referendum but the apparent political immaturity of the masses participating in mass action irritated Whites. People are concerned with their physical, social and financial well-being. There is a pervasive sense of uncertainty that things may and can go very wrong and that therefore a desire for security among Whites is noticeable. The vested interests of Whites in the RSA cannot be denied, unless any future government does not care if the country follows the demise of many other African countries since the inception of the process of Uhuru.

The "yes" vote in the referendum has not brought the promised investment and foreign capital on an unprecedented scale, that are all needed to rescue an ailing economy. This lack of foreign investment is based on international perceptions on the probability of South Africa's chances of coming to a peaceful solution and expected future prosperity. Too many intangibles remain unanswered which may scare off foreign investors, viz both the government's opportunistic minority-orientated proposals at Codesa and the ANC's insistence on a mass action programme, designed to make the country ungovernable. The tiresome inconvenience of negotiations may cause conflict and competition which can and indeed did unleash uncontrolled aggression as is obvious from the massacres at Boipatong and Bisho. Also, the ANC'S economic policy causes uncertainty and discomfort with foreign investors. The ANC has not (yet) completely divorced itself from nationalization by stating that it will nationalize or privatize, depending on the state of the economy.

The ANC's mining strategy involves public ownership and joint ventures where appropriate. The two main pillars of the ANC's policy is:

1. Channeling funds into social development to redress imbalances of the past.
2. Consulting employers and trade unions to decide details of economic policy.

In the above sense, the mining industry seems to be a lucrative target for nationalization efforts of the ANC/SACP/Cosatu alliance as it will guarantee the reaching of these two objectives. The breakdown in constitutional negotiations between the ANC and the

government happened at a time when the country was struggling to provide an increasing number of people with work opportunities, especially for those concerned with requirements of life. Any future government may find itself desperately short of funds to meet rising expectations which may lead to instability.

There is also a tendency among subjects towards masculinity. The masculinity-femininity dimension is related to individual versus group decision-making. Group decision-making is much more risky than individual decision-making as the group members become so concerned about keeping a high degree of consensus and cohesiveness that they fail to critically evaluate ideas. The group mind may also develop in common with cultural values and traditions of any cultural or ethnic group which among other things, contribute to illusions of invulnerability, group members perceiving themselves as having a high degree of morality and sharing common stereotypes. This may be the reason for the failure of Codesa to address the fears of the broad South African populace.

The trend towards greater democracy in the world, is possibly mainly due to increased activity among women's movements. Women's assertion of equal rights has led to the politicizing of economically active women. The phenomenon of working (economically active) women in the early stages was due to the affluence of Western capitalism which created expanding opportunities for employment, economic independence of and purchasing power for women. In 1948, the advent of the Nationalist administration led to the politicization of Black women. In 1952 the Abolition of Passes and Co-ordination of

Documents Act compelled women to carry reference books. The relative degree of freedom from official regulation was something of the past by the fifties. From 1970 onwards economic deterioration has necessitated the employment of women in order for the survival of the family and the labour force expanded.

Also of importance in regard to the masculinity/femininity dimension, is population growth. The Whites' population growth is already below the replacement rate. That of the Blacks is higher than the Whites'. This implies a radical restructuring of the South African labour force if the economy is to be modernized any further. The substituting component, however, is inadequately trained and culturally and ideologically ill-prepared to serve as replacement in an advanced economical and technological environment. The potential labour force will become increasingly younger, with a growing share of workers drawn from the Black population. The economy has to ensure that real growth in the Gross National Product matches the average growth rate of the population. The ratio of white workers to black workers could possibly have been more realistic were it not for the Influx Control Regulation prohibiting Blacks to move to the cities since it is known that urbanization has a stunting effect on human fertility.

The three dimensions of Levenson's Locus of Control, viz internality, externality and powerful others also emphasize intercultural differences. Nowadays, workers tend to be unsure about their control and influence of their own lives. There is an obvious tendency away from externality towards a belief in the role of powerful others in the subjects' (workers') lives. These cultural differences in

regard to locus of control as it relates to behaviour in organizational settings, may be due to perceptions of procedural justice in the fairness of wage settlements and the settling of disputes involving employers and employees. An employee's locus of control orientation also has an influence on motivation which in turn has an effect on productivity. Increased productivity is the engine of economic development. Strong evidence links productivity to investment in human capital and the quality of the economic environment.

Internals usually expect effort to lead to performance and performance in turn to rewards. Externals seem to be insensitive to pay incentives. Internals comply less with coercive supervisors and perform better than externals in complex task situations.

### 10.3 PSYCHOMETRIC CONSIDERATIONS

The Value Survey Module proved to be a useful, valid and reliable cross-cultural research instrument especially to the investigation of cross-cultural differences in values and value-dimensions. A split-half reliability coefficient with a Spearman-Brown correction for unequal length of 0,97, was obtained from the data of the present study. The overall coefficient alpha was estimated at 0,90.

### 10.4 RESEARCH DESIGN

The four main criteria by which national cultures differ were empirically determined and can in future serve as a useful reference framework for showing synergy among cross-cultural studies as these four

real problems. It was however, felt that the use of field workers to administer the questionnaires

value dimensions are conceptually linkable to many variables and issues in the social, economic and political environments. It needs to be pointed out however, that the results of the factor analysis differed from those obtained by Hofstede which may be due to an aggregation of different ethnic and occupational groups.

As regards Levenson's Activism and Powerful Others-scale, which is a refinement of Rotter's Locus of Control-scale, the three dimensions of internality, externality and powerful others are also related to important social, economic and political issues and have implications for these spheres. Locus of Control is defined as the generalized expectancy that rewards, outcomes or reinforcements are contingent upon one's own behaviour (internality) or are determined by other forces (externality and powerful others). The internal structure of the Levenson's scale was investigated by means of a factor analysis (principal axis factoring with varimax rotation) and the same three dimensions as those of Levenson were obtained. The internal consistency proved adequate as a split-half reliability coefficient with a Spearman-Brown correction for unequal length of 0,94 was obtained from the data of the present study. The overall coefficient alpha was estimated at 0,91.

#### 10.4 RESEARCH DESIGN

##### 10.4.1 ADMINISTERING THE QUESTIONNAIRE

The administering of the questionnaire caused no real problems. It was however, felt that the use of field workers to administer the questionnaires

during personal interviews or formal psychological testing sessions, would enhance the response rate, especially among those groups who are not well-versed in the use and application of psychological tests.

#### 10.4.2 REPRESENTATIVENESS OF THE SAMPLE

The comments made in section 10.4.1 obviously also have implications for the representativeness of any sampling procedure. The sample taken in this study provided useful scientific information, although it showed obvious limitations. Further research work needs to be done on the research topic of work values but quite an elaborate sample should be used for this purpose. Subjects should be drawn from all the cultural (ethnic) groups and all occupational levels including the head office of the mining companies concerned to include all professional and technical ranks. Also, attempts should be made to secure a greater number of female subjects. The sample should also include subjects in sufficient numbers, not only from neighbouring states but also from states in Western and Eastern Europe, Israel and the Americas. This would allow significant comparisons across international boundaries and evaluations to be made in regard to ethnicity, religion, democratic versus authoritarian systems, freemarket versus socialist systems and the influence of latitude on value systems. A shortcoming of the present study was that head office personnel were not involved, whilst insignificant number of females, small numbers of Xhosas, Asians, foreigners were surveyed while no subjects of, for instance, Jewish descent, were attracted to the research project.

The inclusion of all major religious groups in future research projects is a necessity as religion proved to be rather a decisive factor. Education also have a profound influence on one's perceptions and behaviour, as judged by the results of the present investigation. Therefore, an adequate number of subjects of different education levels should participate. Education of a high standard is a necessary prerequisite for development, elimination of poverty, higher productivity and the fostering of a stable middle class.

