

AN EMPIRICAL VALIDATION OF  
MASLOW'S NEED HIERARCHY  
IN THE WORK AND NON-WORK SETTING

Thesis submitted in accordance with the  
requirements of the University of Liverpool for the  
degree of Doctor of Philosophy by  
Lynda Christine Gratton

October 1981

**BEST COPY**

**AVAILABLE**

Variable print quality

### ACKNOWLEDGEMENTS

I would like to thank Graham Wagstaff for supervising this work and the numerous people in Liverpool's Inner City for taking part in the interviews and questionnaires which make up the study.

Thanks to Mike Seiersen for providing unflagging support; to Brian Baxter for invaluable critical comments; to Jacki Butcher for typing and collating what was often illegible document and to Bob Nelson for support and a word processor.

# C O N T E N T S

	Page
PREFACE	
CHAPTER 1 - THE MAJOR CONCEPTS OF MASLOW'S "HIERARCHY OF NEEDS" HYPOTHESIS	... 1
CHAPTER 2 - OPERATIONALIZATION OF NEED IMPORTANCE	... 43
CHAPTER 3 - GROUP DIFFERENCES IN NEED IMPORTANCE: SOCIAL CLASS, AGE AND SEX	... 82
CHAPTER 4 - THE SYNDROMES OF BEHAVIOUR	... 132
CHAPTER 5 - NEED IMPORTANCE AND WORK CHARACTERISTICS	... 194
CHAPTER 6 - MODERATORS BETWEEN JOB CHARACTERISTICS AND WORK OUTCOMES	... 234
CHAPTER 7 - CONCLUSIONS	... 274
BIBLIOGRAPHY	... 308
APPENDICES	... 324



## LIST OF TABLES

	Page
2.1	Mean Inter-Item Correlations ... 63
2.2	Factor Analysis of the Items ... 69
2.3	Fusion Distances Between the Clusters ... 74
2.4	Cluster Analysis of the Item Categories ... 76
3.1	Values of the "Inner" and "Other" Directed Individual ... 92
3.2	The Major Values and Orientations Associated with Middle, Working and Lower Class Position ... 95
3.3	The Relationship of Preponent Needs to Social Class Characteristics ... 97
3.4	Social Class Characteristics ... 106
3.5	Construction of the Subject Groups ... 107
3.6	Cluster Analysis of Subject Groups ... 117
3.7	Kruskall-Wallis Analysis of Differences in Need Importance Across Social Class Groups ... 119
3.8	Mann-Whitney Test of the Significance Between Social Class Groups ... 119
3.9	Need Prepotency Across Social Class Groups ... 120
3.10	Kruskall-Wallis Analysis of Differences in Need Importance Across Age Groups ... 124
3.11	Mann-Whitney Analysis of the Differences in Need Importance Between Groups in the Needs for Safety and Belonging ... 125
3.12	Kruskall-Wallis Analysis of Differences in Need Importance Across Male and Female Groups ... 126
4.1	Occupational Categories and Social Class Position ... 139
4.2	Median and Quartile Score Ranges ... 141
4.3	Aspects of a General Sense of Well Being Correlated with Need Importance ... 147
4.4	Assessment of Fair Opportunities and Satisfaction with Ambitions in Life ... 148
4.5	Anxiety and Worries Across Need Importance Range ... 150
4.6	Childhood Experiences and Need Importance ... 152
4.7	Personal Relationships and Need Importance ... 155
4.8	Intergenerational Social Class Mobility Across Need Score Ranges ... 157
4.9	Correlations Between Need Importance and Community Attributes ... 160
4.10	Assessment of and Attitudes to Life in Britain ... 163
4.11	Personal Resources and Need Importance ... 165
4.12	Leisure Time Activities and Need Importance ... 167
4.13	Social Class and Need Importance and Systemmatically Controlling for the Components of Social Class ... 177
4.14	Correlation Matrix of Need Importance and Need Satisfaction ... 186

5.1	Correlation Matrix: Means and Standard Deviations of Occupational Self Direction and Need Importance	... 212
5.2	Need Importance and the Complexity and Hours of Work	... 214
5.3	Correlation Matrix of Need Importance and Importance and Satisfaction of Intrinsic and Extrinsic Work Characteristics	... 219
5.4	Need Importance and Attitudes towards Work	... 220
5.5	Major Categories of Satisfaction and Dissatisfaction	... 222
5.6	Sources of Satisfaction and Dissatisfaction: Proportion of Responses in Median and Quartile Groups	... 224
5.7	Multiple Regression Analysis of Need Importance Scores and Job Characteristics	... 227
6.1	Scoring Procedure for Dummy Variables	... 261
6.2	Spearman Correlation Coefficient Matrix; Means, Standard Deviations and Reliability for Measures of Job Characteristics, Outcome Variables and Higher Order Need Strength	... 264
6.3	Increment in Multiple $R^2$ resulting from the Addition of HNS, Self Actualization as Independent Predictors	... 266
6.4	Matched Group Correlations:	
	(i) Internal Work Motivation	... 268
	(ii) General Job Satisfaction	... 269

## LIST OF FIGURES

	Page
3.1 Preponent Needs Across Social Class	... 121
5.1 Number of Hours Spent Working with Data People and Manually for Upper Quartile Groups	... 217
6.1 The Job Characteristics Model of Work Motivation	... 236

## PREFACE

This thesis explores the relationships between what individuals consider most important to them, in terms of the attitudes and characteristics associated with their life and work. The concept of importance is examined within the framework of Abraham Maslow's theory of hierarchical needs. This theory has much intrinsic appeal to researchers: first, it reflects contemporary humanistic thinking because it steers a middle course between the psychoanalytic and behaviouristic schools, secondly, it proposes a conceptually simple theory of motivation which takes due account of environmental forces.

An examination of the literature on the hierarchy of needs reveals two points, first, that whilst often quoted, there is little empirical support for the existence of a hierarchy, and secondly that most measures of need importance are based on very specific attitudes to work and therefore fail to examine the whole of the individual's experience. These two points had a profound effect upon the direction of the thesis, it became apparent that any literature review must take into consideration research carried out in many varied fields, rather than simply the field of organizational psychology as is commonly the case. Secondly, if need importance was to reflect all aspects of life then a new measuring instrument was needed. Thirdly, that the paucity of empirical support may reflect the use of inappropriate instruments, so the present research should examine the need hierarchy propositions from this new standpoint. Finally there has been little attempt made in the past to consider the predictive validity of the theory by examining the attitudes and characteristics, or



"syndromes" as Maslow terms them, associated with need importance.

These considerations shaped the form of the thesis which explores five major themes. The first examines the mechanisms of the hierarchical model proposed by Maslow. The second theme considers operationalization of need importance and the creation of a new instrument, whilst the third theme explores the "syndromes" or characteristics, attitudes and values associated with each need. The fourth theme explores whether our knowledge of need importance can increase our understanding of the relationships between job characteristics and work outcomes like motivation and satisfaction. The final theme of the thesis examines need importance across various groups of people.

A note on methodology is relevant here: whilst the development and evolution of need importance should be examined over a lifetime, time constraints in most studies make this impossible. This thesis, like much research before it, examines need importance instead through group differences, contrasting the syndromes associated with decreased importance with those associated with increased importance. The syndromes or characteristics and attitudes associated with need importance were examined with a survey design, using both open-ended questions and questionnaires. The former allowed the gathering of very personal and confidential information.

The concept of between-group differences necessitated the examination of a disparate group as possible. Therefore the information collected reflects extreme differences in occupation, income and dwelling area. It is of interest to note that the information collected in 1977 from the Liverpool inner city area of Toxteth reflected then the high levels of deprivation and neglect

which were, four years later, to ignite into the summer inner city riots.

# CHAPTER 1

## THE MAJOR CONCEPTS OF MASLOW'S "HIERARCHY OF NEEDS" HYPOTHESIS AND THEIR RELEVANT EVIDENCE

	Page
1. INTRODUCTION	... 1
1.1 MASLOW'S PHILOSOPHICAL FRAMEWORK	... 2
(i) The Humanistic Approach	... 5
(ii) The "Inner Nature" of Man	... 6
The Relationship between the Individual and his Environment	... 7
(iv) The Importance of Needs	... 9
(v) Maslow's Philosophy of Data	... 10
1.2 THE MECHANICS OF THE MODEL	... 12
(i) Need Gratification and Importance	... 12
(ii) The Hierarchy of Needs	... 13
(iii) The Needs:	... 14
a. Physiology	... 15
b. Safety	... 15
c. Belonging	... 16
d. Self Esteem	... 16
e. Self Actualization	... 17
1.3 THE EVIDENCE FOR THE HIERARCHY	... 20
(i) The Salient Points of the Theory	... 20
(ii) Major areas of Investigation:	... 20
(iii) Evidence for the Hierarchy of Needs - Theme 1 : The Mechanisms of the Hierarchical Model	... 21
(iv) Evidence for the "Growth" and "Deficiency" tendencies	... 23
(v) Are their Five Needs?	... 24
(vi) Are People Motivated by Different Needs?	... 26
(vii) What evidence is there that a satisfied need is not a motivator?	... 32
(viii) Are the needs arranged in a Hierarchy of Dominance, such that frustration of one results in increased cognitive importance?	... 36
a. Physiology	... 36
b. Safety	... 37
c. Belonging	... 38
d. Esteem and Self Actualization	... 40
1.4 CONCLUSION	... 42

## CHAPTER 1

THE MAJOR CONCEPTS OF MASLOW'S "HIERARCHY OF NEEDS" HYPOTHESIS AND  
THEIR RELEVANT EVIDENCE

1. INTRODUCTION

The central figure throughout this thesis is Abraham Maslow, the psychologist who in the 1950's published a need-based theory of motivation which many saw as part of an alternative humanistic or "third" force to the contemporary schools of behaviourism and psychoanalysis. In the intervening thirty years the theory, termed "Maslows Hierarchy of Needs" has become increasingly popular, a frequent syllabus topic in departments of Psychology and Managerial studies. Here a paradox becomes apparent, for whilst most students of psychology and many managers in industry will use the idea of a pyramid of needs to conceptualize human motivation in the work context there has been little substantiating empirical evidence to support the credibility of Maslow's theory.

The introductory chapter discusses the philosophical framework within which Maslow was working, examines the actual mechanics of the model in more detail and finally synthesizes relevant research.



## 1.1 MASLOW'S PHILOSOPHICAL FRAMEWORK

The mid 1950's saw a revolt against 50 years of reductive behaviourism, the emerging humanistic psychology emphasized the philosophical theories of man unlike other orientations notably Wundtian "structural psychology", Freud's psycho analytical school and Watsonian behaviourism which stressed their independence from philosophy. Contemporary humanistic psychology criticizes theories of human life that stress mechanical aspects of human functioning and take the physical sciences as models, instead it emphasizes the role of values, goals and meaning and hopes to demonstrate that these factors could be established with scientifically valid methods and concepts. The historical roots of humanism, which emerged in the 1950's in the United States into what was largely a behavioristically or psychoanalytically orientated science, are closely related to two philosophical systems, existentialism and humanism.

Humanism can be traced to Socrates ideas of love of liberty and the open forum which became a principle of the Greek and Roman republics. As an intellectual movement Buhler (1972) contends that humanism originated in protests against the rigid scholasticism of the Middle Ages. The original movement emphasized classical studies and to these early humanists the classics represented the highest level of human achievement.

"The humanists tried and managed to express the concrete circumstances of their own life and personal thoughts and feelings in language largely borrowed from the classical models."

(Cassirer et al, 1948; p 52)

Perhaps this early humanism's most direct relation to present humanistic thinking is found in the works of Erasmus of Rotterdam who believed in man's essential freedom and the creative power of the individual an ideal which had great influence on many of the philosophies to follow, such as Liebnitz and Kant.

Present humanistic thinking can also be traced to the work of Kierkegaard (1840) and the existential movement. Horner and Buhler (1969) surveying his contribution wrote:

"Kierkegaard saw the coming alienation of man from himself .. and pointed out that the meaning for the person of the objective fact .. depends on how he relates to it; there is no existential truth which can omit the relationship..."

(Horner and Buhler, 1969; p 82)

The human condition, said Kierkegaard, is a state of need which requires choice and decision. Ethics operate not simply as a manner of evaluating a situation, but rather as an active factor in the decision making process. Buhler (1972) points out that:

"The origins of humanistic and existential thinking demonstrates two factors common to today's movement of humanism in the sciences: (1) criticism of rigid methodology and of confining study to certain prescribed areas and patterns, and (2) concentration on man experiencing his existence".

(Buhler, 1972; p 23)

The positive emergence of humanistic psychology can be marked by two events, the first, the birth of the Journal of Humanistic Psychology the aims of which Maslow (1961) articulated:

"The Journal of Humanistic Psychology is being founded by a group of psychologists and professional men and women from

other fields who are interested in those human capacities and potentialities that have no systematic place either in positivistic or behaviouristic theory or in classical psychoanalytic theory, eg. creativity, love, self-growth, organism, basic need gratification, self-actualization, higher values, ego-transcendence, objectivity, autonomy, identity, responsibility, psychological health, etc."

The second influence was the first International Congress of Humanistic Psychology held in August 1970.

Maslow's contribution to humanism and psychology in general has been conceptualized in a number of ways. For example, Maddi (1980) places Maslow's theories with what he terms the "fulfilment models" of Goldstein (1939), Allport (1955), White (1959) Rogers (1961) and Adler (1972) sharing with them the belief that life is the unfolding of one basic force conceived as actualization by Rogers, Goldstein and Maslow.

"People are conceptualized as trying to become what their inherent potentialities actively suit them to be ... Fulfilment follows a course determined by something like a genetic blueprint".

(Maddi, 1972; p 113)

Hall and Nougiam (1978) place Maslow's work within the framework of the organismic theory, purported by Goldstein (1963) and Angyal (1941). This approach, like gestalt theory, directs the investigator to the whole person and studies the total person using qualitative rather than quantitative methods. Overall Maslow's approach can be distinguished by five major orientations, his humanistic approach, his belief about the inner nature of man, the relationship between man and his environment, the importance of

needs and finally his philosophy of data.

(i) The Humanistic Approach

The first distinguishing feature of Maslow's work (1943, 1954, 1968) is that like Rogers (1961) he criticized the classical, mechanistic approach represented by behaviourism as being unsuitable for studying the whole person. This type of reductive analysis, he argued had been effective in finding out how things happen. The why of things, the questions of purpose and meaning, of reasons and intentions, in short, values are left alone. Values are driven by objective science into the non-scientific realm of ethics and religion. As a humanist Maslow refused to ignore values, instead favouring the holistic approach. This stresses the uniqueness of the individual and the idea that methods for the study of human personality should not be reductive, analytical, nomothetic methods of the natural science but should reflect the unique, individual integration which is achieved by each person. By adopting this third force or humanistic perspective of the individual Maslow found fault with prevailing motivational research, primarily behaviourism and psychoanalysis, on a number of issues.

First, both approaches often involve a logical error, instincts being created post-hoc to explain inexplicable behaviour. Secondly, they tend to be ethnocentric and overstate cultural relativism. Maslow believed that by comparison with similarities, the differences in human nature, though undeniable, appear superficial. All people seem to have pride, prefer to be liked and respected. Thirdly, the paradigm for some theories are based on animals, which have very strong instincts, while in contrast, humans have rather weak, though persistent instincts. Fourthly, previous theories of instincts have tended to dichotomize instinctive impulse



and rationality. Maslow argued, that in contrast they are synergic rather than antagonistic. For instance, reason tells us that children should be loved and cared for, which is equally what they instinctively need.

(ii) The "Inner Nature" of Man, Growth and Deficiency Motivation

The second distinguishing feature of Maslow's work is his attitude to the "inner" nature of man. His understanding is different from either the behaviourist or psychoanalytic approaches. He unbraided the latter for its "pessimistic, negative and limited conception of man, which has restricted itself to looking at the darker, meaner half", (Maslow, 1954). He has pointed out that the "bad animal" interpretation of instincts is a fallacy which has particularly unfortunate effects on the thinking of Western civilization. Like the humanistic psychologists Rogers (1961) and Goldstein (1963) he believed that:

"This inner nature, as much as we know of it so far, is definitely not evil, but is either what we adults in our culture call good or else is neutral. The most accurate way to express this is to say that it is prior to good or evil".

(Maslow, 1962; p 93)

Unlike Freud or Skinner, Maslow believed that the major tendencies in life are the needs to survive and actualize. Actualization is an inherent potential, central to development, while the survival need, common to all men and therefore part of the core of personality, is the tendency to ensure physical and psychological survival. The survival tendency is prior to, or preponent over the actualization tendency, this is not to say it is more important, for it can only maintain life, it cannot enhance it.

According to Maslow the survival and actualizing tendencies are the major motivational trends, the latter being the motivation towards growth whilst the former is motivation towards the avoidance of deprivation. Growth motivation is the need or urge to enrich life and enlarge experience and involves not the repairing of deficits so much as the expansion of horizons. In contrast deprivation motivation is the urge to strive for goal states which at that time have not yet been achieved. Its aim is to decrease tension resulting from an unsatisfied need. Whilst the concept of deprivation motivation resembles the generally held view of motivation, in the sense that a specific goal or end state is strived for, growth motivation is quite different. Maddi (1972) has argued that growth motivation is a logical inconsistency since it assumes a kind of motivation which does not involve striving towards something that is lacking. He wrote: "A motive without a specified goal is not a motive at all". Maslow appears to have acknowledged this inconsistency when he contended:

"Maturity, or self actualization, from the (motivational) point of view, means to transcend the deficiency needs. This state can be described then as Meta-motivated".

(Maslow, 1962; p82).

#### (iii) The Relationship between the Individual and his Environment

Maslow acknowledged the importance of environmental circumstances in determining the individuals motivation. In 1962 he wrote that growth motivation:

"is not strong and overpowering and unmistakable, like the instincts of animals. It is weak and delicate and subtle and

easily overcome by habit, cultural pressure and the wrong attitude towards it. Even though weak, it rarely disappears in the normal person".

(Maslow, 1962; p102)

The overcoming of this "inner nature" by habit or cultural pressure acknowledges the importance of environmental circumstances. Maslow believed that as personality unfolds through maturation in a benign environment the drive towards maturation manifests itself. When man is miserable or neurotic, it is because the environment has made him so through ignorance and social pathology.

Because deprivation motivation is the urge to strive for goal states the deficiency needs can only be satisfied by other people, which means considerable dependence on the environment. (Maslow, 1968; p34).

"That is to say he must adapt and adjust by being more flexible and responsive and by changing himself to fit the external situation. He is the dependent variable, the environment is the independent variable".

In contrast, the growth motivated individual is far less dependent and far more autonomous and self directed.

"Growth takes place when the next step forward is subjectively more delightful, more joyous, more intrinsically satisfying than the previous gratification with which we have become familiar and even bored".

(Maslow, 1968; p45)

The environment is also acknowledged as a possible regressive power when it fails to gratify basic needs. Ungratified basic needs have fixative, regressive power and increase the attraction of safety and security, whilst growth is a never ending series of free

choice situations in which the individual chooses between safety, dependency, regression and growth, independence, progression, maturity.

Maslow proposed that one of the major tasks of childhood is satisfaction of the survival tendencies, for only when these are firmly established can actualizing tendencies increase in salience. However, the tendency towards actualization can be easily frustrated by environmental circumstances, at which stage the individual will revert to a more chronic expression of the safety needs.

(iv) The Importance of Needs

The basis of Maslow's thinking is the dialectic relationship between deprivation and growth motivation. It is motivation which is the driving power of individual growth. However, as he pointed out in 1954, motivation:

"cannot be seen directly very often but is more often a kind of conceptual derivation from the multiplicity of specific conscious desires. In other words then, the study of motivation must be in part the study of the ultimate human goals, or desires or needs."

(Maslow, 1954; p60)

Which "ultimate human goals" are chosen depends largely on the theorist. Murray (1938) for instance, distinguished thirty creative and negative needs, whilst Fromm (1955) identified five. The literature abounds with lists of manifest needs grouped in one way or another.

What Maslow stressed is that although growth and deprivation motivation are the basic forces of life these are not directly visible but rather manifest themselves in syndromes or needs.



"A syndrome (is) an organized collection of diversities, all of which have the same psychological meaning".

(Maslow, 1954; p33).

Syndromes have an internal hierarchical structure, in the sense that it is possible to distinguish various levels of specificity, for example the first level might be self-esteem, while the second might be a dominating attitude towards subordinates, a specific symptom, such as the behavioural act of interrupting someone may be the third level. These syndromes or needs are the fundamental data of personality study and display the following characteristics:

- a. Interchangeability of symptoms: the same syndrome may manifest itself under different conditions by way of different symptoms.
- b. Resistance to change: the syndrome, once established tends to maintain itself even when external conditions change considerably.
- c. A tendency to change as a whole: in the case of change, all or most symptoms change in the direction which has the same meaning for all.
- d. Internal consistency: all symptoms belonging to a certain syndrome are usually found to be present.

(v) Maslow's Philosophy of Data

Whilst many of Maslow's contemporaries, particularly those from the behaviourist school were concerned less with theory building and more with observing behaviour Maslow was essentially a theorist, rejecting reductive, analytical methods. As a consequence the hierarchy theory was postulated largely without supportive

empirical evidence. Maslow views of empirical data are well illustrated in the following quotation where he talks about his studies of self-actualized individuals:

"I consider the problem of psychological health to be so pressing, that any suggestion, any bit of data, however moot, are endowed with great heuristic value. This kind of research is in principle so difficult, involving as it does a kind of lifting of oneself by one's axiological bootstraps - that if we were to wait for conventionally reliable data - we should have to wait forever. It seems that the only manly thing to do is not to fear mistakes, to plunge in, to do the best one can, hoping to learn enough from blunders to correct them eventually".

(Maslow, 1963; p 527)

This is exactly what he did particularly when investigating groups of self actualized individuals. Here little has been published about the characteristics of his small sample group or how they were selected or studied. Recall that whilst he considered needs and behavioural acts as the fundamental data of personality study he did not provide studies of needs or syndromes as evidence of his theories.

## 1.2 THE MECHANICS OF THE MODEL

We have briefly examined those beliefs which appear to be central to Maslow's thinking. In summary he proposed that the study of people must address itself to the "why" questions of behaviour rather than the "hows". He believed fundamentally that people are not only motivated by the need to survive but also by the need to actualize their potential to thrive. The environment plays a key role here particularly in the gratification of survival needs and as the "ground" or canvas upon which man could promote his growth to actualization.

Upon this framework of beliefs Maslow has built a model of motivation which seeks to understand the mechanisms of behaviour. The major axis of the model is the relationship between need gratification and importance and the fixative and regressive power of ungratified needs. Let us examine these mechanisms in more detail.

### (1) Need Gratification and Importance

It has been noted that the survival tendency, or needs are preponent over the actualizing tendency. The more survival or safety needs are gratified the less valence or importance they have in influencing a persons action. This leads to one of the central propositions of the model, that a satisfied need is not a motivator,

"Needs cease to play an active determining or organizing role as soon as they are gratified".

(Maslow, 1943; p393)

As a consequence of satisfaction the survival needs are submerged and the actualizing tendency emerges. Thus there is an

exchange of old satisfiers for new satisfiers, which occurs through the over-estimation of the powerful, unsatisfied need and devaluation of the gratified need.

"Wanting anything, in itself implies already existing satisfactions of other wants. We would not have the desire to compose music or create mathematical systems ..... if our stomach was empty all the time. Proper respect by the constructors of motivational theory has not been paid to either of these factors ..... first that the human being is never satisfied, except in a relative, or one-step-along-the path fashion, and second, that wants seem to arrange themselves in some sort of hierarchy of prepotency".

(Maslow, 1954; p72)

This arrangement of wants, which Maslow talked of leads us to the second feature of the model, the hierarchy of needs.

#### (ii) The Hierarchy of Needs

Maslow (1954) proposes that the basic needs are arranged hierarchically on the principle of relative prepotency. At any stage in an individuals life a preponent need can be identified the satisfaction towards which behaviour is directed. In this sense the preponent need can be considered the strongest. Satisfaction of this need results in the emergence of the next adjacent, higher need until self actualization occurs. This process is conceived as a gradual movement, as he has pointed out:

"So far our theoretical discussion may have given the impression that these five sets of needs are somehow in such terms as the following. If one need is satisfied, then another emerges. This statement might give the false



impression that a need must be satisfied a 100% before the next need emerges. In actual fact, most members of our society who are normal are partially satisfied in all of their basic needs and partially unsatisfied in all their basic needs at the same time. A more realistic description of the hierarchy would be in terms of decreasing percentages of satisfaction as we go up the hierarchy of prepotency. For instance ... it is as if the average citizen has satisfied perhaps 85% of his physiology needs, 70% of his safety needs, 50% of his love needs, 40% of his self esteem and 10% of his self actualization needs".

(Maslow, 1954; p 100/101)

The basic needs also range from higher to lower in a number of other senses. The higher needs show a later phyletic and ontogenic development, they are less imperative for sheer survival, they are less urgently subjective and require more preconditions for their gratification.

### (iii) The Needs

When talking of the hierarchy Maslow identified four basic needs characteristic of "deficiency" motivation and one need (self actualization) characteristic of "growth" motivation. For each need a number of salient "syndromes" have been identified. The following sections discuss these syndromes of behaviour<sup>1</sup>.

---

<sup>1</sup> The syndromes of behaviour are discussed in more detail in Chapter 3.1 (i)

a. Physiology

The physiology needs are the most preponent, their fulfilment serving to sustain the individual. These needs are concerned with the basic biological drives, sex, food, drink, sleep and escape from pain. Of these needs Maslow wrote:

"Undoubtedly these physiology needs are the most preponent of all the needs. What it means specifically, is that in those human beings who are missing everything in life in an extreme fashion, it is likely that the major motivation would be the physiology needs rather than the other ones".

(Maslow, 1954; p82)

b. Safety

The safety needs focus on the requirement for a predictable, secure and orderly world. As with other psychological phenomena they are demonstrated in a variety of concerns through which the primary issues are expressed or solved. Maslow categorized the various manifestations of the safety needs as:

"Security, stability, dependency, protection, freedom from fear, from anxiety and chaos, need for structure, order, law and limits".

(Maslow, 1954; p39)

Most of the safety needs are gratified in the more affluent societies of the western world:

"We can perceive the expression of safety needs only in such phenomena as, the common preference for a job with tenure and protection, the desire for saving accounts, and insurances of various kinds".

(Maslow, 1954; p87)

If these needs are not satisfied the individual will see other people and himself, as well as the world in general, as unsafe, unjust, inconsistent or unreliable and will either seek for or attempt to create a life which will offer the greatest stability and protection.

c. Belonging

The love and belonging needs are characterized by the desire to possess affectionate relationships with other people and to belong to a wider group. An individual motivated on this level desires contact, intimacy, warm and friendly relationships.

"Now the person will feel keenly, as never before, the absence of friends or wife or children. He will hunger for affectionate relationships with people in general, namely, for a place in his groups and will strive with great intensity to achieve this goal".

(Maslow, 1954; p89)

d. The Self Esteem Needs

The esteem needs centre around the issue of firmly establishing a high sense of self worth, achieved through the appraisal of actual competence in ones activities and through receiving the esteem of others. As with the other need, there are many dimensions as well as a variety of concerns through which they are expressed.

"They are first, the desire for strength, for achievement, for adequacy, for mastery and competence, for confidence and freedom. Secondly, there is what might be called the desire for reputation or prestige (defining it as respect or esteem

from other people), status, dominance, recognition, attention, importance or appreciation".

(Maslow, 1954; p90)

e. The Growth Need, Self Actualization

Maslow (1954), like Goldstein (1959) and Rogers (1939) sees self actualization as the fulfilment of mans inherent potential. His identification of the salient characteristics of this state are very similar to those identified by Roger who saw the fully functioning person characterized by "openness to experience", "existential living", "organismic trusting", "experiential freedom", and "creativity". The distinction between the growth and the deficiency needs is a very basic one, since there is a difference in both motivational and cognitive strategies. This need is the "desire to become more and more what one is, to become everything one is capable of becoming" (Maslow, 1954; p92).

The needs for self actualization seldom manifest themselves to their full extent in the average person.

"Though, in principle self actualization is easy, in practice it rarely happens (by my criteria, certainly in less than 1% of the population)".

(Maslow, 1968; p204)

However, because the deficiency needs do not have to be fulfilled completely for a less preponent need to emerge the needs for self actualization can be seen to operate in most individuals to some extent.

Maslow (1954) was able to identify the following 15 most salient characteristics of the self actualized individual.



1. A more efficient perception of reality and more comfortable relations with it. The ability to detect falseness and spuriousness in other people and judge people accurately.
2. Acceptance of self and others. Relatively little guilt, shame or anxiety.
3. Spontaneity, in thoughts and covert tendencies, and also in behaviour.
4. Problem centring. Not being ego centred, but rather orientated to problems outside the self, important problems to which life is devoted in the sense of a mission in life.
5. Detachment. The need for privacy. The ability not to mind solitude and even seek it; objectivity being an expression of detachment.
6. Autonomy. Independence of culture and environment.
7. Continued freshness of appreciation. "They desire ecstasy, appreciation and strength from the basic experiences of life" (Maslow, 1954; p215)
8. Mystical experiences or the "oceanic feeling". These are experiences which may arise in a variety of settings; they are:  
  
"Feelings of limitless horizons opening up to the vision, the feeling of being simultaneously more powerful and more helpless than one ever was before, the feeling of great ecstasy and wonder and awe, the loss of placing in time and space, with, finally, the conviction that something extremely important and valuable had happened..."  
  
(Maslow, 1954; p216)
9. Social interest. The feeling of identity, sympathy and affection for mankind.

10. Interpersonal relations. These are very deep and profound and are present usually with only a few rather than with many individuals.
11. Democratic character structure. The ability to respect people and learn from them and relate to them, irrespective of birth, race or family.
12. The ability to discriminate between means and ends, that is discriminate ends or what is being strived for from the means for accomplishing the ends.
13. Sense of humour. The ability to be philosophical and nonhostile in humour.
14. Creativeness. Each one has a "special kind of creativeness or originality, or inventiveness that has certain peculiar characteristics".  
(Maslow, 1954; p223)
15. Resistance to enculturation. The ability to get along in the culture whilst being detached from it and essentially autonomous.

### 1.3 THE EVIDENCE FOR THE HIERARCHY

Turning now to examine the main points of Maslow's need theory consideration will now be given to the sorts of questions which have been asked about his work and an exploration of the substantiating evidence behind their answers.

#### (i) The Salient Points of the Theory

Maslow's theory of the need hierarchy can best be summarized by the following statements.

- a. A satisfied need is not a motivator.
- b. The needs are arranged in a hierarchy.
- c. People are motivated by differing needs according to their position within the hierarchy.
- d. Therefore people are satisfied by different needs according to their position within the hierarchy.
- e. The environment has a profound effect on the ability of the individual to satisfy basic needs.
- f. Need importance for any particular need can be characterized by a specified array of behavioural syndromes.

#### (ii) Major areas of Investigation

Research to elucidate these six statements of Maslow's theory has been concerned with the following issues investigated here under Theme 1, "The Mechanisms of the Model":

- a. What evidence is there for a hierarchy of needs?
- b. What evidence is there of the "growth and deficiency" tendencies?
- c. Are there five needs?

- d. Are people motivated by different needs?
- e. What evidence is there that a satisfied need is not a motivator?
- f. Are the needs arranged in a hierarchy of dominance such that frustration of one results in the increased cognitive importance of that need?

To these general questions the present study explores a further four issues of concern:-

- a. How do we measure need importance? (Theme 2)
- b. What are the "syndromes" of behaviour which characterize a particular need? (Theme 3)
- c. Can the concept of need importance increase our understanding of work and its outcomes? (Theme 4)
- d. What is the relationship between group differences and need importance? (Theme 5)

Having formulated the general scope of the questions which arise in the literature from Maslow's work we now turn to a closer appraisal of the evidence that emerges from their application.

### (iii) Evidence for the Hierarchy of Needs

#### Theme 1 : The Mechanisms of the Hierarchical Model

The field of contemporary motivation theory has to a large extent been characterized by its lack of empirical evidence. Thirty years ago Koch made the following observation:

"Confronted with this over profusion of conflicting "theory" (of motivation) the hygenic thing to do is to turn to the facts. What we find is a ridiculously meagre set of scattered experimental findings and empirical observations. Moreover, much of this material proves, on close analysis, to



be ambiguous, unreliable, of undetermined generality, or downright trivial".

(Koch, 1951; p29)

A decade later, Cofer and Appley (1964) reviewing a number of motivational models also concluded that they varied widely in their assumptions and in general lacked critical or decisive evidence relating to them.

The hierarchical theory has certainly been no different, partly due to Maslow's notions of "evidence" which allows "any suggestion, any bit of evidence", (Maslow, 1963; p527)

The methodology of Maslow's approach is such that it does not contain either any "built in" reliability or tested validity as a more empirical approach might. However lack of apriori evidence need not negate a theory. As Koch (1951) points out the hygienic thing to do is to turn to the facts. Certainly the hierarchy has inspired a vast field of research.

Roberts (1973) reported that by 1972 well over 200 studies which used Maslow's hierarchy and at least 15 typologies parallel with his five need stages had been published. The hierarchy concept had been used in the field of anthropology (eg. Aronoff, 1967) business administration (eg. Huizinga, 1970), education (Simpson, 1971) political science (Drews and Lipsam, 1971), psychology (Roberts, 1973) and sociology (Messe, Aronoff and Wilson; 1972). Its appeal to this broad range of disciplines might in itself be indicative of a certain validity. However, here one of the major paradoxes of the theory, inevitably quoted by researchers, emerges. There is very little well constructed and documented evidence to suggest the existence of a hierarchy of the form which Maslow hypothesized. This is the conclusion which Wahba and Bridwell

(1976) came to after reviewing the empirical evidence for the hierarchy from statistical surveys carried out in the work situation, and the conclusion Cofer and Appley (1964) arrived at considering anecdotal evidence.

(iv) Evidence for the "Growth" and "Deficiency" Tendencies

The nature of the theory lends itself to both anecdotal and empirical evidence.

Maslow has argued that whilst previous theories of instincts have tended to dichotomize impulse and rationality, in fact they are synergic rather than antagonistic. To support this view he cites experiments which indicate that the body is capable of considerable self regulation in the interests of homeostasis and others indicating that dietary self selection in animals and children provides, within limits, a satisfactory variety and quantity of nutrients. This evidence indicated to Maslow that organisms, left alone in a free choice situation can make wise choices. However, as Cofer and Appley (1964) point out, it is a rather large conceptual leap from these kind of data involved in experiments of homeostatis to the belief that organisms can know their own needs.

Another example of anecdotal evidence is taken from the field of psychotherapy. Here Maslow (1968) has argued that it is the pressure towards health, or "growth" that makes therapy worthwhile. There is some dispute about the positive "growth" outcomes of therapy. Whilst Rogers and Dymond (1954) have observed substantial evidence of "growth" following therapy Eysenck (1952) believes that it has no proven value.

(v) Are There Five Needs?

There are numerous lists of manifest needs ranging from the five which Fromm identified in 1955 to the thirty needs earlier identified by Murray (1938). What evidence is there that the many human needs can be grouped into just five categories as proposed by Maslow?

Research in this area has concentrated on analysing the results of the most widely used method of assessing need satisfaction, Porters Need Satisfaction Questionnaire<sup>1</sup>.