There is one limiting factor of a statistical nature. Advanced analysis of variance, as was used in this study to analyse the research data, is more accurate when the number of subjects in subgroups are similar rather than dissimilar. Although the inclusion of multiple independent variables are important, their sheer numbers often lead to cumbersome advanced statistical calculations and to severe problems in the presentation of data. Is this perhaps a case where the well-known law of parsimony in psychological research could have a useful application? If so, this would imply a careful screening as well as useful and purposeful selection of possible independent variables for inclusion in future research projects.

In future, research should also be done on a bigger scale within the subsidiaries of large freemarket companies and parastatal organizations as these organizations have differentiating implications for the humanization of work, leadership, motivation, industrial democracy and the guiding of low-waged employees (and unemployed) into meaningful jobs and the provision of suitable training.



## 10.5 CONCLUSIONS BASED ON EMPIRICAL RESEARCH

Regarding the value dimensions, there is a tendency towards individualism among subjects. Scores also indicate a tendency towards masculinity. However, results illicit prove of a great power distance between superiors and subordinates. There is also a tendency to avoid uncertainty, i.e. an unwillingness to face risk and uncertainty.

In regard to loci of control, the results indicate a tendency to be unsure about the subjects' control and influence of their own lives. However, the scores also indicate a tendency away from externality. Subjects also tend to believe that powerful others play a role in their lives.

## 10.5.1 INDIVIDUALISM

Language has quite a determining influence on individualism. The Afrikaans speaking group differed significantly from the English speaking Whites and the Sotho-speakers on individualism. The English speaking Whites differed significantly with the vernacular users as did the Sotho-speakers and the vernacular users. The Afrikaans speaking Whites (Afrikaners) and the users of an African vernacular are quite similar to each other on individualism while the English speaking Whites and the Sotho-speakers are in turn close to each other on this dimension. A comparison between the Afrikaners and the users of an African vernacular, proved insignificant while a comparison between the English Whites and the Sotho in turn was non-significant.

This convergence between the values of the English Whites and the Sotho on the one hand and those of the Afrikaners and the vernacular users on the other hand are noteworthy. These trends suggest that English speaking Whites are in a better position to make important negotiation breakthroughs internally in the RSA while the Afrikaans speaking Whites in turn are in a better position to make breakthroughs to the African States north of the RSA. It would probably be easier for the Afrikaner (and thus the National Party government) to make a breakthrough in the independent African states while the English speaking Whites would possibly break through to the indigenous Blacks.

The viability of a centrist political party to the left of centre is therefore quite possible taking into consideration the division in value systems between the English and the Sothos on the one hand and the Afrikaners and vernacular users on the other. The difference between the Afrikaans speaking Whites and the indigenous Blacks could possibly centre round the reconciliation of the Ubuntu Value System and the individualism so descriptive of a capitalistic approach.

#### 10.5.2 MASCULINITY

The subjects in the investigation showed a tendency, to a reasonable extent, towards masculinity. Cultural factors did not have any noticeable influence on the masculinity dimension as these variables, viz language, ethnicity, religion and country of origin yielded no significant differences. The same argument holds for the independent variables relating to

organization. The tendency towards masculinity may (perhaps) be observable in the underdeveloped social conscience that is characteristic of the mining industry. Mining houses for example, have only made money available for housing and education under concerted pressure from interest groups. But then it should be borne in mind that in a freemarket economy the organization generally has a limited responsibility towards its employees.

Masculinity as a value was influenced by two interaction factors, both of economic importance, namely the number of years of formal education received and the economic environment (i.e. freemarket or parastatal). The RSA at present has an obvious freemarket economy with emphasis placed on profitability. However, the caring function (feminine pole) is more evident in the parastatal organization.

### 10.5.3 POWER DISTANCE

Although the aggregation of scores in the lower class intervals indicates awareness of great power distance between superiors and subordinates, the independent variables relating to cultural and organizational influences did not yield any significant results. This awareness of large power distance does not augur well for a stable democratic government in any future political dispensation. The power struggle between the more powerful and the less powerful, between superior and subordinate, led to the failure of Codesa II. Also, the viability of industrial democracy in such circumstances, is doubtful.

All forms of industrial democracy are in essence ways of reducing power distance. The reduction of power distance is more natural in smaller power distance cultures while it is a necessary condition of economically developed and technologically advanced large power distance cultures. More direct resistance against any form of industrial democracy may be expected because the democracies are in conflict with the present political situation characterised by the erosion of civil order and of already pernicious individual liberties.

However, the non-participation of top-management left a gap with regard to firm scientific conclusions in this regard. The participation of management groups could perhaps have led to more applicable results. Also, an educational system training the rank and file of society to secondary school level may lead to a reduction in power distance and the formation of a stable but undersized middle class of Blacks.

#### 10.5.4 UNCERTAINTY AVOIDANCE

As the scores tend to aggregate in the lower middle class intervals, it may be inferred that subjects revealed a tendency towards security and stability and a reduced willingness to face risk and uncertainty. Factors relating to culture have no significant influence on uncertainty avoidance. However, organizational factors, viz educational qualifications, income and occupational level, had significant influences on uncertainty avoidance. Also, the two-way interactions educational qualifications by age,

educational qualifications by years of formal schooling received, years of formal schooling received by income and years of formal schooling received by economic sector employed in, yielded significant differences.

In regard to educational qualifications, the lower educated differed significantly from matriculants and also from graduates on uncertainty avoidance. This is thus an indication that the attainment of educational qualifications is a strong divisive factor in the South African society in terms of uncertainty avoidance. The higher the person's qualifications, the better his or her chances for promotion and for an accompanying comfortable lifestyle and thus the greater the propensity towards security and stability.

As regards income, the lower income group and the lower middle income group differed significantly. So did the lower income group and the higher middle income group. The higher middle income group also differed significantly from the high income group on uncertainty avoidance. However, no significant differences existed between the low income group and the high income group and between the lower middle income group and the high income group. This implies that the high income group and the lower income group generally had the same value perceptions. The perceptions of the middle income groups differed significantly from the low and high income groups.

In regard to occupational level, the labourers differed significantly from the managers and consultants. Also, the administrative staff

differed significantly from the managers and consultants. The managers and consultants in turn differed significantly from the supervisors. The management component is quite conspicuous as the percipient factor. Managers and consultants are more inclined to uncertainty avoidance which in the present climate of instability in South Africa is quite understandable. This may be due to the fact that managers are more aware of poor economic growth and the long term trend towards greater unemployment and poverty due to inconsistent economic policies and lacklustre economic management.

As the sample was predominantly White, the role of income grouping, professional or organizational status and years of formal education received, emphasised the fact that the taken sample in general represented the in-group and that members of out-groups were underrepresented in this study. The lack of well-educated out-groups will be an added handicap in any future new political dispensation. This may lead to pressure for quick mass education at the expense of high quality education which is necessary for freemarket economics. The problem is further compounded by the fact that economic realities very often dictate social, political and other realities.

#### 10.5.5

**INTERNALITY** Educational levels were less favourably inclined towards internality. Younger subjects Independent variables relating to culture and to organization do not have significant effects on internality. Afrikaans speaking subjects as well as Sothos originating from other countries, tend toward internality. English speaking Whites showed the least inclination toward internality.

The users of an African vernacular, originating from other countries, showed a tendency towards externality. However, subjects using a vernacular originating from South Africa, tend towards internality. Two possible explanations are offered. Firstly, prevailing political circumstances may perhaps be responsible for this tendency towards internality among the indigenous Blacks.

The tendency towards internality among Afrikaans subjects may be an indication that Afrikaans people still harbour the thought that they are going to control events and thus the future, as was borne out by the breakdown of Codesa which was ascribed to the Afrikaners' insistence on a minority veto if the emerging new constitution is not to their liking. They also insisted on extending the period of interim rule indefinitely. Secondly, the influence of psychological selection procedures and westernized managerial training can also not be discounted. The problem is further compounded by the unsuitability of large masses of untrained and unemployed Blacks in the RSA.

Among organizational factors, the significant two-way interactions, i.e. educational qualifications by age reveal that younger subjects with lower educational levels were less favourably inclined towards internality. Younger subjects with a tertiary education were conspicuously favourably inclined towards internality. However, beyond the age of 45, these subjects were less inclined towards internality, possibly due to increased awareness of social responsibility toward out-groups. Age and education tend to have

a decisive influence. In the first instance the need for a broad middle class with secondary education is underscored as this is a necessity for economic and political stability and progress. The case of graduates of 46 years of age and older, revealing a tendency towards externality, may also be a token of desperation at the prevailing circumstances in the country, i.e. the erosion of the internal order and a worsening of the economy.

Also, occupational level by age yielded a significant interaction. Marked differences among the occupational groups beyond the age of 45 was conspicuous. Managers, and to a lesser extent administrative staff, revealed a tendency to be less favourably inclined towards internality while labourers and especially supervisors tended toward internality. This may be because supervisors are in direct control of people and labourers who are usually members of the Black groups, experienced new zest for dominating and controlling others in the prevailing political situation.

The two-way interaction economic sector employed in by educational qualifications, also had a significant influence on internality. Graduates in the parastatal sector were more favourably exposed towards internality than those in the freemarket sector. The reverse pattern holds for subjects with a lower educational qualification (Std. 8 or less). This may also be due to a tendency of despair among these subjects being less sophisticated. This tendency is also borne out by those with a high income in the freemarket sector (tends less towards internality) and the



low income group (more favourably disposed towards internality). The prevailing political situation once again gives new zest, life and hope, especially to those Blacks with a low income. The opposite holds true for the parastatal sector of the economy. It is thus obvious that income has an influence on internality.

#### 10.5.6 EXTERNALITY

Scores tended to aggregate in the higher class intervals which indicates a tendency away from externality. Three cultural factors, viz language, ethnicity and religion had a significant influence on externality. Also, the two-way interactions language by country of origin and religion by country of origin yielded significant differences.

The Afrikaans speaking subjects and members of the three Afrikaans sister churches scored high on this dimension. The Afrikaans subjects differed significantly from most other churches (three sister churches excluded) on the Scheffé-comparisons.

These comparisons bring Afrikaner identity into prominence in regard to externality. The Afrikaans speaking subjects are more sensitive to internality than the other language groups who are more externality orientated. The English speaking Whites positioned themselves in regard to the indigenous Blacks. Although the English are less sensitive to internality, they do not differ significantly with the Afrikaners on externality. This tendency towards externality may be the reason why the English Whites have played a

subdued political role. The difference between the English Whites and the Sothos are quite dramatic.

The Dutch Reformed Sister Churches, were more internally inclined. The Calvinistic doctrine and values are diametrically opposed to externality. It is thus evident that the Dutch Reformed Churches do not have a strongly developed social conscience although they are aware of the need for social contact.

The Methodist/Presbyterians were more externally inclined than the Anglicans and Roman Catholics but did not differ significantly from the Pentacostal/Apostolic faiths. The Methodist/Presbyterian Churches were favourably disposed towards externality and have accordingly developed a strong social conscience. This may be the reason for the leading figures in the South African Council of Churches being Methodists, their strong social conscience is quite conspicuous in public or social life. Apparently the absence of the Calvinistic doctrine with its emphasis on predestination, leads to a greater and deeper awareness among Methodists/Presbyterians and Pentacostal/Apostolic adherents of the role of fate and chance.

The value system of the English speaking people does not yield significant differences in regard to religious orientation within the cultural environment. However, in regard to ethnicity in cultural context, significant differences were observed. English identity is more evident in ethnical/cultural context than in religious context. Church membership in regard to

externality thus does not play as important a role as ethnicity in regard to the formation of the English identity.

Four of the six independent variables related to organization, viz educational qualifications, years of formal schooling received, income and occupational level, had a significant influence on externality. The organizational milieu also yielded significant interactions between educational qualifications and age, educational qualifications and sector of the economy employed in, age and sector of the economy employed in as well as between occupational level and sector of the economy employed in.

Especially in the RSA the highly developed economic environment determines group membership. This is a special feature of the South African case and stresses the importance of sound educational qualifications and adequate schooling in the development of potential in order to attain high status occupations and the accompanying high incomes.

Three options are open to the RSA in regard to economic policy and economic systems which will determine economic performance as well as the stability of future government, viz (1) a dual economy, (2) maintaining and extending the freemarket system (capitalistic economic philosophy) which, of course, requires an ideological about-turn from the ANC/SACP/Cosatu-alliance which is highly improbable and (3) a change-over of the welfare system. However, Masodorp (op.cit, p 19) argues that the successful functioning of a social democracy presupposes an efficient state

RSA economy to a socialist economy, accompanied by the curtailing of economic activity over a broad spectrum - also in the mining industry. At the present the RSA seems to be moving towards a dual economy.

Regarding a dual economy (mixed economy) the strong feelings of political, social and economic injustice and deprivation demand a redistribution of income, wealth and property to rectify the historical legacy of extreme inequality and the attended poverty and the defective and unpopular education system, housing and social services for the disadvantaged groups. It is doubtful whether a centrally planned economy would be suitable to a post-apartheid South Africa in rectifying these extreme inequalities. Central planning has clearly failed to increase labour productivity and consumption and to eliminate poverty and inequality - all of which were important objectives in Marxian terms - in Eastern Europe. But it is also doubtful whether the libertarian model of a freemarket economy would be appropriate for the future South Africa. Any future government could be compelled to play an interventionist role in economic affairs in an attempt to remove the distortions which results from the country's racially based past (Maasdorp, 1989, p 18).

A social democracy may offer a model for a post-apartheid South Africa. Maasdorp (1989, p 19) cited West Germany and Sweden as examples of social democracies combining a highly efficient private sector with a well-developed social welfare system. However, Maasdorp (*op cit*, p 19) argues that the successful functioning of a social democracy presupposes an efficient state

apparatus, an integrated market, good flow of the information and a level of income sufficient to sustain the welfare system. In South Africa the last of these conditions is hardly met and the other aspects are defective. However, high economic growth would be an essential precondition for any move towards a West German-type "social market economy".

Regarding the second alternative, namely the maintaining and extension of the freemarket, it needs to be pointed out that the economy won't pick up without a political settlement at home and world markets for key exports. If there could be agreement in principle among the main players, viz the National Party and the ANC, that a future government would follow a broadly liberal, freemarket approach, it would affect investors' confidence and economic activity positively, facilitating economic growth and creating new jobs.

Regarding the third alternative, viz the bringing about of a socialist economy attended with the curtailing of economic activity, the ANC/SACP/Cosatu-alliance at present is succeeding, to a certain extent, in curtailing economic activity and growth. Also, the alliance's policy of nationalization which features so prominently in their political programme, is not conducive to investors' confidence which is so crucial for a favourable investment climate. The time has now arrived for the alliance to decide if there are any differences between the ANC and the SACP on such vital issues as democracy and the economic policy as it is only fair that the South African voters and foreign investors should know it

10.5.7 beforehand. If there is no differences, then the alliance partners should stop the pretence that there are marked differences.

As Van Zyl Slabbert (Vryeweekblad, Nov. 9, 1992) so forcefully argues, it is of no avail that individual members of the ANC say that militant communism is not the ANC's official standpoint. In practice the SACP and the communist-controlled unions are the most coherent and organized faction while the rest of the alliance is basically powerless. Marxist activists should realize the longterm harm that such absurdities as mass action will do to a climate of investment, economic growth and the creation of jobs. The creation of jobs is of paramount importance in the light of the high Black population increase. The confidence of foreign investors is of absolute importance in order to encourage economic growth.

Instead of talks about nationalization, the alliance should rather co-operate with the large South African conglomerates and multi-national corporations, encouraging them to step up their equal opportunity employment and social responsibility programmes, especially in such a field as education in order to provide adequate quality education and training to activate the energy and talent latent in the population. Instead of antagonizing these conglomerates and rendering them impotent by means of nationalization, future government should rather work with them. A social democratic model may offer a post-apartheid government the opportunity to be represented on the boards of the conglomerates and multi-national companies, enabling the state to exercise a say in the accumulation of capital and investment.