The following general conclusions emerge: (Payne, 1970; Roberts Walter and Miles, 1971; Herman and Hulin, 1973; Waters and Roach, 1973)

- a. None of the studies have shown all of Maslow's five need categories as independent factors.
- b. In one (Waters and Roach, 1973) higher order needs and lower order needs emerged as two factors. In others (Payne, 1970) a "general need satisfaction" and "general job valency" factor emerged.
- c. The previous studies used orthogonal rotation, which assumes independence of factors. In view of the probable overlap between needs, Mitchell and Moudgill (1976) analysed responses for five factors using oblique rotation, which allows independent factors. The factors which emerged corresponded to the security, social, esteem, autonomy and self fulfilment categories.

Overall the studies utilizing Porters NSQ, with the exception of

---

<sup>1</sup> Reservations about the validity of this instrument will be discussed in Chapter II

Mitchell and Moudgill (1976) are clearly not supportive of Maslow's classification scheme.

Huizinga (1970) unlike a number of other researchers assumed that the need categories would overlap. Rotating the data from his own questionnaire for five factors, he distinguished four groups of items. These comprised the need categories, self actualization and self esteem, belonging, physiology and safety. Rotating of more and more factors lead at no point to an appropriate split of the combination self esteem and self actualization.

A number of researchers have attempted to reinterpret past findings in the light of the hierarchy. For example Huizinga (1970) statistically reinterpreting Schaffer's (1953) twelve need correlations concluded that they showed some symmetry, one cluster contained the esteem needs whilst the other contained the social and security needs. Huizinga has also reinterpreted Friedlander's (1965) data from his "sources of satisfaction" research. Friedlander extracted three factors, Factor I (which Huizinga interpreted as representing the needs for belonging, safety and physiology), Factor II which was self actualization and esteem, and Factor III which was respect. In this reinterpretation like that of Schaffer whilst the factors were made up of adjoining need categories, neither studies showed clear evidence of the five need categories proposed by Maslow.

Finally, Alderfer reviewing nine factor analytic studies of employee attitudes in 1972 could only find one consistent need, which he termed the "growth need".

In conclusion, with the exception of Mitchell and Moudgill's (1976) study, none of the research in this field appears to support the notion of five separate needs.



Not surprisingly a number of attempts have been made to modify Maslow's original framework. For example, both Barnes (1960) and later Lawler (1973) have proposed a two stage hierarchy, Porter (1961) has identified six categories, Huizinga (1970), seven whilst Alderfer (1972) proposed three.

(vi) Are People Motivated by Different Needs?

Maslow has repeatedly stressed that there will be differences between people in the needs they find important and are satisfied with. These differences will become apparent through the need "syndromes" which are the behavioural attitudes and acts which surround a need. Most research in interpersonal differences have examined very broad syndromes, notably occupational status. Only Aronoff (1967) to date has attempted to examine more closely specific syndromes and symptoms.

There is some evidence, both from organizational research and the field of psychology generally which reveal systematic differences between groups of people, based primarily on the type of work they do.

A number of studies using Porter-type questionnaires have reported differences in self-actualization need importance between occupational groups. For example early studies by both Porter (1961) and Centers (1948) demonstrated that as the level in the organization increases from lower management to president so the importance of autonomy and self actualization increase. In the same way Centers reports:

"... a fairly consistent tendency for the desire for self expression to decrease as first choice as lower and lower occupational levels are scrutinized, and another consistent tendency for the desire for security to increase".

(Centers, 1948; p205/206)

Blau (1964) using a rather restricted instrument also reports that self actualization items are considered more important by professional groups, whilst belonging and safety needs are considered more important by the lower occupational groups.

Later studies by Hall and Nougiam (1968) report similar results, that higher occupational groups are more concerned with affiliation, achievement, esteem and self actualization than younger, lower status groups. Wahba and Bridwell (1976) reviewing twenty three studies which used the original or modified version of Porter's NSQ report that the majority found self actualization the least satisfied and belonging the most satisfied need.

Interestingly whilst increases in the higher needs have been consistently reported in individuals holding managerial positions a number of interpretations of these data have been made.

Hall and Nougiam (1968) acknowledged the problems of interpretation when they wrote:

"One problem of inferring the existence of a need hierarchy from the study of deprived and satisfied groups is that selection, situational and cultural factors, and not personality processes may be effecting the results".

(Hall and Nougiam, 1968; p14)

Top executives may have high needs for achievement and ambition, but these may have been present before promotion and therefore the cause rather than the effect of moving to a higher level of the organization. They interpret their findings in light of a model of sequential career stages, the first stage characterized by a concern for safety and the second for promotion and achievement. The difference between the career and hierarchical model is that the

former asserts that movement to a higher status occupation is a result of regular status passages facilitated by the environment and the individual, while the latter contends that the needs themselves are inherently hierarchical. The important point is that movement is largely independent of perceived satisfaction with earlier stages. Thus, they argue although the emergence of higher needs has been reported by a number of studies, it is incorrect to infer that lower level gratification causes higher needs to emerge. According to the career model, people may express less dissatisfaction with a lower need, simply because that need has been gratified, rather than vice-versa.

A thorough study by Aronoff (1967) examined differences in need importance between two occupational groups, fishermen and cane-cutters on the West Indian Island of St Kitts. He demonstrated significant differences across the two occupational groups, the most important needs for the cane cutters being physiology and safety, while, for the fishermen, the predominant needs were belonging and esteem.

Aronoff then went on to relate these differences to a number of personality and interactional patterns. Using sentence completion and interviews to examine childhood experiences and behavioural patterns, Aronoff was able to show that an above average incidence of childhood instability and parental separation was associated with increased focus on safety and physiology needs. With respect to interactional patterns Aronoff proposed that much of the group behaviour exhibited by the cane cutters could be related to the satisfaction of their preponent needs. For example, although cane cutting gangs can be arranged in a number of ways, democratic, authoritarian or *laisse-faire* the particular arrangements of these



groups facilitate the satisfaction of the needs for safety.

The cane cutting groups were supervised by a head cutter who set the pace, took all the initiative and responsibilities and directed each member of the group. Group co-operation, solidarity and supportive relationships among the cutters were negligible. This simple, autocratic arrangement needed no individual decision making, and Aronoff argued gratified the members preponent safety needs. This motivation was reflected in other aspects of life, cane cutters tended to marry older women (who are considered more reliable housewives) build fences around their homes and have fewer friends.

In contrast, the fishermen reported fewer incidents of childhood instability, and worked in more democratic, highly cooperative groups. They reported larger numbers of friends, who they frequently visited, and married younger women, who are considered less experienced housewives.

Aronoff interpreted these findings in terms of need gratification, arguing that economic institutions permit a wide range of potential arrangements which can only be understood by reference to the specific psychological needs its members are trying to satisfy. Thus, the observed differences in personalities are a result of the specific deprivation or gratification of basic needs experienced during childhood. Consequently the cane cutters choose that occupation and arrange their groups in a manner which will satisfy their preponent safety needs.

Aronoff's argument presupposes flexible economic institutions. To argue that the cane cutters choose their occupation to satisfy their preponent needs, ignores the most parsimonious historical explanation, that they had no alternative.

The only other occupation on the island is fishing, and, because this is jealously passed down from father to son, sons of cane cutters have no alternative but to enter their fathers occupation. Therefore, if a boy comes from a cane cutting family, which is by nature seasonal and unreliable, he too will become a cane cutter, not because it satisfies his preponent need, but because there is no alternative. Aronoff's hypothesis that psychological need determinants direct motivation towards gratification, which enter into a process of adjustment with the institutional demands by a system of reciprocal interchange is somewhat tenuous. The 1967 study showed that certain behaviours are associated with certain needs, but could not demonstrate causality.

In 1971 Aronoff and Messé reported a follow up study which provided limited evidence for the causal hypothesis. Returning to the island they observed that the cane cutting gangs were more democratic and had a high degree of cooperation and solidarity among the gang members. Most of these workers had joined the gang in the last six years, following a large fire which swept the island. These workers had grown up in much more stable families and, unlike the early group, when tested considered belonging to be their most important need. Aronoff attributes these changes in group structure to need importance. It is still somewhat questionable whether the more democratic structures can in fact be related to changes in need importance, or, more simply, to changes in managerial techniques and general life style.

Aronoff's later research provides one of the rare series of studies which examine the influence of need importance on group behaviour. The first study (Aronoff and Messé, 1971) demonstrated that a group of safety orientated individuals, when given a task to



perform, established a more hierarchical structure, concentrating task orientated behaviours on fewer members, than groups composed of esteem orientated individuals.

The second study, (Messé, Aronoff and Wilson, 1972) attempted to specify more precisely the mechanics by which group members become associated with specific roles in the group. Past research had shown that personal attributes such as competence, intelligence, occupation or sex, and external indicators of status can influence the roles taken by members in a group. Messé et al (1972) examined the hypothesis that individuals with increased safety needs would focus on external cues, whilst those with increased esteem needs would focus on personal qualities. Two types of three-person groups were formed, composed homogeneously of individuals with increased safety and esteem needs. Each group contained one male and two female members. Following the assumption that males rather than females are expected to take leadership positions, it was predicted and found that males would occupy this position more frequently in the safety groups, while leadership in the esteem groups correlated more highly with competence.

A number of points are important in the interpretation of these studies. First, although Aronoff terms these studies experiments they are more closely related to the cross sectional method which Whaba and Bridwell (1976) advocate, than a true manipulation of variables, second, as Hall and Nougiam (1968) have pointed out, when two groups are studied it is impossible to isolate the cause of the differences between them. Aronoff, isolating high and low need groups, uses the concept of need importance to explain differences between groups. However, a number of mediating variables can also be proposed, for instance, social class

differences could explain differences in both need importance and the type and sex of the leader.

The findings indicate that while Aronoff has contributed breadth to the study of the hierarchy, the problem of causality and mediating factors, also encountered in the managerial studies, have not yet been surmounted.

(vii) What Evidence is there that a Satisfied Need is not a Motivator?

Maslows assertion that a satisfied need is not a motivator is, in many respects, the central axis of the model of motivation. It can be conceptualized in the following manner:

The higher the satisfaction with a need;

- a. the lower the importance of the need
- b. the greater the importance of the adjacent higher level.

A number of studies (eg. Newman, 1948 Hall and Nougiam, 1968; Lawler and Suttle 1972; Graham and Balloun, 1973) have tested the proposition that satisfaction of a need reduces the importance of that need, for example, as satisfaction with the belonging need increases, so its importance to the individual decreases. This proposition allows one to predict the existence of a negative relationship between satisfaction and importance within each need category, the one exception being the self actualization need, which never becomes completely satisfied or loses its status as a motivator.

The second proposition states that need satisfaction for one category is positively related to the need importance of the adjacent higher category. This predicts for example, a positive

relationship between belonging need satisfaction and the importance of the esteem needs.

With regard to the first proposition early research by Newman (1948) has shown that workers who rated "having a friendly and understanding supervisor" as the most important factor in their work were significantly less satisfied than the remainder of the sample with a number of items dealing with interpersonal relationships. Thus, for this group, high importance was associated with low satisfaction.

Another study testing the first proposition was carried out by Graham and Balloun (1973) with an instrument containing both methodological and reliability problems<sup>1</sup> on a sample of only 37 people. They found that satisfaction and importance of a given need were negatively and significantly correlated.

However, Hall and Nougiam (1968) report that, with the exception of the affiliation (belonging) need, need importance correlated more strongly with its own satisfaction than with the satisfaction of any other need. This finding not only fails to support Maslow's dictum (1943, p393) that "a satisfied need is not a motivator", it seems to contradict it.

When Alderfer (1972) considered the same problem his findings suggest a number of qualifiers. For the growth (self actualized) and relatedness (belonging) need, the type of organization moderated the relationship between need importance and satisfaction. He found that the relationship between need importance and satisfaction was

---

<sup>1</sup> See Chapter 2 for a detailed critique of this methodology.

positive in data gathered from two fraternity houses, an adult therapy group and boys school. However data from a bank and manufacturing company showed negative correlations. Those employed in bank and manufacturing organizations tend to have lower levels of relatedness (belonging) and growth (esteem and self actualization) satisfaction and also experience a negative relationship between satisfaction and importance for each of these two needs. On the other hand, those in the therapy groups had higher levels of relatedness satisfaction and experienced positive relationships between need satisfaction and importance. Wanous and Zwany (1977) considering this paradox, suggested that need fulfilment may be a mediating variables in the relationship between importance and satisfaction.

In a study to examine this proposition they measured need fulfilment by asking "How much of each characteristic is present in your job?" and incorporated the level of need fulfilment as a moderating variable. They report that the overall relationship between importance and satisfaction was insignificant for the existence needs, and positive for both relatedness and growth needs. Dividing the sample into high, medium and low fulfilment resulted in the expected moderating effect occurring as a function of need fulfilment. For example, in the growth need the correlation between importance and satisfaction for low need fulfilment was significantly negative, for medium fulfilment was nonsignificant and for high fulfilment was significantly positive.

This implies that the proposition may only be operative in the case of low fulfilment and therefore the satisfaction/importance relationship is not as simple as originally formulatd by Maslow.

A number of studies have considered the hypothesis that the



satisfaction of a given need will be positively correlated with the importance of the need at the next highest level. Wanous and Zwany (1977), using Alderfer's ERG (Existence, Relatedness and Growth) paradigm found no significant correlations between existence satisfaction and relatedness importance, and no moderating effect of fulfilment. The relationship between relatedness satisfaction and growth importance was positive and sensitive to the moderating effect of need fulfilment, the relationship being negative for medium fulfilment and positive for high fulfilment, again suggesting a possible oversimplification in Maslow's hypothesis.

Hall and Nougiam (1968) used data collected over a five year period to test the hypothesis that from one year to the next, changes in the satisfaction of a given need level will be positively correlated with changes in the importance of the needs at the next higher level. This analysis yielded similar results to the static analysis. Again the strength of each need in a given year was positively related to its satisfaction in the previous year. This relationship was particularly strong for achievement and esteem needs.

The longitudinal data also allowed Hall and Nougiam to test the hypothesis that after five years of employment, successful managers would show lower need importance and higher satisfaction in the safety needs than less successful colleagues.

However, the analysis refuted their hypothesis. For both the successful and less successful groups, higher need importance increased while lower need importance decreased in about the same way, indicating that changes in these needs were unrelated to work gratification of the safety, achievement and esteem needs. According to the theory successful managers should become more



satisfied with lower needs, since their importance had decreased. Contrary to predictions the data showed that the average satisfaction decreased in each of the lower needs.

Furthermore, the satisfaction of the less successful group either decreased or remained the same for the higher needs, while the strength of these needs increased. Hall and Nougiam postulate that this decrease in satisfaction may reflect the gap between need strength and need fulfilment.

Finally, Lawler and Suttle (1972) conducted a longitudinal study using a cross-logged correlation analysis in addition to static correlation analysis. The former makes it possible to infer with some confidence the strength and direction of causal relationships, using Porters NSQ they concluded that the data offered little support for the second hypothesis.

(vii) Are the Needs arranged in a hierarchy of dominance, such that frustration of one results in increased cognitive importance?

There are a number of fields of research which pertain to this question. Each of Maslow's needs will be briefly considered in turn by first examining the anecdotal evidence marshalled to support the hypothesis that frustration of the basic needs results in behaviour dominated by the need to gratify those needs.

a. Physiology

There are many reports in the literature of the dominating effect of deprived physiology needs, particularly severe cold, hunger and thirst. For example, Holmberg (1960) found that food was the dominating motivational factor in the lives of the Siriono Indians of East Bolivia, where the need for food was constantly

frustrated. Food was prepared in a hasty manner, eating habits were not ritualized and dreams and fantasies invariably centred around food.

An early experiment by Franklin, Schiele, Brazek and Key (1948) which placed individuals on a semi starvation diet for six months found the need for food dominated their behaviour. Their subjects had highly possessive attitudes towards their food, collecting recipes and cooking utensils.

Alderfer, reviewing these studies concluded that:

"The specific object of deprivation, food, became decidedly more important. The fact that the food deprivation seemed to lead to increased desires for other hunger-reducing materials, gives some support to the idea of a general existence [physiology] need category".

(Alderfer, 1972; p33)

Less dramatic, but nonetheless definite effects have been reported from animal studies, for example Harlow (1953) has reported that hunger in monkeys interferes with performance of set tasks.

#### b. Safety

There is also anecdotal evidence to suggest that needs for safety, particularly those concerned with individual survival and security, can, under severe conditions of deprivation, come to dominate behaviour. Cofer and Appley (1964) report that studies from concentration camps and areas in the world where severe catastrophe or other stress has occurred often indicate that normal interests and values and acceptable social behaviour cannot withstand for very long the demands of safety needs and severe insecurity.

For instance, in a study of American soldiers in Vietnam, Mosko (1969) asked combat soldiers, living under extreme physical conditions, what made America different from other countries. About two-thirds of the respondents answered in materialistic terms; emphasizing that the US had high paying jobs, consumer goods and leisure activities, although no control study of the average American citizen's reply was reported.

c. Belonging

Maslow (1954) proposed that frustration of the belonging needs results in deficiency motivation directed towards their satisfaction while gratification more or less eliminates them from further status in the individuals repertory. There are several kinds of evidence usually cited in support of these propositions. The first concerns the effect of inadequate mothering on behaviour, for instance, Alderfer (1972) cites Harlow's (1953) research on monkeys reared in isolation. These animals showed striking evidence of abnormality. They were ferocious, withdrawn and sexually incapable. The results from monkeys raised in isolation, he argued, tend to demonstrate that social gratification is necessary for normal development.

The early research by Bowlby (1951) and Spitz (1946) which purported to demonstrate that neurosis, psychosis and delinquency result from maternal deprivation are also quoted by Alderfer (1972) to support the frustration proposition. These studies have been interpreted as suggesting that frustration of the belonging needs results in abnormal behaviour. However it must be remembered that in these early studies, the loss of maternal care had been compounded with the effects of hospitalization, which drastically

reduced any type of human contact. For example, in the Kibbutz (Spiro, 1958) where children are separated from their mothers without concurrent deprivation, there are no apparent disturbances of any severity in adults. Reviewing a number of such studies Cofer and Appley (1964) came to the following conclusion:

"It is no longer as clear as these studies implied that affective frustration arising from maternal separation persists until appropriate gratifiers occurs, or, put another way, that development must necessarily be impeded by a lack of maternal affection".

(Cofer and Appley, 1964; p689)

However, reviewing rather similar evidence, Alderfer came to a more supportive conclusion. He reports Bettelheim's (1969) study of Kibbutz children which concluded that such children showed less pathology, but they also showed less individualism and tended to be somewhat flat emotionally. Reviewing a wide range of research primarily on maternal deprivation, he came to the following conclusion:

"The case of independent and autonomous relatedness [belonging] needs arising from the innate characteristics of the human animal is strong. Studies of both men and animals indicate that prolonged absence of interpersonal satisfactions severely diminish a human beings capacity to function. Field and laboratory studies have shown that deprivation of these satisfactions is associated with increased desires".

(Alderfer, 1972; p41).



d. Esteem and Self Actualization

Whilst little anecdotal evidence has been quoted in the literature to support the effect of deprivation upon esteem needs a number of researchers have marshalled support for these effects on self actualization needs. Alderfer (1972) cites the irritability, boredom and hallucinations of subjects kept in isolation for six days in an experiment by Heron, Doane and Scott, (1956). This he considers evidence for the independence of the growth needs from the more basic needs. Conditions of monotony lead people to want more challenging, stimulating and interesting settings.

There is some evidence to suggest that if hierarchical external control is decreased and people are allowed to control their own fate, then self actualized behaviour will increase (eg. McGregor, 1960; Argyris, 1964). This evidence is rather weak since such behavioural effects can be derived from other theories as well. As Korman argued:

"One does not need Maslow to predict that the decrease of hierarchical control by others will lead to the greater seeking of values and favourable outcomes. This is also expectancy value theory, if we make the reasonable assumption that throwing of controls by another leads to a greater sense of ones own value as a person, and hence, a greater expectancy that one will be able to achieve the values that one desires".

(Korman, 1974; p248)

In summary these studies suggest that anecdotal evidence provides some support for the physiology and safety needs, is contentious for the belonging, provides little support for the growth needs and concludes that there appears to be no clear



consensus view about the support anecdotal evidence gives to the gratification hypothesis.

#### 1.4 CONCLUSION

This chapter has examined the first theme of the thesis, the mechanisms of the hierarchical model and has focused upon the major studies which have investigated the theory's reliability, validity and general applicability. Although it has been seen that support for Maslow's theory is certainly equivocal it has also been noted that the instruments used by researchers in this field are not necessarily adequate as tools to explore all the implications of Maslow's hierarchy of needs. Attention will now turn in the next chapter to the question of operationalization (Theme 2) and to a detailed assessment of the validity and reliability of the main instruments currently in use and report on the creation of a new instrument designed specifically to measure need importance.

## CHAPTER 2

### OPERATIONALIZATION OF NEED IMPORTANCE

	Page
2. INTRODUCTION	... 43
2.1 INSTRUMENTS TO MEASURE THE HIERARCHY OF NEEDS	... 44
(i) Operationalization Within the Work Context	... 44
a. Content	... 45
b. Form	... 46
c. Analysis	... 46
d. Validity	... 47
(ii) Operationalization Outside the Work Context	... 52
(iii) Conclusions	... 55
2.2 THE PROPOSED INSTRUMENT	... 56
(i) Constraints on the Instrument	... 56
a. Time to Complete the Test	... 56
b. Method of Administration	... 56
c. Objectivity	... 57
(ii) Methodology	... 57
(iii) Test Reconstruction	... 58
2.3 RELIABILITY AND VALIDITY	... 60
(i) Studies of Change over a Number of Occasions	... 61
(ii) Studies of Internal Structure	... 61
(iii) Studies using Multivariate Analysis	... 64
a. Factor Analyses	... 64
b. Cluster Analyses	... 72
(iv) Group Differences	... 78
2.4 CONCLUSIONS	... 80

## CHAPTER 2

OPERATIONALIZATION OF NEED IMPORTANCE2. INTRODUCTION

The first chapter examined the scope of work arising from Maslow's "theory of motivation" and concluded that difficulties in operationalization and the use of unreliable or inappropriate techniques are, in part, responsible for the ambivalence found in the relevant studies.

This chapter reviews the instruments designed to measure the concepts of need importance and need satisfaction. It demonstrates that none of those reviewed represent a reliable and appropriate measurement of need importance and from this conclusion it reports on the development of an instrument, based on Q-sort methodology, designed specifically to measure need importance.

## 2.1 INSTRUMENTS TO MEASURE THE HIERARCHY OF NEEDS

There have been a number of attempts to devise instruments which measure the various concepts within the hierarchy, for example need importance (Porter, 1961; Beer, 1966; Aronoff, 1967; Huizinga, 1970; Graham and Balloun, 1973), need fulfilment (Porter, 1961) and perceived deficiency or satisfaction. (Porter, 1961; Lollar, 1974).

When measuring concepts within the hierarchy researchers have either confined themselves to the narrow context of work experience (Porter, 1961; Beer, 1966; Huizinga, 1970) or, more recently, broadly examined the whole of the individuals experience (Aronoff, 1967; Graham and Balloun, 1973; Lollar, 1974). The measurement of these concepts has involved various methodologies the most popular being Likert-type<sup>1</sup> procedures which instruct individuals to place themselves on an attitude continuum, for example from 1 (very important) to 7 (not at all important) (eg. Porter, 1961; Huizinga, 1970). However a number of other techniques have also been used, for example ranking (Beer, 1966), and sentence completion (Aronoff, et al, 1971). The problems associated with the use of these instruments when examining Maslow's theories are predominantly associated with their reliability and validity and are discussed in the following section.

### (1) Operationalization Within the Work Context

One of the more frequently used operationalizations of the hierarchy is Porter's Need Satisfaction Questionnaire (NSQ). Since its inception in 1961 dozens of studies in some 20 countries have

---

<sup>1</sup> After Likert's 1932 model design.



been carried out using the NSQ as a major investigative tool. (eg. Goldberg, 1967; Payne, 1970; Herman and Hulin, 1973; Waters and Roach, 1973; Mitchell and Moudgill, 1976). The instrument will be discussed in terms of its content, form, method of analyses and validity.

a. Content

The NSQ consists of 13 items relating to security, social, esteem, autonomy and self actualization needs.

For each item individuals are asked to rate:

1. "How much of the characteristic is there now in your job?".
2. "How much of the characteristic you think there should be in your job?".
3. "How important is that characteristic to you?".

These ratings produce three scores per item:

1. Need Fulfilment - the rating of the question "How much is their now?"
2. Perceived deficiency in need fulfilment - obtained by subtracting the rating on "How much is there now" from "How much ought there to be".
3. The importance of the need - the rating to the question "How important is this to you?"

Examples of the items are:

Security Needs (1 item)

1. The feeling that your employment is a secure and permanent one.

Social Needs (2 items)

2. The extent to which your job lets you give help to other people.

Esteem Needs (2 items)

4. The extent to which people outside the factory think the job is a highly respected one.

Autonomy Needs (1 item)

6. The opportunity for independent thought and action.

Self-Actualization Needs (2 items)

7. The feeling of self-fulfilment you get from the job.

Each is rated on a 7 point scale with high values representing maximum amounts.

Throughout this discussion it is worth recalling that the NSQ was not created to empirically test the hierarchy per se but rather to study the relationship between need fulfilment, dissatisfaction and need importance in a work situation. For this reason it will be argued that its basic structure renders it inappropriate as a tool to examine empirically the hierarchy. More specifically the following points can be made about the measure.

b. Form

The needs which are examined by the NSQ are not an exact reflection of those proposed by Maslow (1954). For example, there are no items relating to the physiology needs, which individuals are assumed to have adequately satisfied. An additional category "autonomy" has been inserted between the esteem and self actualization categories and the small number of items (13) are unevenly distributed throughout the categories.

c. Analysis

Perceived deficiency is calculated by subtracting perceived actual fulfilment from desired fulfilment. This makes the

assumption that the larger the difference the smaller the degree of satisfaction. The advantage of such a method claims Porter (1961) is that it reduces the problems associated with "response set" by providing an indirect measure of satisfaction. However Alderfer (1972) has argued that response bias is introduced by measuring fulfilment and importance almost simultaneously on scales with identical directions. Moreover as Wau and Payne (1973) have pointed out the discrepancy score is difficult to interpret psychologically since it can result in negative scores. For example if actual fulfilment is rated 7 and ideal fulfilment 2, this will result in a discrepancy score of -5. Payne (1970) interprets this as denoting high satisfaction, because the individuals job provides more satisfaction than he thinks it ought to. Alternatively however it could also be interpreted as low satisfaction because, for example the job has too much autonomy or safety.

d. Validity

Discussions of the validity of the NSQ address two issues. First, does the instrument measure the distinct needs it is purported to do? Secondly, is it valid to only use work experience as the basis for measuring need importance?

Although the NSQ is frequently used, its authority seems to be founded upon the reputation of its author rather than empirically based validation studies. Blunt (1977) examining a sample of 28 studies which used the NSQ over the period 1967 to 1977 found only four (Payne, 1970; Roberts et al, 1971; Waters and Roach, 1973; Schneider and Alderfer, 1973) which attempted to test the reliability or validity of the NSQ. The descriptive validity of the measure is questioned on two fronts; first there is little evidence

to suggest that the questionnaire is composed of separate scales. Lawler and Suttle (1972) report that the correlations between the items in the same category is not high, and, worse, all items actually correlate with each other. Secondly, the majority of attempts to factor analyse the items (Payne, 1970; Herman and Hulin, 1973; Schneider and Alderfer, 1973; Waters and Roach, 1973) have not been successful. They have been unable to obtain evidence of the hypothesized categories and therefore failed to establish the descriptive validity of the classification scheme.

Mitchell and Moudgill (1976) have argued that this failure may, in part, arise from the use of orthogonal rotation in factor analyses which forces independent factors. In view of Maslow's (1954) emphasis upon the overlap between needs they argue that attempts to obtain the need categories through independent factors are conceptually erroneous and suggest instead the use of oblique rotation, which allows the expression of inter-dependence among underlying concepts. Using such a technique, and rotating for five factors, they found that the resulting loading pattern displayed close correspondence with Maslow's classification. The data also showed a tendency towards a natural cleavage between social, esteem needs and the security needs. This supports the distinction suggested by a number of researchers, (Lawler, 1973; Wahba and Bridwell, 1976) between lower order and higher order needs.

The previous brief summary of the literature has cast some doubt upon the descriptive validity of the NSQ. Perhaps more importantly, for the present study, is Porters decision to examine Maslow's need hierarchy only in the work situation. Many researchers have followed this approach (eg. Schneider, 1968; Goodman, 1968; Herman and Hulin, 1973; Wanous, 1974), understandably



because their hypotheses have been formulated within an organizational framework. The question is whether such an approach allows a valid examination of the hierarchy. It will be argued that there is evidence to suggest that this is not the case.

First, in terms of face validity it could be contended that an item like "the feeling of self-fulfilment you get from your job" is not a true reflection of the self actualization needs. By limiting analysis to work experiences the applicability and empirical power of these scales must be questioned, particularly if Maslow's hierarchy is to be related to all aspects of psychological growth.

If, as in the present study, the major aim is to examine empirically the hierarchical theory then consideration of its applicability only to work experience leaves unmeasured a major part of possible sources of motivation. Particularly as Dubin's (1956) work on "Central Life Interests" has demonstrated, the vast majority of workers do not locate their central life interests in work. In a sample of 2796 workers Dubin reports that 74% were most interested in "the things I usually do in my free time", whilst only 26% were most interested in "the things about my work". As a corollary to this, when peoples' "areas of concern" or issues that worried them are considered, Taveggia and Hedley (1976) report that 80% of their sample, when worried, were usually worried about things that happened at home, while only 20% were worried about things that happened at work.

Considering only work experience in the analysis of need importance raises a second problem, demonstrated by the work of Taveggia and Hedley (1976). They report a clear differentiation between groups in the importance they assign to their work, some

groups particularly those in the non-manufacturing industries locate their interests more significantly outside the work situation.

Taveggia and Hedley go further to suggest that this is a social class variable:

"Thus we assume respondents who believe their work is more important than anything else, who are more interested in their job than the things that they do in their spare time, and respondents who worry most about things at work are more likely than non-work orientated respondents to identify with the full range of middle class work values".

(Taveggia and Hedley, 1976; p299)

It could be argued that because middle class workers are more likely to place greater life importance in their work, by only measuring attitudes towards work a systematic bias is being introduced. Whilst for the majority of middle class respondents, work experiences may realistically reflect their motivational disposition, for a worker experiencing job alienation this will not be the case.

To summarize, although Porter's NSQ is one of the most popular measures of need importance we have questioned its applicability to the aims of the present study by arguing that the measurement of need importance must make reference to all aspects of the individuals experience. For this reason the NSQ, which refers only to work experience is considered inappropriate to fulfil the needs of the present study.

The question of restricted applicability of Porters NSQ is also relevant to two other measures, those developed by Beer (1966) and Huizinga (1970). Beer has operationalized the hierarchy in the work context by using five sets of five job items, each reflecting a

different need category. Individuals ranked the items of each set in importance from 1 to 5. The inter-correlation of items within categories was high although no reliability test-retest analysis or external predictive validity was presented. The scoring procedure has the weakness of forcing negative correlations within the need scales (Alderfer, 1972). Huizinga's (1970) questionnaire was designed explicitly to test Maslow's hierarchy. Twenty four items, divided between the five categories, were used. Individuals rated how important each item would be in their evaluation of a job. Examples of the items are; "A job where I would/would not know that my colleagues would be unhappy if I left" (belonging); "A job where I would/would not have a regular pattern of work and life" (safety). Although the scale utilizes all of the need levels and shows high discriminative validity, the inter-correlation of items within categories and predictive validity are not given. More importantly, the items only examined attitudes towards work, thus leaving a vast part of motivational potential unmeasured.

The instruments discussed are of doubtless importance to managerial techniques and occupational psychology, however, it has been argued that their relevance to an empirical examination of Maslow's hierarchy is strictly limited. Wahba and Bridwell's (1976), conclusion that "the need hierarchy theory has received little clear or consistent support from the available research findings" may in part reflect this methodological deficiency.

A number of measures have been designed to consider a wider range of the individuals potential sources of need gratification and satisfaction, notably those of Aronoff (1967), Graham and Balloun (1973) and Lollar (1974). In the light of our criticisms of the narrow applicability of Porter's, Beer's and Huizinga's work



examination will now be made of the operationalization of Maslows hierarchy outside the work context.

(ii) Operationalization Outside the Work Situation

Aronoff (1967) has formulated a sentence completion instrument based on an intermediate methodology between objective forced choice and free response projective techniques. Sentence completion has the advantage of eliciting a variety of psychological motives and stimulating many different types of responses. In the development of the test forty sentence fragments, designed to stimulate expressions of motivational orientation were administered to a college student sample of 850. Examples of the incomplete sentences are;

Item 1 "I should like to .."

Item 7 "My head ..."

Item 31 "..... continually..."

Responses were categorized according to their manifest gratified expression of needs for safety, belonging and esteem. Aronoff decided the sample populations physiology needs were satisfied so he did not measure them. More seriously he could find no reliable system to score the self actualization needs of this group (this may have been a reflection of the young age of the sample population).

There are a number of problems associated with the application of the instrument. The sentence completions tend to be fairly short, sometimes factually too specific or, alternatively, vague and ambiguous. Trained scorers are required, which reduces its general applicability. There is also the problem of the "halo" effect, the scorer reaching a global judgement about the person from the first few sentences and then scoring all ambiguous sentences as



a reflection of this conclusion. Further, the scoring manual is based on the responses of an American college student population and therefore is a direct reflection of their motivation, being of little relevance to a broader-based English population. With regard to predictive validity, Aronoff (Aronoff and Messe, 1971; Wilson and Aronoff, 1973) has demonstrated that safety orientated individuals scored significantly higher on the manifest anxiety and dependency sub scales of the MMPI and, in task orientated situations were more likely to establish a hierarchical social structure.

Aronoff reports inter-judge reliabilities ranging from 0.68 to 0.89 (product-moment correlation coefficient). However, in a personal communication to the author (1977) he questioned the validity of the belonging category because of paucity of items. Further, no measures of test-retest or inter-rater reliability have been reported.

Another method of operationalizing Maslow's need theory in non-work contexts is found in the work of Lollar (1974) who designed a forced choice interview schedule to assess need satisfaction among young juvenile delinquents. Because of the age and characteristics of the sample, self actualization need satisfaction again could not be measured.

After an initial administration eight items were selected to represent each of the four needs. Percentage agreements between judges on assignment of items to the respective levels of Maslow's hierarchy ranged from 85% to 95%.

Sample items from the instrument (answered yes or no) are:

Item 1 "Have you been getting enough to eat in the last two weeks"  
(physiology).

Item 7 "Are you doing anything here that is important to you" (self esteem).

Each level was scored by adding together the number of responses indicating satisfaction of a particular need. Lollar presents rather extensive reliability figures for the scale. A test-retest analysis showed phi coefficients ranging from 0.60 to 0.75. Split-half reliability, using the Kuder Richardson coefficient alpha ranged from 0.40 to 0.78. Inter-correlation of the four sub scales ranged from 0.29 to 0.51 indicating that they were significantly related. Although the test, because of its specific population characteristics, is not considered to be of use to an English population cross-section nevertheless, the reliability figures provide broad guidelines for an instrument based on this approach.

A third attempt to explore the applicability of Maslows need theory to broad contexts is that of Graham and Balloun (1973). Using a small sample (37 subjects) they have measured need importance with three methods. The first asked individuals to describe the most important things in their life which were rated according to the desire expressed for the physiology, security, social and self actualization needs. The esteem needs were, inexplicably, not included and inter-rater reliability not analysed. A second measure asked individuals to judge a series of life situations using two statements for each need, one describing a low and the other a high level of need gratification. Subjects were presented with all possible combinations of paired statements and asked to imagine that they described a person's situation which they then rated on a seven point scale from, "extremely pleasant" to "extremely unpleasant". No split half or test-retest reliability data were presented. The third measure consisted of direct ratings

of present satisfaction and improvements desired for each of the four needs. Again, no reliability figures were presented. The level of agreement between the different methods of measuring need satisfaction and desire was only low to moderate and no attempt was made to determine the validity of the test. Although the instrument could not be used it demonstrates the possible range of ways to measure need importance.

### (iii) Conclusions

There has been a relative lack of empirical evidence both in the applicability of Maslow's theory to the work context and at a more general level a failure to substantiate what Maslow (1954) called the "subjective plausibility" of the theory. No small part of the problem of empirical validation arises from the difficulty in operationalizing the need hierarchy concepts. Such was the conclusion of both Goldberg (1967) and Hall and Nougiam (1968). Wahba and Bridwell (1976) have pointed out that, although there are a number of scales designed especially to reflect Maslow's ideas, there are many measurement problems associated with these scales. Some do not show acceptable reliability figures whilst others validity is questionable.

As a result of the inadequacies of the measurements used to test Maslow's theory the present author devised a new instrument: this instrument was designed to avoid the major pitfalls of previous instruments and to enable an examination of all aspects of need importance, not just in the work context, but as a psychological force underlying people's behaviour and attitudes.

## 2.2 THE PROPOSED INSTRUMENT

A number of hierarchical concepts have been measured in the literature which can be dichotomized into those measuring the relative importance of each need to an individual, and those measuring need satisfaction, variously termed need fulfilment or gratification. The present instrument measured need importance because it is the most central concept to Maslow's theory. However, before describing the instrument itself, the framework within which it was developed will be discussed.

### (i) Constraints on the Instrument

A number of a priori limitations served to shape the construction of the instrument. These limitations were primarily ones of time to complete the test, method of administration and objectivity.

#### a. Time to Complete the Test

From talking to a small sample (30 individuals) it became apparent that most were not willing to spend more than 1½ hours being interviewed. Experience had also shown that interest and motivation to complete tests flag dramatically after this length of time. Therefore a measure based on a lengthy interview was considered inappropriate particularly as it was intended to pair the measure with a questionnaire.

#### b. Method of Administration

The instrument had to be one which could be self-administered if necessary because individual administration would be too time consuming if large samples were needed.



c. Objectivity

The method has to be objective. Subjective measures, for example Aronoff's sentence completion, call for one person to administer the instrument and another person to interpret it. In the present study a second person was not available.

(ii) Methodology

A number of possible methodologies are available to measure need importance. Within the parameters discussed above it was decided to use a modified Q-sort methodology based on the work by Stephenson (1953). This technique has been used most notably by Rogers and Dymond (1954) and typically involves a number of miscellaneous statements about the person's self which are sorted into nine normally distributed categories, according to the degree to which they resemble the individual's perception of his self. For the present instrument the statements reflected aspects of the needs proposed by Maslow (1954). The use of the Q-sort in this manner makes two assumptions as Butler and Haigh (1954) have noted.

First, that the self concept consists of an organized pattern of needs together with the importance attached to them. Secondly, that this pattern can be mirrored respectively in terms of ordinal scale placements according to the degree to which they are important to an individual. The Q-sort as an ipsative measurement yields multiple scores but the sum of the scores for all individuals remains the same. Forcing distribution in this manner controls such response sets as hugging the mean or giving extreme variance. Without such limitations a subject may conceivably lump all items along a few points in the scale. For ease of statistical analysis, items are usually arranged in a normal distribution, although the

distribution can be any shape the investigator chooses. In the present analysis the normal distribution was abandoned because of the problems of interpreting this form in terms of the hierarchy of needs and instead equal numbers in each category was used.

Finally it must be remembered that as an ipsative method the technique forces negative correlations between items, but not necessarily between needs.

### (iii) Test Construction

Several steps were carried out in the construction and selection of items to represent Maslow's hierarchy of needs. Initially, 75 items were constructed, each group of 15 involving an attempt to state as clearly and as simply as possible a certain aspect of each of the five needs. The deficiency items reflected dimensions presented in "A theory of Human Motivation" (1943) while those representing self actualization were taken from an operational definition in "Deficiency, Motivation and Growth Motivation" (1955).

Consistent with the thinking of Thorndike and Hagen (1969) the schedule of items was given in a preliminary form to reduce ambiguities. The 75 items were administered to 10 post graduate students of psychology who had some knowledge of Maslow's work. They were instructed to place each item in the need level they considered most appropriate. Percentage agreement between judges in item assignment ranged from a low of 63% to a high of 90%. The 10 most consistently placed items for each need were retained (see Appendix 2.1 for details of the items). This procedure represents an initial attempt to analyse content validity.

In the administration respondents were instructed to arrange the 50 cards in 5 piles of 10 cards. Instructions were as follows:

"I am going to give you 50 cards on which are written things which you may or may not consider to be important to you. I would like you to sort the cards into 5 piles with 10 items in each. On the far left hand side put the ten items which you consider most important to you. On the far right hand side put the 10 items you consider least important. Then grade the three middle piles down, from most to least important. Do you understand?".

In the analysis the items in the most important pile were assigned a score of 5, graded to the least important which were assigned a score of 1. The index of perceived overall importance for each of the need levels was the sum of the scores for each 10 items representative of that need.

### 2.3 RELIABILITY AND VALIDITY

The Q-sort instrument assumes that the need importance construct is composed of five distinct dimensions. Because this instrument is to be interpreted as a measure of some attributes or qualities which are not "operationally defined" Cronbach and Meehl (1955) argue that the researcher must investigate construct validity, which is not to be identified solely by particular investigative procedures, but by the orientation of the researcher. Many types of evidence are relevant to construct validity, including inter item correlations, inter test correlations and studies of stability over time. Thus, construct validity cannot be expressed in the form of a single simple coefficient. To investigate construct validity the following methods were used.

1. Studies of change over a number of occasions.
2. Studies of internal structure.
3. Studies using multivariate analysis.
4. Group differences.

Although a number of reliability criteria for need scale formation were used, the overriding criterion was still the conceptual definition of each need level. It was deemed more important to retain the theoretical meaning of the hierarchy than to attempt redefinition on the basis of factor analysis or inter-item correlations.

Reliability and validity measures were based on a cross-sectional sample of 250 adults from Liverpool. However because this chapter deals with the characteristics of the instrument rather than individual characteristics, the specific demographic characteristics of this sample and data collection



procedures will be discussed in some detail in Chapter 3.

(i) Study of Change Over a Number of Occasions

The first analysis of reliability dealt with that aspect of stability which refers to the degree of similarity of response over a period of time. In order to determine the stability dimension of the instrument, a test-retest procedure was used.

As Cattell and Warbuton (1967) argue, test-retest reliability, when motivational traits are being measured, is not purely a characteristic of the test but is also dependent on internal changes in the individual, which they term "function fluctuations". Thus the notion of "what is important to me" may fluctuate in the space of two weeks so that a test showing high test-retest reliability may actually demonstrate only that it is insensitive to the measure in question.

To assess test-retest reliability 10% of the sample were randomly chosen and readministered the test after a two week period. The importance scores for each of the five needs were ranked on each occasion and a measure of the rank agreement provided by the nonparametric test "Pages L" (Page, 1963). The results were significant at the  $p < 0.001$  level, demonstrating that the respondents were applying essentially the same standard when repeating the test.

ii. Studies of Internal Structure

The second aspect of reliability considered was internal consistency, which refers to the degree of similarity of response to questions purporting to measure like characteristics. The statistic

utilized was the Kuder Richardson Coefficient Alpha (Ley, 1972; Appendix 2.2). The Coefficient Alpha is the mean of all possible split-half reliabilities of a particular sub scale and measures the amount of common variance in a sub scale. In addition the general case has been corrected for attenuation and therefore is interpretable for the entire sub scale. This means that unlike the Spearman Brown formula, the Coefficient Alpha needs no adjustment before interpretation. Thus the larger the alpha coefficient the more one can be sure the items in the sub scale are homogeneous.

Nunnally (1967) in a discussion of the standards of reliability coefficients, contends that a coefficient of 0.50 will suffice in the early stages of research of a particular psychological construct. Using this statistic as a base, the internal consistency of the physiology, safety, esteem and self actualization levels met the criterion (0.51, 0.53, 0.51 and 0.67) respectively ( $n = 250$ ,  $p < 0.01$ ). However, the internal consistency of the belonging level failed to meet the criterion (0.39) although the coefficient was significant ( $p < 0.05$ ). Nevertheless, it approached this criterion, and in view of the infant stage of development of the instrument for assessing the construct of need motivation it was acceptable as being generally interpretable.

The third analysis of the instruments reliability considered internal consistency by analysing inter-item correlations. The items within each subset were selected on the basis of their relevance to the hierarchy theory, rather than on the basis of internal homogeneity, therefore the underlying theory of the trait being measured does not call for high inter-item correlations. However, the theory does assume that the inter-item correlations within a need will be greater than the inter-item correlations

between needs.

A Pearson Product Moment correlation matrix of all 50 items was constructed and the mean within subset correlation and mean between subset correlation coefficient calculated.

As Table 2.1 shows, the mean inter-item correlations within needs are all positively significant, ranging from 0.15 ( $p < 0.01$ ) to 0.20 ( $p < 0.001$ ) and higher than the mean inter-item correlation between needs which ranged from a negative of -0.13 ( $p < 0.001$ ) to 0.01. Further, 16 out of 20 between subset correlations were negative. Thus, the subsets or need categories demonstrate homogeneity by being composed of items which are significantly related to each other and not significantly related to other sets of items.

Table 2.1

MEAN INTER-ITEM CORRELATIONS

	LEVEL				
	1	2	3	4	5
1. Physiology	.19**	.02	-.01	-.03	-.09
2. Safety		.20**	-.04	-.05	-.13*
3. Belonging			.15*	-.03	-.05
4. Self Esteem				.18**	.01
5. Self Actualization					.17**

n = 250

Pearson Product Moment Correlation.

\*\*  $p < 0.001$

\*  $p < 0.01$

(iii) Studies using Multivariate Analyses

The development of the Q-sort instrument assumes that the postulated attribute, need importance can be reflected in the individual's performance on the instrument. The earlier studies of internal structure demonstrated that when a need like belonging is hypothesized the items of behaviour which are subsumed under that label appear to be generally intercorrelated.

Guildford (1948) has argued that when examining the constructs of an instrument, multivariate techniques go further and can identify "real dimensions of human personality". Certainly many researchers have used multivariate techniques to obtain evidence for Maslow's need categories (eg. Payne, 1970; Roberts et al, 1971; Schneider and Alderfer, 1973; Mitchell and Moudgill, 1976), although there is no consensus of opinion about the most appropriate multivariate technique, factor analysis and more recently cluster analysis remain the most frequently used techniques.

a. Factor Analysis

Factor analysis is one of the commonest methods of determining source variables. It has been used by a number of researchers, (Payne, 1970; Herman and Hulin, 1973; Waters and Roach, 1973; Mitchell and Moudgill, 1976) in attempts to validate Porter's NSQ. However, only Mitchell and Moudgill report factors which closely correspond to the need categories. The remaining studies found no indication that any of the factors represent any one of the needs in the hierarchy.

In the present study factor analysis was used to determine whether the items showed a tendency to converge into five needs as proposed by Maslow.



The factor analysis procedure allows a correlation coefficient for a set of variables to be reduced or rearranged to a smaller set of factors or components that may be taken as "source variables". The term does not describe a single process, but rather subsumes a large variety of procedures classified around three customary steps.

1. Preparation of a correlation matrix.
2. Extraction of initial factors
3. Rotation to a terminal solution.

Researchers concerned with the hierarchy of needs have used a number of techniques for the extraction of initial factors, of which "principal components" appears to be the most common. This method (Nie, Hull, Jenkins, Steinbrenner, 1975) replaces the main diagonal elements of the correlation matrix with communality estimates ( $R^2$ ). The first principal factor (PF 1) accounts for as large a percentage of the common variance as is possible, with its associated eigen value being equal to the sum of the squared loadings. The procedure then extracts orthogonal factors in order of their importance, the first factor extracted tends to be general, such that it loads significantly on every variable. However the second factor tends to be bi-polar, that is half of the variables have positive loadings and half negative. With rotation each variable is accounted for by a single common factor, the rotated factor loadings being conceptually simpler than the unrotated ones.

The two most common methods of rotation are orthogonal and oblique. The former forces the factors to be orthogonal and therefore the correlation between factors to be arbitrarily determined as zero. The latter (oblique) is more flexible since the

factor axis need not be orthogonal. Oblique is more realistic for the present hypothesis because the theoretical strands underlying the dimensions are not assumed to be completely distinct.

The majority of researchers have used the orthogonal rotation technique VARIMAX, (Alderfer, 1967; Payne, 1970; Waters and Roach, 1973). As Mitchell and Moudgill (1976) have pointed out, use of orthogonal rotation is justified when there are prior reasons to believe that;

1. The constructs under measurement are conceptually independent.
2. It is possible for them to vary independently.

However, Maslow has proposed that the need categories are not mutually exclusive, rather they are inter-dependent:

"There is usually such an overlapping that it is almost impossible to separate clearly and sharply any one drive from any other".

(Maslow, 1954; p74)

The inappropriateness of orthogonal factor analysis has also been argued by Wahba and Bridwell:

"It can be argued that factor analysis should not yield five independent factors due to the hierarchical nature of the theory. If Maslow's theory was not hierarchical in nature, then it would seem logical that factor analysis should produce results supporting five clear factors. In some sense, the failure of the factor analytic studies to produce five independent needs can be interpreted as indirect evidence to support rather than negate Maslow's hierarchical proposition."

(Wahba and Bridwell, 1976; p221)

Herman and Hulin (1973) were the first to depart from the tradition of orthogonal rotation. The "Oblimax criterion" they used yielded an oblique solution which Mitchell and Moudgill suggested was also inappropriate and quoted Rummel (1970) to substantiate this claim.

"Oblimax yields an oblique solution very close to an intuitive graphical result if the data have a clear, simple structure. In geometric terms, if the variable points fall into clusters close to the axis, the oblimax will determine a highly satisfactory oblique solution. If however the data is highly complex the variable points are spread throughout the space without clear breaks, oblimax may be unsatisfactory".

(Rummel, 1970; p412)

In view of the nature of the data and the shortcomings of rotational techniques which assume independence or a clear, simple structure, Mitchell and Moudgill used an oblique rotational technique which did not make these assumptions. This was considered appropriate for the present analysis because it is both more flexible, not assuming orthogonal factor axes, and more realistic since the theoretically important underlying dimensions are not assumed to be unrelated to each other. The statistical package used in this study (OBLIQUE; SPSS) (Nie et al, 1975) allows specification of the delta value thus controlling the obliqueness of the terminal solution. This was set at -0.05 to generate a less oblique or more orthogonal solution.

The responses to the 50 importance items were analysed for five factors by bypassing the eigen value. The results of the analysis are presented in Table 2.2. It is not possible to obtain levels of statistical significance for factor loadings on oblique

rotation, however, only those factors above 0.30 are conventionally shown (eg. Wanous and Zwany, 1977).

The factor analyses reflect the ipsative nature of the methodology, producing bipolar factors, the negative correlations equalling the positive in summing to zero. The direction of the signs is entirely arbitrary.

#### Factor 1

Factor 1 accounts for the largest (37%) of variance. It is loaded negatively on seven of the self actualization items and positively on the security items of the safety needs and would therefore appear to be a general "self actualization" factor. In a Q-sort ipsative method, items which are assigned high importance are balanced by those assigned low importance. So, if self actualization items are placed in the more important categories, then other items must be placed in the least important. Maslow (1954) has proposed that only when the deficiency needs are gratified will the growth needs assume importance. So, hypothetically, if self actualization is the most important need then the deficiency needs will be the last and vice versa. Factor 1 presents some support for this proposition in demonstrating that when the self actualization needs are more important (and assigned high scores) then the security aspects of the safety needs are least and vice versa.

A number of other more general points emerge. First, Maslow proposes that only a small proportion of the population have gratified their deficiency needs and are motivated towards self actualization. Therefore it would be expected that the self actualization would account for the greatest amount of variance, since it has the greatest range of importance scores. Our analysis of the factors support this.



FACTOR ANALYSIS OF ITEMS

Table 2.2

NEED ITEM	FACTORS						
	I	II	III	IV	V	$\bar{X}$	Variance
<b>PHYSIOLOGY</b>							
A1 Having a good sex life					.37	3.2	2.3
A2 The food that is eaten			.41			2.3	1.6
A3 Having enough to eat			.56	.34		3.0	2.0
A5 Having enough to drink			.50			2.3	1.9
A6 Being warm enough			.40			2.8	1.6
A7 Getting enough sleep			.37			2.9	1.6
A8 Having enough energy to do things		.37				3.7	1.4
A11 The things one drinks		-.50	.37			1.9	1.3
A13 Eating nutritious goods			.50			2.5	1.6
A14 Having good skin						2.2	1.5
<b>SAFETY</b>							
B1 Having a secure job				.30		3.1	2.1
B2 Being free from threat	.36					2.9	1.6
B3 Feeling protected	.48					2.7	1.8
B4 Feeling safe	.49					3.0	1.5
B5 Knowing nothing unexpected will occur		-.50				1.9	1.3
B8 Having enough money				.51		3.4	1.8
B9 Knowing one can rely on transport		-.30				2.0	1.6
B10 Knowing life is predictable		-.53			-.39	1.8	1.2
B11 Knowing what will happen each day		-.54				1.8	1.1
B15 Being able to predict what will happen		-.41				1.8	1.1
<b>BELONGING</b>							
C2 Feeling someone cares for you					.30	3.6	1.3
C3 Getting on well with ones family						3.7	1.5
C4 Being surrounded by friends						3.2	1.3
C5 Having someone who is very close					.48	3.2	1.3
C6 Feeling someone needs you					.37	3.6	1.3
C7 Having special relationships					.40	3.0	1.6
C8 Knowing you are loved					.40	3.8	1.5
C10 Feeling part of a caring community				-.46		2.8	1.6
C13 Knowing your parents love you					.44	3.2	2.0
C15 Having strong attachments to a home town team		-.44				1.8	1.4
<b>SELF ESTEEM</b>							
D2 Being held in esteem			-.30			2.6	1.4
D3 Achieving something			-.38			3.6	1.4
D4 Feeling confident		.30				3.6	1.2
D8 Being of worth				-.30		3.2	1.7
D9 Having pride in ones accomplishments			-.43			3.1	1.4
D10 Being respected	.30					3.4	1.4
D11 Being well thought of						3.2	1.4
D12 Having confidence in ones abilities			-.37			3.5	1.3
D13 Knowing you are capable of doing things well			-.40			3.6	1.4
D15 Knowing one can accomplish what one set out to achieve			-.43			3.4	1.4
<b>SELF ACTUALIZATION</b>							
E1 Doing and seeing new things	-.30					3.4	1.7
E3 Looking objectively at life	-.57					2.8	1.9
E5 Having autonomy	-.45					2.9	2.1
E6 Having mystical thoughts	-.30	-.46				1.9	1.6
E7 Having sympathy for others		.35		-.45		3.7	1.7
E9 Having an efficient perception of reality	-.59					3.0	1.9
E10 Being spontaneous	-.49					2.7	1.8
E11 Having a freshness of perception	-.65			-.45		2.8	1.7
E12 Having a sense of humour		.50				4.1	1.2
E13 Having free will						3.6	1.6
EIGEN VALUE	4.6	3.4	1.8	1.3	1.1		
PERCENT VARIANCE	37.2	27.5	15.1	10.7	9.4		
CUMULATIVE PERCENTAGE	37.2	64.8	79.9	90.6	100.0		

Secondly, because the rotational method is not orthogonal the factors are allowed to correlate. Thus Factor I is positively correlated (0.14,  $p < 0.01$ ) with Factor III which represents a physiology/self esteem dimension. Because the needs do overlap, then such a correlation would be expected with a self actualization/safety dimension.

Thirdly, whilst the majority of items are factorially simple, loading significantly on only one factor; a number are complex, loading moderately on more than one factor. In Factor I, item E6 "Experiencing mystical thoughts" is such a case. It loads significantly, on both factors F1 (-0.30) and FII (-0.46). Conversely, other items do not load significantly on any one of the factors ie. E13 "Having free will", A14 "Having good skin" and two belonging items, C3 "Getting on well with your family" and C4 "Being surrounded by friends".

### Factor II

Factor II accounts for 27% of the variance and is loaded negatively on all the predictability items of the safety needs. Interestingly, it is also negatively loaded on three items; A11 "The things one drinks", C15 "Having strong attachments to a home town team", and E6 "Experiencing mystical thoughts". As such, if one considers the mean for each item it appears to represent an importance factor, an interpretation which is supported by the cluster analysis which follows. Thus, E6 and C15 are placed in the least important category by most individuals. Conversely, the positively loaded items are considered by most people to be important, irrespective of their level of need importance. ie. A8 "Having enough energy to do things", D4 "Feeling confident", E7 "Having sympathy for others" and E12 "Having a sense of humour".

Factor III

Like the first factor the third demonstrates a clear bi-polarization. Here the dichotomy is between the physiology and esteem needs. When esteem needs are considered important then physiology needs are less so and vice versa.

Factor IV

The loadings of the fourth factor are scattered throughout the need levels, again there is a clear distinction between negative and positive loadings across the need items.

Factor V

The fifth factor, accounting for only 9% of variance is loaded significantly on six of the belonging items and would appear to represent a belonging factor.

In conclusion, the oblique rational factor analyses revealed a number of bipolar factors reflecting an important/not important dichotomy. Whilst there was some overlap in the designation of the items to the factors, for the most part the items representative of one need fell into one factor. Seven of the self actualization items were polarized by three safety items representing positive and negative poles of the first factor which accounts for the largest amount of variance. Similarly six of the self esteem items were grouped with seven of the physiology items in Factor III, whilst the second factor contained five of the safety items, and the fifth factor, six of the belonging items.

Finally, whilst there are a cluster of similar items in each factor some need aspects are assigned greater or lesser importance. For example, E6 and E11 are not clustered with the main self actualization cluster. This diffusion of items reflects the overlap of needs which Maslow talks of whilst the major groupings



reflect the five hypothesized needs.

b. Cluster Analysis

Wanous and Zwany (1977) recommend the use of both factor analysis and cluster analysis in the validation of need categories. For the present study, cluster analysis has various advantages. By clearly grouping variables and expressing clusters in a dendogram the result can be more easily interpreted in terms of a conceptual hierarchy.

There have been a proliferation of clustering techniques (see Everitt, 1974; for a review) though most psychological research uses one of the agglomerate methods. This proceeds by the computation of a distance matrix between items, usually a product moment correlation. The end product consists of a dendogram showing the successive fusion of items, culminating at the stage when all items are clustered in one group. Hierarchical techniques were selected for two reasons, first, they are the most suited to data where it can be assumed that there is some kind of grouping. Secondly they have the advantage of requiring less computing time, consequently being feasible for the large data sets the present analysis used. Because there is no consensus of opinion about which ~~one~~ hierarchical technique is most appropriate Everitt (1974) suggests that to prevent misleading solutions being accepted the researcher uses several techniques. Following Everitt's suggestion "Single Linkage", "Median" and "Ward's Method" were applied to a subset of the data. Of these Ward Method was selected, primarily because it could best cope with the problems of chaining, ie. the tendency for some methods to cluster, at relatively low levels, items linked by chains of intermediates.

These studies of construct validity use data collected from



240 people in Liverpool. The characteristics of this sample and data collection procedures are discussed in detail in the next chapter. The parameters of the CLUSTAN 1A programme were such that it could not accept 240 cases. Therefore prior reduction of the original data set was necessary. It was decided that this would be achieved by subdividing the original sample into groups with similar need importance scores. An analysis, explained in detail in Chapter 3.4 (i), showed that this was best achieved by creating groups of people of similar age (20 to 30, 31 to 40, 41 to 50, 51 to 60), sex and social class (lower, working, middle class). This yielded 24 homogeneous groups with 10 people in each. (see Section 3.5 (i), Table 3.5 and Appendix 3.1 for coefficient values of the groups). The data on which the analysis was performed consisted of the scores for each item summed within the groups.

Within-group differences were further reduced by examining item clusters within social classes. As Table 3.6 shows this is the most appropriate variable on which to group subjects.

Therefore, for each social class grouping there were 8 groups of 10 respondents. Three analyses were conducted, one on each social class. The CLUSTAN 1A program (Mark 2) at Manchester University computer laboratory was used. The large numbers of items involved necessitated the extension of the package parameters.

The results of the analyses are initially presented in dendogram form (Appendix 2.3). This shows the 50 items at the initial stage of the analyses and the successive clustering which occurs until finally all the items are clustered in one group. For example, examination of the working class group shows that initially the items which are most similar, and cluster at the least fusion distance are 45, 49; 33, 23; 35, 40; 50, 11; 41, 34; 20, 8; etc.

items are then successively clustered at greater fusion distances, until all are placed in a single group. To aid interpretation of the dendogram the four major cluster groups, shown on the dendograms in Appendix 2.3 were extrapolated and the significance of differences between the clusters assessed with the Kruskal Wallis nonparametric statistic. All the clusters were found to be significantly different (Lower Class;  $H = 40.9$ ,  $p < 0.001$ ; Working Class  $H = 24.7$ ,  $p < 0.001$ ; Middle Class  $H = 27.4$ ,  $p < 0.001$ ). Because the differences were significant it appeared valid to use these clusters as discrete groups. The clusters were then ranked according to the average need importance assigned to their component items. Those assigned the greatest average importance were ranked I and those the least importance, IV. Three sets of rankings were formed, on the lower class, middle class and working class samples. Table 2.3, which shows the fusion distances between the clusters demonstrates that these differences are not equal, for example clusters I and II cluster at a lower fusion distance (240) in the lower class sample than clusters III and IV and are therefore more similar.

Table 2.3

FUSION DISTANCES BETWEEN CLUSTERS

LOWER CLASS	WORKING CLASS	MIDDLE CLASS
I } II } 240 } III } IV } 900 } } 3000	I } II } 814 } III } IV } 200 } } 3663	I } II } 200 } III } IV } } 850 } } 3996

The items contained in each ranked cluster are shown in Table 2.4. The inclusion of an item in a cluster is indicated with an \* in the cluster column.

A measure of dispersion of importance assigned to items within the five need categories is shown by the labelling presented in the vertical columns. Each need category is labelled with the title of the cluster in which the majority of its component items are clustered. All other items representative of that need level are then given values of displacement. Thus, if the majority of the items representative of a need cluster at level II, then items in that need which fall into level I will be labelled (+1), whilst those falling into importance level III will be labelled (-1).

Two important points emerge from this analysis. First, as the factor analysis demonstrated, although 50% to 70% of items from the same need fall within a similar factor a minority of items are dispersed across the factors. Secondly, items representing a need do not cluster in a similar manner across social class grouping. Thus, whilst seven of the self actualization items cluster in the middle class analysis only four cluster in the working class grouping. However, the direction of displacement is usually similar across social class groups. For instance, the belonging need items, C7 ("Having special relationships" and C15 ("Having strong attachments to a home town team") are judged less important than the majority of the belonging items by all social groups. Conversely, C8 ("Knowing you are loved") and E12 ("Having a sense of humour") are judged more important than the average belonging item.

When both cluster and factor analyses are compared then 50% to 70% of items which represent a need actually group together in terms of the importance which has been assigned to them. As might



Table 2.4

## CLUSTER ANALYSIS OF ITEM CATEGORIES

NEED ITEM	Lower Class				Working Class				Middle Class			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
<b>PHYSIOLOGY</b>												
A1 Having a good sex life			*	III			*	III				* IV
A2 The food that is eaten			*	III			*	III				* IV
A3 Having enough to eat	*			(+2)	*			(+1)		*		(+1)
A5 Having enough to drink			*	III			*	III		*		(+1)
A6 Being warm enough	*			(+2)			*	III		*		(+2)
A7 Getting enough sleep		*		(+1)		*		(+1)			*	(+2)
A8 Having enough energy to do things		*		(+1)	*			(+2)		*		(+3)
A11 The things one drinks			*	III				(-1)				* IV
A13 Eating nutritious goods			*	III			*	III				* IV
A14 Having good skin				* (-1)			*	III				* IV
<b>SAFETY</b>												
B1 Having a secure job		*		(+2)	*			(+2)		*		(+2)
B2 Being free from threat		*		(+2)	*			(+2)			*	IV
B3 Feeling protected	*			(+3)	*			(+2)			*	IV
B4 Feeling safe	*			(+3)	*			(+2)		*		(+2)
B5 Knowing nothing unexpected will occur				* IV			*	IV		*		IV
B8 Having enough money	*			(+3)	*			(+2)		*		(+1)
B9 Knowing one can rely on transport				* IV			*	IV			*	IV
B10 Knowing life is predictable				* IV			*	IV			*	IV
B11 Knowing what will happen each day				* IV			*	IV			*	IV
B15 Being able to predict what will happen				* IV			*	IV			*	IV
<b>BELONGING</b>												
C2 Feeling someone cares for you		*		(-1)	*			I		*		I
C3 Getting on well with ones family	*			I	*			I		*		I
C4 Being surrounded by friends		*		(-1)	*			I		*		(-1)
C5 Having someone who is very close	*			I	*			I		*		I
C6 Feeling someone needs you	*			I	*			I		*		I
C7 Having special relationships			*	(-2)	*	*		(-2)		*	*	(-2)
C8 Knowing you are loved	*			I	*			I		*		I
C10 Feeling part of a caring community				* (-3)	*	*		(-1)		*	*	(-1)
C13 Knowing your parents love you	*			I	*	*		(-2)		*	*	(-2)
C15 Having strong attachments to a home town team	*			I	*			(-1)		*		I
<b>SELF ESTEEM</b>												
D2 Being held in esteem				* (-1)		*	*	(-1)		*	*	(-1)
D3 Achieving something		*		III		*		II		*		I
D4 Feeling confident	*			(+2)	*			(+1)		*		I
D8 Being of worth		*		III		*		II		*		I
D9 Having pride in ones accomplishments		*		(+1)	*	*		II		*	*	(-1)
D10 Being respected	*			(+2)	*	*		II		*	*	(-1)
D11 Being well thought of		*		(+1)	*	*		II		*	*	(-1)
D12 Having confidence in ones abilities		*		III	*			(+1)		*		I
D13 Knowing you are capable of doing things well		*		(+1)	*			(+1)		*		I
D15 Knowing one can accomplish what one set out to achieve		*		III	*			II		*	*	(-2)
<b>SELF ACTUALIZATION</b>												
E1 Doing and seeing new things		*		(+1)	*	*		(+1)		*	*	I
E3 Looking objectively at life			*	IV	*	*		(+1)		*	*	I
E5 Having autonomy			*	IV	*	*		III		*	*	(-2)
E6 Having mystical thoughts			*	IV	*	*	*	(-1)		*	*	(-3)
E7 Having sympathy for others	*			(+2)	*	*		(+2)		*	*	I
E9 Having an efficient perception of reality			*	IV	*	*		III		*	*	I
E10 Being spontaneous			*	IV	*	*		III		*	*	(-3)
E11 Having a freshness of perception			*	IV	*	*		III		*	*	I
E12 Having a sense of humour	*			(+3)	*	*		(+2)		*	*	I
E13 Having free will		*		(+2)	*	*		(+1)		*	*	I



be expected both analyses show similar items which are not homogeneous with the rest of the items in a need level eg. A8, B1, C10, C15, D4 and E6.

These multivariate analyses, used in conjunction allow a more thorough understanding of the need items. For instance consider two self actualization items, E7 ("Having sympathy for others") and E12 ("Having a sense of humour"): in the middle class sample of the cluster analysis these items are both part of the level I cluster, which may lead one to believe that they are homogeneous with the self actualization items. However, the factor analysis demonstrated that both terms load on Factor II, rather than the self actualization factor, Factor I. Returning to the cluster analysis it appears that these items are placed in the most important category by all groups and because the self actualization is the most important cluster level for the middle class group these items appear to be homogeneous.

The cluster analysis also demonstrates the meaning of Factor II of the factor analysis. Recall that this factor consisted of the predictability aspects of the safety needs loaded negatively with E6, C15 and A11, while the positive dimensions were E12, E7, D4 and A8. The importance clusters of these items show that the positively loaded items fall into the most important cluster for all groups, while the negative fall into the least important, thus demonstrating that this is primarily an "importance" factor similar to that observed by Payne (1970) in a factor analysis of the NSQ, and is operating (apart from the safety items) across the need levels.

Finally, no evidence from either analysis has supported either a dichotomy model or a trichotomy of needs, postulated for example in the "Existence, Relatedness, Growth, model hypothesized

by Alderfer (1972). Although the needs are simply abstractions, some researchers suggesting more and some less than five, nevertheless in the present analysis they appeared to be reasonably distinct. The factor analysis demonstrated that the self actualization (Factor I) and self esteem (Factor II) categories were positively correlated and as Table 2.4 shows, they both cluster in level I for the middle class group but did not cluster together in either the working class or lower class sample. Again, in both analyses belonging appeared to be a rather distinct category. The safety needs clearly dichotomized into the predictability items (B5, B9, B10, B11) which all groups consider of little importance, and the safety items (B1, B2, B3) which are of the greater importance particularly to the lower class and working class groups. The physiology items load differently than the safety items in the factor analysis and cluster differently for the lower class and working class groups, though not for the middle class groups who consider both of little importance.

#### (iv) Group Differences

Our understanding of Maslow's Hierarchy of needs leads us to expect groups to differ in importance. This has been investigated throughout the study but will be summarized here for the purposes of construct validity.

1. There are significant differences between social class groups with respect to need importance (Table 3.7).
2. There are significant differences in need importance across age groups with respect to the safety and belonging needs (Table 3.10).
3. There are significant differences in need importance between

men and women with respect to the belonging need (Table 3.12).

4. When grouped by need importance there are differences in occupation, income and education, and a number of personal variables, notably personal competence and trust in people (Chapter 4).
5. There are differences between groups with dissimilar needs with respect to the type of work performed and attitudes towards work (Chapter 5).

## 2.4 CONCLUSION

In summary the evidence regarding the reliability and validity of the need importance instrument indicated that:

1. The subscales and total score of the instrument appeared quite stable over time with those individuals used for the test-retest situation.
2. The internal consistency of the categories Physiology, Safety, Esteem and Self Actualization seemed adequate. The internal consistency of Belonging was not as high as desired. However, the coefficient approached the desired criterion and was to that extent interpretable.
3. Again with respect to internal consistency the inter need category correlates were positively significant whilst the between need category correlations were either nonsignificant or negative.
4. Construct validity was demonstrated by the high proportion (at least 60%) of need items which loaded significantly on one factor.
5. Construct validity was also demonstrated by testing out the theory underlying the instrument. The studies reported group differences in the hypothesized variables.

This chapter has fulfilled the first aim of the research, by constructing an instrument which measures the five needs hypothesized by Maslow (1954) with a reliable and valid method.

This instrument will now be used as a basis to explore the social class differences in needs, and later the syndromes of behaviour associated with each need and the relationship between needs and work.



The next chapter notes the similarities between characteristics associated with social class position and the syndromes of behaviour postulated by Maslow. It examines the hypothesis that social class position is correlated with need importance, or more specifically that membership of the middle classes is characterized by self actualization and self esteem orientation, membership of the working class by esteem and belonging orientation, and finally, membership of the lower classes by safety and belonging orientation.