10.5.7 POWERFUL OTHERS are also a special feature of the South African case and are mainly due to the The scores tend to aggregate in the lower class intervals which indicates a tendency towards a belief in the role of powerful others in the subjects lives. This is indicative of an awareness of the influence of authority. Three of the independent variables relating to culture, viz language, religion and ethnicity, have a significant influence on the dimension of powerful others.

In regard to powerful others (awareness of the influence of authority) the Afrikaans and English speaking subjects differ mostly from the indigenous Black language groups. Significant differences especially become obvious when members of the High Churches (Anglican and Roman Catholic) were compared with the Methodist/Presbyterian Churches. The latter reveal an awareness of the influence of authority (tend towards powerful others). However, no significant differences were obtained between the English and the Afrikaans speaking subjects but both White groups differed significantly from the Blacks.

10.5.8 DISTINCTION BETWEEN THE FREEMARKET SECTOR AND THE As regards organizational factors, three of the six independent variables, viz educational qualifications, years of formal schooling received and income have a significant influence on the dimension "powerful others". The organizational milieu also yielded significant interactions between age and occupational level, educational qualifications and sector of the economy employed in and occupational level and economic sector employed in. Especially, differences in regard to income are highly significant and are very prominent.

Income differences are also a special feature of the South African case and are mainly due to the distortions which result from the country's racially based past, viz the poor state of Black education and the inequality in employment opportunities. Regarding educational qualifications and sector of the economy employed in, the attainment of higher educational qualifications leads to less awareness of the role of powerful others in both the parastatal and freemarket environment but more so in the parastatal environment.

Regarding occupational level and sector of the economy employed in, awareness of the role of powerful others occurred among labourers and managers/consultants in both the parastatal and the freemarket spheres. Administrative staff and supervisors in the parastatal environment are less sensitive to powerful others than their counterparts in the freemarket environment. Supervisors and administrative staff in the freemarket sector tend to be sensitive of the role and influence of powerful others.

#### 10.5.8 DISTINCTION BETWEEN THE FREEMARKET SECTOR AND THE PARASTATAL SECTOR OF THE ECONOMY

The distinction between these two sectors of the economy is based on the four value dimensions of individualism, uncertainty avoidance, power distance and masculinity. Subjects in the parastatal economy were slightly more inclined towards individualism when compared with those in the freemarket economy. In both sectors there is a tendency towards masculinity. A large power distance also exists in both sectors of the



economy. Uncertainty avoidance, however, is quite a decisive factor. Subjects in the parastatal sector are more inclined to avoid unnecessary uncertainty while subjects in the freemarket environment are more prepared to face risk and uncertainty.

#### 10.6 CONSEQUENCES AND IMPLICATIONS FOR COMPANY POLICY AND PRACTICE

This research has implications and consequences for company policy and practices in a number of areas.

1. Motivation - the existing motivation theories, viz Maslow's Need - hierarchy theory, Herzberg's Motivation - hygiene theory, Vroom's Expectancy theory, Adam's Equity theory, the Porter-Lawler extension of Vroom's theory and McClelland's Achievement - affiliation theory are applicable and employable to industrial-psychological research. But these theories seem only applicable to and valid in developed countries. It is therefore less applicable to cross-cultural research in developing countries such as the RSA.

In the RSA the problem however, is the interaction between the developed sector and the underdeveloped sector. This underdevelopment is mainly due to the historical legacy of extreme inequality between the different cultural and ethnic groups.

However, the Ubuntu-value of the Blacks with its emphasis on community, cooperation and humaneness, should always be kept in mind. The Japanese, for example, stress the importance of good human relations. Next to achievement motivation South Africa also needs Pareek's (1968) extension

motivation which implies a concern for other people or society as a whole. A synergy between achievement motivation and extension motivation could transform labour resources into productive units leading to a flexible and well-diversified trading base characteristic of a modern economy. In the same vein, what is of utmost importance is a broadly based educational system to turn out the necessary technical and professional manpower necessary for development and to encourage individual effort. There are, however, two shortcomings. Firstly, there is the earlier mentioned possibility that South Africa may develop a dual economy with both capitalistic and socialistic components because of the two totally different segments (sectors) of the economy. Secondly, any attempt to bring about mass education presently, can only be successful if attended with a lowering in educational standards. This of course the RSA cannot afford, socially as well as economically.

2. Leadership - The key to leadership according to Hofstede (1980a, p 378) is consideration of subordinate expectations. Successful leadership has to take the values of subordinates into account. A successful leadership theory by definition implies high power distance and tendencies towards masculinity and uncertainty avoidance. Blacks prefer a democratic style of management and Whites a consultative style. These differences in approach suggest a possible impasse in business management or at least frequent interruption in business functioning. The mining industry is very susceptible in this respect. The present calm in the industry is more the result of the general low gold price and the threatening or

- actual job scarcity in the industry. However, leadership approaches should allow for grievance channels (grievance procedures) by which lower-level employees could bring their grievances and complaints to the attention of top management.
3. Management by Objectives (MBO) - The present value system - high power distance and uncertainty avoidance - negates against a successful MBO system. The MBO system implies a cybernetic control-by-feedback philosophy. The power distance in the mining industry is too large to allow for meaningful negotiation between subordinate and supervisors. MBO also demands risk taking but the uncertainty avoidance is too large for risk taking.
4. Organization Design - The organization type that fits the mining industry now is the full bureaucracy with its large power distance and uncertainty avoidance. The implicit model of organization is pyramid-like. Because of the volatile and uncertain labour and economic climate, rising operating costs, the general state of unrest in South Africa over the past few years, inter-union and tribal rivalry which have brought sweeping changes to the fabric of life on the mines, illegal strikes and racial incidents between White and Black miners, gold debased to the status of just another commodity and the emergent trade unions with which the mining industry has to deal, have led to uncertainty and insecurity in its fields of operation. It necessitates a pyramid-like organization with its large power distance in order to secure stability and certainty. But the possible successful transformation of South Africa to a

post-industrial society with stable government and freemarket system which encourages economic growth accompanied with a prudent amount of redistribution of wealth, demands an implicitly structured organizational type with small power distance and weak uncertainty avoidance. The implicit model of organization is of course, the freemarket system. The educational system should also or rather ought to contribute to a reduction in power distance and uncertainty avoidance.

5. Industrial Democracy - The results revealed a large power distance. Witte (1980, p 3) views Industrial Democracy as "a set of decision-making mechanisms based on a reasonable assumption of political equality. These mechanisms might include decisions reached in mass assemblies; referenda; elections of representatives to councils, committees, or assemblies and direct participation in the work unit itself." Support for participation requires a belief in and a desire for democracy. Lemmer (1989) sees Industrial Democracy as a useful approach in the free enterprise and political systems in South Africa. It is a link between industrial and political elements in a free society, and, according to Lemmer, serves as a training ground for South Africans, enabling them to participate fully in the political democracy which is currently expanding.

Industrial Democracy is increasingly used to administer industrial relations by peaceful means of resolving disputes such as the Industrial Court and conciliation boards. Le Roux (in Natrass and Ardington, 1990, p 26) defines social democracy as "a system committed to a process whereby an

attempt is made to develop a consensus on economic policies acceptable to a wide spectrum of groups and classes in society. The twin goals of this exercise are to enhance overall economic welfare and to create a much greater degree of economic equality, or to put it differently, eliminate economic dominations."

This has found expression in European social democracies such as the welfare state, social investments ensuring equal access to a high standard of education and health services, intervention in the labour markets, consumer protection and environmental protection. Social democracy (according to Le Roux) are more concerned with how the economic benefits are distributed than with who owns the means of production. Social democracy in modern language does not imply the socialization or nationalization of the means of production or use of central planning. The intervention in the labour markets are to regulate negotiations between the trade unions and industry and commerce. There is obviously a broad correspondence between Industrial Democracy and Social Democracy. Both Black and White, managers as well as labour prefer some form of democracy. These parties, however, may have different conceptions of it. These are nevertheless viable conceptions in the culture of the mining industry and the chances are good that through negotiation some or other democratic system acceptable to all parties, may emerge.

6. Company ownership and control - Ownership of business enterprise has frequently been seen as the principal key to control the organization of

production and the division of labour (Poole, 1990, p 2). It is also the key to economic and political power. There is a close historical link between capitalism and individualism.

Conventional socialist wisdom, on the other hand, dictates that a more just, equitable and egalitarian society can only be reached by way of purposeful nationalization of the mining and banking sectors. In the Soviet Union and the countries of the Eastern bloc nationalization was not the ultimate answer.

Any effort towards facilitating and guiding an egalitarian restructuring of South Africa, must also be sensitive to the existing infra-structure and resources. Increased productivity in the mining industry as well as in the remaining economic spheres in the Republic of South Africa is of utmost importance in this restructuring. It is fairly obvious that control of vital sectors of the South African economy through nationalization, will not lead to a more efficient running of the economy. This is so much more obvious because of the high growth rate in the Black population. In order to effectuate this restructuring, companies have to accept and encourage profit sharing schemes for employees and greater participation of all stakeholders in its endeavours. State ownership will not help the huge deprived population in any way. What is badly needed, is economic growth and accompanying opportunities for employment. Bethlehem (The Star, Oct. 25, 1991, p 13) so aptly puts it: "I don't believe the haves need to be hurt at all. If the state is going to be a leader in this transformation, it is not going to do so by direct intervention in the economy but by acting through market forces and

creating incentives for the private sector to deliver the wherewithal of improving the position of the deprived masses".

Hofstede (1980a, p 389) ascertains that the relationship between the individual and an organization in an individualistic society is calculative and in a collectivist society, it is moral. In terms of Hofstede's theory, the simultaneous presence of lower power distance, an increasing trend towards masculinity and an equality in individualism among ethnic groups, is conducive for sustained economic growth. Thus the chances of freemarket capitalism with accompaniment of the profit motive and a prevailing calculative labour contract between employer and labour, are great.

#### 10.7 SOME FINAL COMMENTS

Should the politicians succeed in providing the necessary stability and security, the mining industry could provide the necessary momentum for economic growth and development. The political developments of the past four months, viz increased violence, mass action and talks of such damaging absurdities as rent and tax boycotts have led to a general slump of attitudes with economic despondency. The executives of mining houses are stricken with uncertainty caused by the low gold price, strikes and stayaways, rising operating costs and the unstable and volatile political climate.

South Africa's economy is mainly built around the mining industry and should the political climate improve, the mining industry is well poised for a significant contribution to the overall development

of the South Africa. South Africa is a developing economy with a developed sector but also a subsistence (underdeveloped) sector. The mining industry could contribute, over the longterm, to the development of this latter sector which would also benefit the Southern African region, using modern technology and freemarket principles. Freemarket principles require a low power distance which goes hand in hand with individual initiative and a high, adequate educational system which is a prerequisite to release the energy and talent that is latent in the South African society which is so absolutely essential for economic growth and increased productivity.

A high masculinity orientation is essential as it suggests an environment conducive to achievement orientation. The mining industry should also be inclined to take risks for economic development, eliminating unemployment and poverty and providing the necessary motivational profile. This value system and motivational profile could lead to a positive job experience giving rise to a majority of any future work force strongly identifying with work ethics, increasing the economic power of the Blacks and giving access to material resources and thereby removing inequalities.

Economic realities also provide an answer for a constitutional policy of federation/confederation. The South African economy is an interlocking web binding Whites and Blacks together. The successful future of the Republic of South Africa possibly lies in the blending of economic integration and limited racial integration, thus resulting in continued social separation which for the foreseeable future at least, will remain unchanged because of the underlying differences. Thus the working environment



could be more conducive towards any desired change than the social and physical environments in which the inhabitants of the RSA live. In terms of human behaviour a federation/confederation seems to be the ultimate solution.

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APPENDIX I

WORK VALUES SURVEY MODULE

QUESTIONNAIRE NUMBER

1-3

CARD NUMBER

4

Please complete the Biographical Section below accurately by ringing the applicable number.

QUESTION 1: SEX

MALE	1	FEMALE	2
------	---	--------	---

5

QUESTION 2: HOME LANGUAGE

AFRIKAANS	1	ENGLISH	2	GERMAN	3
N SOTHO	4	S SOTHO	5	XHOSA	6
ZULU	7	OTHER	8		

6

If other, please specify .....

7

QUESTION 3: RELIGION

ANGLICAN	1	DUTCH REFORMED	2	JUDAISM	3
METHODIST	4	PRESBYTERIAN	5	PENTACOSTAL	6
CATHOLIC	7	REFORMED	8	APOSTOLIC	9
LUTHERAN	10	ZIONIST	11	MISSIONARY	12
INDEPENDENT	13	ISLAMIC	14	HINDU	15
N H CHURCH	16	OTHER	17		

8-9

QUESTION 4: EDUCATION QUALIFICATIONS

ILLITERATE NO SCHOOLING	1	STD 5 OR LOWER	2	STD 6	
STD 8	4	STD 10	5	B.DEGREE	6
HONOURS	7	MASTERS	8	DOCTORAL	9

10

QUESTION 5:

How many years of formal school education did you complete? (Starting with primary school; count only the number of years each course should officially take, even if you spent less or more years on it; if you took part-time or evening courses, count the number of years the same course would have taken you full-time).

- |                     |                     |  |    |
|---------------------|---------------------|--|----|
| 1. 10 years or less | 7. 16 years         |  | 11 |
| 2. 11 years         | 8. 17 years         |  |    |
| 3. 12 years         | 9. 18 years or more |  |    |
| 4. 13 years         |                     |  |    |
| 5. 14 years         |                     |  |    |
| 6. 15 years         |                     |  |    |

QUESTION 6: INCOME P.A.

R1 000 OR LESS	1	R1 001 - R3 000	2
R3 001 - R5 000	3	R5 001 - R10 000	4
R10 001 - R15 000	5	R15 001 - R18 000	6
R18 001 - R24 000	7	R24 001 - R30 000	8
R30 001 - R45 000	9	R45 001 - R60 000	10
R60 001 - R80 000	11	R80 001-R120 000	12
OVER R120 000	13		

 12-13

QUESTION 7: OCCUPATIONAL LEVEL

EXECUTIVE	1	TOP MANAGEMENT	2
MIDDLE MANAGER	3	SUPERVISORY	4
CONSULTANT	5	ADMINISTRATIVE	6
ARTISAN	7	SEMI-SKILLED	8
UNSKILLED LABOR	9		

 14

QUESTION 8: WHAT KIND OF WORK DO YOU DO?

- a. I am a manager (that is, I have at least one hierarchical subordinate) - go to f.

 15

- b. I am not a manager and I work most of the time in an office - go to e.
- c. I am not a manager and I do not work most of the time in an office - go to d.
- d. If you are not a manager and you do not work most of the time in an office, what do you do:
1. Work for which normally no vocational training, other than on-the-job training, is required (unskilled or semi-skilled work).
  2. Work for which normally up to four years of vocational training is required (skilled worker, technician, non-graduate engineer, nurse, etc.).
  3. Work for which normally a higher-level professional training is required (graduate engineer, doctor, architect, etc.).
- e. If you are not a manager and you work most of the time in an office, what do you do:
4. Work for which normally no higher-level professional training is required (clerk, typist, secretary, non-graduate accountant).
  5. Work for which normally a higher-level professional training is required (graduate accountant, lawyer, etc.).
- f. If you are a manager, are you:
6. A manager of people who are not managers themselves (that is, a first-line manager).
  7. A manager of other managers.

QUESTION 9: AGE

18 YEARS AND YOUNGER		1	19-21	2	22-25	3	
26-30	4	31-45	5	46-55	6	over 55	7

16

QUESTION 10: FROM WHICH COUNTRY (OR REGION) ARE YOU?