## C H A P T E R 3

### GROUP DIFFERENCES IN NEED IMPORTANCE: SOCIAL CLASS, AGE AND SEX

	Page
3. INTRODUCTION	... 82
3.1 LITERATURE REVIEW: SOCIAL CLASS	... 84
(i) Maslow's Concept of the "Arrestive Personality Type"	... 84
1. Physiology	... 85
2. Safety	... 85
3. Belonging	... 86
4. Self Esteem	... 87
5. Self Actualization	... 87
(ii) The Relationship between Social Class and Personality Characteristics	... 87
1. Childhood Experiences	... 87
a. Middle Class	... 88
b. Working Class	... 89
c. Lower Class	... 90
2. Adult Social Class Characteristics	... 91
a. Middle Class	... 91
b. Working Class	... 93
c. Lower Class	... 94
(iii) The Relationship of Social Class to Need Importance	... 95
3.2 AGE DIFFERENCES	... 98
(i) Childhood	... 98
(ii) Young Adulthood	... 98
(iii) Adulthood	... 99
(iv) Old Age	... 100
3.3 SEX DIFFERENCES	... 102
3.4 METHODOLOGY	... 106
(i) Measurement of Social Class, Age and Sex	... 106
(ii) Characteristics of the Sample	... 108
1. Lower Class	... 108
2. Working Class	... 110
3. Middle Class	... 111
(iii) Measurement of Need Importance	... 111
3.5 ANALYSIS	... 112
(i) Homogeneity of Need Importance Within Groups	... 112

(ii)	Differences between Ranking of Need Importance	... 113
(iii)	Typology of Need Importance	... 114
3.6	RESULTS	... 116
(i)	Social Class	... 116
	1. Need Prepotency and Social Class	... 120
	2. Discussion	... 122
(ii)	Age Differences	... 123
	1. Discussion	... 125
(iii)	Sex Differences	... 126
	1. Discussion	... 126
3.7	CONCLUSION	... 128

CHAPTER 3 - GROUP DIFFERENCES IN NEED IMPORTANCE, SOCIAL CLASS,AGE AND SEX3. INTRODUCTION

We concluded in the first chapter that although Maslow's (1954) hierarchy of needs was often quoted as a basis for a fuller understanding of motivation, there was some reluctance to use the concept, stemming primarily from a paucity of empirical evidence. In this chapter we examine the fifth theme of the thesis, the relative importance of the five needs identified by Maslow to different groups of people using the method created and validated in Chapter 2.

The vast body of research on the hierarchy of needs has examined two major issues, the interaction between satisfaction and importance and the relationship between needs and an individuals environmental and psychological characteristics.

Whilst a number of studies have observed that different occupational groups express differing concern for the importance of specific needs, none, with the exception of Aronoff (1967), have attempted a systematic investigation, on the basis of individual differences.

The "symptoms" of need importance are examined in great detail in Chapters 4 and 5<sup>1</sup>. This chapter takes a broader approach and from a review of the literature, to be discussed more fully later in the chapter investigates three major variables, social class, age and sex.

---

<sup>1</sup> The characteristics of syndromes and symptoms have been discussed in some detail in Chapter 1.1. (iv)



We will first examine the literature which has illuminated the relationship between the needs an individual considers important and his social class.

### 3.1 LITERATURE REVIEW - SOCIAL CLASS

No study to date has investigated the need structure of groups from the standpoint of different social classes or hypothesized that such differences might occur. For this reason the literature review will be far ranging collecting, as it does research from a number of disciplines and takes the following form:

- a. The first section reviews Maslow's (1954) hypothesis that those individuals whose basic need, for physiology and safety have not been satisfied, will exhibit what he terms an "arrestive" personality which has various characteristics, aspirations and goals associated with it.
- b. Following from this the review will examine studies which suggest that individuals from differing social classes also exhibit specific personality types, again with various characteristics, aspirations and goals associated with them.
- c. The final section examines the hypothesis that an individual's social class can be related to the importance he assigns to needs.

#### (1) Maslow's Concept of the "Arrestive" Personality Type

Maslow (1954) has hypothesized that frustration of the lower needs is associated with a specific personality type which he terms "arrestive". Similarly frustration of the belonging and esteem needs is also associated with certain negative personality characteristics. He also discusses the positive personality characteristics of the "self actualized" individual.

He proposes that there are two general causes of lower need frustration; child rearing techniques inappropriate to the child's

specific developmental needs, and what he terms "lack of cultural support" eg. unemployment, failure to provide housing, failure to provide adequate food.

Theme 3, the "symptoms" of behaviour will be examined in the next chapter, however to allow a fuller understanding of individual differences the behavioural characteristics of need importance, the "syndromes" of behaviour will be discussed here. (Maslow, 1954; p33).

### 1. Physiology

When the environment has failed to satisfy the individual's physiology needs, for food, shelter or sleep then that individual's activities and thoughts will be predominantly occupied with satisfying these needs. Because striving after satisfaction of these needs is primarily present-orientated, Maslow postulates little future planning, the individual surviving from day to day. By way of anecdotal example Orwell provides an illustration of this in his book "Down and out in Paris and London" (1969);

"When you are approaching poverty, one makes one discovery, which outweighs the others. You discover boredom and mean complications and the beginnings of hunger, but you also discover the great redeeming feature of poverty, that it annihilates the future".

To summarize, the causes of nongratification of the physiology needs are such things as hunger, poverty, bad health, sleep deprivation and thirst.

### 2. Safety

Maslow proposes that when an individual's needs for safety

are not met, for example by fear, unfairness, financial insecurity, inconsistent parental demands or personal insecurity then three major behavioural syndromes are exhibited:

- a. First the individual is mistrustful and withdrawn, seeing the world as generally unsafe, inconsistent and unreliable. Such an individual is uncertain about his ability to handle social relations, feeling others are either threatening or not dependable.
- b. Secondly, the individual is dependent on others, which results from their need to be stable, secure and protected in a structured and organized world. This is apparent in a preference for the familiar and a need for freedom from fear and anxiety.
- c. Finally, such an individual may exhibit personal incompetence, and an inability to meet responsibility, a task or challenge.

### 3. Belonging

According to Maslow (1954) the nongratification of the belonging needs are associated with a desire to possess affectionate relationships with others, to belong to wider social groups and to be intimate and warm.

If gratification of the belonging needs is perceived developmentally then it could be expected that adolescence and early childhood will be a normal period of belonging need gratification. However, if gratification fails to take place during this period then the adult will continue to exhibit those need gratification symptoms. If this is the case then frustration could be the result of an unstable bonding with parents, failure to make lasting



relationships or the loss of a close friendship.

#### 4. Esteem

When the needs for esteem remain frustrated then gratification becomes of paramount importance to the individual. Thus he will desire and strive for strength, achievement, adequacy, competence, and desire reputation, prestige and dominance.

Esteem can be considered developmentally, the means for satisfaction normally arising in middle age.

#### 5. Self Actualization

The characteristics of the self actualized individual have been discussed at some length in Chapter 1.2. Maslow has hypothesized that such need gratification is the result of a nonvaluing, loving childhood and environmental conditions which have allowed the gratification of the lower needs.

### (ii) The Relationship Between Social Class and Personality Characteristics

There is a large body of research which has suggested that social class differences are related to specific personality characteristics. These will be discussed in some detail because they are central to a discussion of the present study. For the sake of simplicity they will be divided into those relating to childhood experiences and those relating to adult experiences.

#### 1. Childhood Experiences

When reviewing the relevant literature Lundberg (1974) came to the conclusion that social class position affects personal

development by differential learning experiences which for any given class consist of distinctive value systems and interactional patterns. To the extent that socialization of the individual into his social class is successful, he will develop a number of personality attributes that embody that subculture.

a. Middle Class

In terms of child rearing techniques middle class mothers have been observed to be more directive, helping and encouraging of independent thought (Walters, 1964). They are more likely to answer their children's questions in terms of causes and consequences, thus encouraging them to think more conceptually (Gollin, 1968). With regard to this conceptualization, Bernstein (1958) made the following observation:

"The child in the middle class and associative levels is socialized within a formally articulated structure. Behaviour is modified according to an orientation towards an explicit set of goals and values, the future is conceived of in direct relation to the emotional and educational life of the child and consequently the child grows up in an ordered and rational structure in which his total experience is organized from an early age. The world mediates between the expression of feeling and its approved social recognition".

(Bernstein, 1958; p163)

The "elaborate" language which the middle class child learns from infancy, with its explicit meanings and wide vocabulary predisposes him to respond to the language and ordering of symbolic concepts of the school. For such a child the social structure of the school creates a framework which he can accept, respond to and exploit.

McClelland et al (1953) has suggested that this emphasis in childhood of independence, and autonomy encourages the later development of achievement motivation, one of the dominant middle class values. Similarly, Kohn (1969) reports that middle class parents gave higher priority to the attributes of their children which reflected internal dynamism. In summary, the middle class child is encouraged and taught to manipulate, control, understand and achieve.

b. Working Class

In contrast Walters (1964) has observed that working class mothers tend to be less helpful and encouraging, responding to their children's question in terms of "because it is" rather than causes and consequences. This creates a non-reflective state of mind for the child, who at a later stage will also reply to questions with appeals to regularity, eg. "because it always does" (Robinson and Rackshaw, 1972).

Further, a number of studies have shown that the working class parents in general punish their children for the immediate consequences of their action, rather than the intentions. The use of command, threat and other coercive techniques tends to be typical.

Differences also emerge in linguistic styles, for example Bernstein (1958) has demonstrated that the "restricted code" typical of close, informal groups, with implicit meaning, little verbal planning and a high degree of expressive meaning and emotional content, is more frequently used in the working class. He hypothesized that a child hearing the "restrictive code" will become sensitive to the quality and strength of feeling through nonverbal

expression. The "elaborate code", more frequently used by the middle class child, is the language of the school, thereby placing many working class children at a disadvantage. The perception of parental roles also varies by social class. The working class wife typically views her husband as a controlling and dominant figure, feeling that discipline is the major part of his role as a father. (Rainwater, et al, 1962).

c. Lower Class

Like the typical working class childhood many researchers have characterized the lower class by authoritarianism and "restrictive" linguistic codes.

One of the problems which the lower class child faces is that of identification. The internalization of norms and values usually occurs through parental identification, normally with the mothers and by the age of three with the father. Problems arise because in the lower class families the father is sometimes absent, and there is more likely to be a series of "fathers". A child may be left with no male to identify with except distant glamorous pop stars or footballers who offer little help in mastering the environment or himself. As a result the strongest identifications are likely to be with the peer group, which contributes little to the development of a value system or personality suited to broader interactions.

Major class differences have also been observed in the use of power. The lower class parent/child relationship tends to be more closed, hierarchical and rigid, so children raised in this atmosphere and fearful of parents' explosive anger, tend to become either bullies or submissive followers (McGuire, 1952). A Texas study has shown the inconsistency of parental discipline, the child



being laughed at one day and smacked the next (McGuire, 1952). From this he learns that gratification should be seized at every opportunity since there is no certainty it will be available later.

## 2. Adult Social Class Characteristics

We will briefly review the salient differences in social class characteristics.

### a. Middle Class

Whilst there are a number of values and attitudes common to most middle class individuals, many observers speak not of a homogenous group but rather of many divisions. For example, Rayner (1969) talks of a disparate group of people who perceive themselves as middle class, but lack any kind of common ideology. They share broad economic institutions but have different life styles, levels of prestige and power. He divides the middle class into upper and lower, and characterizes the values of the former as independence, both financial and psychological.

Reisman (1961) divides the middle class into the "inner" and "other" directed groups. The former are composed of professional people who value internal controls, activity and future orientation. They are enterprising and primarily concerned with problems of the physical environment. The latter, "other" directed group are composed of publicly orientated bureaucrats who are primarily concerned with the actions and wishes of others and have a high level of abstraction. It is of interest to note that Reisman's concept of the autonomous person, capable of conforming to social norms but free to choose whether or not to, is similar to Maslow's concept of the "self actualized" individual. Reisman

believes that if autonomous nature does develop it is more likely to do so for the "other" directed person because this group's consciousness rests on a more abstract base and is less subject to external power. The major values of the "inner" and "other" directed individual are summarized in Table 3.1 to allow comparison with Maslow's concept of the self actualized individual.

Table 3.1

VALUES OF THE "INNER" AND "OTHER" DIRECTED INDIVIDUALS  
(From Reisman, 1961)

Inner-directed or Rationalistic Value System	Other-directed or Neo-humanistic Variant
<ul style="list-style-type: none"> <li>- Activity; manipulation of the physical environment</li> <li>- Rationalism</li> <li>- Universalism</li> <li>- Individualism</li> <li>- Future orientation</li> </ul>	<ul style="list-style-type: none"> <li>- Less activity; manipulation of the social environment</li> <li>- Sensitivity to others by means of intuition as well as or rather than by knowledge</li> <li>- Universalism fused with particularism to extend it to a broader field</li> <li>- A flexible form of self-consciousness tied to a vastly expanded primary group orientation</li> <li>- Present orientation with constant reference to the immediate future</li> </ul>

A number of more basic characteristics have also been observed, one of the more interesting being marital stability. Goode, (1956; p28), reviewing consensus data concluded that:

"There is a rough inverse correlation between class position and rate of divorce .. this is not simply a matter of

economic causality, but is the result of the family patterns at different strata".

Others who have studied middle class communities (Young and Willmott, 1960; Stacey, 1960) have reported the richness of voluntary organization membership and the characteristics of visiting. In one middle class area, 40% of the sample had visited a friend or neighbour during the previous 24 hours. In addition many belonged to voluntary organizations.

b. Working Class

The working class characteristic most frequently discussed is the control of power. For example White (1952) makes the following statement:

"Working class people have particularly no influence on the powers that concern their fate. Decisions in the community, in the unions and in business management are made by remote figures with whom contact is impossible, and the consequence of these decisions usually have to be accepted as if they were immutable decrees of nature. Such a situation disposes a person to an attitude of resigned acceptance".

(White, 1952; p136)

Patterns of working class interest tend to centre around the extended family, so family, rather than friends are seen more frequently. Unlike the middle class, the working class individual spends less time participating in the community in voluntary organizations, with the exception of those activities which are purely social (Hodge and Treiman, 1968). As Dubin's (1956) work on life interests has shown, for the working class man life really begins when he leaves work. Only 10% perceive their primary

relationships taking place at work, home and work experiences are kept separate, workmates are not generally invited to the home and are seldom seen outside work.

c. Lower Class

Like the working class the central issue of the lower class is the control of power. White (1952) has this to say:

"The power of the lower class individual is even more limited, central to the lower class situation is hopelessness. It will always be desperately difficult to make ends meet. If the future is not going to be better, there is no point in sacrificing for it. What makes life worthwhile is the pleasure that can be obtained in the present".

(White, 1952; p143)

With regard to locus of control, lower class people have been repeatedly described as present orientated, living in a quick sequence of tension and relief, unwilling to forgo pleasures for long periods or to plan action that has distant goals because of the uncertainty of the future.

Marital instability is particularly prevalent in this class. The husband or wife may be working, or may be living together by private agreement only, but in either case the relationship tends to be unstable. From consensus figures Goode (1956) reports that half or more of lower class families have been broken by divorce, separation, desertion or death.

To summarize, the major values and orientations representative of each social class are presented in Table 3.2. The lower class values are summarized from Cohen and Hodges (1963), the



working class from Miller and Reisman (1961) and the middle class from Williams (1959). The "other" directed characteristics are summarized from Reisman (1961).

Table 3.2

THE MAJOR VALUES AND ORIENTATIONS ASSOCIATED WITH MIDDLE, WORKING AND LOWER CLASS POSITION

Middle Class	Working Class	Lower Class
Active Mastery Manipulation Open world view; change, flux	Striving for stability or security Belief in luck or fate	Powerlessness in impersonal and achievement areas.
Faith in Rationalism Preference for orderliness	Traditionalism Attitudes held unquestioningly Pragmatic	Anti-intellectualism and intolerance
Univeralistic ethnic stress on equality	Personal centredness Home and neighbourhood centred	Simplification and narrow experience and perspectives
Emphasis on individual personality	Person centredness	Deprivation Misanthropy
Strong orientation towards change and future	Excitement No point in saving The immediate, present	Toughness Insecurity

(iii) The Relationship of Social Class to Need Importance

The major values and orientations of the social classes has been summarized in Table 3.2. Table 3.3 relates these values and orientations the symptoms of behaviour which Maslow postulates are

characteristic of each need.

However, within such a framework it must be remembered that social class defines a group of probable values with diffused edges. Presumably the more central a person is to a class, the more he will espouse the dominant needs. There is of course no exclusiveness of needs, neatly separating classes. Thus esteem though postulated to be pervasive in the middle class, may be found in a minority of the working class.

Let us bring Maslow's theory and the evidence reviewed together and propose three hypotheses:

#### Hypothesis 1

The lower class group will most frequently assign increased importance to the physiology and safety needs.

#### Hypothesis 2

The working class group will most frequently assign increased importance to the belonging and esteem needs.

#### Hypothesis 3

The middle class group will most frequently assign increased importance to the esteem and self actualization needs.

Table 3.3

RELATIONSHIP OF PREPONENT NEED TO SOCIAL CLASS CHARACTERISTICS

Need	Arrestive Personality Characteristics	Associated Social Class Characteristics	Social Class
PHYSIOLOGY	Present Orientation No delay of gratification Deprivation	Present Orientation No delayed gratification Deprivation	LC/WC LC LC
SAFETY	Insecurity, mistrust and withdrawal Dependency Need for stability Personal incompetence	Striving for security  Need for predictability Powerless in achievement areas	LC/WC  LC LC
BELONGING	Desire for relationships Desire for contact and intimacy	Person centredness Home and neighbourhood centred	WC WC
ESTEEM	Desire for strength and achievement Desire for dignity	Active mastery, manipulation Emphasis on individual personality	MC (I) MC (I)
SELF-ACTUALIZATION	Acceptance of self; Increased autonomy; Resistance to enculturation; Democratic; Richer perception of individual; Increased social interest.	Sensitive to others by means of intuition A flexible form of self consciousness tied to a vastly expanded primary group orientation	MC (O)  MC (O)

MC (I) Reisman's "Inner" directed middle class

MC (O) Reisman's "Other" directed middle class

### 3.2 AGE DIFFERENCES

The second factor examined is age or the individual's position in the life cycle. Interestingly, although Maslow (1954) has repeatedly stressed the developmental aspects of the needs there are no studies to date which have examined this relationship.

We will briefly summarize the developmental aspects of need importance postulated by Maslow and discuss research which might elucidate these characteristics;

#### (i) Childhood

Maslow (1954) has this to say of childhood:

"The average child in our society generally prefers a safe, orderly, predictable, organized world which he can count on and which unexpected, unmanageable or other dangerous things do not occur".

(Maslow, 1954; p87)

If the environmental situation of the child allows gratification of the safety needs then adolescence will be characterized by a striving to gratify the needs for belonging.

#### (ii) Young Adulthood

Many reseachers examining young adulthood have observed behaviour centred on peer groups or close relationships, for example Erikson (1963), within the framework of his postulated psychosocial development has characterized this stage as "intimacy and solidarity versus isolation" reflecting the importance of close relationships to this age group.

Others have interpreted this need for intimacy apparent in



young adulthood primarily in terms of sex drives.

"In adolescence and in adulthood when the sex need is strongest and most generally frustrated, personal desires and sex-social interests are very strongly in evidence. Later, as sex needs are satisfied in marriage, and decline somewhat, the path is paved for other needs to achieve dominance".

(Pressey and Kuhlen; 1957, p313)

The belonging needs of young adults are to a certain extent satisfied by marriage, this gratification results in motivation direction towards the esteem needs.

### (iii) Adulthood

Frenkel-Brunswick (1951) has observed a major change occurs during adulthood, from the "personal desires" of young adults to a "sense of duty" and cultural responsibility apparent in middle age. For some individuals middle age represents the culmination of a career, the height of achievement, goal and promotion, for example Pressey and Kuhlen (1957) report that the most frequently mentioned goal for men until the age of 50 was getting promotion in the same place, or getting a better job.

Bromley (1974) has suggested middle age also represents a choice period, a time when the individual can review his life progress to date and make decisions about the future.

"Some concentrate their minds on important, unfinished business, and set about reappraising their activities, and aims of life. Others feel depressed or demoralized. Most, no doubt, fall somewhere between these two extremes".

(Bromley, 1974; p251)

(iv) Old Age

If fulfilment of the lower needs occurs then late middle age can be a time of self-actualization, however, as Maslow points out, this is apparent only in a small percentage of the population, the majority of individuals do not attain self actualization because the prerequisites of lower need gratification have not been met. During old age the individual can either grow, or he can regress, which occurs when the lower needs are frustrated and results in a reversion to earlier forms of motivation. Regression during late maturity and old age can arise from a number of causes. The physiology needs, once satisfied, may be frustrated by ill health; occupational redundancy or retirement may leave the safety needs ungratified. Loss of a spouse, or a loved one may increase the need for the once satisfied belonging needs. Finally, even the esteem needs may become of renewed importance with the failure of occupational aspirations or loss of youthful vigour or freedom. This regression in later life is demonstrated by increases in anxiety, introversion, neuroticism and an apparent decrease in risk taking and confidence. (Bromley, 1974)

The effects of age on motivation cannot be considered in isolation from various life conditions, for example, as Bromley, (1974) points out, socio-economic factors affect financial adjustment to middle age, whilst the average working class man has passed his peak earning capacity by the age of 40, the middle class individual does not do so until 50. Partly as a consequence of higher earnings and partly as a result of education, middle class people are more likely to acquire financial assets and find more opportunity for relaxation or leisure in their old age whilst working class men often do not have the time or resources to prepare

adequately for retirement and are consequently more likely to feel they are "too old at 50" so reconciling themselves to such security and status as has been achieved.

The effects of age on motivation are also different for men and women, for example in a western society a man's career achievement may occur earlier than a woman's whose time during young adulthood is frequently spent in child rearing activities.

In summary, whilst theoretically the hierarchy may be ascended developmentally it is important to acknowledge the effect of intervening variables, two of which, socio economic status and sex, have been discussed.

However acknowledging intervening variables a number of hypotheses can be postulated:

#### Hypothesis 1

The younger age group will more frequently assign increased importance to the belonging needs.

#### Hypothesis 2

Those individuals with increased esteem needs will more frequently be in the older age group.

### 3.3 SEX DIFFERENCES

Maslow's work gives little indication that sex differences will have any effect on the importance an individual assigns to the needs. In his own subjective research of characteristics of self actualization, it is unclear how many women, if any were considered. Whilst later research in the hierarchy appears to have carried on the tradition of male orientation, because most studies have been concerned with the work situation the subjects have been predominantly male, no study to date has systematically considered the possibility of sex differences in need importance or gratification.

When related research is reviewed a number of pertinent findings emerge. First, it has been variously reported that women have higher needs for belonging, or what has been termed "dependency" than men (Kagan and Moss, 1962; Douvan and Adelson, 1966). Dependency has emerged as a stable female personality trait, the correlations between dependency behaviour of girls in adolescence and early adulthood being higher than any other behavioural dimension, suggesting that women are consistent in their patterns of dependency over this span of time. (Kagan and Moss, 1962).

The second major research finding to emerge is that men have higher needs for achievement (McClelland et al, 1953; Maccoby and Jacklin, 1955; Bardwick, 1971) which in many respects is synonymous with Maslow's concept of esteem motivation.

"From early childhood on, males appear to have greater achievement needs directed towards successful task accomplishment, while females exhibit greater affiliation or



social needs directed towards successful relationships with other people in their environment."

(Garai and Scheinfeild, 1968; p70)

In reviewing this research Bardwick (1971) has suggested that achievement in men and women stem from different motives; women achieve through their affiliation needs, in which case the motive to achieve, especially competitively, is probably not a part of the core personality whilst in contrast adolescent boys are highly motivated to be independent (Douvan and Adelson, 1966). In terms of actual development of internal values and controls boys have developed much further than the girls who in social relationships are very much more mature, focusing on the interpersonal aspects of their future lives in their roles as housewives and mothers. What the boy achieves through separation and autonomy, the girl achieves through intimate connexion with others.

Similarly, Lipinski (1966) asking college women what they thought were the achievements in their lives, found the standard masculine categories, of intellectual, mechanical or artistic endeavours insufficient. Her subjects added success in achieving a certain kind of relationship and internal development. She argues that the definition of achievement is always derived from the academic, vocational model, but this is not only the model which is relevant to women. For many women the affiliation need is dominant and the need for achievement important but secondary.

It has been reported (Kagan and Moss, 1962; Garai and Scheinfeild, 1968) that in the early years of marriage a woman's relations with her husband and children are her major source of esteem. It is only after about 15 years, when she is secure in the nuclear family, there will be increased motivation to achieve. Therefore needs for achievement may develop in women much later than

in men requiring first the security of the belonging needs, for example, Baruch (1966) reports that 10 to 15 years after marriage, the responses of women who have been college students indicate an increase in the motives to achieve, if they enter the job market. The characteristics of these women are typically rather different from their male counterparts, Kagan and Moss (1962) report a major cluster of intercorrelated variables that include competitiveness, achievement, intellectual mastery, masculine interests, low social anxiety and a reluctance to withdraw from a stressful situation. Bardwick (1971) argues that this reveals a woman whose personality is, in these respects, closer to the male model and who uses her intellectual and professional areas as the place in which she can express her abilities, independence and competitiveness with a lessened likelihood of alienating others.

A number of studies (eg. Lynn, 1966; Hoffman, 1977) have explored the women's reduced achievement motive in terms of "fear of success". This is based on the premise that the achievement situation is competitive, aggressive and therefore unfeminine, so a successful woman finds herself in an unfeminine position which creates conflict, identified by high anxiety levels and fear of success.

Reduced achievement and increased dependency may also vary environmentally, particularly across social class.

"Adherence to the traditional sex role behaviours is breaking down in the middle classes and is strongly correlated with educational levels".

(Bardwick, 1971; p151)

Rabbin (1950) has reported that lower class boys and girls have toy preferences much closer to the traditional sex typed

choices and lower class mothers encourage sex typed behaviours more vigorously. Similarly, the higher the educational level of the parents, the more the female child is permitted to participate in masculine activities (Kagan and Moss, 1962).

Finally, Helson (1966) found that creative females could be characterized by impulsiveness, an interest in imaginative and artistic activity, a mistrust of personal relationships, an investment in inner life and an independence of judgement and originality. These characteristics bear some relation to Maslow's concept of the self actualized individual.

On the basis of these research findings the following hypotheses can be formulated:

#### Hypothesis 1

The female group will consider the belonging needs of greater importance than their male counterparts.

#### Hypothesis 2

The esteem needs will be of greater importance to the male group.

### 3.4 METHODOLOGY

#### (1) Measurement of Social Class, Age and Sex

The existence of social classes has been implicitly assumed and explicitly defined by a number of social science theoreticians (Hollingshead and Redlich, 1953). Reviewing the various alternatives the decision was made to assess social and economic status by an index of status characteristics, which included occupation, source of income, house type and dwelling area.

These characteristics are presented in Table 3.4

Table 3.4

#### SOCIAL CLASS CHARACTERISTICS

	SOCIO-GROUP		
	Lower Class	Working Class	Middle Class
Occupation	Unemployed Unskilled Manual Semi-skilled Manual	Skilled Manual Skilled Nonmanual	Skilled Nonmanual Managerial Professional
House Type	Private Rent Council Rent	Council Rented Privately Owned	Privately owned.
Dwelling Area	Inner City Council Estates Inner City Private Flats	Suburban Council Estates Suburban Private Estates	Suburban Private Estates

In the case of housewives and students not gainfully employed, occupation and income of husband or father respectively, was used.



In an effort to consider age and sex within the sample each were varied systematically. Comparisons were made between male and female, and age groups 20 to 30, 31 to 40, 41 to 50 and 51 to 60. Each of the 24 groups contained 10 respondents, 240 respondents in all. (See Table 3.5)

Table 3.5

CONSTRUCTION OF SUBJECT GROUPS

MALE			AGE	FEMALE		
Social Class				Social Class		
Lower	Working	Middle		Lower	Working	Middle
			20-30			
			31-40			
			41-50			
			51-60			

10 Subjects per cell ; 240 subjects

Data were collected from working and nonworking people who were either approached at home in the evenings or at work. The former was important because of the substantial percentage of housewives in the middle class and high incidence of unemployment in the lower class. Data were only collected from an urban population in Liverpool, an inner city decaying council estate, a suburban council estate and a privately owned estate.

Of the 244 people contacted 2% refused to participate. For the majority the Q-sort instrument test to measure need importance was administered in a quiet room at work or in the home. The test took approximately three-quarters of an hour. Background data about age, sex, marital status, education level and occupation were collected.

(ii) Characteristics of the Sample

It is of interest to briefly examine the salient characteristics of each social class group which emerged from the interview, both formally and informally.

1. Lower Class

The stratification of the class system bulges in the middle, the lower class stratum being occupied by a minority whose number rarely exceed more than 20% of the population and is estimated presently at 10%.

Because of the large numbers of unemployed in Liverpool's inner city it was decided that if individuals were only approached at their place of work, then the unemployed would go unmeasured. For this reason the major method of data collection in the lower class was by house type and dwelling area. The area selected was the Falkner Estate, a seven year old council estate in Liverpool's inner city. The author was introduced to a number of members of the estate by the Community Liaison Officer. The majority of individuals were approached in the evening to obtain data from both working and non working people.

The estate from which data were collected is considered one of the worst inner city estates, and viewed as something of a "dumping ground" for problem families. For this reason it has a higher rate of broken families and unemployment than one would normally expect in other inner city estates.

The estate, though comparatively new, showed severe signs of decay, most of the ground floor walls were covered in graffiti, many windows were broken and replaced with boarding. The streets were littered with broken glass and garbage, children wandered around and

men loitered at street corners. Many of the houses were grossly over crowded with up to nine people living in a house with three bedrooms. Eighty-five percent of the sample were either coloured or of mixed race, generally the women were white and the men coloured.

Family structure was unstable, 40% of the youngest female age group were unmarried mothers and 20% of the eldest age group were divorced. However, some stability was gained from the extended family, for instance, the children of unmarried mothers were often cared for by the grandparents. The type and incidence of broken homes showed changes through the age groups. Forty percent of individuals between the ages of 20 and 30 were part of broken homes, primarily because they were unmarried mothers. In the 41 to 50 age group, 10% were unmarried mothers, 20% divorced and 10% widowed. In the 51 to 60 age group 80% of the families were broken, 20% by divorce and 60% by widowhood, (though it was difficult to determine whether this meant death of spouse or simply separation).

Unemployment is above the national average; of the economically active males, 33% of the 20 to 30 age group were unemployed, thus, 80% of the families were state supported, either by unemployment benefit, child welfare, invalid pension or old age pension. Family income, according to the local social welfare officer, was often supplemented by petty theft. The consensus figures (Hart, 1972) shows that in the Granby area, (of which the estate is a section) there is an average unemployment rate of 23% of whom 13% are chronically unemployed, rather than seasonally unemployed.

Reliance on state assistance, which characterizes the majority of the families, results in the reduction of the male role as supporter. Consequently, many of the families were matriarchal,

it is the mother, who, through child benefits, provides for the children and disciplines them.

None of the sample had attended or were attending further education; again reflected in the consensus of the area which reports that only 2% of this population had received further education. These figures and observations serve as some indication of the economic and social deprivation which the majority of this group had suffered. Low income places severe restrictions on the lives of these families. Many have experienced overcrowding, the average size of families of parents over the age of 30 was 4 children. Thus the atmosphere in many of the homes is likely to be dominated by a weary preoccupation with getting the housework done, irritable out breaks and noisy quarrels. As children become more numerous parental patience snaps, often the father is absent and the mother has to cope on her own. In the estate, going out of doors means yet another crowded environment, which may be conducive to adventure, but is often highly competitive and violent.

## 2. Working Class

This sample, collected from the outer residential areas and a number of work places, were noticeably more stable, both economically and socially. None of the youngest age group was unemployed, rising to 15% of the 41 to 50 age group. Occupational types were either skilled manual or unskilled manual. Family structure was more stable than the lower class. There were no unmarried mothers in the group and loss of spouse, through divorce or death, had occurred in 20% of the mature age group. This illustrates one of the interesting differences between the two social class groups. While in the lower class group there was no



pressure for the unmarried to wed, this is not the case in the working class group. Here, although conception may occur outside marriage, there is a great social pressure against illegitimacy and the status of an unmarried mother. This greater pressure towards conformity can be observed in many aspects of the working class life. Conversely, in the lower class group no such pressure appeared to exist.

### 3. Middle Class

None of the middle class sample was unemployed, 40% of the sample was employed in skilled manual or nonmanual work, 27% in lower managerial and administration and 35% were higher managerial or professional. Thirty five percent of the group had attended some form of higher education. Family structure was stable and similar to the working class.

#### (iii) Measurement of Need Importance

The measure of need importance, described in Chapter 2 was administered to each individual.

### 3.5 ANALYSIS

Prior to examining the specific hypotheses which have been discussed earlier it is first important to examine the basic need structure of these groups. With this in mind the first analysis investigates whether groups of similar age, sex and social class have similar notions of what needs are most important to them. Thus we are looking at within group homogeneity of need importance.

The second analysis examines the differences in need importance between the five needs in each subject group.

#### (1) Homogeneity of Need Importance within Groups

The first analysis examined the similarity of need importance within each of the 24 groups. It will be remembered that the 10 individuals within each group were of similar age, sex and social class. If there is some consistency in the rating of need importance then these groups will be internally homogeneous.

Homogeneity was examined with a matrix which correlated ranked need importance scores within each group. The Kendall coefficient of Concordance ( $W$ ) was considered the most appropriate statistic because of its nonparametric parameters (Seigal, 1956).  $W$  expresses the degree of association among the sets of ranked scores, a significant value demonstrating that individuals within a group are applying essentially the same standards in ranking the need items.

Analysis using the Kendall Coefficient ( $n = 10$ ;  $k = 5$ ; for  $S$  231.2  $p < 0.05$ ) demonstrated that only three of the 24 groups (L.C.; age 41-50, Male; L.C. age 31-40, Female; W.C. age 41-50 Female) showed significant differences within group rankings and

were not homogeneous. (See Appendix Table 3.1 for S and W values of the groups). High values of W signify increased homogeneity, values of W ranged from 0.10 to 0.75 with a mean value of 0.42. Within group homogeneity of need importance appears to increase with social class, thus the average Coefficient of Concordance for the middle class groups was 0.57, for the working class 0.38 and for the lower class 0.31.

(ii) Differences between Ranking of Need Importance

Having established that most groups of similar age, sex and social class rank the need items in a similar manner it is now important to ascertain whether there are significant differences between the overall score assigned to each need within the homogeneous groups. If individuals were ranking the need items randomly then it would be expected that there would be no significant differences between the overall score for each of the five needs.

To examine this the Friedman Two Way Analysis of Variance was used to analyse the sum of the ranks within each of the 24 groups. Analysis demonstrated (  $n = 10$ ;  $d.f = 4$ ; for  $\chi^2 = 9.49$ ;  $p < 0.05$ ) that in 19 of the 24 groups there were significant differences between the overall need importance score assigned to the five needs which suggests that the items are not being randomly sorted. Appendix 3.2 presents the chi-square values.

As one would expect those groups which do not show a significant difference are in the main, also lacking internal homogeneity.

Having established that the groups are homogeneous and there are significant differences within them as regards need importance, we are now justified in examining the differences between the groups

and the major hypothesis.

(iii) Typology of Need Importance

The previous analyses suggested that there was some justification in constructing groups of similar age, sex and social class. However they gave no suggestion about the relative similarities between these three variables, for example, do the similarities of age cut across social class or sex differences? The third analysis investigated this by grouping the 24 groups according to the similarity of their need importance scores.