SOUTH AFRICA	1	BOTSWANA	2	LESOTHO	3
MOZAMBIQUE	4	ZAMBIA	5	NAMIBIA	6
ZAIRE	7	S AMERICA	8	ENGLAND	9
CANADA	10	U S A	11	JAPAN	12
TAIWAN & HONG KONG			13	KOREA	14
SOUTHERN EUROPE		15	NORTHERN EUROPE		16
EASTERN EUROPE		17	SELF GOVERNING STATES		18

17-18

QUESTION 11: IF SOUTH AFRICA, PLEASE INDICATE

AFRIKAANS	1	ENGLISH	2	JEW	3
BROWN	4	ASIAN	5	XHOSA	6
SOTHO	7	TSWANA	8	ZULU	9

19

VALUE SURVEY QUESTIONNAIRE

Please think of an ideal job - disregarding your present job. In choosing an ideal job, how important would it be to you to (please circle one answer in the column on the right).

- 5. Of very little importance
- 4. Of little importance
- 3. Of moderate importance
- 2. Very important
- 1. Of utmost importance

Q12 Have sufficient time left for your personal or family life?  1  2  3  4  5  20

Q13 Have challenging tasks to do, from which you can get a personal sense of accomplishment?  1  2  3  4  5  21

Q14 Have a little tension and stress on the job?  1  2  3  4  5  22

Q15 Have good physical working conditions (good ventilation and lighting, adequate work space, etc)?  1  2  3  4  5  23

Q16 Have good working relationships with your direct superior?  1  2  3  4  5  24

Q17 Have security of employment?  1  2  3  4  5  25

Q18 Have considerable freedom to adopt your own approach to the job?  1  2  3  4  5  26

Q19 Work with people who cooperate well with one another?  1  2  3  4  5  27

- Q20 Be consulted by your direct superior in his/her decisions? 

1	2	3	4	5
---	---	---	---	---

 28
- Q21 Make a real contribution to the success of your company or organization? 

1	2	3	4	5
---	---	---	---	---

 29
- Q22 Have an opportunity for high earnings? 

1	2	3	4	5
---	---	---	---	---

 30
- Q23 Serve your country? 

1	2	3	4	5
---	---	---	---	---

 31
- Q24 Live in an area desirable to you and your family? 

1	2	3	4	5
---	---	---	---	---

 32
- Q25 Have an opportunity for advancement to higher paying jobs. 

1	2	3	4	5
---	---	---	---	---

 33
- Q26 Have an element of variety and adventure in the job? 

1	2	3	4	5
---	---	---	---	---

 34
- Q27 Work in a prestigious, successful company or organization? 

1	2	3	4	5
---	---	---	---	---

 35
- Q28 Have an opportunity for helping other people? 

1	2	3	4	5
---	---	---	---	---

 36
- Q29 Work in a well-defined job situation where the requirements are clear? 

1	2	3	4	5
---	---	---	---	---

 37

Please indicate your degree of agreement or disagreement with the following statements by making a cross in the relevant block.

5. Strongly disagree
4. Disagree
3. Undecided
2. Agree
1. Strongly agree

- Q30 A company's rules should not be broken - even while the employee thinks it is in the organization's best interest. 

1	2	3	4	5
---	---	---	---	---

 38

Q31 Most people can be trusted 

1	2	3	4	5
---	---	---	---	---

 39

Q32 Most employees have an inherent dislike of work and will avoid it if they can. 

1	2	3	4	5
---	---	---	---	---

 40

Q33 A large company is generally a more desirable place to work for than a small company. 

1	2	3	4	5
---	---	---	---	---

 41

## QUESTION 34

How frequently, in your work environment, are subordinates afraid to express disagreement with their superiors? (circle the number to your answer)

1. Very frequently  42
2. Frequently
3. Sometimes
4. Seldom
5. Very seldom

## QUESTION 35

How long do you think you will continue working for this company? (circle the number to your answer)

1. Two years at the most  43
2. From two to five years
3. More than five years (but I probably will leave before I retire)
4. Until I retire.

## QUESTION 36

How often do you feel nervous or tense at work? (circle the number to your answer)

1. I Always feel this way  44
2. Usually
3. Sometimes
4. Seldom
5. I never feel this way.

The descriptions below apply to four different types of managers. First, please read through these descriptions:

Manager 1 Usually makes his/her decisions promptly and communicates them to his/her subordinates clearly and firmly. Expects the subordinates to carry out the decisions loyally and without raising difficulties.

1	2	3	4	5
---	---	---	---	---

47

Manager 2 Usually makes his/her decisions promptly, but, before going ahead, tries to explain the decisions to his/her subordinates. Gives them the reasons for the decisions and answers whatever questions they may have.

Manager 3 Usually consults with his/her subordinates before he/she reaches his/her decisions. Listens to their advice, considers it, and then announces his/her decision. He/she then expects the subordinates to work loyally to implement it whether or not it is in accordance with the advice they gave.

Manager 4 Usually calls a meeting of his/her subordinates when there is an important decision to be made. Puts the problem before the group and invites discussion. Accepts the majority viewpoint as the decision.

QUESTION 37

Now, for the above types of manager, please mark the one which you would prefer to work under (circle one answer number only):

- 1. Manager 1
  - 2. Manager 2
  - 3. Manager 3
  - 4. Manager 4
- 45

QUESTION 38

And, to which one of the above four types of managers would you say your own superior most closely corresponds?

- 1. Manager 1
  - 2. Manager 2
  - 3. Manager 3
  - 4. Manager 4
  - 5. He/she does not correspond closely to any of them.
- 46

ACTIVISM AND POWERFUL OTHERS - SCALE

Please indicate your degree of agreement or disagreement with the following statements by making a cross in the relevant block.

- 5. Strongly disagree
- 4. Disagree
- 3. Undecided
- 2. Agree
- 1. Strongly agree

Q39 By and large companies change their policies and practices much too often.

1	2	3	4	5
---	---	---	---	---

47

- Q40 I feel like what happens in my life is mostly determined by authoritative persons. 

1	2	3	4	5
---	---	---	---	---

 48
- Q41 People like myself have very little chance of protecting our personal interests when there is conflict with those of strong pressure groups. 

1	2	3	4	5
---	---	---	---	---

 49
- Q42 My life is chiefly controlled by persons in authority. 

1	2	3	4	5
---	---	---	---	---

 50
- Q43 Getting what I want requires pleasing those people above me. 

1	2	3	4	5
---	---	---	---	---

 51
- Q44 I am usually able to protect my personal interest. 

1	2	3	4	5
---	---	---	---	---

 52
- Q45 My life is determined by my own actions. 

1	2	3	4	5
---	---	---	---	---

 53
- Q46 I can pretty much determine what will happen in my life. 

1	2	3	4	5
---	---	---	---	---

 54
- Q47 When I make plans, I am almost certain to make them work. 

1	2	3	4	5
---	---	---	---	---

 55
- Q48 When I get what I want, it's usually because I worked hard for it. 

1	2	3	4	5
---	---	---	---	---

 56
- Q49 To a great extent my life is controlled by accidental happenings. 

1	2	3	4	5
---	---	---	---	---

 57
- Q50 Often there is no chance of protecting my personal interest from bad luck. 

1	2	3	4	5
---	---	---	---	---

 58
- Q51 When I get what I want, it's usually because I'm lucky. 

1	2	3	4	5
---	---	---	---	---

 59
- Q52 It's not always for me to plan too far ahead because many things turn out to be a matter of good or bad fortune. 

1	2	3	4	5
---	---	---	---	---

 60



- Q53 Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time. 

1	2	3	4	5
---	---	---	---	---

 61
- Q54 I have often found that what is going to happen, will happen. 

1	2	3	4	5
---	---	---	---	---

 62
- Q55 Whether or not I get into a car accident is mostly a matter of luck. 

1	2	3	4	5
---	---	---	---	---

 63
- Q56 Whether or not I get into a car accident depends mostly on how good driver I am. 

1	2	3	4	5
---	---	---	---	---

 64
- Q57 How many friends I have depends on how nice a person I am. 

1	2	3	4	5
---	---	---	---	---

 65
- Q58 Although I might have good ability I will not be given a leadership responsibility without appealing to those in positions of authority. 

1	2	3	4	5
---	---	---	---	---

 66
- Q59 If important people were to decide they didn't like me, I probably wouldn't make many friends. 