Whilst the majority of work concerned with Maslow's propositions have made use of factor analysis (Payne 1970) it could be argued, as Wahba and Bridwell (1976) do, that the very nature of factor analysis precludes the yielding of five independent factors. In keeping with Wanous and Zwany (1977) cluster analysis appeared more appropriate for by clearly grouping variables the results are more easily interpreted.

There has been a proliferation of clustering techniques (Everitt, 1974), though most psychological research uses one of the agglomerate methods which proceeds by scanning the entire correlation matrix for items with the highest correlation. Following Everitt's suggestion various clustering techniques were applied to the data. (See Chapter 2.3 (ii) for a fuller explanation of the technique.) Hierarchical techniques were initially selected because they are best suited to data where it can be reasonably assumed that there is some sort of grouping. Single Linkage, Median and Wards methods were applied to a subset of the data. All produced similar dendrograms, although because of the different properties of the method, the fusion distances were different,



demonstrating that the results from any one method are not spurious or the result of method characteristics. Of these "Wards Technique" was selected, primarily because of the problems of chaining, ie the tendency to cluster at a relatively low level objects linked by chains of intermediates, associated with the other techniques.

The first group of cluster analyses were conducted to examine the typology of individuals with similar needs. If social class is an important determinant of need gratification it could be expected that people of similar social class will share similar preponent needs. Specifically, five cluster analyses were performed, one for each need level. The data consisted of the sum of importance score assigned to each item for each of the 24 groups.

### 3.6 RESULTS

The results are first presented in dendrogram form (Appendix 2.3), which is a two dimensional diagram illustrating the fusions which have been made at successive levels. For the sake of clarity Table 3.6 shows the most significant clusters extracted from the relevant dendrograms. It becomes apparent from this table that the major factor which groups the importance individuals assign to need categories is social class. Table 3.6 also shows the fusion distances (a measure of independence) between clusters. Thus, for example, Clusters I and II in the self-actualization analysis have a greater fusion distance, whilst clusters II and III are more similar than clusters I and II.

A number of general observations can be made about fusion distances, for all the need category analyses the larger fusion distances are found between middle and lower class groups, this being the greatest for the belonging and self-actualization needs. For some needs the working class and lower class are similar, while for others the working class and middle class are similar.

Having examined the general typology of the data we will now consider the hypotheses for the variables.

#### (1) Social Class

The hypotheses proposed in Section 3.1 (iii) can be stated thus:

##### Hypothesis I

The lower class group will most frequently report increased need importance for the physiology and the safety needs.

Table 3.6

CLUSTER ANALYSIS OF SUBJECT GROUPS

Subject Groups	PHYSIOLOGY		SAFETY		BELONGING		ESTEEM		SELF ACTUALIZATION		Group Total Correlations
	I	II III	I	II III IV	I	II III	I	II III	I	II III	
1. LC M 20-30	*		*		*		*		*		.63
2. LC F 20-30	*		*		*		*		*		.68
3. LC M 31-40	*		*		*		*		*		.69
4. LC F 31-40	*		*		*		*		*		.64
5. LC M 41-50	*		*		*		*		*		.59
6. LC F 41-50	*		*		*		*		*		.59
7. LC M 51-60	*		*		*		*		*		.70
8. LC F 51-60	*		*		*		*		*		.66
9. WC M 20-30	*		*		*		*		*		.65
10. WC F 20-30	*		*		*		*		*		.63
11. WC M 31-40	*		*		*		*		*		.71
12. WC F 31-40	*		*		*		*		*		.76
13. WC M 41-50	*		*		*		*		*		.59
14. WC F 41-50	*		*		*		*		*		.70
15. WC M 51-60	*		*		*		*		*		.66
16. WC F 51-60	*		*		*		*		*		.61
17. MC M 20-30	*		*		*		*		*		.67
18. MC F 20-30	*		*		*		*		*		.51
19. MC M 31-40	*		*		*		*		*		.69
20. MC F 31-40	*		*		*		*		*		.69
21. MC M 41-50	*		*		*		*		*		.76
22. MC F 41-50	*		*		*		*		*		.73
23. MC M 51-60	*		*		*		*		*		.68
24. MC F 51-60	*		*		*		*		*		.59
Fusion Distances	411	287	70	331	63	708	283	68	299	725	280

### Hypothesis II

The working class group will most frequently report increased need importance for the belonging and esteem needs.

### Hypothesis III

The middle class sample will most frequently report increased need importance for the esteem and self actualization needs.

The cluster analysis demonstrated that the most appropriate method of categorizing the groups was by social class. To analyse the difference in need importance across social class a Kruskal Wallis analysis was used. All five analyses tested the hypothesis that there is a significant difference in the importance assigned to the need categories across social class groupings. The Kruskal Wallis analysis also provides rank sums, which gives some indication of relative need importance.

A summary of the analyses is presented in Table 3.7 which demonstrates significant differences between the need importance assigned by the three social class groups to all need categories. Further, the rank totals suggest a trend similar to those hypothesized. Following the Kruskal Wallis analysis a number of planned Mann Whitney nonparametric tests were performed to locate the significant differences between need importance of the three social class groups. For each need category every possible combination was made, LC/WC : WC/MC : LC/MC. The results are summarized in Table 3.8. A more detailed description of the Z values are presented in Appendix (Table 3.3).



Table 3.7

KRUSKAL-WALLIS ANALYSIS OF DIFFERENCES IN NEED IMPORTANCE ACROSS  
SOCIAL CLASS GROUPS

	NEED CATEGORY				
	Physiology	Safety	Belonging	Esteem	Self Actualization
H VALUE	37.7	42.5	10.4	30.9	75.8
<u>RANK TOTAL</u>					
Lower Class	12,729	12,391	9,799	7,008	6,086
Working Class	8,396	9,843	10,968	10,093	9,157
Middle Class	7,796	6,687	8,152	11,818	13,676
Significance Level $p <$	0.01	$p < 0.01$	$p < 0.05$	$p < 0.01$	$p < 0.01$

Df = 2, n1 = 80, n2 = 80, n3 = 80

From the analysis it appears that the safety and physiology needs are significantly more important to the lower class group than the other social class groups. Conversely, the need for belonging is significantly more important to the working class sample. Esteem was rated equally important by the working class and middle class groups and less important by the lower class. Finally, self-actualization was significantly more important to the middle class group and less important to the working class and lower class group.

Table 3.8

MANN-WHITNEY TESTS OF SIGNIFICANCE BETWEEN SOCIAL CLASS GROUPS

NEED LEVEL	ANALYSIS		
Physiology	LC > WC**	WC = MC	LC > MC*
Safety	LC > WC*	WC > MC**	LC > MC**
Belonging	LC = WC	WC > MC*	LC > MC*
Self Esteem	LC < WC**	WC = MC	LC < MC**
Self Actualization	LC < WC**	WC < MC**	LC < MC**

\*  $P < 0.05$

\*\*  $P < 0.01$

1. Need Prepotency and Social Class

The concept of "propotency" or most important need is central to Maslow's hierarchical model. Considering again Hypotheses 1, 2, and 3 the need prepotency across the social class was examined. For each individual the need level with the highest score was deemed "preponent" and numbers of individuals with similar preponent needs were summed within social classes and presented as percentages.

Table 3.9

NEED PREPOTENCY ACROSS SOCIAL CLASS GROUPS

Percentage of Individuals in each grouping placing need as most important

SOCIAL CLASS	NEED CATEGORY				
	Physiology	Safety	Belonging	Esteem	Self Actualization
Middle Class	1	1	19	37	42
Working Class	3	6	41	38	12
Lower Class	25	11	39	19	6

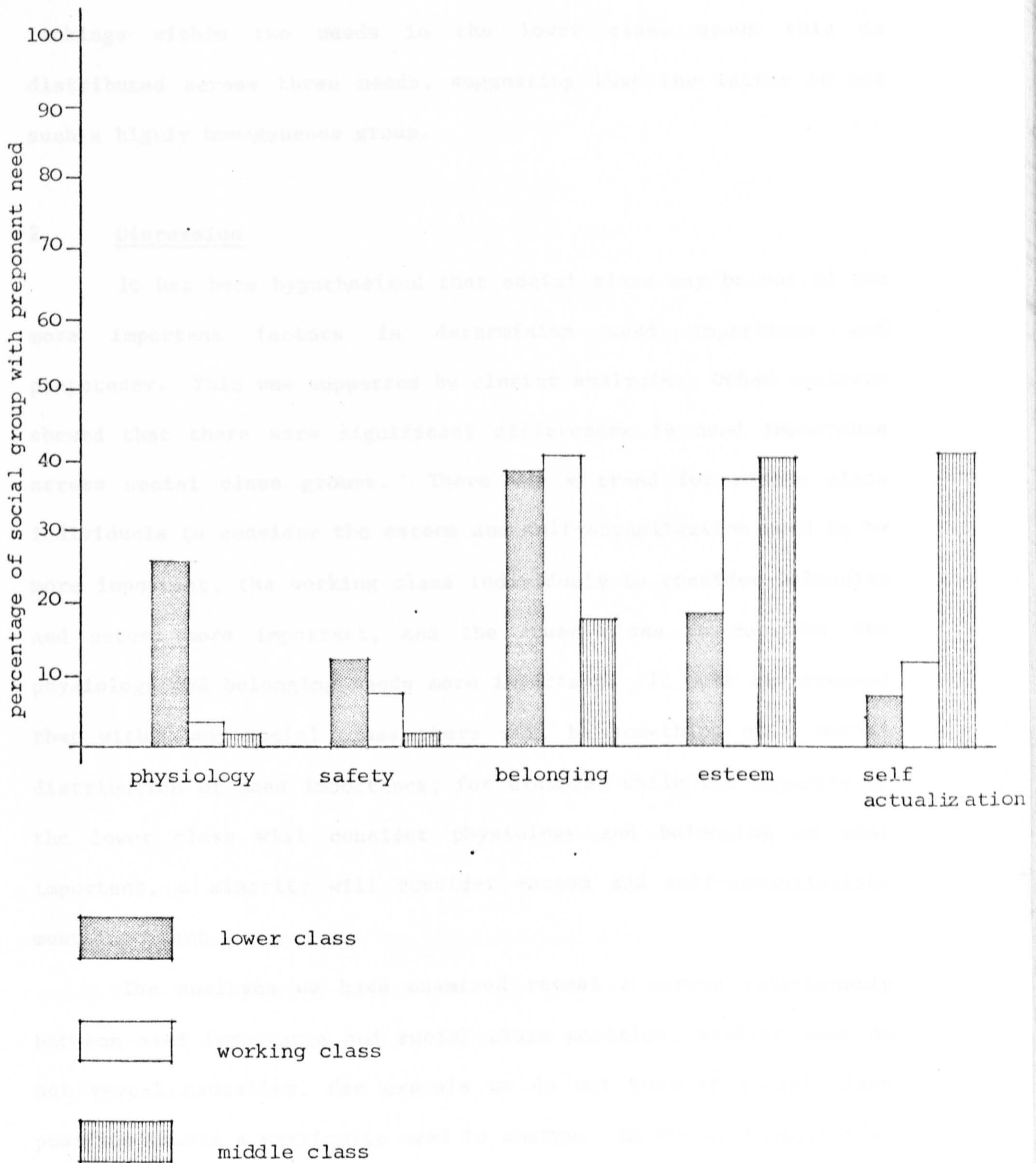
Thus, Table 3.9 demonstrates that whilst only 1% of the middle class sample considered the physiology need to be most important, 25% of the lower class considered it most important. For ease of interpretation the percentiles are also presented in block diagram form (Figure 3.1).

A number of clear trends emerged, to summarize, the lower class groups preponent needs were physiology (25%) and belonging (39%), the working class group belonging (41%) and self esteem (38%) and the middle class group self esteem (37%) and self actualization (42%). These percentiles provide clear support for the hypotheses with the exception of the safety need for the lower class group. Whilst the lower class group consider safety significantly more



Figure 3.1

PREPONENT NEEDS ACROSS SOCIAL CLASS



important than either the working or middle class group, in terms of their own group, safety does not emerge as one of the most preponent needs. Allied to this point is the decreased homogeneity of the lower class group. For example whilst the majority of the middle and working class group concentrate most of their high importance rankings within two needs in the lower class group this is distributed across three needs, suggesting that the latter is not such a highly homogeneous group.

## 2. Discussion

It has been hypothesized that social class may be one of the more important factors in determining need importance and prepotency. This was supported by cluster analysis. Other analyses showed that there were significant differences in need importance across social class groups. There was a trend for middle class individuals to consider the esteem and self-actualization need to be more important, the working class individuals to consider belonging and esteem more important, and the lower class to consider the physiology and belonging needs more important. It must be stressed that within any social class there will be something of a normal distribution of need importance, for example, while the majority of the lower class will consider physiology and belonging as most important, a minority will consider esteem and self-actualization most important.

The analyses we have examined reveal a strong relationship between need importance and social class position, however they do not reveal causality, for example we do not know if social class position causes a particular need to emerge. In the next chapter we examine the major variables, attitudes and values associated with



social class position and investigate their relationship with need importance.

The strong relationship between need importance and social class raises the question of whether some of the relationships between need importance and other factors for example leadership patterns (Aronoff and Messe, 1971) or job satisfaction (Porter, 1961) may not more parsimoniously be explained by reference to social class as a mediating factor.

#### (ii) Age Differences

Whilst the needs can be examined developmentally we acknowledged earlier that intervening environmental conditions would often serve to block the growth to self actualization.

The earlier cluster analysis demonstrated that (Table 3.5) need importance scores do not naturally group with age differences. Between age differences were examined with the Kruskal Wallis and as Table 3.10 shows, the only significant differences between the age groups are for safety and belonging. The trends shown in the rank totals became more apparent when a number of planned Mann Whitney tests were performed between the age groups, the results are presented in summary form in Table 3.11 with the significance and Z values appearing in Appendix 3.4 . The youngest group had significantly higher belonging needs and the eldest significantly higher safety needs. To understand these differences more completely the age groups 20 to 30s and 31 to 40 were divided according to social class and sex (Appendix, Table 3.5) and the significance of differences between them analysed. This demonstrated that the locus of significance within the safety need was between the male working class age groups, whilst the belonging

differences were located between the female working class, middle class age groups and the male middle class.

Maslow has hypothesized that the unfolding of the hierarchy and attainment of self actualization is dependent upon conducive environmental circumstances, so it could be postulated that the hierarchy will only be apparent developmentally within the middle class group whose environment more frequently provides the means to lower need gratification. To consider this proposition the 20 to 30 and 31-40 age group comparisons were made across all three social groups for esteem and self actualization. As Appendix 3.6 shows, in both the male and female groups esteem was significantly higher in the 31 to 40 than 20-30 age groups. Further, the self actualization needs were greater in the 31 to 40 than the 20 to 30 female groups; there were no other significant differences.

Table 3.10

KRUSKAL-WALLIS ANALYSIS OF DIFFERENCES IN NEED IMPORTANCE ACROSS  
AGE GROUPS

	NEED CATEGORY				
	Physiology	Safety	Belonging	Esteem	Self Actualization
H VALUE	2.1	8.2	20.8	3.2	2.6
<u>RANKS TOTAL</u>					
20-30	7,534	5,974	9,299	6,427	6,512
31-40	7,590	7,511	6,236	7,339	7,266
41-50	7,193	7,379	6,436	7,489	7,656
51-60	6,602	8,055	6,948	7,665	7,484
Significance Level (p) <	N.S.	0.05	0.001	N.S.	N.S.

Df = 3, n1 = 60, n2 = 60, n3 = 60, n4 = 60

(N.S. = Not Significant)

Table 3.11

MANN-WHITNEY ANALYSIS OF THE DIFFERENCES IN NEED IMPORTANCE  
BETWEEN AGE GROUPS IN THE NEEDS FOR SAFETY AND BELONGING

NEED LEVEL	ANALYSIS
Safety	$(20-30) <^* (31-40) = (41-50) = (51-60)$ ; $(20-30) <^* (51-60)$
Belonging	$(20-30) >^{**} (31-40) = (41-50) = (51-60)$ ; $(20-30) >^{**} (51-60)$

\*  $P < 0.05$

\*\*  $P < 0.01$

1. Discussion

The only clear age differences to emerge were between belonging need, which was significantly higher in the younger age group, safety need importance, which was significantly higher in the older age group. As expected the operation of numerous intervening variables made the emergence of clear differences unlikely. To obtain a more thorough understanding of the relationship it was necessary to control for the variables of social class and sex, when this was done the relationship became more apparent, younger female working and middle class women had increased belonging needs whilst the older middle class groups had increased esteem and self actualization needs.

However a word of caution is necessary here, as in all developmental studies only longitudinal analysis can demonstrate clear developmental paths. Therefore although this study has shown that some differences emerge between age groups whilst other factors are controlled nevertheless because it is not longitudinal any conclusions can only be tentative.

(iii) Sex Differences

After reviewing the literature we proposed two hypotheses, that women will have greater needs for belonging and men greater needs for esteem; although Maslow himself made no such propositions.

Differences in need importance between the sexes were analysed with the nonparametric Kruskal Wallis test because the groups are independent and no assumptions could be made concerning normality or homogeneity of variance.

Only the belonging need significantly differentiated between the sexes, whilst the esteem need as hypothesized failed to do so (Table 3.12).

Table 3.12

KRUSKAL-WALLIS ANALYSIS OF DIFFERENCES IN NEED IMPORTANCE ACROSS  
MALE AND FEMALE GROUPS

	NEED CATEGORY				
	Physiology	Safety	Belonging	Esteem	Self Actualization
H VALUE	3.7	1.1	12.5	1.3	3.3
<u>RANKS TOTAL</u>					
Male	15,481	13,881	12,565	15,090	13,483
Female	13,439	15,038	16,355	13,829	15,436
Significance Level (p) <	N.S.	N.S.	0.001	N.S.	N.S.

(Large sample Kruskal-Wallis, H distributed as  $\chi^2$ )

Df = 1, n1 = 120, n2 = 120,

(N.S. = Not Significant)

1. Discussion

It has been hypothesized that younger women will have greater



needs for belonging than the younger men, whilst men will have greater needs for esteem.

The former was supported by the analysis although there was no evidence to support the second hypothesis that there are differences in the esteem importance between the sexes, although there is an insignificant trend which supports this.

### 3.7 CONCLUSION

Maslow has postulated that psychological growth proceeds from the interaction between innate tendencies which push towards actualization of potential, and environmental circumstances. As such these environmental circumstances are conceived in terms of potential blocks to actualization, rather than encouraging it. Thus, in an ideal environment, where the basic needs are gratified, the innate needs towards growth will be actualized.

The environment serves as a block to growth in a number of ways, for example, inappropriate childhood experiences or non provision of means to allow gratification of the basic needs. If the environment is conducive to growth then ascendance of the hierarchy of needs will proceed developmentally, childhood being a time of gratification of the physiology and safety needs, young adulthood of the belonging needs and middle age of the esteem and self actualization needs.

The fundamental effect of environmental conditions has never been systematically examined in the literature, even though it is basic to an understanding of the hierarchy. The present study examined the "umbrella" term social class because it is one of the most pervasive summaries of environmental circumstances.

The hierarchy was also considered developmentally, by examining the differences between age groups and between males and females.

The most important finding to emerge from this the fifth theme of the thesis was the relationship between social class and need importance, this relationship had been suspected, for example by Roe (1960), but the magnitude never examined. From a review of

literature it had been hypothesized that the environmental conditions associated with lower class membership would, in general, serve as a block to lower need gratification and self actualization.

The results showed this hypothesis to be justifiable. First, when importance scores were grouped the most salient factor to emerge was social class whilst later analysis showed the differences between social class to be all pervasive. When these were examined more closely it became apparent that the lower class and middle class expressed significant differences in importance for all five of the needs, the former considering the lower needs, for physiology, safety and belonging more important and the latter considering the needs for esteem and self actualization more important. Whilst the middle class and working class had similar physiology and esteem needs, the working class expressed higher safety and belonging needs and lower self actualization.

When need prepotency was considered a similar picture emerged, the middle class being esteem, self actualization orientated, the working class belonging and esteem and the lower class physiology and belonging orientated.

These results demonstrate conclusively the environmental effect on need importance, because although Maslow postulated that each individual has the potential for personal growth, the circumstances of the lower class, and to a lesser extent, the working class position may preclude gratification of the lower needs and therefore the emergence of self actualization.

This raises a number of questions and problems, first, is the notion of self actualization a middle class concept, which has little relevance to other social classes? When developing the concept of the self actualized individual, Maslow has not reported

the sample group characteristics, although, it does appear that only well educated, successful figures were considered. Thus, it is hardly surprising that these characteristics are not observed in other groups. The question is whether self actualization develops in other ways in less privileged groups.

Secondly, the measurement of need importance is based on the assumption that the self concept consists of an organized pattern of needs which can be mirrored respectively in terms of ordinal scale placements according to the degree to which they are "important to me". The main problem involved in such an instrument is that of semantics, does a phrase like "achieving something" mean the same thing to people of differing backgrounds with different experiences? Therefore, are the differences observed between social class need importance, differences of needs per se or simply an artifact of semantics? Previous research to some extent supports the notion that there are clear differences between groups, as we discussed in the first Chapter differences in need importance have been observed by a number of researchers using different terminology and methods.

The third cautionary note is concerned with the oversimplification involved in speaking of a "need level" in a holistic manner. A more realistic image would be one which conceives of the individual satisfied with some aspects of a preponent need while seeking gratification for other aspects. Thus, the individuals assigned importance, although concentrated on a preponent need can be seen to operate to a decreasing degree with needs further away from the preponent. For example, in the middle class sample the preponent needs are self esteem and self actualization whilst aspects of the belonging needs are also



important, and aspects of safety much less important.

Although the majority of any one social class group have similar needs there is a minority with atypical needs, for example, 6% of the lower class group expressed self actualization as their preponent need, and 18% of the middle class expressed belonging. It would be of interest for future research to examine what differentiates these respondents from the more typical ones within their social class.

Finally, because social class appears to bear such a strong relationship to need importance it could be suggested that the relationship between need importance and a number of variables, for example job satisfaction or leadership patterns, can be explained more parsimoniously in terms of social class, without recourse to need importance.

In the next chapter we will examine in more detail Theme 3, the syndromes of behaviour associated with each need. Many of these syndromes are similar to those characteristics of social class position discussed earlier and their examination allows a fuller understanding of the need importance/environment relationship.

## CHAPTER 4

### THE SYNDROMES OF BEHAVIOUR

	Page
4. INTRODUCTION	... 132
4.1 THE RELATIONSHIP BETWEEN DEMOGRAPHIC VARIABLES, PERSONALITY CHARACTERISTICS AND IMPORTANCE ASSIGNED TO THE FIVE NEEDS	... 133
(i) Measurement	... 133
4.2 HYPOTHESES	... 137
4.3 METHODOLOGY	... 139
(i) Research Setting and Subjects	... 139
(ii) Data Collection Procedure	... 140
4.4 MEASUREMENT OF CONCEPTS	... 141
(i) Need Importance	... 141
(ii) Quality of Life Index	... 141
a. Categorization	... 141
b. Quality of Life Indices	... 142
c. Administration	... 144
4.5 ANALYSES	... 145
4.6 RESULTS	... 146
(i) The Relationship between Well-Being and Need Importance	... 146
(ii) Personal Relationships and Need Importance	... 153
(iii) Intergenerational Social Mobility	... 156
(iv) The Residential Environment	... 158
(v) Personal Resources	... 164
4.7 DISCUSSION	... 169
(i) The Syndromes Associated with Increased Needs for Self Actualization	... 169
(ii) Syndromes Associated with Other Needs	... 171
a. Self Esteem	... 172
b. Belonging	... 172
c. Safety and Physiology	... 172

	Page
4.8 SOCIAL CLASS AND NEED IMPORTANCE	... 176
4.9 THE RELATIONSHIP BETWEEN NEED IMPORTANCE AND SATISFACTION AND FULFILMENT	... 180
(i) Introduction	... 180
(ii) Propositions	... 181
4.10 METHODOLOGY	... 182
(i) Research Setting and Subjects	... 182
(ii) Measurement of Concepts	... 182
a. Need Importance	... 182
b. Need Satisfaction	... 182
c. Need Fulfilment	... 183
(iii) Analyses	... 184
4.11 RESULTS	... 187
(i) Hypothesis 1	... 187
(ii) Hypothesis 2	... 190
4.12 CONCLUSIONS	... 193

CHAPTER 4 - THE SYNDROMES OF BEHAVIOURINTRODUCTION

When interpreting the first study it became clear that if an overall concept like "social class" is related to a group's attitude of what constitutes lesser or greater importance within the framework of specific needs, then clear differences across such classes emerge. That study used social class as a broad, summarizing demographic variable making no attempt to separate it into its components. However, as the literature review in Chapter 3 demonstrated, an individual's social class position is a conglomerate of experiences encompassing occupation, education, values and aspirations.

The primary objective of the present study is to investigate the relationship between need importance and a number of personal characteristics and experiences which make up what Maslow (1954) called the "syndromes" of needs, the third theme of the thesis.

Allied to this is the investigation of whether the previously observed relationship between social class and importance assigned to the five needs could be more parsimoniously interpreted in terms of education level, occupation or a number of other variables closely related to social class position.

The second objective of the study was to examine the relationship between the importance assigned to a need and its degree of reported satisfaction. For the sake of simplicity this second proposition and methodology will be discussed following the report of the first part of the study in Part II.



#### 4.1 THE RELATIONSHIP BETWEEN DEMOGRAPHIC VARIABLES, PERSONALITY CHARACTERISTICS AND IMPORTANCE ASSIGNED TO THE FIVE NEEDS.

##### (i) Measurement

The measurement of demographic variables such as occupation, education or income is relatively clear-cut in contrast to the measurement of personality and experiential variables which remains complex.

It was decided that rather than create an ad hoc assortment of subjective measures drawn from various sources it would be more parsimonious to employ a package of measures from a similar source. In reviewing these possible sources the field of social indicators appeared to be the most promising. Historically social indicators had been created on a governmental level to complement the more objective measures of standard of living like numbers of cars per household or average income. More generally they arose from the belief that the quality of an individual's life, for example their feelings of well being, or conversely, of anxiety, were as important if not more important than material assets. Whilst it has been widely acknowledged that these methods are not as precise as the objective ones, they do have the advantage of dealing directly with the individuals sense of well being.

A review of these subjective or "Quality of Life" Indicators revealed a large number of methods, questionnaires and scales, which could be divided roughly into three categories. First, Cognitive Satisfaction Indicators, for example job satisfaction scales such as the Job Description Index (Smith et al, 1969); secondly, non-job scales, such as the Self Anchoring Ladder (Cantril, 1965) and finally, the composites of several cognitive scales, such as the

### Quality of Life Questionnaire (Campbell, 1976).

Although a large number of quality of life measures are available, most suffer from either being too narrow, for example, measuring only job satisfaction, or too questionable in terms of validity, reliability or utility. The decision was taken to use Campbell, Converse and Rogers (1976) instrument "The Quality of American Life". The decision rested on a number of reasons: the instrument is well documented and constructed, data have been obtained through personal interviews with a sampling design of 2,164 people and provides a number of reliability measures, important because one of the major arguments raised against subjective measures is that of validity. These arguments focus on the problems associated with trying to obtain measures of how people evaluate their lives.

The major areas of criticism are:

- a. The problem of bias in answers.
- b. The intransient and unstable nature of responses.

The first criticism can be considered from various perspectives. Andrews and Crandall (1976) report single item validity coefficients on this type of questionnaire, ranging from 0.69 to 0.87 with a median of 0.81. The proportion of variance attributed to differences in tendencies to bias account for less than 10%, whilst a combination of several items to assess the same concern resulted in estimated validities of approximately 0.90.

Campbell et al (1976) included in their questionnaire a measure of Social Desirability (Crowne and Marlowe, 1964) and report that the tendency to bias answers to make them appear more socially desirable generally explained from 1.5% to 3% of the variance in answers. Related to the problem of bias in answers is that of

method bias arising from measuring many aspects of personality variables in close temporal sequence. Briefly response-response bias could arise when life satisfaction is measured with life importance because the individual is striving to be cognitively consistent. To reduce this problem the Quality of Life Index was administered at separate occasions from the Q-Sort measure of Need Importance, the sequence of administration being random.

The second criticism of subjective indicators focus on their possible instability, based on the premise that the individuals replies are intransient and apt to change from one day to the next. In response to this criticism, a number of studies have reported test-retest procedures. For example, Andrews and Crandall (1976) report that five months after the original administration over 80% of the respondents chose either the same category or one immediately adjacent. They conclude:

"Thus, while we would not want to claim that that social indicators of perceived well being are perfectly valid, it would appear that fairly substantial validities can be achieved through the use of appropriate measurement and test construction techniques."

(Andrews and Crandall, 1976; p15)

Similarly Campbell et al (1976) repeating their questionnaire eight months after the original presentation report stability correlations for overall life satisfaction of 0.43 and 0.38 for happiness.

The time span between test and retest renders these correlations uninterpretable in terms of conventional reliability, however, Campbell demonstrated that those individuals with low

retest stability were more likely to be involved in some true change during the interim which could be expected to influence their retest scores.

To summarize, the Campbell, Converse and Rodgers Index of "Quality of Life" was used because it has been extensively documented, albeit in America, and attempts have been made to measure its reliability.



## 4.2 HYPOTHESES

This study examines the third theme of the thesis, the relationships between the demographic variables, occupation, education and income; subjective, personality variables and the importance assigned to each of the five needs postulated by Maslow. The characteristics or syndromes of behaviour associated with each of the needs (see Table 3.3) were discussed in Chapter 3. That study had demonstrated in broad terms that social class position could be related to the importance assigned to any one of the needs. This study examines in more detail the syndromes associated with each need.

The major hypotheses concerning the syndromes of behaviour are:

### Hypothesis 1

Those individuals with increased needs for safety and physiology will exhibit decreased well-being; less satisfactory personal relationships and personal resources.

### Hypothesis 2

Those individuals with increased needs for esteem and belonging will exhibit increased well being, personal relationships and personal resources.

### Hypothesis 3

Those individuals with increased needs for self actualization will exhibit those characteristics postulated by Maslow (1954).

To summarize the relevant characteristics from Chapter 1.

- i. Acceptance of self and others, reduced anxiety.
- ii. Democratic character structure.
- iii. Efficient perception of reality.

- iv. Problem centring. Orientation to problems outside of the self.
- v. Social Interest. The feeling of identity, sympathy and affection for mankind.
- vi. Interpersonal relationships, which are deep and profound.

#### Hypothesis 4

The final analysis considers whether the previously observed relationship between social class and need importance can more parsimoniously be explained with reference to income, education or occupation, all of which could be postulated as intervening variables.

### 4.3 METHODOLOGY

#### (1) Research Setting and Subjects

The research was conducted in the inner city of Liverpool and involved individuals from a number of organizations, housewives and the unemployed. Organizations were approached, for example, Banks, Factories and Maintenance Departments, and permission sought to administer the questionnaire.

To maximise within sample variance data were collected from a cross section of occupational, age and sex groups. 120 individuals were selected so that between 12 and 16 fell into each occupation group shown in Table 4.1 (from Pavalko, 1971) plus one unemployed and one housewife category.

Table 4.1

#### OCCUPATIONAL CATEGORIES AND SOCIAL CLASS POSITION

Occupational Categories	Social Class
1. Professional	I. Middle Class
2. Managerial and Executive	
3. Inspectorial Supervisory	II. Intermediate
4. Inspectorial Lower	
5. Skilled Manual	III. Working
6. Semi-skilled Manual	
7. Unskilled, routine manual	IV. Lower
8. Unemployed	

(from Pavalko, 1971)

Approximately half of the respondents were female and the age

distribution was as follows; under 30 years, 37%; 31 to 40, 26%; 41 to 50, 19%; 51 to 60, 17%.

Like the first study socio-economic status was assessed with an index of status characteristics including occupation, source of income, house type and dwelling area. A full description has been presented in Table 3.4. Approximately 31% of the sample were Middle Class, 47% were Working Class and 21% were Lower Class, which reflects the general social class composition for that area as reported by Hart (1972) from the census data.

(ii) Data Collection Procedure

a. Individuals contacted at work.

Permission was first sought from managers and if granted, employees subsequently contacted. Administration of the Q-Sort and "Quality of Life Questionnaire" was random with at least a weeks separation. The interviews lasted between an hour and one and a half hours and were normally carried out in the lunch breaks, when this was impossible interviews were held at home. Because of the sensitive nature of some questions complete confidentiality was assured.

b. Individuals contacted at home.

To collect data from the unemployed, and housewives interviews were also carried out in the home. Links had already been made from the earlier study with one community and this allowed the researcher to seek information.



#### 4.4 MEASUREMENT OF CONCEPTS

##### (1) Need Importance

Need importance was assessed with the Q-sort the development and reliability of which have been discussed in Chapter 2. Scores were derived by summing the score for each of the ten items representative of the five needs. Thus, high scores represented high need importance. For those analyses requiring either a median or quartile division the score ranges are presented in Table 4.2.

Table 4.2

#### MEDIAN AND QUARTILE SCORE RANGES

Need Category	Lower Quartile	Upper Quartile	Median
Self Actualization	16-25	34-42	31
Esteem	20-30	39-47	34
Belonging	21-29	37-43	34
Safety	15-22	28-36	25
Physiology	14-23	32-40	27

##### (ii) Quality of Life Index

A number of modifications were deemed necessary, primarily concerned with substituting English equivalents to American phrases. Neither the work section of the original questionnaire nor the section for a retired sample were included. The questionnaire is presented in Appendix 4.1 and the answer sheet in Appendix 4.2.

##### a. Categorization

The Michigan Study had devised lengthy categories for the open ended questions. These were considered inappropriate to the present study for two reasons; the smaller sample rendered any

lengthy response categories redundant and secondly, many of the original categories pertained to specifically American responses.

For example, the original categories following the question "Are there any ways you think life in the US is getting worse?" were:

1. Behaviour and attitudes of individuals in social situations, Church, religion, Family, Drugs, Alcohol, Values and Morals
2. Individuals reaction to modern life and each other, violence, isolation, fear, apathy etc.
3. Individuals in groups or organizations, young people, communists, reactionaries etc.
4. Protests and protest movements, racial situations, students, women etc.
5. War, draft, military.
6. Law, Courts, Police, Crime
7. Living conditions.
8. Jobs, unemployment.
9. Mass Media.
10. Government.
11. Science, technology, education.

It will be appreciated that these are too lengthy and Americanized for the present purposes. For this reason answers were recorded verbatim and then grouped into major categories by three psychology students who were not aware of responses to other parts of the questionnaire. Finally all answers were categorized into the categories which are listed in Appendix 4.3.

#### b. Quality of Life Indices

The indices can be subdivided into those that measure the

individuals general sense of well-being and concern their feelings about themselves and others; those that examine their feelings and attitude towards the environment and finally those that measure what Campbell et al term "Personal Resources". The indices are summarized below and explained in greater detail, with their major categorizations in Appendix 4.3.

1. General Sense of Well Being

Happiness, Life satisfaction, enjoyment.

Stress and Anxiety.

Personal Competence.

Trust in People.

Attitudes to ambitions.

Attitudes to opportunities.

Childhood experiences.

2. Personal Relationships

Marriage.

Children.

Friends.

3. The Residential Environment

Britain

The community and home.

4. Personal Resources

Leisure Time.

Financial.

Education.

Occupation.

Age.

Health.

Leisure Time Activities.

## Social Desirability.

### c. Administration

For administration purposes the interviewer asked the questions from the Questionnaire (Appendix 4.1) and then recorded the answers verbatim on individual record forms (Appendix 4.2). For multiple choice questions, for example A1 the alternative answers were written on cards and passed to the respondent to choose the most appropriate answer. The replies to open ended questions eg. C1 were recorded verbatim on the individual record form for later categorization.