1	2	3	4	5
---	---	---	---	---

 67
- Q60 Its chiefly a matter of fate whether or not I have few friends or many friends. 

1	2	3	4	5
---	---	---	---	---

 68
- Q61 Whether or not I get to be a leader depends mostly on my ability. 

1	2	3	4	5
---	---	---	---	---

 69
- Q62 In order to have my plans work, I make sure that they fit in with the desires of people who have authority over me. 

1	2	3	4	5
---	---	---	---	---

 70
- Q63 Whether or not I get into a car accident depends mostly on the other driver 

1	2	3	4	5
---	---	---	---	---

 71

Thank you for your co-operation.

APPENDIX II

WERKSWAARDES OPNAME-MODULE

VRAAG 5: VRAELYSNOMMER

1-3

KAARTNOMMER

4

BIOGRAFIESE VRAELYS

Voltooi asseblief die biografiese vraelys deur die toepaslike nommer te omring.

VRAAG 1: GESLAG

MANLIK	1	VROULIK	2
--------	---	---------	---

5

VRAAG 2: HUISTAAL

AFRIKAANS	1	ENGELS	2	DUIITS	3
N SOTHO	4	S SOTHO	5	XHOSA	6
ZOELOE	7	ANDER	8		

6

Indien "ander", spesifiseer asseblief

7

VRAAG 3: GODSDIENS

ANGLIKAANS	1	N G KERK	2	JUDAISME	3
METHODISME	4	PRESBITERIAANS	5		
PINKSTERKERK	6	KATOLIEK	7	GEREFORMEERD	8
APOSTOLIES	9	LUTHERS	10	ZIONISTE	11
SENDINGKERK (NG-KERK)			12	ONAFHANKLIK	13
ISLAM	16	HINDU	17	NH KERK	16
				ANDER	17

8-9

VRAAG 4: OPVOEDKUNDIGE KWALIFIKASIES

ONGESKOOLD	1	STD.5 EN LAER	2	STD.6	3
STD.8	4	STD.10	5	B.GRAAD	6
HONNEURS	7	MEESTERS	8	DOKTORAAL	9

10

## VRAAG 5:

Hoeveel jaar formele (skool) opleiding het u voltooi? Beginnende by laerskool, tel die aantal jare wat elke kursus behoort te duur, selfs indien u meer of minder jare daaraan spandeer het. Indien u deelydse of na-uurse kursusse bygewoon het, bereken die aantal jare wat dieselfde kursus sou neem, indien u voltyds gestudeer het.

- |                      |                    |                      |    |
|----------------------|--------------------|----------------------|----|
| 1. 10 jaar of minder | 7. 16 jaar         | <input type="text"/> | 11 |
| 2. 11 jaar           | 8. 17 jaar         |                      |    |
| 3. 12 jaar           | 9. 18 jaar of meer |                      |    |
| 4. 13 jaar           |                    |                      |    |
| 5. 14 jaar           |                    |                      |    |
| 6. 15 jaar           |                    |                      |    |

## VRAAG 6: VLAK VAN INKOMSTE (PER JAAR)

R1 000 EN MINDER	1	R1 001 - R3 000	2
R3 001 - R5 000	3	R5 001 - R10 000	4
R10 001 - R15 000	5	R15 001 - R18 000	6
R18 001 - R24 000	7	R24 001 - R30 000	8
R30 001 - R45 000	9	R45 001 - R60 000	10
R60 001 - R80 000	11	R80 001 - R120 000	12
BO R120 000	13		

 12-13

## VRAAG 7: BEROEPSVLAK

UITVOEREND	1	TOPBESTUUR	2
MIDDEL-BESTUUR	3	TOESIGHOUER	4
KONSULTANT	5	ADMINISTRATIEF	6
AMBAGSMAN	7	SEMI-GESKOOLD	8
ONGESKOOLDE ARBEIDER	9		

 14

## VRAAG 8: WATTER TIPE WERK DOEN U?

SUIDE EUROPA 15 NOORD EUROPA 16

 15

- a. Ek is 'n bestuurder (dit is, ek het ten minste een ondergeskikte) - gaan na vraag f.

- b. Ek is nie 'n bestuurder nie en werk meestal in 'n kantoor - gaan na vraag d.
- c. Ek is nie 'n bestuurder nie en werk ook nie meestal in 'n kantoor nie. Wat doen u wel?

1. Werk waarvoor gewoonlik geen beroepsopleiding, behalwe in-die-werk-opleiding, nodig is nie. (Onopgelei of semi-opgelei).
2. Werk waarvoor nie meer as vier jaar beroepsopleiding nodig is nie. (Opgeleide werk, bv. werktuigkundige, ongegradueerde ingenieur, verpleegster).
3. Werk waarvoor gewoonlik 'n hoër mate van professionele opleiding nodig is. (bv. gegradueerde ingenieur, dokter, argitek).

- d. Indien u nie 'n bestuurder is nie, maar meestal in 'n kantoor werk. Wat doen u?

4. Werk waarvoor gewoonlik geen hoër graadse professionele opleiding nodig is nie. (bv. klerk, tikster, sekretaresse en boekhouer).
5. Werk waarvoor 'n hoër mate van professionele opleiding nodig is. (bv. gegradueerde rekenmeester, advokaat).

- e. Indien u 'n bestuurder is, is u:

6. 'n Bestuurder van persone wat nie self bestuurders is nie (d.w.s. 'n eerstelynbestuurder).
7. 'n Bestuurder van ander bestuurders.

VRAAG 9: OUDERDOM

18 JAAR EN JONGER		1	19-21	2	22-25	3
26-30	4	31-45	5	46-55	6	BO 55
						7

16

VRAAG 10: VAN WATTER LAND (OF STREEK) IS U?

SUID-AFRIKA	1	BOTSWANA	2	LESOTHO	3
MOZAMBIEK	4	ZAMBIA	5	NAMIBIA	6
ZAIRE	7	S.AMERIKA	8	ENGELAND	9
KANADA	10	V S A	11	JAPAN	12
TAIWAN & HONG KONG			13	KOREA	14
SUID EUROPA		15	NOORD EUROPA		16
OOS EUROPA		17	T B V C - STATE		18

17-18

## VRAAG 11: INDIEN SUID-AFRIKA, DUI AAN OF U

AFRIKAANS	1	ENGELS	2	JOODS	3
BRUIN	4	ASIAAT	5	XHOSA	6
SESOTHO	7	TSWANA	8	ZOELOE	9

 19
WERKSWAARDEVRAELYS

Stel u die ideale betrekking voor, u huidige betrekking uitgesluit - Hoe belangrik ag u die volgende by die keuse van die ideale betrekking? (Omkring slegs een antwoord nommer by elke vraag).

1. Van uiterste belang
2. Baie belangrik
3. Redelik belangrik
4. Minder belangrik
5. Van baie min belang

V12 Om genoeg tyd te hê vir u persoonlike- en gesinslewe?  1 2 3 4 5  20

V13 Om take te verrig wat uitdagings bied en u 'n persoonlike gevoel van tevredenheid gee?  1 2 3 4 5  21

V14 Om goeie fisiese werksomstandighede te hê (bv. goeie ventilasie en beligting, genoegsame werksoppervlak)?  1 2 3 4 5  22

V15 Om 'n goeie werksverhouding met u direkte toesighouer te hê?  1 2 3 4 5  23

V16 Om min spanning en druk in u betrekking te hê?  1 2 3 4 5  24

V17 Om verseker te wees van 'n betrekking?  1 2 3 4 5  25

V18 Om redelik mate van vryheid te hê om eie inisiatief te kan gebruik?  1 2 3 4 5  26

V19 Om met mense te werk wat goed met mekaar saamwerk?  1 2 3 4 5  27

- V20 Om deur u toesighouer geraadpleeg te word in sy besluitneming? 

1	2	3	4	5
---	---	---	---	---

 28
- V21 Om 'n werklike bydrae te maak tot die sukses van u maatskappy of organisasie? 

1	2	3	4	5
---	---	---	---	---

 29
- V22 Om 'n geleentheid te hê om u inkomste te vergroot? 