#### 4.5 ANALYSIS

The use of both nominal and ordinal scaled data necessitated two types of analyses. The Spearman Rank Correlation Coefficient ( $\rho$ ) assessed the relationship between need importance and ordinal variables, for example Social Desirability or Personal Competence.

For ordinal scaled variables individuals were also grouped by need importance score and the significance of difference between the frequency of responses assessed. A number of possible methods of grouping are available. Groups can be divided into quartiles and the lower and upper quartiles compared on the independent variable. This divisional technique assumes that the relationship between need importance score and the independent variable is linear and has the disadvantage of reducing the subject pool by half, however it does have the advantage of maximizing differences. Alternatively the group can be split at the median, this uses the complete subject pool but reduces possible extreme differences.

For the present purposes a median split was conducted initially followed by a quartile split if the relationship was linear.

Nominal data were assessed with the Chi Square Test ( $\chi^2$ ) to determine the significance of the difference between independent groups whilst ordinal data necessitated the use of the Mann Whitney U Test. In the divisions the analyses were performed on the raw data but for purposes of interpretation the frequency of response for nominally scaled variables are presented as percentages.

## 4.6 RESULTS

### (i) The Relationship between Well-Being and Need Importance

Let us first examine the evidence which purports to Maslow's contention that the satisfaction of lower needs can be associated with an increased sense of well-being. Well-being has been measured with a conglomerate of variables, (See Appendix 4.3) if increased well-being is a function of the gratification of lower needs and therefore increased higher needs, then a significant positive relationship would be expected between well-being and perceived need importance for the esteem and self-actualization needs. As Tables 4.3 and 4.4 show the evidence supporting this hypothesis is mixed.

Interestingly there is no significant relationship between expressed importance of self actualization and happiness or life satisfaction whilst there is a positive relationship between life satisfaction and self esteem and as would be expected, a negative relationship between life satisfaction and physiology need importance. Whilst those individuals with increased needs for self actualization express similar satisfaction with their lives as the general population there are significant positive relationships between self actualization, self esteem and attitudes towards self or others. The ordinal scaled variables within this section are presented in Table 4.4 which shows the proportion who responded in a particular way to each category.

These analyses show clearly that increased needs for self actualization and self esteem are associated with increase self confidence and satisfaction with past accomplishments and opportunities. Thus there are significant positive relationships between self actualization, self esteem and personal competence and

Table 4.3

ASPECTS OF A GENERAL SENSE OF WELL BEING CORRELATED WITH NEED IMPORTANCE  
(Spearman Rank Correlation Coefficient)

	NEED CATEGORY				
	Self Actualization	Self Esteem	Belonging	Safety	Physiology
i. Happiness (a) Life Satisfaction (a) Enjoyment (a)	-0.02 0.04 0.02	0.00 0.12* 0.01	0.13 0.06 0.03	-0.04 -0.07 -0.13	0.04 -0.16* 0.02
ii. Personal Competence	0.19*	0.19*	-0.12	-0.09	-0.15*
iii. Trust in People (a)	0.32**	0.31**	-0.09	-0.19*	-0.34**

\*  $p < 0.05$ \*\*  $p < 0.01$ 

Note (a) For ease of interpretation these scales are reversed.

Table 4.4

## ASSESSMENTS OF FAIR OPPORTUNITIES AND SATISFACTION WITH AMBITIONS IN LIFE

	NEED CATEGORY									
	Self Act		Self Esteem		Belonging		Safety		Physiology	
	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
1. Have satisfied Ambitions	.54 **	.38	.46	.44	.46	.45	.47	.44	.37 **	.52
	.61 **	.31a	.65 *	.41a	.43	.55a	.30	.31a	.33 **	.56a
2. Have had a fair opportunity	.66 *	.44	.56	.50	.50	.59	.53	.54	.41	.65
	.65 **	.37a	.68 *	.54a	.62	.66a	.33	.40a	.33 *	.66a
Have not satisfied Ambition:										
1. Individual	.13	.14	.15	.13	.15	.13	.13	.14	.10	.17
2. Financial	.06	.16	.16	.19	.15	.20	.22	.15	.22	.14
3. No Encouragement	.09	.10	.03 *	.16	.07	.11	.12	.08	.12	.08
4. Family	.17	.22	.20	.19	.19	.20	.17	.21	.26	.14
Have not had a fair opportunity:										
1. Family background	.11	.16	.15	.13	.13	.14	.15	.13	.14	.14
2. Education	.09 *	.27	.16	.23	.23	.17	.17	.21	.24	.15
3. Family Commitment	.13	.23	.15	.23	.09 *	.26	.23	.15	.27 *	.11
4. Individual	.01	.01	.03	.00	.00	.03	.02	.01	.01	.01
5. Bad Advice	.05	.04	.05	.05	.06	.04	.04	.06	.07	.03

Statistical Significance \*  $p < 0.05$ \*\*  $p < 0.01$ 

Chi Square to test significance of differences between proportions.

Quartile Split : (a)

Median split : U.M. = Upper Median; L.M. = Lower Median

Proportion of individuals mentioning each category.



trust in people. Similarly those individuals in the upper medium of the self actualization group are significantly more likely to feel they have had a fair opportunity to satisfy their ambitions.

If we now examine the belonging, safety and physiology needs a different picture emerges. Increased need for physiology is significantly associated with decreased satisfaction with life, decreased personal competence and decreased trust in people. Those individuals with high physiology needs are significantly more likely to feel they have not had an opportunity to satisfy their ambitions or make the most of their abilities. Interestingly they are more likely to attribute their perceived failure in these areas to family commitments.

Increased needs for belonging are not associated with the same degree of self criticism and mistrust observed for individuals with high needs for safety or physiology. When a median or quartile split is performed there are no significant differences between the groups in expressed satisfaction with opportunities. However those with low needs for belonging more frequently mention family commitment as a restraint to satisfaction of their ambitions.

Overall a few other points can be made. Whilst insignificant there is a trend for financial restraints to be more frequently cited as a reason for unsatisfied ambitions as lower need importance increases. Similarly lack of education is more frequently cited as a reason for an individual not making the best of themselves.

Table 4.5

ANXIETY AND WORRIES ACROSS NEED IMPORTANCE RANGE

	NEED CATEGORY											
	Self Act		Self Esteem		Belonging		Safety		Physiology			
	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
ANXIETY, WORRIES	.43	.51	.46	.50	.55	.43	.47	.50	.50	.47	.50	.47
1. Old Age	.13	.06	.08	.09	.05	.11	.07	.10	.07	.11	.07	.11
2. Career	.11	.04	.10	.05	.05	.08	.08	.06	.08	.09	.05	.09
3. Health	.04	.06	.09	.01	.10	.01	.06	.04	.06	.10	.09	.10
4. Crime	.05	.07	.05	.08	.07	.05	.06	.08	.06	.10	.10	.03
5. Children	.17	.11	.16	.11	.07	.18	.13	.14	.13	.12	.12	.15
6. Future	.07	.16	.08	.16	.11	.13	.13	.11	.13	.17	.17	.08

Statistical Significance \* p < 0.05  
 \*\* p < 0.01

Chi Square Analysis

Median split, U.M. = Upper Median; L.M. = Lower Median

Proportion of individuals mentioning each category.

It has been proposed that individuals with increased needs for self esteem and self actualization will express increased feelings of well-being. A contra-indication of well-being are high levels of stress and anxiety. Therefore one could expect increased needs for self actualization and self esteem to be associated with decreased stress and anxiety. This hypothesis is explored in Table 4.5 which demonstrates that in a median split whilst individuals from the upper median of these needs less frequently express anxieties the differences are not statistically significant. Further, there are no significant differences in the reasons for anxiety between any of the upper and lower median groups although there is a trend for worries about career to decrease as the upper median of the lower needs are surveyed and conversely for worries about crime to increase.

Finally, Maslow (1968) has proposed that a possible block to the satisfaction of lower needs and therefore actualization of potential are childhood experiences which are not conducive to personal growth. This was explored by investigating both objective measures, ie. the incidence of separation from parents before the age of 16, and the subjective measure, ie. the reported incidence of unhappy childhood experiences.

When objective separation is examined the only median split to reveal significant differences is the safety need (Table 4.6). Twenty five percent of those individuals with high needs for safety have experienced separation from one or both parents before the age of 16, as opposed to 9% of those with decreased safety needs. Reasons for separation were also investigated, because Rutter (1972) has suggested that it is not separation per se which has an adverse effect on development, for example in the causes of juvenile

Table 4.6

CHILDHOOD EXPERIENCES AND NEED IMPORTANCE

Chi-Square Analysis.

	Self Act		Self Esteem		Belonging		Safety		Physiology	
	U.M.	L.M.a	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
1. Unhappy Experience	.41	.28	.35	.32	.28	.37	.35	.33	.31	.36
2. Separation	.19	.15	.15	.18	.11	.20	.25 *	.09	.15	.17
i. Death	.07	.06	.03	.10	.06	.06	.09	.03	.10	.03
ii. Separation/Divorce	.09	.09	.11	.07	.06	.11	.16	.07	.05	.12

	U.Q.	L.Q.b	U.Q.	L.Q.	U.Q.	L.Q.	U.Q.	L.Q.	U.Q.	L.Q.
	1. Unhappy Experience	.43	.30	.40	.30	.24	.46	.23	.35	.23
2. Describes childhood as "very unhappy"	.43	** .03	.47	.35	.40	.44	.30	.34	.29	.46

Statistical Significance \*  $p < 0.05$   
 \*\*  $p < 0.01$

a. Median split, U.M. = Upper Median; L.M. = Lower Median  
 b. Quartile split, U.Q. = Upper Quartile; L.Q. = Lower Quartile

Proportion of individuals in each category



delinquency, but rather the family disharmony which precedes and culminates in separation. If this is the case then the death of a parent which is usually not preceded by disharmony creates a different experience from that which results from separation or divorce.

With this in mind it is interesting to note that the incidence of parental separation rather than death is higher for those individuals from the upper median safety group than any other group.

Whilst parental separation or death can be categorized as an "unhappy childhood experience" other incidents can also be considered so. Those voiced fall predominantly into the categories "parental violence", "illness", "poverty" and "inability to get on with parents". Although there are no significant differences in the frequency of unhappy experiences the upper-median and upper-quartile group of the self actualization need distribution more frequently mentioned unhappy childhood experiences, particularly arising from illness and poverty. However, whilst this is the case they were significantly more likely to describe their childhood as "very happy". Conversely only 3% of those with low needs for self actualization described their childhood in a similar manner.

#### (ii) Personal Relationships and Need Importance

It will be recalled that personal relationships were assessed by the individuals attitude towards their spouse, children (if applicable) and friends. In summary 55% of the sample were married, 9% widowed, 11% divorced or separated and 25% single. Our hypotheses 2 and 3 postulated that those individuals with increased needs for self esteem and self actualization would to a greater

extent have satisfied their needs in the belonging aspects of their life and therefore report greater satisfaction than those with increased needs for physiology or safety. More specifically Maslow (1954) has proposed a number of characteristics of the self actualized individual which includes such attributes as "acceptance of self and others" and deep and profound personal relationships.

The relevant data for these hypotheses are presented in Table 4.7. Marital and Divorced Adjustment is an index of attitude towards children and friends, the relationship between need importance score and those indices were assessed by the Spearman Rank correlation coefficient ( $\rho$ ).

As Table 4.7 demonstrates, whilst there is a trend for marital adjustment to increase with self actualization need score the correlation is not statistically significant although the relationship between self actualization and marital adjustment appears to be more positive than the other need scores ranges, where the correlation is either very low or negative. There are no significant correlations between the five need score ranges and adjustment following divorce. Similarly no significant relationship emerged between the indices of friendship and need importance except for the safety needs where greater needs for safety were associated with fewer friends and decreased interest in making new friends.

In summary, those individuals with high safety needs expressed less satisfactory personal relationships, reflected in decreased marital adjustment, their attitude to friends and increased problems with children. Conversely high self actualization and belonging needs were associated with fewer problems with children, though the former with decreased enjoyment of children.

Before moving on to the more general sphere of environmental

Table 4.7

PERSONAL RELATIONSHIPS AND NEED IMPORTANCE : SPEARMAN RANK CORRELATION

	Self Actualization	Self Esteem	Belonging	Safety	Physiology
1. MARRIAGE					
Marital Adjustment (b)	0.13	0-.07	0.08	-0.11	0.04
Divorce Adjustment (b)	-0.04	-.08	-0.08	0.08	0.11
2. FRIENDS					
	-0.01	-0.03	0.08	-0.17*	0.01
3. CHILDREN					
Problems (a)	-0.11	0.01	-0.11	0.18*	-0.01
Enjoyment	-0.31**	-0.00	-0.02	0.38**	0.01

Statistical Significance \*\* p < 0.01  
 \* p < 0.05

Note; a. Problems, As score increases so number of problems decrease  
 b. Scales reversed for ease of interpretation.

perceptions let us first examine a concept which adds historical light to individuals experience, that of intergenerational social mobility.

(iii) Intergenerational Social Mobility

This reflects any change in occupational status between the parental and child generations. To achieve this the sample was divided into three, the first group, where respondents occupational status was similar to that of the parents, indicated no change. The second, in which respondents occupational status was lower than parental status, indicated downward movement, whilst upward mobility was indicated by higher child occupational status than parental.

Though useful such a measure does not indicate the degree of mobility, for example the intergenerational mobility from an unskilled manual worker to a doctor would be similarly classified as that between a skilled and unskilled worker. Secondly, a number of individuals were unclear about their fathers occupation whilst for others social desirability may result in an overestimation of parental occupation.

Overall 19% of the sample were engaged in occupations similar to their fathers, 36% showed downward and 45% upward mobility. Interestingly there were clear differences within the self actualization need score range (Table 4.8), 61% of the upper median showing upward mobility, in contrast to only 30% of the lower median group. Significantly the upper median group also exhibited the lowest incidence of downward mobility. In summary, a larger proportion of the upper median self actualization group were engaged in work of a higher occupational status than their parents, than any other group.



Table 4.8

INTERGENERATIONAL SOCIAL MOBILITY ACROSS NEED SCORE RANGES

MOBILITY	Self Act		Self Esteem		Belonging		Safety		Physiology	
	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
Same Status	.16	.18	.18	.19	.20	.18	.18	.21	.22	.16
Downward	.21 *	.51.	.27	.42	.38	.31	.38	.31	.41	.29
Upward	.61 *	.30	.53	.36	.42	.50	.42	.47	.36	.53

Statistical Significance \*  $p < 0.05$   
 \*\*  $p < 0.01$

Chi Square Analysis

Median split, U.M. = Upper Median; L.M. = Lower Median

Percentage of individuals in each category

(iv) The Residential Environment

Perceptions of the residential environment were assessed subjectively, in terms of community services, standards of housing and attitudes towards Britain's present situation; and objectively with numbers of people per room. Relationships between need importance and the indices of community quality were analysed with the Spearman Rho correlation analysis. For the nominally scaled variables, attitudes towards Britain and personal safety a median split was performed and the significance of differences between groups assessed with the Chi-Square Analysis.

If, as Maslow (1954) proposes increases in the importance of the higher needs are a result of gratification of the lower needs, then it could be expected that increases in esteem and self actualization will be accompanied by perceptions of increased environmental quality reflecting gratification of the lower needs. Table 4.9 shows that this proposition receives some support with the positive correlation between community attributes and importance of the self actualization and esteem needs. Conversely there is a significant negative correlation between perceived community quality and the importance of the physiology needs. As the importance of the higher needs increases so to does the perception of community quality in terms of its members, public services, schools and police force. Significantly, increases in the physiology needs are associated with perceptions of decreased quality. One particular question illustrates this trend rather well. Participants were asked whether they felt safe walking alone in their neighbourhood at night. In many ways this is a highly significant question because community safety could be considered central to community living. If a person feels unsafe to walk alone at night then this perception

will have very significant effects on their behaviour and may underlie many decisions taken within the community. For this reason the results shown in Table 4.9 are particularly interesting. When a median split across the need score ranges is made clear, between group differences emerged for the self actualization, safety and physiology needs. Whilst 63% of the individuals in the upper median of the self actualization need score range felt safe walking alone at night, only 37% from the lower median expressed a similar sentiment. The converse is apparent in the lower needs where individuals with increased safety needs predictably were significantly less likely to feel safe walking alone at night in their neighbourhood.

This insecurity experienced by individuals with high physiology and safety needs is also reflected in attitudes to treatment they receive from public officials. The whole question of self determination and expressed personal power was explored earlier with personal competence. It is now useful to consider individual's perception of the fairness with which they are treated by public officials. This too is a central issue for community atmosphere particularly for people on social security or housewives collecting child allowance. Again clear differences emerge across the five need score ranges. As needs for safety and physiology increase so perceived fairness of public officials decrease, the converse being the case for the esteem and self actualization needs.

Assessment of attitudes to housing examined room size, structural quality and heating. Unlike attitudes towards the community this showed no relationship with need importance scores. However an objective measure of number of people per room revealed that as esteem needs increase so numbers of people per room

Table 4.9

CORRELATIONS BETWEEN NEED IMPORTANCE AND COMMUNITY ATTRIBUTES

	Self Act		Self Esteem		Belonging		Safety		Physiology		
	U.M.	L.M.a	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	
1. Index of community Attributes			0.17*		0.17*		0.04		0.07		-0.25**
2. Index of Housing Attributes			0.02		0.06		0.09		-0.04		0.00
3. Number of People per Room			-0.08		-0.17*		0.10		0.00		0.17*
4. Public Officials			0.14*		0.26**		-0.13		-0.17*		-0.20*
5. Proportion who respond "Felt safe to walk alone at night"	.63	** .37	.51	.44	.46	.49	.33	** .58	.37	** .57	

Statistical Significance \*  $p < 0.05$   
\*\*  $p < 0.01$

a. Median split, U.M. = Upper Median; L.M. = Lower Median

Spearman's Rho correlation analysis.

Chi-Square analysis to test the significance of differences between proportions in Section 5.



decrease, whilst increases in physiology needs are associated with increased overcrowding (Table 4.9). An index of overcrowding was one of the few completely objective measures in the questionnaire. It shows clearly that the generally lower quality of housing and community living expressed by individuals with high physiology and safety needs are in fact reflected in their true housing situation and not simply reflective of differences between their aspirations and actual living standards.

The attitudes we have discussed have been rather specific, to public officials, numbers of rooms or police protection. Ones attitudes towards ones country are more abstract, with in many cases, little basis for comparison save what is read in newspapers and seen on the television. Participant's feelings towards Britain were explored by asking in what ways, if any, they felt life in Britain was getting better or worse. As Campbell et al (1976) had found, there was considerable diversity in attitudes. The major categories constructed from the open ended answers are shown in Appendix 4.3 together with frequency of response. Predictably in this time of economic recession over half the participants spoke of inflation or unemployment as major trends reducing the quality of British living. Conversely 40% spoke of increased standards of living as a way in which Britain was improving.

Differences of response frequency between upper and lower median groups were assessed with the Chi-Square analyses and presented in Table 4.10.

A number of trends emerge from these results. Generally the upper median of the self actualization group were more optimistic about life in Britain, more frequently mentioning standard of living, advances in health care and liberalization as reasons for

this. To contrast, many from the upper median physiology group thought life in Britain was not improving in any way, talking of unemployment and crime as the major demise. This concern with unemployment was also apparent in the upper median safety group, a concern which will become more justifiable when the personal resources of this group are explored later in the study.

In summary, this discussion ranged from a global survey of attitudes to Britain, narrowed to community perceptions and finally to perceptions of the home. Obviously such an approach can only tap a limited proportion of the many perceptions an individual has of his environment. Having said this however it has been possible to draw a number of broad conclusions about these perceptions.

Perhaps most noteworthy are the feelings and attitudes of people with high physiology and safety needs. These perceptions create a picture of decreased quality of housing, more people per room, unsafe neighbourhood environments, unfair treatment by public officials and assessments of life in Britain dominated by concerns about unemployment and crime. Because these assessments are fundamentally subjective their validity could be called into question. However it can be argued that if people perceive their world as unjust, unfair or unsafe then it is these perceptions which affect their behaviour; irrespective of the actual situation and therefore must be accepted as a justifiable perception.

It is possible to draw rather direct contrasts between these trends and those observed in the self actualization and esteem needs. As the latter increase and assume greater importance so to does the optimism with which life in Britain is perceived together with increased community quality and safety.

Attitudes to the environment are central to what Campbell et

ASSESSMENTS OF, AND ATTITUDES TO LIFE IN BRITAIN

	Self Act		Self Esteem		Belonging		Safety		Physiology	
	U.M. <sup>a</sup>	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
<b>1. BRITAIN GETTING WORSE</b>										
Economy	.28	.20	.20	.28	.21	.26	.25	.22	.22	.25
Unemployment	.24	.38	.33	.31	.32	.32	.39	.27	.41	* .23
Crime	.41	* .61	.51	.54	.59	.47	.51	.54	.60	.46
Attitudes to minorities	.13	* .01	.08	.05	.07	.05	.12	.03	.03	.09
Environment	.28	.16	.20	.23	.21	.21	.15	.25	.22	.20
Values	.20	.10	.20	* .08	.05	* .21	.05	* .21	.15	.14
Morals	.17	.10	.17	.09	.17	.10	.07	.17	.08	.17
Not getting worse	.13	.06	.11	.06	.05	.11	.13	.05	.07	.11
<b>2. BRITAIN GETTING BETTER</b>										
Health	.19	* .06	.13	.09	.09	.13	.07	.14	.12	.10
Standard of Living	.45	.36	.41	.38	.36	.13	.25	**	.36	.44
More liberal	.17	* .03	.10	.08	.09	.08	.02	* .14	.11	.07
Education	.00	.03	.01	.01	.00	.03	.00	.04	.02	.02
Not getting better	.19	* .38	.40	.54	.51	.43	.68	**	.48	.46

Statistical Significance \* p<0.05  
 \*\* p<0.01

Chi Square analysis to test significance of difference frequency of responses between the two groups.

Note a : Median split U.M. = Upper Median; L.M. = Lower Median

Proportion of individuals mentioning each category.



al term "life domains". In the present study satisfaction with the country, neighbourhood and home were significantly correlated with the individuals perception of his life satisfaction (correlations of 0.33,  $p < 0.01$ ; 0.27,  $p < 0.01$  and 0.36,  $p < 0.05$  respectively). Therefore they figure highly as concomitants to overall life satisfaction.

(v) Personal Resources

The final cluster of measure are indicative of what Zill (1954) terms "coping resources" bearing on "effective life management" to the extent that they allow the individual to cope with his life. In the present study these coping functions are represented by the individuals salary and therefore command of goods and services; his occupational status, level of education, age, health and leisure activities.

Table 4.11 shows clear trends between need importance and these personal resources. Increases in self actualization are associated with a later school leaving age, higher income and occupational status. Similarly as self esteem increases so to does educational standard and occupational status. Whilst a correlation analysis shows the general relationship between the variables a quartile division was also performed to identify more closely those areas of significance. The proportion of each quartile group represented in the variable levels are shown in Appendix 4.4 the significance of differences in the distribution were assessed by a Chi-Square Analysis. This shows there were significant differences in education level across the self actualization and safety quartile groups. Following trends observed throughout the study there were no significant correlations between education, income and belonging



PERSONAL RESOURCES AND NEED IMPORTANCE

	NEED CATEGORY				
	Self Act	Self Esteem	Belonging	Safety	Physiology
EDUCATION (a)	0.39**	0.19*	-0.05	-0.27**	-0.24**
INCOME (b)	0.25*	0.06	0.06	-0.18*	-0.06
OCCUPATION (c)	-0.39**	-0.15*	0.05	0.23*	0.24*
AGE	0.02	0.07	0.10	0.07	0.06

Statistical Significance \* p < 0.05  
 \*\* p < 0.01

(a) EDUCATION: Leaving age, 1, 1-14 years; 2, 15-16 years; 3, 17-18 years; 4, 19-23 years.  
 (b) INCOME: 1, £500 to £999; to 14, Over £14,000  
 (c) OCCUPATION: 1, Professional; to 7, Routine Manual  
 (d) MEDIAN SPLIT: U.M. = Upper Median; L.M. = Lower Median  
 Spearman's rho correlation coefficient

	U.M.		L.M.		U.M.		L.M.	
	U.M.	L.M.d	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
INCOME: Worries about money	.43	.45	.45 *	.63	.51	.56	.58	.51
HEALTH: Problems with health	.24	.38	.25 *	.40	.33	.30	.43 *	.24
							.70 **	.41
							.36	.28

Proportion of individuals mentioning health or money worries.

Chi-Square analysis to test the significance of differences in frequency of responses.

need importance, or indeed across those quartile groups.

The converse of the self actualization and esteem relationships were observed for the safety and physiology need ranges, there being significant negative correlations between safety need importance, education and income; and physiology and education whilst for both these need ranges, as need importance increased so occupational status decreased.

An overview presents the following picture; those individuals from the upper quartile of the self actualization need score range are likely to be employed in professional or managerial occupations, to be earning higher than average income, and to have received more education. In contrast, the majority of the individuals in the upper quartile of the physiology need range are employed manually, earn minimum wages, are significantly more likely to be worried about money and left school before the age of 16. In many ways the upper quartile safety need group are similar to the physiology group, whilst the stark contrast in the self actualization and physiology extremes are reflected to a lesser extent in the esteem and safety upper quartiles. Although there are significant correlations between esteem need importance and education there are, unlike the self actualization group, no significant differences between the quartile groups.

Finally, age and health were examined as representative of other coping functions. Whilst there are no significant correlations between age and need importance score, quartile divisions (Appendix 4.4) revealed significant differences between the safety and belonging quartile groups which are very similar to those observed in the first study.

The use of spare or leisure time is an important part of an

Table 4.12

## LEISURE TIME ACTIVITIES AND NEED IMPORTANCE

	Self Act		Self Esteem		Belonging		Safety		Physiology	
	U.M.	L.M.a	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.	U.M.	L.M.
SPARE TIME ACTIVITIES										
Team	.11	.17	.13	.16	.17	.13	.17	.13	.15	.14
Observational	.03	.08	.06	.06	.07	.06	.02	.10	.10	.13
Individual	.34	.22	.26	.27	.19	.11	.13	**	.27	.27
Creative	.32	*	.23	.19	.23	.20	.13	.27	.17	.25
Social	.41	.56	.50	.49	.48	.50	.49	.50	.53	.46
Cultural	.19	.07	.15	.10	.13	.11	.10	.14	.08	.16
Reading	.35	.20.	.33	.21	.30	.24	.27	.27	.17	* .36
CAN DO ANYTHING	.17	* .38	.28	.29	.36	.23	.37	.22	.27	.30
HELD BACK										
Personality	.07	.08	.06	.10	.10	.07	.06	.10	.08	.07
Money	.35	.35	.28	.42	.36	.34	.23	**	.39	.31
Time	.32	** .13	.18	.24	.29	.16	.15	.25	.17	.25
Family	.22	** .06	.18	.08	.09	.16	.17	.10	.12	.14
NUMBER OF CASES	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)

Statistical Significance \*  $p < 0.05$ \*\*  $p < 0.01$ 

Chi Square analysis to test significance of differences in frequency of responses between the two proportions.

Note a : Median split U.M. = Upper Median; L.M. = Lower Median

Proportion of individuals mentioning each category.

individual personal resources (Table 4.12) so for this reason individuals were asked if they could do anything they wanted to in their spare time. Predictably a proportion felt they could not do anything they wanted, those from the upper median of the self actualization need score range were significantly more likely to feel that their spare-time activities were limited by time pressures and family commitments. A wide range of activities were mentioned, general trends indicate that individuals with increased higher needs are more likely to spent their time in creative or social activities, whilst those with increased lower needs spend more time engaged in social activities.



#### 4.7 DISCUSSION

In the first part of this study we examined the relationship between perceived need importance and a number of objective and subjective social indicators. Attention can now turn to an examination of the major symptoms<sup>1</sup> distinguishing various needs or syndromes.

##### (i) Syndromes associated with increased needs for Self

###### Actualization

The pattern of findings associated with increased needs for self actualization reflects to some degree Maslow's concept of the self actualized individual. Two trends emerge, first, that these individuals are historically more privileged than the rest of the sample, being brought up in predominantly middle class families and receiving a higher level of education. To a certain extent it is understandable that reviewing their life they feel they have had the opportunities to actualize their potential. Secondly, their perceptions of themselves and the environment reflect to a certain extent the notion of the "democratic character" (Maslow, 1954). Indicative facets are increased trust in people, higher personal competence, and a concern for health care, liberalization, and minority groups.

Maslow (1954) has used such terms as "acceptance of self and others", "detachment", "autonomy", "Profound interpersonal relationships" to describe how he perceives the self actualized

---

<sup>1</sup> See Chapter 1.1.(iv) for a full discussion of the concept of symptoms.

individuals interpersonal relationships. Because the present study is looking at trends, ie, "relatively higher needs for self actualization" rather than self actualized individuals per se; it would be naive to equate the upper quartile group with "self actualized individuals". Nevertheless it is useful to identify these trends because they represent movements towards gratification of the lower needs and increases in the higher needs.

This group's personal life has a number of characteristics which could be interpreted in the framework of the "autonomous individual". There is no evidence to suggest "profound interpersonal relationships" (certainly marital adjustment is not significantly higher), but perception of any children this group has is rather interesting. They are more likely to disclose problems to their child but do not always enjoy their company. Unlike individuals with increased physiology needs they do not blame marital or family commitments for blocking their potential, but are more likely to feel that these commitments stop them from doing certain things they would like to do in their spare time. Children are not seen as central to their lives, as they are, for example, for the group with increased safety needs, but rather as sometimes enjoyable, and at other times an incursion on their autonomy.

This general tendency to talk of problems with children could be a facet of what Maslow terms "a more efficient perception of reality". The tendency to disclose is also apparent, albeit insignificantly, in the trend to mention unhappy childhood experiences more frequently. These incidents are ones of illness, poverty or war, circumstances which could be as frequent, if not less so, in a well educated, middle class group, as any other. Therefore perhaps what we are observing is this "efficient

perception of reality", children are sometimes enjoyable, and sometimes problematic; unhappy incidents do occur in childhood, but these have not served to block potential. However, "social desirability" reflecting as it does the methods of self projection correlates positively, though insignificantly ( $\rho = 0.11$ ,  $p < 0.07$ ) with self actualization need importance.

Having said that there is evidence to support the notion of a democratic character, and a more efficient perception of reality in this group it is important to note that a number of findings run contrary to Maslow's hypotheses.

First, this group do not, as Maslow postulates, exhibit lower anxiety levels. Secondly, whilst Maslow has predicted that self actualization develops through the life span, this study, like the first, found no correlation between age and self actualization need importance.

At the beginning of this discussion it was observed that the childhood of this group could be considered privileged, so too can their contemporary situation. They are characteristically employed in professional or managerial occupations, earning a significantly higher income than the rest of the sample. This begs the question, can the concept of self actualization be more parsimoniously described in social class terms, referring as it does to a value system which is firmly based in the orientation of the middle classes? However before turning our attention to this question later in the chapter the characteristics of the other groups will be examined.

#### (11) Syndromes Associated with Other Needs

It has been postulated that increased needs for safety and

physiology would be associated with decreased well-being and personal resources, and less satisfactory personal relationships.

Increased esteem needs would be associated with satisfaction of the lower needs whilst increased belonging needs would be associated with satisfactory personal resources.

a. Self Esteem

There appears to be a number of similarities between the characteristics associated with increased esteem and self actualization need importance which can be firmly dichotomized from the lower needs. Like individuals with increased self actualization needs, those with increased esteem needs are characterized by increased faith in their own competence and perceptions that they have had a fair opportunity to actualize their potential. Although this group's education and occupation level are higher than the norm, their income is not significantly different.

b. Belonging

Whilst increased needs for self actualization and esteem have many similar characteristics, as safety and physiology do; the needs for belonging show very few significant characteristics. When median or quartile splits are performed, unlike the other needs, few differences emerge. Thus individuals with high needs for belonging do not differ from those with low needs for belonging in any significant way. Similarly the continuous variables examined, such as age, occupation or education level do not relate to the belonging need in any significant manner.

c. Safety and Physiology



Individuals with increased safety or physiology needs exhibit clear characteristics which support the earlier propositions to the extent that many live in environments which clearly have low potential to satisfy some aspects of these basic needs. For example, those with increased safety needs tended to be employed in lower status, manual work, earning lower incomes, having received less education. Twenty five percent of this upper quartile group had been separated from their parents before the age of 16, for 16% this was due to parental separation rather than death. This need for safety is also reflected in attitudes towards people, who are considered untrustworthy, the community, which is unsafe to walk in, and Britain, generally seen as a nation in decline.

Attitudes to personal relationships were also examined. Whilst both marital adjustment and interest and numbers of friends decrease as the safety needs increase, these increases are paradoxically associated with greater enjoyment and fewer problems with children.

This contrast between marriage, friends and children can be interpreted in a number of ways. First, perhaps individuals with increased safety needs are not as disclosive of their family problems as other groups, for example those with high self actualization needs. This is supported, to some extent by the positive correlation ( $\rho = 0.15$ ,  $p < 0.05$ ) between social desirability and the safety needs. Certainly many of these homes are broken, poverty stricken, and experiencing unemployment. Therefore it could be argued that problems with children do exist, but parents are simply not disclosing them. However this can only serve as a partial explanation because such individuals do disclose problems about their marriage, as the negative correlation between

the two shows. We would argue that the explanation arises directly from perceptions of the world and is based on various attitudes reflected during the interviews rather than in specific answers to questions.

When interviewing a proportion of the individuals, who, it later became apparent, had high needs for safety, the despondency and despair of their own lives was readily apparent. Their major hope was that their children would be given the opportunities to live the sort of life that they themselves would like to have done. Thus, children were of paramount importance and in many ways a major source of enjoyment. A finding which supported such an interpretation, is that the upper quartile group, when asked their major hopes for the future were significantly more likely to talk of their children, hoping that they would have the opportunities which they perceived to be denied to them. This is in direct contrast to individuals with increased self actualization whose hopes for the future centred more directly around development of their potential or personal growth.

In many ways individuals with increased physiology needs represent the most deprived group, because, unlike the high safety group, they express rather low confidence in their own abilities and competence, more frequently feeling that their past life, most often family commitments and lack of education, have deprived them of any opportunity to satisfy their ambitions. This is also reflected in decreased life satisfaction and trust in other people. These feelings of inadequacy appear, in part to reflect objective experiences, in the sense that individuals live in less satisfying communities, which are unsafe to walk in at night, in homes with a high ratio of people per room. Like the high safety group they tend

to have rather low educational levels, manual or semi-skilled occupations and increased money worries.

Thus there appears to be rather clear distinctions between higher and lower needs. In many respects the groups with high needs for safety or physiology represent an unfulfilled section, characterized by low confidence in their own abilities and competence, living in a hostile, often deprived environment.

#### 4.8 SOCIAL CLASS AND NEED IMPORTANCE

The final analysis in this section examines the previously observed relationship between social class and need importance and discusses whether it can be more parsimoniously explained with reference to income, education or occupation, all of which can be postulated as intervening variables. This is achieved by examination of the independent and related contribution each variable of social class makes to need importance. Social class is clearly multi-dimensional, reflected by the highly significant correlations between it and Income ( $r = 0.54$ ;  $p < 0.001$ ), Occupation ( $r = 0.85$ ;  $p < 0.001$ ) and Education ( $r = 0.72$ ;  $p < 0.001$ ). Partial-correlation analysis (Nie et al, 1975) was used to examine the relationship between social class and need importance while adjusting for the effects of other variables. Its use was based primarily on the need to locate spurious relationships, for example perhaps the correlation between social class need importance is solely the result of intervening variables like occupation or income, which is instead the true predictor. If this was the case then when the effects of income are controlled and held constant social class will no longer vary with need importance.

As Table 4.13 shows the initial analysis revealed a significant positive correlation between safety, physiology and social class and no correlation between belonging and social class. The first order partials address the question of whether these relationships are spurious and due solely to the covariance of income, education or occupation.

Controlling for income had little effect on the initial relationships; controlling for education reduced somewhat the



Table 4.13

## 4.13 (1) SOCIAL CLASS AND NEED IMPORTANCE, SYSTEMATICALLY CONTROLLING FOR THE COMPONENTS OF SOCIAL CLASS

	1st Order Partial controlling for:			2nd Order Partial controlling for:			3rd Order Partial
	Income	Education	Occupation	Education/ Income	Education/ Occupation	Income/ Occupation	Income/ Education/ Occupation
	Initial Correlation						
Self Actualization	-0.38**	-0.28**	-0.17*	-0.21**	-0.16*	-0.16*	-0.15*
Self Esteem	-0.22**	-0.18*	-0.16*	-0.18*	-0.16*	-0.17*	-0.17*
Belonging	0.04	0.00	0.11	-0.05	0.11	0.09	0.09
Safety	0.27**	0.23**	0.08	0.22**	0.08	0.09	0.09
Physiology	0.23**	0.13	0.09	0.12	0.09	0.10	0.09

Statistical Significance \*  $p < 0.05$   
 \*\*  $p < 0.01$

NOTE: Social Class I: Professional, managerial to 7 unskilled manual.

Partial Correlation.

	1st Order Partial controlling for:	
	Initial	Trust in People
Self Actualization	-0.38**	-0.36**
Self Esteem	-0.22**	-0.14*
Belonging	0.04	0.01
Safety	0.27**	0.30**
Physiology	0.23**	0.13*

4.13 (11)

initial correlation with self actualization, esteem and physiology but they all remained significant. Controlling for occupation reduced to insignificance the correlation with safety and physiology, indicating that the relationship between social class and these needs is a spurious one, dependent instead upon occupational level. However whilst controlling for occupation level reduced the relationship between social class and self actualization by half, it still remained significant.

The second order partials controlled for all possible combinations of the paired variables. Controlling for both education and income did not significantly reduce the original correlation with either self actualization, self esteem or safety. Interestingly when all the major components of social class; income, education and occupation were controlled in a third order partial the relationship between self actualization, self esteem and social class remained significant whilst that with safety and physiology was reduced to insignificance.

This would suggest that some facet of social class other than occupation, education or income is operating in the relationship with esteem and self actualization. In an effort to understand this relationship two personal characteristics strongly related to social class, "personal competence" ( $\rho = 0.32$ ;  $p < 0.01$ ) and "trust in people" ( $\rho = 0.44$ ;  $p < 0.01$ ), were controlled in the social class, need importance relationship. Table 4.4 showed both correlate positively with the higher needs and negatively with the lower needs. The effect of controlling for these personal variables in the social class, need importance relationship (Table 4.13 (ii)) was minimal. When personal competence was controlled the correlation between self actualization, safety and social class was actually

increased. Similarly controlling for "trust in people" only affects the relationship between social class and self esteem and physiology, both of which are reduced.

These findings suggest that for the lower needs occupational status is the most relevant class dimension. In the higher needs, though education and occupational dimensions are relevant, when controlled the correlation between social class and the higher needs remain significant. Further, controlling two class related variables, personal competence and trust in people does not reduce significantly the original correlation suggesting that some unmeasured factor is of importance.

The configuration of the relationships examined suggest that social class and its major dimensions, occupation, education and income have a differential relationship with the five needs of the hierarchy. For the lower needs the major relationship appears to be with occupational level rather than social class per se. However in the higher needs controlling for all three dimensions does not reduce to insignificance the original correlation, suggesting some other facet of social class is operating here. Whilst a partial explanation of this "other facet" was provided for esteem by controlling the effects of personal competence and trust in people no such explanation arose for self actualization.

Because the relationship between the individual needs and social class varies so much across the needs the notion, originally mooted, that the observed relationships between need importance and personal variables can be more parsimoniously explained in terms of social class position remains an oversimplification.



#### 4.9 THE RELATIONSHIP BETWEEN NEED IMPORTANCE, SATISFACTION AND FULFILMENT

##### (1) Introduction

In the second part of this study we examine the need-satisfaction model proposed by Maslow (1954).

The first component of the model is an assumed negative correlation between expressed satisfaction and importance of a given need. To quote Maslow (1954):

"As a consequence of satisfaction of a need that need is submerged and a higher need emerges, that is an exchange of old and new satisfiers which occurs through the overestimation of a powerful, unsatisfied need and the devaluation of the gratified need".

(Maslow, 1954; p108)

For example, as the needs for belonging are satisfied so their importance decreases, which leads to the second component of the model, that the satisfaction of one need is positively related to the need importance of the adjacent, higher category. For example, there will be a positive correlation between belonging need satisfaction and the importance of the esteem needs.

So, as Salancik and Pfeffer (1977) point out, the underlying structure of this model presumes rational action, that people make decisions consistent with the extent to which choice alternatives satisfy or do not satisfy their preferences or self interest.

The introductory Chapter reviewed the major research findings which have investigated the need importance/satisfaction model. In summary it concluded that no clear support of either the first or second component of the model was forthcoming. A number of



researchers who have examined the satisfaction/importance hypothesis have questioned the simplicity of Maslow's proposition. For example Alderfer (1972) has observed that when examining work satisfaction and importance the type of organization moderates the relationship. Wanous and Zwany (1977) have gone further to suggest that need fulfilment is the important organizational variable which moderates the relationship. At low levels of need fulfilment the correlation between importance and satisfaction is negative whilst for high levels of fulfilment the correlation is positive, suggesting that the original proposition may only be operative in cases of low fulfilment.

To examine the fulfilment proposition the data collected from the first part of the study were examined using the following propositions.

#### (11) Propositions

The major hypotheses to be examined are:

##### Hypothesis 1

Maslow (1954) predicts a negative relationship between satisfaction and importance within each need category. The one exception being the highest need category, self actualization, where satisfaction and importance are positively correlated.

##### Hypothesis 2

The second hypothesis states that satisfaction for one need category will be positively related to need importance in the next higher category.

#### 4.10 METHODOLOGY

##### (i) Research Setting and Subjects

The second section of the study is based on the same sample group as the first section and therefore share similar collection methodology and sample characteristics.

##### (ii) Measurement of Concepts

###### a. Need Importance

The importance assigned to the five needs were assessed with the Q-Sort whose development and reliability have been discussed in Chapter 2.

Scores were derived by summing the score for each of the ten items representative of the five needs.

###### b. Need Satisfaction

A number of methodological decisions were made to reduce the problems of response bias.

###### 1. Random Administration

The measure of need importance and need satisfaction were collected at different times with a random sequence of administration. This was designed to reduce the consistency problem which may result when an individual is asked to assess the importance of an aspect of his life and then asked to examine its satisfaction. During such an occasion high correlations between satisfaction and importance may be the result of a striving for consistency on the part of that person. By separating the measures of importance and satisfaction by at least a week it was hoped to reduce to a minimum the consistency effect.

## 2. Dissimilar Measures

The measure of need importance and satisfaction was designed to be dissimilar and therefore further reduce cognitive consistency. The measures were dissimilar in the sense that need importance was measured by a Q-sort technique whilst satisfaction was assessed on a 7 point scale embedded in the "Quality of Life" questionnaire discussed earlier. Therefore the participants were minimally aware of any hypothesized relationship between the two.

In the construction of the satisfaction measure a number of aspects representative of each need were examined:

1. Physiology - Satisfaction with health and general standard of living (mean intercorrelation  $\rho = 0.02$  (not significant)).
2. Safety - Satisfaction with the neighbourhood, housing and the country (mean intercorrelation,  $\rho = 0.34$ ,  $p < 0.01$ ).
3. Belonging - Satisfaction with friends, marriage and children (mean intercorrelation,  $\rho = 0.28$ ,  $p < 0.01$ ).
4. Self Esteem - Satisfaction with spare time activities, education and work ( $\rho = 0.18$ ,  $p < 0.01$ ).

No aspects of self actualization were included because of the problems associated with operationalization of the need aspects.

### c. Need Fulfilment

In the assessment of need fulfilment the data collected in the first section of the present study were used.

Some researchers, for example Wanous and Zwany (1977) have directly questioned participant's fulfilment of each need with the question "How much of each characteristic is present in your job or life?".

In an effort to reduce the problems of response consistency the measure of fulfilment considered participants perceptions of need domains. For example esteem need fulfilment was examined with years of education, type of job, income; belonging fulfilment by number of friends, marital adjustment, problems with children; safety fulfilment by neighbourhood safety, housing standards and attitude to Britain; physiology fulfilment by standard of health and general standard of living. All these factors give some indication of the extent to which an individual has fulfilled these needs.

### (iii) Analysis

When analysing the satisfaction/importance relationship a number of studies have used longitudinal techniques (Hall and Nougiam, 1968; Alderfer, 1972) to relate changes in satisfaction with changes in importance from one time to another. Most assume that longitudinal data is the better way to test the hypotheses because the theory is dynamic and postulates causal relationships between changes in satisfaction and changes in importance. However, the problem with these studies is the short time interval involved, Maslow (1954) has proposed that the hierarchy will take a life time to develop therefore even a 5 year study may be inadequate.

On the other hand Wanous and Zwany (1977) have argued that the hypotheses can be examined cross sectionally if differences in need importance amongst various individuals are to be explained in terms of need satisfaction. The present study used the latter



approach which necessitated the generation of meaningful variance in need importance and satisfaction. Consequently it used a cross-sectional group of respondents from many backgrounds the primary limitation being that data came from only one city, Liverpool.

In the collection procedures individuals were asked about various aspects of each need and then asked to rate on a 7 point scale their overall satisfaction; from 1 "completely satisfied" to 7 "completely unsatisfied".

For the purposes of interpretation the need importance scores were reversed. This was deemed necessary because satisfaction and importance were previously scaled in an opposite manner, the former 1 (high) to 7 (low) and the latter 40 (high) to 20 (low).

The relationship between need importance and satisfaction was assessed with a nonparametric correlation matrix (Table 4.14).

Table 4.14

CORRELATION MATRIX OF NEED IMPORTANCE AND NEED SATISFACTION

	NEED IMPORTANCE					Self Actualization
	Physiology	Safety	Belonging	Esteem		
PHYSIOLOGY	Health	-0.10	-0.29**	0.17*	0.21**	
	Standard of Living	-0.25**	-0.01	0.09	0.15*	0.25**
SAFETY	Neighbourhood	-0.14*	-0.12	0.14*	0.00	0.02
	Housing	-0.12	-0.01	0.14*	0.04	0.02
	Country	-0.22**	-0.05	0.05	0.20**	0.28**
BELONGING	Friends	-0.01	-0.05	0.02	0.01	-0.04
	Marriage	-0.01	0.02	0.35**	-0.09	-0.07
	Children	-0.01	0.04	0.20**	-0.10	-0.04
ESTEEM	Sparetime	-0.19*	0.03	0.02	0.12	0.10
	Education	-0.16*	0.02	0.07	0.16*	0.16*
	Work	-0.28**	0.01	-0.18*	0.21**	0.14*

Spearman's rho Correlation Coefficient

Blocks indicate satisfaction and importance of one need.

Dotted blocks indicate satisfaction and importance of adjacent higher need.

\*\* p < 0.01

\* p < 0.05

#### 4.11: RESULTS

The results are discussed in two sections. First the correlations between satisfaction and need importance within each need category are examined. These results indicate if increases in need satisfaction are associated with decreased need importance. Secondly, there is a review of the correlations between satisfaction within one need category and need importance at the adjacent higher category.

##### (1) Hypothesis 1

Hypothesis 1 predicts that there will be a negative correlation between satisfaction and importance within each need category.

Table 4.14 presents the results of correlating satisfaction of aspects of the four needs with need importance. The analyses of the correlation for the lower and higher needs can be summarized thus:

##### Lower Needs: Physiology and Safety

There is a negative correlation between importance and satisfaction for the lower needs, physiology (average correlation, -0.17) and safety (average correlation, -0.06); high need importance being associated with decreased satisfaction and conversely, low importance with increased satisfaction.

##### Higher Needs: Belonging and Esteem

There is a positive correlation between need importance and satisfaction for the higher needs, belonging (average correlation, 0.19) and esteem (average correlation, 0.16); high need importance

being associated with increased satisfaction and conversely, low importance with decreased satisfaction.

Thus, there appears to be a clear differentiation, negative correlations between satisfaction and importance in the lower needs and positive correlations between satisfaction and importance in the belonging and esteem needs.

These apparent differences may be explained with recourse to the concept of need fulfilment. This was not measured directly with respect to each need aspect, as satisfaction was, but rather with analysis of perceptions to a number of areas which make up each "syndrome" of a need. These perceptions of need fulfilment have been examined in some detail in the first section of the study. For example, it has been shown that individuals from the upper median of the physiology need range are more likely to mention health as a source of anxiety, live in communities with below standard services, in overcrowded homes. In fact, as the previous discussion concluded, this group can, like individuals with increased needs for safety, remain unfulfilled, with regard to aspects of both the lower and upper needs.

When satisfaction, fulfilment and importance are examined together it is observed that increased importance of the lower needs is associated with decreased satisfaction with aspects of these needs and low need fulfilment. Conversely decreased need importance is associated with increased satisfaction and fulfilment.

Certainly for the lower needs there seems to be some support for Maslow's dictum that a satisfied need is not a motivator, increased satisfaction with the lower needs is associated with decreased importance.

However, as the previous study demonstrated, when the higher



needs for belonging and esteem are examined increased importance is associated with increased satisfaction. Those individuals who rank friends and home life as important to their life also express greater satisfaction with their marriage and children, than those who do not consider those aspects of such importance.

A similar situation can be observed in the esteem needs, where increased need importance is associated with increased satisfaction with sparetime activities, education and work. Similarly individuals with increased esteem needs are likely to be more fulfilled in these needs to the extent that they are better educated, are occupied in more demanding, skilled work and engaged in a wider range of leisure activities.

These results are particularly interesting in the light of those of Alderfer (1972) and Wanous and Zwany (1977). Their studies have suggested that the relationship between importance of relatedness and growth needs (akin to the present belonging and esteem) and satisfaction is moderated by need fulfilment, the relationship being positive when fulfilment is high.

The present study does not attempt to manipulate or systematically quantify the level of need fulfilment to examine any possible moderating effects. However the technique employed here of taking a snapshot of the situation has shown that those individuals with increased needs for physiology and safety express low satisfaction with those needs and a low level of need fulfilment. Conversely those individuals with increased needs for belonging and esteem express greater satisfaction with these needs and a higher level of fulfilment.

Maslow has said that a positive relationship between need satisfaction and importance will be observed for self actualization,

differentiating here between "deficiency motivation" and "growth motivation".

"In the growth motivated self actualizing person, impulses are welcomed rather than rejected and feared, gratification of importance increases rather than decreases motivation; that is growth is rewarding and the desire for it is increased by gratification".

(Cofer and Appley, 1964; p680)

Therefore, increased satisfaction of the self actualization need will result in increased importance. However, the results of the present study would suggest that this is true only for the unfulfilled lower needs; for belonging and esteem, increased fulfilment and satisfaction is associated with increased rather than, as Maslow would suggest, decreased importance.

#### (ii) Hypothesis 2

The second hypothesis states that satisfaction for one need category will be positively related to need importance in the next higher category.

This hypothesis arises from Maslow's (1954) axiom that a satisfied need is not a motivator, therefore satisfaction with a need is associated with transference of importance from the fulfilled need to the adjacent higher, unfulfilled need. For example belonging need satisfaction will be positively related to esteem need importance, similarly safety need satisfaction will be positively related to belonging need importance.

Table 4.14 presents rather mixed evidence, the important average correlations are summarized below:

Physiology Need Satisfaction and Safety Need Importance = -0.02 (not

significant).

Safety Need Satisfaction and Belonging Need Importance = 0.11 (not significant).

Belonging Need Satisfaction and Esteem Need Importance = -0.06 (not significant).

Esteem Need Satisfaction and Self Actualization Need Importance = 0.13 (not significant).

Thus there is no relationship between physiology need satisfaction and safety need importance and belonging need satisfaction and esteem importance. Two relationships (safety and esteem) do follow the general trends predicted by the hypothesis, although for neither is the correlation statistically significant.

Overall a number of other points arise from the correlation matrix. In general Maslow proposes that the lower needs must be satisfied before the higher needs assume importance. Therefore one could predict, and the matrix demonstrates, that increases in esteem and self actualization need importance are associated with increased physiology and safety need satisfaction. However increases in esteem and self actualization are not associated with increased satisfaction with friends, marriage or children, in fact the correlation, though statistically insignificant is primarily negative.

Individuals with importance situated in the higher needs will have gratified the lower needs, similarly those with importance situated in the lower needs will not have had an opportunity to satisfy their higher needs. This is certainly the case for the physiology needs where increased importance is associated with decreased satisfaction with aspects of the safety and esteem needs. For safety, increases in importance bear no relationship to

satisfaction expressed for aspects of the other higher needs.



#### 4.12 CONCLUSIONS

To summarize, Maslow's prediction that there will be a negative correlation between satisfaction and importance within each need category has received support from the lower needs for physiology and safety. However in the esteem and self actualization needs, the correlation is positive. Earlier analyses had shown that those individuals with increased esteem and self actualization needs express greater fulfilment with the aspects of these needs. The results can therefore be interpreted in the light of a number of studies which have reported that the correlation between importance and satisfaction is positive when fulfilment is high.

Maslows second hypothesis, that satisfaction for one need is positively related to need importance in the adjacent higher need also received mixed support. Whilst the predicted relationship was reported for two needs, safety and esteem the other relationships were insignificant.

In this chapter we have examined the syndromes of behaviour associated with each need and the relationship between need satisfaction and need importance. In the next chapter we direct our attention towards the area of work and examine the work characteristics associated with need importance. That chapter is also concerned with the appropriateness of measuring need importance with instruments based on assigned importance to intrinsic work characteristics.

## C H A P T E R 5

### NEED IMPORTANCE AND WORK CHARACTERISTICS

	Page
5. INTRODUCTION	... 194
5.1 DEFINITIONS AND SPECIFICATIONS	... 196
(i) Job and Work	... 196
(ii) Occupational Self Direction	... 196
(iii) Intrinsic Work Importance	... 196
(iv) Extrinsic Work Importance	... 196
(v) Job Satisfaction	... 196
(vi) Higher Order Need Strength	... 196
(vii) Need Importance	... 197
5.2 PROBLEMS ASSOCIATED WITH PAST RESEARCH	... 198
(i) Operationalization of the Hierarchy	... 198
(ii) The Consistency Effect	... 199
5.3 MEASUREMENT OF JOB CHARACTERISTICS AND ATTITUDES	... 200
5.4 PROPOSITIONS TO BE EXAMINED	... 202
(i) Proposition 1 : Hypothesis 1	... 203
(ii) Proposition 2	... 203
a. Work Attitudes : Hypothesis 2	... 204
b. Job Satisfaction : Hypothesis 3	... 205
(iii) Proposition 3	... 206
5.5 METHODOLOGY	... 207
(i) Data Collection	... 207
(ii) Characteristics of the Sample	... 207
5.6 MEASUREMENT OF THE CONCEPTS	... 208
(i) Need Importance	... 208
(ii) Occupational Self Direction	... 208
a. Closeness of Supervision	... 208
b. Routinization	... 209
c. Substantive Complexity of Work	... 209
(iii) Importance of Work Characteristics	... 210
(iv) Satisfaction with Job Characteristics	... 210
a. Satisfaction with Extrinsic and Intrinsic Characteristics	... 210
b. Sources of Satisfaction and Dissatisfaction	... 210

## 5.7 RESULTS

... 211

(i) Proposition 1 : Hypothesis 1

... 211

(ii) Proposition 2 : Hypotheses 2 and 3

... 216

(iii) Proposition 3

... 226

## 5.8 DISCUSSION

... 229

## CHAPTER 5 - NEED IMPORTANCE AND WORK CHARACTERISTICS

### INTRODUCTION

Maslow's Hierarchy of Needs has been extensively used in the field of management and organization science (eg. Blau, 1964; Hall and Nougiam, 1968; Huizinga, 1970) despite the fact that a number of reviews, notably those of Wahba and Bridwell (1976) and Cofer and Appley (1964) have found little supportive empirical evidence. It has been argued earlier that this lack of evidence might arise from a number of sources. On the more fundamental level inappropriate or unreliable instruments to measure such central concepts as "need importance" and "prepotency" have rendered operationalization both difficult and imprecise. The development of a new instrument to measure need importance (Chapter 2) has bearing on some of the studies reviewed by Wahba and Bridwell, particularly those which investigate the relationship between an individuals stated need importance, the characteristics of their job and attitudes towards that job.

These studies can be divided according to the combination of variables examined, some have considered the relationship between job characteristics and job attitudes whilst others have concentrated on the need importance/job characteristic relationship. It is important to note that in many of these studies job characteristics and job attitudes are not individually examined but rather subsumed under the one "umbrella", of the operationally simpler variable, of occupational level. For example, in the job characteristic/job attitude relationship, work importance (Dubin, 1956) and work satisfaction (Gurin, Veloff and Field, 1960) have both been reported to vary between individuals from differing



occupational levels. Similarly the job characteristic and need importance relationships have been studied primarily in terms of occupational level. Porter (1961) reports that individuals from higher occupational positions ("top executives") express greater importance for esteem and self actualization than managers lower in the occupational structure. Many studies have observed a similar trend, increased needs for esteem and self actualization (Huizinga, 1970) and increased importance of accomplishment and self expression (Centers, 1948; Morse and Weiss, 1955; Lyman, 1955) have both been observed in individuals higher in the organizational structure.

This trend has been well documented, as early as 1948 Centers was observing:

"a fairly consistent tendency for the desire for self expression to decrease as first choice as lower and lower occupational levels are scrutinised and another consistent tendency for the desire for security to increase".

(Centers, 1948)

Whilst occupational position has been repeatedly related to job attitudes and need importance a more systematic approach to the measurement of these variables is called for to locate the important variables of occupational position. The present study was designed to take this systematic approach whilst minimizing some of the rather fundamental problems of consistency and operationalization associated with earlier research. Before examining these problems in detail the specific meaning of major terms and concepts used in the following study will be explained.

## 5.1 DEFINITIONS AND SPECIFICATIONS

### (i) Job and Work

Following Wall et al. (1978) suggestion, "job" is used to refer to tasks undertaken in a particular setting, whereas "work" covers jobs more generally.

### (ii) Occupational Self Direction

This is a conglomerate term derived from the work of Kohn (1969) and refers to the overall effect of work complexity, routinization; closeness of supervision and hours worked with data, people and things. The operationalization of the parts are presented in Appendix 5.2.

### (iii) Intrinsic Work Importance

This is viewed as the degree to which an individual values intrinsic work aspects or "motivators" like achievement, recognition or responsibility.

### (iv) Extrinsic Work Importance

This is viewed as the degree to which an individual values extrinsic work aspects or "hygienes", such as supervision, pay or salary.

### (v) Job Satisfaction

Is the degree to which an individual reports satisfaction with intrinsic and extrinsic features of his job.

### (vi) Higher Order Need Strength

Is taken as the importance which an individual attaches to the attainment of higher-order needs. It is akin to Lawler's (1960) "Intrinsic Motivation" defined as the degree to which the job holder is motivated to perform well because of some subjective rewards or feelings that he expects to receive or experience as a result of

performing well. However, it does not refer only to specific job situations but rather to a dispositional characteristic extending across jobs. (Jackson, Paul and Wall, 1981).

(vii) Need Importance

This is taken as the importance an individual attaches to various aspects of the five needs, physiology, safety, belonging, esteem and self actualization. The self actualization need strength is conceptually similar to Higher Order Need strength, although operationalization is pertinent to all aspects of life, rather than being confined to work aspects.

(viii) Glossary of Terms:

- HNS: Higher Order Need Strength
- JDS: Job Diagnostic Survey
- SOC: Study of Occupational Conditions
- NSQ: Need Satisfaction Questionnaire
- JDI: Job Description Inventory

## 5.2 PROBLEMS ASSOCIATED WITH PAST RESEARCH

Returning now to past research in this field two major problems will be examined, those associated with operationalization and the consistency effect.

### (1) Operationalization of the Hierarchy

It could be contended that the greatest problem associated with this area of research is the measurement of need importance or higher order need strength<sup>1</sup>. We have previously argued (Chapter 2) that the instruments purporting to measure higher order need strength or need importance (Porter, 1961; Beer, 1966; Huizinga, 1970; Aronoff, 1967; Graham and Balloun, 1973) are unsatisfactory for a number of reasons, many do not consider all five needs whilst others have unspecified reliability and validity figures.

Additionally, these measures of need importance proceed by examination of the individuals attitudes towards intrinsic work characteristics and then score these attitudes in terms of their manifest higher order need strength content. It has been argued that to select a group with different need importance on the basis of their work attitudes and experiences and then contrast these same groups with regard to similar attitudes and occupational position is something of a tautology. The use of a reliable measure of need importance which does not rely solely on individual attitudes to intrinsic work characteristics reduces the consequences of this rather fundamental problem.

---

<sup>1</sup> See Chapter 2 for examples of these instruments.



(11) The Consistency Effect

The second problem, that of consistency is related to the first and again stems from the traditional measures of need importance which are based on attitudes to intrinsic work characteristics. The problem of response bias or consistency has been enumerated by Salancik and Pfeffer in 1977 and arises from the temporal proximity and similarity of measures of need importance and work attitudes. For example, asking an individual to describe his attitudes towards his job or the content of the job might influence the needs he reports and vice versa. If this was the case then the relationships reported may be evidence of nothing more than cognitive consistency or the lack of cognitive consistency.

In an attempt to reduce the consistent effect the present study followed Salancik and Pfeffer's suggestion and measured job attitudes and need importance on separate occasions with a weeks interval between administrations.

However it must also be remembered that the consistency effect will be reduced anyway because the questions used to elicit information about job content and attitudes are not similar and do not tap the same experiences as do those which measure need importance.

### 5.3 MEASUREMENT OF JOB CHARACTERISTICS AND ATTITUDES

Before considering the specific hypotheses to be tested in the present study it is appropriate to briefly discuss the measurement of job characteristics and attitudes. This is necessary at this point because this study departs from the tradition of measuring occupational characteristics and satisfaction with Hackman and Oldham's, (1975) "Job Diagnostic Survey" (JDS), and instead uses a modified version of a lesser known instrument, Kohn and Schooler's (1973) "Study of Occupational Conditions" (SOC). Like the JDS this instrument focuses on job characteristics but considers more specifically the areas of "occupational self direction", the most important condition for which is that the work requires initiative, independent thought and judgement. Work with data or people is more likely to require initiative, thought and judgement than manual work. Complex work with data or people, synthesizing, coordinating data; teaching or negotiating is especially likely to require initiative, thought and judgement. Therefore occupational self direction is more probable when an individual spends substantial amounts of his working time doing complex work with data or with people. Kohn postulates that the final condition of occupational self direction is work which allows a variety of approaches and therefore is not routine, otherwise the possibilities for exercising initiative, thought and judgement are seriously limited. In summary:

"In so far as men are free from close supervision, do complex work with data or with people and work at complexly organised tasks, their work is necessarily self directed. In so far as men are subject to close supervision, work with things

(manual) and work at simply organised tasks, their work does not permit self direction".

(Kohn, 1969; p140)

No one of these conditions is a definition of occupational self direction, nevertheless each tends to be conducive to it and the combination of the three both enables and encourages it. Whilst in many respects the SOC and JDS are similar measures of "job enrichment" the former specifies job characteristics in terms of both quantity and complexity. Such an approach is advantageous to the present study for a number of reasons, most obviously, by being more sensitive to the dimensions of a job it enables the observer to become more aware of the many aspects of a job. Secondly quantification of job characteristics allows statements of the type "X spends about 14 hours a week engaged in complex work with data and 10 hours a week in less complex administrative work with people". Intuitively this approach appears more sensitive to job dimensions than questions which elicit overall and global measures of "complexity". Finally the SOC is more objective because the individual is asked to describe his work rather than to subjectively decide how complex he perceives his work.

Like the JDS the present instrument provides data relating to job satisfaction and importance associated with a number of intrinsic and extrinsic occupational characteristics.

#### 5.4 PROPOSITIONS TO BE EXAMINED

With the use of the SOC this study was designed to examine the relationships between job characteristics, job attitudes and need importance. The major relationships between these variables can be summarized thus;

1. The manner in which "occupational self direction" varies with need importance.
2. The manner in which attitudes towards work and work satisfaction vary with need importance.
3. The extent to which variance in need importance can be explained in terms of the individuals work characteristics.

These three relationships will now be considered in more detail.

##### (1) Proposition 1 : The Relationship between Occupational Self Direction and Need Importance

No study to date has related occupational self direction to need importance. However Kohn in a 1969 study reports that self direction can be related to occupational position, and when it is also recalled that need importance is related to occupational position (Chapter 4) then it could be hypothesized that there will be a relationship between occupational self direction and need importance.

Maslow has stated on a number of occasions that the connexion between environmental characteristics and need importance is an intimate one. Consider the following quotation from a 1968 publication;

"The potentialities, not just actualizations have a life history and must be viewed developmentally. They are



actualized, shaped or stifled (but not altogether) by extra psychic determinants (culture, family environment, learning etc)".

(Maslow, 1968; p 26)

Work experience as a "cultural determinant" has the potential to shape or stifle the individual's ability to satisfy lower needs. In this context it could be suggested that some types of work experience will be conducive to lower need gratification and therefore "personal growth", whilst other types will stifle the potential for such gratification.

More specifically it is hypothesized that work which requires initiative, independent thought and judgement and therefore increased occupational self direction has greater potential for lower need gratification than work with decreased occupational self direction.

### Hypothesis 1

This hypothesis can be divided thus:

- a. Increased needs for esteem and self actualization will be associated with increased occupational self direction; non-routine, complex work with data and people.
- b. Increased needs for physiology or safety will be associated with decreased occupational self direction; routine, closely supervised manual work.

### (ii) Proposition 2 : The Relationship between Work Attitudes, Work Satisfaction and Need Importance

The next section examines the empirical evidence for these propositions.

a. Work Attitudes

The distinction between intrinsic and extrinsic motivators was popularized by the work of Herzberg (1959) who differentiated between intrinsic "motivators" (Eg. achievement, recognition, the work itself, responsibility and advancement) and extrinsic sources of dissatisfaction or "hygienes" (Eg. company policy and administration, supervision, salary, interpersonal relationships with co-workers and the working conditions).

A number of studies have demonstrated that individuals at higher occupational levels place greater value in intrinsic job characteristics while those at lower occupational levels place greater value in extrinsic job characteristics. (Centers and Bugental, 1966; Vroom, 1964; Friedlander, 1965; Cummings and El Salmi, 1968). Other studies have related occupational level to need importance (Porter, 1961; Huizinga, 1970). Therefore, it could be proposed that because the importance of intrinsic job characteristics is related to higher occupation levels, which is itself related to increased needs for esteem and self actualization, then the importance of intrinsic job characteristics will be related to increased needs for esteem and self actualization. Recall that this is the implicit assumption on which both the NSQ (Porter, 1961) and JDI (Hackman and Oldham, 1975) measures of need importance are based. Both assume that "higher order need strength" can be operationalized by measuring the importance of intrinsic job characteristics. For example the former asks, "How important is the feeling of self fulfilment you gain from your job?". While in a similar manner the latter asks how much the respondent would like: "chances to exercise independent thought and action in my job?". Therefore both these frequently used instruments are based on the

assumption that increased self actualization can be related to increased importance of intrinsic job characteristics. It is surprising to realise that there is little empirical evidence to support this rather basic assumption.

The present study considers this proposition by the following hypothesis:

#### Hypothesis 2

Increased needs for esteem and self actualization will be associated with increased importance of intrinsic work characteristics and increased needs for safety and physiology with increased importance of extrinsic work characteristics.

#### b. Job Satisfaction

The second part of this proposition examines satisfaction with intrinsic and extrinsic job characteristics. Maslow (1954) has hypothesized that a gratified need is not a motivator and therefore the higher the satisfaction with a need the lower its importance. As Wahba and Bridwell's review (1976) of studies which used the NSQ has shown, this hypothesis has received rather inconclusive support (Hall and Nougiam 1968; Lawler and Suttle, 1972; Graham and Balloun, 1973; Wanous and Zwany, 1977). Gratification of the lower needs is primarily achieved through extrinsic factors. If gratification of these needs is associated with increased importance for the higher needs then it would be expected that increased needs for esteem and self actualization will be associated with increased satisfaction with extrinsic work characteristics, while increased needs for physiology and safety will be associated with decreased satisfaction with extrinsic work characteristics. The hypotheses can be

specified thus:

Hypothesis 3

i. Increased needs for esteem and self actualization will be associated with increased satisfaction with extrinsic job characteristics, conversely, increased needs for physiology and safety will be associated with decreased satisfaction with extrinsic job characteristics.

ii. Increased needs for esteem and self actualization will be associated with increased satisfaction with intrinsic job characteristics, and increased needs for safety and physiology with decreased satisfaction.

(iii) Proposition 3 - The effect of job characteristics and attitudes on need importance.

The final proposition of this study examines the part work experience plays in determining the individuals position in the need hierarchy. Although no research to date has examined which parts of work experience can explain need importance it could be proposed that work will play some part.



## 5.5 METHODOLOGY

### (i) Data Collection Procedure

The Kohn questionnaire was administered concurrently with the larger "Quality of Life" questionnaire (Campbell, Converse and Rogers, 1976) discussed earlier and therefore similar collection procedures apply (see Chapter 4 for details). For this study only data from working people were included thus reducing the initial sample to 93.

The questionnaire took 90 minutes and the Q-sort 45 minutes to administer. To reduce the problems of consistency, discussed earlier (Salancik and Pfeffer, 1977) the administration of the Q-Sort and Questionnaire was random with a weeks interval between administration.

### (ii) Characteristics of the Sample

The characteristics of the sample represented a cross-section of occupational categories, thus between 14% and 16% of the sample fell into the occupational categories Professional (1); Managerial and Executive (2); Inspectoral or Supervisory (3); Nonmanual (4); Routine Nonmanual (5); Semi-skilled manual (6); Routine Manual (7). The income distribution of the sample was such that 30% earned less than £4,000; 19% earned £4,001 to £5,000; 14%, £5,001 to £6,000; 11%, £6,001 to £7,000 and 24% over £7,001. The age distribution was skewed towards the younger age group, 36% were under 30; 28%, 31 to 40; 17% 41 to 50; and 16% 51 to 60. Finally, there were almost equal numbers of male and female subjects.

## 5.6 MEASUREMENT OF CONCEPTS

### (i) Need Importance

Need importance was assessed with the Q-Sort technique discussed earlier (Chapter 2) which requires the respondent to rank the importance assigned to a number of aspects of each of the five needs hypothesized by Maslow. As in the previous studies, need importance scores consisted of the summed scores of the ten items representative of each need. A score of five was assigned to an item placed in the "most important" category, ranging to a score of one to an item placed in the "least important" category.

### (ii) Occupational Self Direction

The analysis used the Kohn and Schooler "Indices of Occupational Self Direction" (1973) (the complete questionnaire is presented in Appendix 5.1). The instrument was first administered in 1956/57 and more extensively in a national study in 1964 based on interviews with 3,101 men representative of all civilian occupations. In 1974 the National Opinion Research Centre carried out a follow-up study, interviewing a representative sample of those men who were less than 65 years old. (Kohn and Schooler, 1978).