1	2	3	4	5
---	---	---	---	---

 30
- V23 Om u land te dien? 

1	2	3	4	5
---	---	---	---	---

 31
- V24 Om in 'n area te bly wat vir u en u gesin aanvaarbaar is? 

1	2	3	4	5
---	---	---	---	---

 32
- V25 Om geleentheid te hê tot bevordering? 

1	2	3	4	5
---	---	---	---	---

 33
- V26 Om verskeidenheid en avontuur in u werk te hê? 

1	2	3	4	5
---	---	---	---	---

 34
- V27 Om vir 'n suksesvolle maatskappy of organisasie te werk? 

1	2	3	4	5
---	---	---	---	---

 35
- V28 Om die geleentheid te hê om andere te help? 

1	2	3	4	5
---	---	---	---	---

 36
- V29 Om 'n goed-gedefinieerde pos te beklee, waarin verwagtinge duidelik uiteengesit is? 

1	2	3	4	5
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 37

Dui asseblief aan tot watter mate u saamstem of verskil met die volgende stellings deur 'n kruis in die toepaslike blokkie te maak.

1. Stem volkome saam
  2. Stem saam
  3. Onseker
  4. Verskil
  5. Verskil sterk
- V30 Die reëls van die maatskappy of organisasie behoort nie verbreek te word nie - selfs al dink die werknemer dat dit in die beste belang van die organisasie sou wees. 

1	2	3	4	5
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 38

V31 Meeste mense is betroubaar 

1	2	3	4	5
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 39

V32 Meeste mense het 'n inherente teensin in werk en sou dit vermy as hulle kon 

1	2	3	4	5
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 40

V33 'n Groot organisasie of maatskappy is 'n beter werkgewer as 'n klein organisasie of maatskappy. 

1	2	3	4	5
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 41

## VRAAG 34

Hoe dikwels in u werksituasie is die ondergeskiktes bang om te toon dat hulle verskil van hulle meederes?

1. Baie dikwels  42
2. Dikwels
3. Soms
4. Selde
5. Nooit

## VRAAG 35

Hoe lank dink u sal u nog vir die maatskappy of organisasie werk?

1. Twee jaar op die meeste  43
2. Twee tot vyf jaar
3. Meer as vyf jaar (maar sal moontlik bedank voor ek aftree)
4. Tot ek aftree.

## VRAAG 36

Hoe dikwels voel u senuweeagtig en gespanne in u werk?

1. Altyd  44
2. Dikwels
3. Soms
4. Selde
5. Nooit.

Die beskrywings wat volg het betrekking op vier tipes bestuurders. Lees asseblief eers die beskrywings aandagtig deur en voltooi die daaropvolgende vrae.

Bestuurder 1 Neem gewoonlik dadelik besluite en dra dit ferm en duidelik oor aan sy ondergeskiktes. Hy verwag dat sy besluite lojaal en sonder enige besware uitgevoer sal word.

V39 Organisasies verander hul beleid, prosedures en praktyke veels te dikwels. 

1	2	3	4	5
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 47

- Bestuurder 2 Neem ook gewoonlik dadelik besluite, maar voordat hy voortgaan met die uitvoering daarvan verduidelik hy dit eers ten volle aan sy ondergeskiktes en gee redes vir die spesifieke besluite. Hy antwoord ook eers alle vrae wat opduik.
- Bestuurder 3 Raadpleeg gewoonlik eers sy ondergeskiktes voordat hy 'n besluit neem. Hy luister eers na hulle advies, oorweeg dit en maak dan sy eie besluit bekend. Hy verwag dan van al sy ondergeskiktes om die besluite lojaal uit te voer, maak nie saak of dit in oorleg met hulle advies is of nie.
- Bestuurder 4 Reël gewoonlik 'n vergadering en lê enige probleme voor aan sy ondergeskiktes. Hy stel dit oop vir bespreking en aanvaar die besluit van die meerderheid.

## VRAAG 37

Kies nou uit die bogenoemde vier tipes bestuurders die een waarvoor u sou verkies om te werk.

1. Bestuurder 1
  2. Bestuurder 2
  3. Bestuurder 3
  4. Bestuurder 4
- |   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
- 
- 45

## VRAAG 38

Met watter van die bogenoemde bestuurders kom u huidige bestuurder se styl die meeste ooreen?

1. Bestuurder 1
  2. Bestuurder 2
  3. Bestuurder 3
  4. Bestuurder 4
  5. Geeneen van bogenoemde nie.
- |   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
- 
- 46

AKTIVISME EN OUTORITÊRE PERSOONLIKHEID-SKAAL

Dui asseblief aan tot watter mate u saamstem of verskil met die volgende stelling deur 'n kruisie in die toepaslike blokkie te maak.

1. Stem volkome saam
  2. Stem saam
  3. Onseker
  4. Verskil
  5. Verskil sterk
- V39 Organisasies verander hul beleid, prosedures en praktyke veels te dikwels.
- |   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
- 
- 47



- V40 Ek voel dat dit wat in my lewe gebeur die toedoen van persone in gesagsposisies is. 

1	2	3	4	5
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 48
- V41 Wanneer my belange in konflik is met die van sterk drukgroepe, kan ek nie veel doen om my belange te beskerm nie. 

1	2	3	4	5
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 49
- V42 Persone in gesagsposisies beheer hoofsaaklik my lewe 

1	2	3	4	5
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 50
- V43 Ek moet innemend optree teenoor my meerderes indien ek iets wil bereik. 

1	2	3	4	5
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 51
- V44 Ek is gewoonlik daartoe instaat om my persoonlike belange te beskerm. 

1	2	3	4	5
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 52
- V45 My optrede is bepalend vir wat in my lewe gebeur. 

1	2	3	4	5
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 53
- V46 Eksel self bepaal my lewensverloop. 

1	2	3	4	5
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 54
- V47 Ek dra sorg dat my planne ten uitvoer gebring word. 

1	2	3	4	5
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 55
- V48 Ek bereik my doelwitte deur harde werk. 

1	2	3	4	5
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 56
- V49 My lewe word in 'n groot mate beheer deur toeval. 

1	2	3	4	5
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 57
- V50 Ek kan nie voorsorgmaatreels tref teen teenspoed nie. 

1	2	3	4	5
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 58
- V51 Ek is suksesvol slegs omdat geluk aan my kant is. 

1	2	3	4	5
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 59
- V52 Dit is nie wys om vooruit te beplan nie aangesien die noodlot 'n baie groot rol in my lewe speel. 

1	2	3	4	5
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 60

- V53 My bevordering tot bestuurder word bepaal deur of ek op die regte plek is op die regte tyd. 

1	2	3	4	5
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 61
- V54 My ervaring is dat wat moet wees sal wees. 

1	2	3	4	5
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 62
- V55 Geluk bepaal of ek in 'n motorongeluk betrokke sal wees. 

1	2	3	4	5
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 63
- V56 My bedrewenheid as 'n motorbestuurder bepaal grootliks of ek in 'n ongeluk betrokke sal raak. 

1	2	3	4	5
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 64
- V57 My geaardheid bepaal die grootte van my vriendekring. 

1	2	3	4	5
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 65
- V58 Alhoewel ek 'n hoogs bevoegde persoon is, sal ek nie tot bestuurder bevorder word indien persone in gesagsposisies nie van my hou nie. 

1	2	3	4	5
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 66
- V59 Indien persone in gesagsposisies nie van my hou nie, sal ek nie 'n groot vriendekring hê nie. 

1	2	3	4	5
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 67
- V60 Die grootte van my vriendekring word deur die noodlot bepaal. 

1	2	3	4	5
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 68
- V61 My bevoegdheid is bepalend vir my bevordering tot bestuurder. 

1	2	3	4	5
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 69
- V62 Ten einde suksesvol te wees moet my planne inpas by die wense van gesagsfigure. 

1	2	3	4	5
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 70
- V63 My betrokkenheid in 'n motorongeluk hang grootliks van die ander bestuurder af. 

1	2	3	4	5
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 71

Baie dankie vir u samewerking.