### Variables of Occupational Self Direction

All the variables are scaled 1 (more self directed) to 5/6 (less self directed). Kohn (1969; p. 67) postulates three occupational conditions critical to self direction, closeness of supervision, routinization and the substantive complexity of the work.

#### a. Closeness of Supervision

This is based on a Guttman type scale based on five questions

concerned with the amount of supervisory control exercised.

(Questions : D16, D18, D29, D17)

Scaled 1 (not closely supervised) to 6

b. Routinization

This measures the repetitiveness of the work task and the complexity of the work units.

(Questions : D80, D25)

Scaled 1 (not routine) to 5.

c. Substantive Complexity of the Work

This index is based on a detailed enquiry about precisely what the individual does and how much time is spent working with data, people or things (manually). The open ended job descriptions are rated for the complexity of the work, classification rating is blind and made without knowledge of other aspects of the respondent. The classification is based on the Directory of Occupational Titles (1977) which provides objective appraisals of the typical job requirements for all the major occupations. From this information seven ratings were derived.

Scaled: People 1. Monitoring, 2. Negotiating, 3. Instructing,  
(D12) 4. Supervising, 5. Diverting, 6. Speaking, 7.  
Serving.

Scaled: Data 1. Synthesizing, 2. Co-ordinating, 3. Analysing,  
(D4) 4. Compiling, 5. Computing, 6. Copying,  
7. Comparing, 8. Reading instructions.

Scaled: Manual 1. Setting-up, 2. Precision workings,  
(D17) 3. Operating-controlling, 4. Driving-Operating,  
5. Manipulating, 6. Tending, 7. Feeding,  
8. Handling.

(cf. Kohn, 1969: 271-275)

(See Appendix 5.2 for a detailed description of each rating).

(iii) Importance of Work Characteristics

Work importance, for work in general, rather than the individuals own job, was assessed on a three point scale for both extrinsic and intrinsic work characteristics, the scores being calculated from the mean importance assigned to each. The items are shown in Appendix 5.2. Using a Spearman rho correlation the mean inter-item correlation for the intrinsic items was 0.12 ( $p < 0.05$ ) and for extrinsic; 0.15 ( $p < 0.05$ ).

(iv) Satisfaction with Job Characteristics

A number of methods of assessing satisfaction were used.

a. Satisfaction with Extrinsic and Intrinsic Characteristics  
(D31)

Satisfaction was assessed on a three point Likert-type scale for both extrinsic and intrinsic job characteristics, with scores calculated from the mean satisfaction assigned to each. The mean inter-item correlation for intrinsic satisfaction was 0.26 ( $p < 0.01$ ) and for extrinsic, 0.20 ( $p < 0.01$ ).

b. Sources of Satisfaction and Dissatisfaction

Individuals were asked what part of their own job they liked most and least. These open ended answers were then recorded verbatim and coded blind into categories, ie. all the answers to each question were placed together and categories formed on the basis of frequencies. This procedure eliminates problems associated with categorizing responses when other characteristics of the individual are known. The scaling procedure and indices are presented in Appendix 5.2



## 5.7 RESULTS

### (1) Proposition I : The Relationship between Occupational Self Direction and Need Importance

An overview of the complete sample demonstrates that work with people accounts for the largest proportion of the working week, whilst the least complex work is manual. The nonparametric (Spearman's Rho) correlation matrix between need importance and job characteristics presented in Table 5.1 allows some discussion of these relationships central to the first proposition.

As expected, self actualization correlates positively with the complexity of work with people and data, while the lower needs, safety and physiology, are negatively correlated. Although there is a trend for low scores for belonging and high scores for esteem to be associated with increasingly complex work with people, neither trends are statistically significant. Manual work, which in this sample is of a uniformly uncomplex manipulating (category 5) and tending (category 6) nature, is not significantly correlated with any of the five need importance score ranges, but is significantly negatively correlated with freedom from routine and supervision and the overall complexity of the work.

The complexity of work cannot be considered in isolation from the hours worked. As the correlation matrix shows, hours spent working with data and people, whilst positively correlated, is negatively correlated with hours spent engaged in manual work. The number of manual hours worked is negatively correlated with esteem and self actualization need scores and positively with physiology and safety need scores. Conversely, hours spent with data significantly decreases as safety and physiology need importance increases.

Table 5.1

CORRELATION MATRIX: MEANS AND STANDARD DEVIATIONS OF THE SCALES OF OCCUPATIONAL SELF DIRECTION, AND NEED IMPORTANCE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Hours spent : Data	.14													
2. : People	-.68*	-.61*												
3. : Manual														
4. Complexity : Data	.71*	.17*	-.52*											
5. : People	.60*	.20*	-.57*	.71*										
6. : Manual	.19*	.15*	.15*	.13	.27*									
7. Overall Complexity	.69*	.15*	-.42*	.72*	.81*	-.70*								
8. Routinization	.58*	.54*	-.43*	.63*	.71*	-.54*	.74*							
9. Supervision	.35*	.27*	-.30*	.16*	.25*	-.40*	.39*							
10. Self Actualization	.40*	.16*	-.43*	.43*	.40*	.04	.32*	.31*	.10					
11. Esteem	.06	.22*	-.26*	.00	.11	.05	.14	.03	.09	.20*				
12. Belonging	.04	.03*	-.00	-.06	-.10	.02	-.05	.07	.04	-.32*	-.36*			
13. Safety	-.23*	-.09	.20*	-.26*	-.22*	-.08	-.16	-.21*	-.07	-.48*	-.22*	-.06		
14. Physiology	-.22*	-.23*	.39*	-.18*	-.27*	-.05	-.25*	-.22*	-.05	-.44*	-.59*	.01	.04	
Mean	11.00	15.40	13.40	4.80	4.30	5.50	3.70							
Standard Deviation	11.60	13.30	13.90	2.40	1.80	2.60	1.80							

Spearmans Rho Correlation Coefficient . \* Significance levels  $p < 0.05$

Note: Scales 4 to 9 reversed for ease of interpretation

Neither closeness of supervision nor routinization significantly correlate with any need importance score, although as work becomes less closely supervised, so the complexity and hours spent with data and people increase, and manual hours of work and complexity decrease. Less routine work is associated with increased self actualization need scores and decreased safety and physiology need score. Again, highly routine work is associated with decreased hours and complexity of work with data and increased noncomplex manual work.

Hypothesis 1 proposes that increased needs for esteem and self actualization will be associated with increasingly complex work which is neither routine or closely supervised. This specific hypothesis was investigated by comparing those respondents from the upper and lower quartile division of each need score range. The quartile groups were formed such that approximately equal numbers of respondents were placed in each of the four groups (n equals about 22). The average number of hours, complexity of work, closeness of supervision and routinization for the upper and lower quartile groups are presented in Table 5.2 together with the Mann Whitney U test (Ferguson, 1959; p 326) performed between each upper and lower quartile comparison to assess the significance of differences between the two independent groups. As the table shows, individuals with high self actualization need scores are employed in significantly more complex work with people and data than those with low scores. The difference between average hours spent with people, data and manually are particularly striking for this upper and lower quartile group. For example, whilst the upper quartile group spend 17 hours weekly working with data and five hours manually, in contrast, the lower quartile group spend only 5 hours weekly working



Table 5.2

NEED IMPORTANCE AND THE COMPLEXITY AND HOURS OF WORK

TYPE OF WORK	NEED IMPORTANCE											
	Self Act		Self Esteem		Belonging		Safety		Physiology			
	High	Low	High	Low	High	Low	High	Low	High	Low		
I. Complexity of Work : Data : People : Manual	3.9 **	5.7	4.7	4.8	5.5	4.5	5.9	4.5	5.7	4.5		
	3.2 **	5.2	4.1	4.5	5.1 *	3.9	5.0	4.2	5.2 *	3.7		
	5.0	5.4	4.8	4.8	5.7	5.7	6.0	6.1	6.2	6.1		
II. Hours of Work : Data : People : Manual	16.8 **	5.1	10.6	12.0	9.4	11.0	6.5	12.1	7.3 *	12.3		
	20.8	14.6	16.4 *	10.5	17.6	16.7	13.1	16.7	14.0 *	21.3		
	5.2 **	22.4	10.8 *	16.9	13.2	11.6	19.9 *	11.0	21.7 **	7.4		
III. Closeness of Supervision	1.9	2.3	2.2	2.2	2.3	2.2	2.6	2.3	2.3	2.1		
IV. Routinization	1.8 **	2.8	2.5	2.4	2.1	2.0	2.1	1.7	2.5 *	1.8		

\*\* P < 0.01

\* P < 0.05

Mann - Whitney U Test.

See Appendix 5.2 for scaling of complexity of work.



with data and the majority of their time, 22 hours working manually. There are also significant differences between the quartiles in routinization but not for the closeness of supervision, although there is a trend for individuals with increased actualization scores to be less closely supervised. In summary, there is clear evidence to support the first hypothesis that increased needs for self-actualization are associated with complex, non-routine work with data and people. However there is less evidence to support a similar conclusion for the esteem needs, suggesting that, in this case anyway, it might be something of an oversimplification to treat self-actualization and esteem need importance as similar. As Table 5.2 shows, whilst there is a trend for work with people to be more complex in the increased esteem score group there is little difference between the complexity of the work with data or manual work. The only clear difference which emerged are between the hours spent working with people and manually, individuals with lower esteem scores spending the least number of hours of any group working with people. There was no significant difference between quartile groups with regard to either closeness of supervision, or routinization.

The second half of the first hypothesis states that high needs for physiology and safety will be associated with increasingly closely supervised, routine manual work. Again the results suggest that it might be something of an oversimplification to postulate that the needs for physiology and safety are similar. The greatest difference between quartile groups is found at the highest, self-actualization and lowest, physiology point of the hierarchy, with the belonging quartiles differing only with respect to the complexity of the work with people and safety with respect only to

hours of manual work.

The between group differences are particularly apparent for the physiology need. As hypothesized individuals with increased physiology need scores perform work which is significantly more routine, spend less time working with data and people and more time working manually. Further, the time spent working with people is primarily of a speaking or signalling type, whilst the lower quartile of this need deal with people in terms of speaking or supervising. With respect to complexity of work, hours of work and routinization the relationships between the need quartiles and the independent variables can be seen to be linear, for example, as the upper quartile of successively higher needs are considered, so work becomes increasingly non-routine, more time is spent working with data and people and less working manually and work with data and people becomes increasingly more complex. This is demonstrated graphically in Figure 5.1 which shows the hours engaged with data, people and manually by the upper quartile groups of the five needs. The graph demonstrates the clear increase of hours worked with data and people and decrease in hours worked manually as successively higher upper quartile need groups are examined.

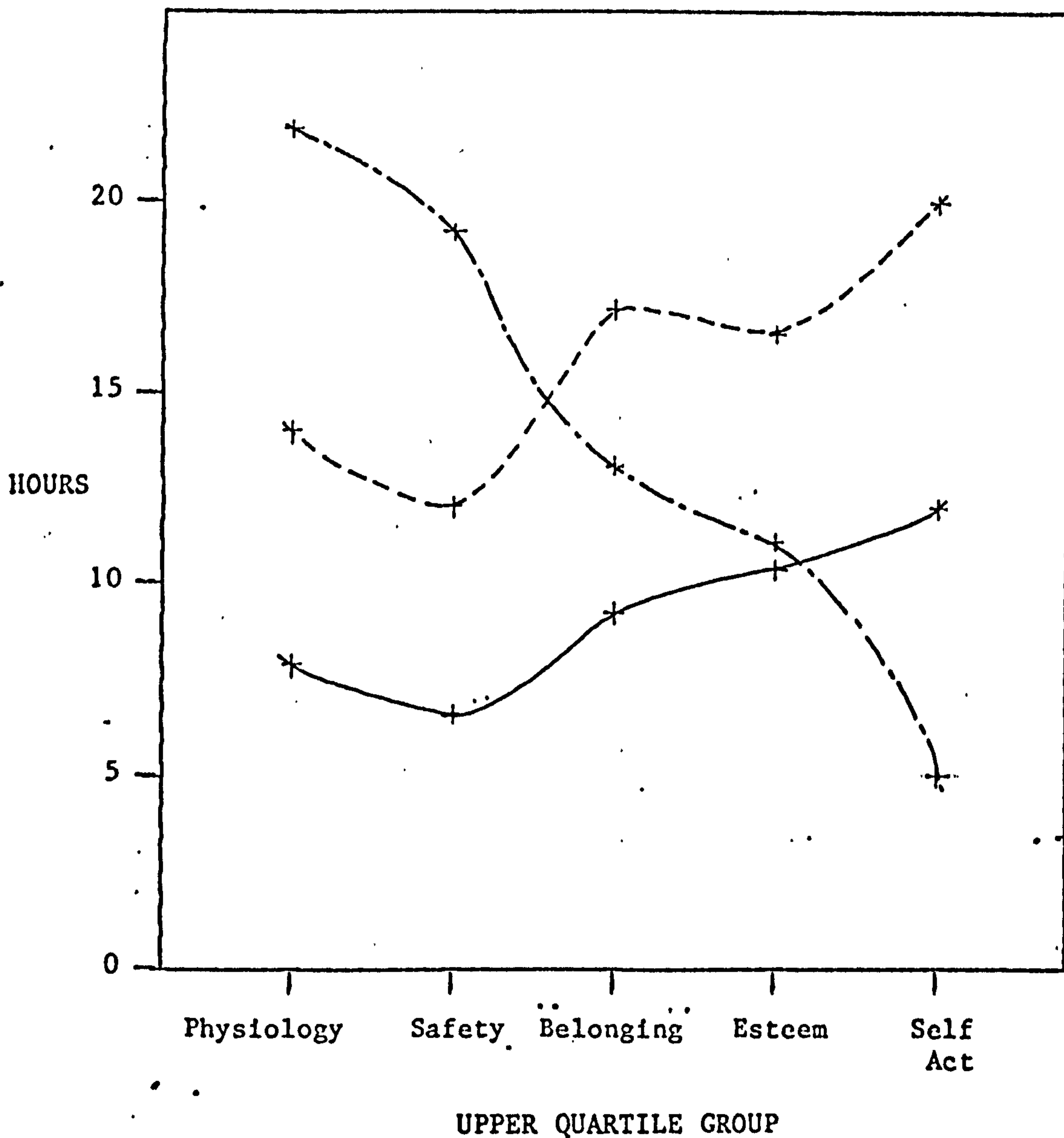
(11) Proposition 2 : The Relationship Between Work Attitudes, Work Satisfaction and Need Importance.

The assumed relationship between valuation of intrinsic job characteristics and higher order needs forms the corner stone of most measures of need importance, notably Porter's (1961) measure of need importance and Hackman and Lawler's (1974) measure of Higher Order Need Strength.

The second hypothesis, that higher needs for esteem and self

Figure 5.1

NUMBER OF HOURS SPENT WITH DATA, PEOPLE AND MANUALLY FOR UPPER QUARTILE GROUPS



Data           —————  
 People        - - - - -  
 Manual        - . - . -

actualization will be associated with increased importance of intrinsic job characteristics and decreased importance of extrinsic job characteristics was investigated by a correlation matrix (Table 5.3) and Mann Whitney analysis of quartile groups (Table 5.4).

As predicted the importance of intrinsic job characteristics increase with both self actualization ( $\rho = 0.28, p < 0.01$ ) and self esteem need importance ( $\rho = 0.21, p < 0.01$ ) and decrease with physiology need importance ( $\rho = -0.18, p < 0.05$ ).

The proposition that increased self actualization and esteem need importance can be differentiated by the importance assigned to intrinsic job characteristics was examined by analysis of the mean scores of upper and lower quartile groups (Table 5.4). The Mann Whitney analyses do not support Porter's (1961) contention that the groups can be differentiated in such a manner, no significant differences emerged between groups with regard to the importance of intrinsic job characteristics.

To summarize, although the importance assigned to intrinsic work characteristics increases with increases in self actualization and esteem, these differences are not sufficiently great to allow differentiation between the upper and lower quartile groups. This has direct bearing on Porter's, (1961) assumption that "Higher Need Strength" groups can be differentiated on the basis of the importance they assign to intrinsic work characteristics and suggestions that it cannot be regarded as an apriori fact.

(111) Hypothesis 3 : Job Satisfaction and Need Importance.

The third hypothesis that individuals with increased self actualization and esteem needs will express greater satisfaction with the extrinsic aspects of their job is supported by the correlations shown in Table 5.3 ( $\rho = 0.3, p < 0.01$ ;  $\rho = 0.26,$



Table 5.3

CORRELATION MATRIX OF NEED IMPORTANCE AND THE SATISFACTION IMPORTANCE AND IMPORTANCE OF INTRINSIC AND EXTRINSIC JOB CHARACTERISTICS

	1	2	3	4	5	6	7	8	9
1. SELF ACTUALIZATION									
2. ESTEEM	.20								
3. BELONGING	-.32	-.36							
4. SAFETY	-.48	-.22	-.06						
5. PHYSIOLOGY	-.44	-.59	.01	-.04					
6. IMPORTANCE : Extrinsic	.05	.10	.04	-.02	-.05				
7. IMPORTANCE : Intrinsic	.28	.21	-.05	-.27	-.18	.59			
8. SATISFACTION : Extrinsic	.31	.26	-.15	-.23	-.21	.48	.53		
9. SATISFACTION : Intrinsic	.26	.29	-.11	-.15	-.31	.48	.54	.78	

Spearman's Rho Correlation Coefficient

rho > 0.20 : p < 0.01  
rho > 0.16 : p < 0.05

Table 5.4

NEED IMPORTANCE AND ATTITUDES TOWARDS WORK

ATTITUDE	NEED IMPORTANCE									
	Self Act		Self Esteem		Belonging		Safety		Physiology	
	High (3)	Low	High	Low	High	Low	High	Low	High	Low
I. JOB IMPORTANCE : Intrinsic (1)	1.7	1.5	1.7	1.6	1.5	1.5	1.5	1.7	1.5	1.6
: Extrinsic	1.7 **	2.1	1.8	1.9	1.9 *	1.7	1.9	1.8	1.9	1.8
II. JOB SATISFACTION : Intrinsic (2)	2.1 *	1.8	2.1 *	1.7	1.9	2.2	2.0	2.0	1.7 **	2.2
: Extrinsic	2.3 **	1.8	2.0	1.9	1.8 **	2.2	1.9	2.1	1.8 *	2.1

Notes: Mann Whitney Analysis.

(1) IMPORTANCE 3 = (Very important) to 1 = (Not particularly important)

(2) SATISFACTION 4 = (Very satisfied) to 1 = (Very dissatisfied)

(3) Mean values for group.

\*\* p<0.01

\* p<0.05

$p < 0.01$  respectively). Conversely the table demonstrates that those with increasing safety and physiology needs express decreasing satisfaction ( $\rho = 0.23$ ,  $p < 0.01$ ;  $\rho = -0.21$ ,  $p < 0.01$  respectively). These differences are also significant across the quartile groups for self actualization, belonging and physiology need importance ranges (Table 5.4).

Turning to satisfaction with intrinsic job characteristics (Table 5.4) a similar pattern emerges. Individuals with increased needs for self actualization and esteem express greater satisfaction, and those with decreased higher needs, less satisfaction.

A more detailed analysis of areas of satisfaction and dissatisfaction was undertaken with the use of open ended questions the major categories and their frequency are shown in Table 5.5. The most frequently mentioned sources of satisfaction (co-workers, freedom, interest) and dissatisfaction (working conditions, boredom, supervision) have some resemblance to Herzberg's (1959) analysis, although he has reported that work with co-workers is more likely to be mentioned as a source of dissatisfaction than satisfaction.

The significance of the differences in citation frequency of satisfiers and dissatisfiers between median and quartile divisions were assessed with chi-square analysis (Table 5.6). The most striking feature to emerge, particularly with the median split, is the lack of significant differences and of the 60 quartile division chi square analyses performed, only seven were significant. Nevertheless, a number of non significant trends emerged, which will be briefly discussed.

With reference first to sources of satisfaction, individuals with increased belonging and safety needs emerged as one of the

Table 5.5

MAJOR CATEGORIES OF SATISFACTION AND DISSATISFACTIONA. Sources of Satisfaction

SOURCE	Percentage of Respondents making Response
1. The chance to meet people, the <u>co-workers</u> .	37%
2. The <u>freedom</u> , <u>autonomy</u> or <u>flexibility</u> of the job.	30%
3. The <u>challenge</u> the job presents, <u>opportunities</u> to use <u>abilities</u> .	15%
4. The <u>variety</u> , opportunities to do many different things.	8%
5. The job is <u>interesting</u> .	28%
6. No source of satisfaction.	6%

B. Sources of Dissatisfaction

1. <u>Working conditions</u> , <u>hours too long</u> , <u>early start</u> , <u>too much overtime</u> .	22%
2. The type of work, <u>boring</u> , <u>repetitive</u> .	26%
3. Relationships with <u>supervisors</u> , or <u>co-workers</u> .	17%
4. <u>Insecurity</u> , no <u>opportunity</u> for <u>progression</u> .	17%
5. The <u>pay</u> , <u>fringe benefits</u> .	6%
6. No source of satisfaction.	32%



least satisfied groups. The upper quartile of the former were significantly more likely to mention their work provided little source of satisfaction and what satisfaction they recalled came primarily from their co-workers. Conversely individuals with increased self actualization needs (in the upper quartile of the range) emerged as one of the most satisfied groups, more frequently mentioning the freedom and autonomy their jobs provided as a source of satisfaction, whilst a trend also emerged to talk more of challenge and variety. With regard to dissatisfaction this group were significantly less likely to mention working conditions and more likely to feel there were no major sources of dissatisfaction in their jobs.

A number of other trends can be observed, individuals with high esteem scores, (in the quartile split) as anticipated bore a rather close resemblance to those with high self actualization scores. They expressed significantly less dissatisfaction and like the former their major source of satisfaction, "interest" is, in Herzberg's term, a "motivator".

In summary, as hypothesized, individuals with increased needs for esteem and self actualization emerged as the most satisfied group, they were less likely to cite areas of dissatisfaction in their work and more likely to cite "motivators" as sources of satisfaction. Conversely, those with increased needs for belonging, safety and physiology emerged as less satisfied, they were less likely to mention "motivators" as sources of satisfaction and more likely to cite "hygiene" factors, such as co-workers, as sources of satisfaction. Their dissatisfaction appeared to centre on the boring and repetitive nature of their work, and less frequently, their pay. For those with increased physiology and safety needs

Table 5.6

SOURCES OF SATISFACTION AND DISSATISFACTION - PROPORTION OF RESPONSE IN MEDIAN AND QUARTILE GROUPS

1. Median Split

SATISFACTION	NEED IMPORTANCE											
	Self Act		Self Esteem		Belonging		Safety		Physiology			
	High	Low	High	Low	High	Low	High	Low	High	Low		
1. Co-workers	.35	.40	.38	.36	.47	.29	.36	.38	.42	.34		
2. Freedom	.41	.17	.34	.24	.21	.38	.34	.24	.27	.32		
3. Challenge	.17	.10	.15	.14	.19	.10	.09	.20	.10	.18		
4. Variation	.10	.05	.05	.12	.04	.12	.05	.12	.10	.07		
5. Interest	.27	.30	.38	.14	.21	.34	.18	.38	.17	.35		
6. No Satisfaction	.00	.12	.01	.12	.10	.02	.07	.06	.05	.07		

DISSATISFACTION	NEED IMPORTANCE											
	High	Low	High	Low	High	Low	High	Low	High	Low		
1. Working Conditions	.17	.30	.17	.29	.19	.25	.25	.20	.25	.20		
2. Repetition	.21	.32	.19	.34	.34	.17	.25	.26	.35	.19		
3. Co-workers	.20	.11	.21	.12	.17	.17	.09	.24	.15	.18		
4. Insecurity	.04	.00	.01	.10	.02	.08	.04	.06	.07	.04		
5. Pay	.00	.12	.04	.10	.09	.04	.09	.04	.07	.05		
6. No dissatisfaction	.43	.19	.40	.22	.32	.31	.26	.38	.25	.37		

Table 5.6

**SOURCES OF SATISFACTION AND DISSATISFACTION - PROPORTION OF RESPONSE IN MEDIAN AND QUARTILE GROUPS**

**1. Quartile Split**

SATISFACTION	NEED IMPORTANCE											
	Self Act		Self Esteem		Belonging		Safety		Physiology			
	High	Low	High	Low	High	Low	High	Low	High	Low		
1. Co-workers	.18	.40	.31	.33	.50	* .32	.33	.41	.42	.42	.42	
2. Freedom	.45	* .13	.45	.29	.12	.44	.12	.32	.31	.38	.38	
3. Challenge	.18	.04	.17	.16	.08	.12	.05	.12	.15	.05	.05	
4. Variation	.13	.04	.07	.18	.08	.08	.05	.20	.10	.00	.00	
5. Interest	.36	.22	.48	* .18	.20	.32	.16	.25	.10	.38	.38	
6. No Satisfaction	.00	.22	.00	.04	.21	* .00	.16	.04	.00	.07	.07	

DISSATISFACTION	High	Low	High	Low	High	Low	High	Low	High	Low
1. Working Conditions	.10	* .32	.17	.25	.16	.25	.38	.16	.37	.30
2. Repetition	.27	.50	.17	.29	.50	.16	.27	.12	.31	.19
3. Co-workers	.23	.09	.20	.14	.16	.17	.02	.21	.16	.17
4. Insecurity	.04	.00	.03	.12	.00	.04	.06	.08	.10	.00
5. Pay	.00	.13	.03	.08	.12	.00	.11	.04	.10	.00
6. No dissatisfaction	.45	* .13	.44	* .25	.25	.32	.16	.41	.15	.42

\* Differences statistically different.  $p < 0.05$ , using the chi-square test.

the actual working conditions, overtime demands and hours of work were also a source of dissatisfaction.

(iii) Proposition 3 : The Effect of Job Characteristics and attitudes on Need Importance

The final analysis of the present study used a multiple regression technique to examine the relationship between need importance and job characteristics. This technique (Kim and Mohout, 1975) served as a descriptive tool to assess the variation in need importance scores which could be accounted for by the joint linear influences of occupational self direction, namely the hours working with data, people and manually, the complexity of such work, routinization and closeness of supervision.

To achieve this solution five regression analyses, one for each need, were performed. In each analysis the job characteristics were entered into the equation in a step wise manner. This proceeds by first entering into the equation those variables explaining the greatest independent amount of variance and then, in a step wise manner, entering those that account for lesser amounts of variance.

The bracketed figures in Table 5.7 indicate the step at which each variable was entered into the equation.

The figures to be examined are R Square ( $R^2$ ), the Coefficient of Determination, and R the correlation Coefficient where  $R^2$  indicates the proportion of variation in the independent variable, need importance score, explained by the dependent variable, job characteristics. Statistical significance was calculated from the F value. From Table 5.7 it appeared that the job characteristics associated with occupational self direction explain differing amount of variance across the five needs. Thus,



Table 5.7

MULTIPLE REGRESSION ANALYSIS OF NEED IMPORTANCE SCORES AND JOB CHARACTERISTICS

	Self Actualization			Esteem			Belonging			Safety			Physiology		
	R2	R2	R	R2	R2	R	R2	R2	R	R2	R2	R	R2	R2	R
	Change			Change			Change			Change			Change		
Hours : Data	.22	.00	.38 (7)	.15	.00	.02 (7)	.04	.00	.01 (4)	.13	.01	-.15 (3)	.13	.01	-.15 (3)
: Manual	.21	.02	-.39 (2)	.15	.00	-.24 (5)	.03	.01	-.04 (3)	.10	.01	.24 (3)	.10	** .10	.32 (1)
: People	.21	.00	.08 (3)	.15	.00	.18 (6)				.08	.01	-.01 (2)	.14	.00	-.16 (5)
Complexity : Data	.18**	.18	.43 (1)	.14	.02	.05 (3)	.02	.01	.03 (2)	.15	.00	-.18 (8)	.15	.00	-.18 (8)
: Manual	.22	.00	-.10 (5)	.14	.00	-.18 (4)	.04	.00	.00 (6)	.11	.01	.02 (4)	.14	.00	.09 (6)
: People				.07*	.07	.21 (1)	.04	.00	.02 (7)	.07*	.07	-.26 (1)	.14	.00	-.26 (7)
Routinization	.22	.00	.10 (4)	.11	.04	.00 (2)	.00	.00	.08 (1)	.11	.00	-.21 (5)	.11	.01	-.23 (2)
Closeness of Supervision	.22	.00	.30 (6)	.15	.00	.06 (8)	.04	.00	.04 (5)	.14	.00	.02 (4)	.14	.00	.02 (4)
EXPLAINED VARIANCE	22%			16%			4%			11%			15%		

n = 93 for each column

Significance of F value \*\* p < 0.01

\* p < 0.05

Bracketed figures indicate step variable entered into regression equation

they explained the greatest amount of variance in self actualization (22%) and the least amount in belonging (4%).

Turning now to the characteristics which significantly contribute to explaining variance, the complexity of the work with data explained a significant 18% of the variance in self actualization and as the R value showed, the relationship is positive. Complexity of work with people contributed significantly to explaining the variance in esteem and safety, although, for the former this was positive whilst for the latter negative. A significant 10% of variance in physiology need importance scores was accounted for by hours spent working manually, the relationship being negative. Finally, none of the job characteristics entered into the equation contributed significantly to explained variance in the belonging need importance scores.

## 5.8 DISCUSSION

Maslow (1968) has suggested that environmental conditions are central to both the satisfaction and importance associated with successively higher needs. The majority of people spend more than half their waking hours working so work constitutes a large part of "environmental conditions", although it must be remembered that the actual centrality of work varies across occupational groups (Dubin, 1956).

In measuring job characteristics this study has digressed somewhat from the norm by using Kohn's "Study of Occupational Conditions" rather than the more usual "Job Diagnostic Survey" (Hackman and Oldham, 1975). The former provides information about the complexity and hours of work, routinization, closeness of supervision, work importance and job satisfaction.

It has been postulated that the actual hours and type of work engaged in during the working day can be associated with the importance an individual assigns to the five needs. More specifically it was hypothesised that increased occupational self direction would be associated with increased needs for esteem and self actualization, while decreased occupational self direction would be associated with increased needs for safety and physiology. The results provided some points of clarification to these rather broad hypotheses. First, in interpreting the relationship between occupational self direction and need importance it became apparent that individuals with increased needs for esteem and those with increased needs for self actualization were not necessarily similar and could not be treated as such. Although both exhibited many of the attributes of increased occupational self direction (Table 5.2)

the relationship is qualitatively and quantitatively different. Those individuals with high needs for self actualization reported increased overall job complexity and decreased routinization, they were engaged in complex work with people and data and spent more than half their hours working with data. As the regression (Table 5.7) showed, a significant 18% of variance in self actualization need importance scores can be explained by the complexity of work with data, while a further 4% can be explained by the other work characteristics. It would appear that highly complex work, particularly work with data is strongly related to increased needs for self actualization.

The relationship between job characteristics and the need for esteem, although apparent, is not as significant as that for self actualization. Whilst individuals from the upper quartile of the esteem need range spend significantly more time working with people and less working manually, the work they do is not significantly more complex than individuals from the lower quartile. Furthermore, while complexity of work with people explains 7% of variance in the esteem need scores in total the type of work done explains less variance (16%) for esteem than for the self actualization need. In conclusion, it would appear something of an oversimplification to place esteem and self actualization together as "higher needs" when the latter appears to be more closely explained by job characteristics.

A similar correction must be made for the safety and physiology needs which again cannot be categorized simply in terms of "lower needs". High needs for physiology are associated with increased time spent working manually fewer hours spent working with data and people, decreasingly complex work with people and



increased routinization. This group appear to exercise the least occupational self direction to the extent that the type of work they do can be considered a "limiting condition" in the sense that it limits the possibilities of gratification of the needs for safety and physiology. Kohn has suggested that individuals cannot exercise self direction if their work is highly routine or exclusively manual and uncomplex, or if their interactions with people is primarily in terms of receiving orders. The limitations of this groups work is further highlighted when it was calculated that 10% of the variance in physiology need score can be explained by the number of hours spent working manually and a further 1% by routinization.

Although high needs for safety are also associated with decreased occupational self direction the relationship is not as marked as that observed for physiology. These individuals may spend significantly more hours working manually but their work with data or people is not as uncomplex as the former group and there is no significant difference between the upper and lower quartile groups with regard to routinization.

The differences between the upper and lower quartile groups (Table 5.2) and the regression (Table 5.7) best illustrate one of the most striking features of these findings, the curvilinear relationship between job characteristics and need importance. Observe that differences between upper and lower quartile groups and amount of explained variance are greatest for the highest (self actualization) and lowest (physiology) needs, while they are least for the middle (belonging) need. There is only one significant difference between the upper and lower quartile of the belonging groups (complexity of work with people) and only 4% of the variance in this need can be explained by these job characteristics.

Therefore it would appear that although increased occupational self direction is associated with increased needs for self actualization and low occupational self direction with increased physiology need importance, something other than job characteristics explains the variance in belonging need strength.

The other major finding to emerge from this study was that the relationship between importance of intrinsic job characteristics and self actualization or "higher order need strength", which forms the corner stone of many measures of HNS, should not be accepted as apriori truth. Whilst there is a significant positive correlation between the importance of intrinsic job characteristics and self actualization need importance, the relationship is not sufficiently delineated to allow upper and lower quartile groups to be differentiated on this basis. This finding leads to a number of points. First it is necessary to investigate the relationship between intrinsic job characteristic importance and other measures of HNS or self actualization to ascertain whether the nonsignificant difference between high and low importance groups, observed in the present study can be generalized. Secondly it questions the assumption that higher order need strength can be measured simply in terms of importance assigned to intrinsic job characteristics. This does not negate measures like the JDS, but it does ask whether these measures should be called Higher Order Need Strength, or simply, as could be argued, Need for Intrinsic Work Characteristics. The use of the former has a number of connotations which the instrument does not justify.

The next chapter discusses further the applicability of the HNS measure of need importance and observes the correlation between it and the Q-sort measure of need importance.

This study has provided a broad framework of the relationship between need importance and job characteristics, demonstrating that increased higher need importance is associated with complex work with people and data which is not routine or closely supervised. In the next study we narrow our observations of work and examine an area which has generated a great deal of contemporary research, the relationship between work characteristics and the outcomes of work like performance, satisfaction or absenteeism. This is a particularly interesting area of study for a number of reasons, first it has direct relevance to industrial psychologists work with job performance and satisfaction, and to job enrichment schemes, and therefore affects the practitioners' thinking in that area. Secondly it is a relationship which HNS, among other things, has been postulated to moderate and therefore provides an excellent testing ground to observe whether the Q-sort measure of need importance can add more to our understanding of the relationship than the HNS measure alone.

MODERATORS BETWEEN JOB CHARACTERISTICS AND WORK OUTCOMES

	Page
6. INTRODUCTION	... 234
6.1 METHODOLOGY OF PAST RESEARCH	... 237
(i) Job Characteristics	... 237
(ii) Higher Order Need Strength	... 237
(iii) Personal and Work Outcomes	... 238
1. Personal Outcomes	... 238
2. Work Outcomes	... 238
(iv) Interpretation of Results	... 239
6.2 PROBLEMS ASSOCIATED WITH MEASUREMENT OF HNS	... 244
(i) Response Artifacts	... 244
(ii) Applicability of HNS	... 246
1. Importance of Intrinsic Work Characteristics to groups with Increased Self Actualization Scores	... 247
2. Correlation of Growth Need Strength Scale of JDS	... 247
3. Moderating of the Job Characteristic/ Personal Outcome Relationship by Related Personality Indices	... 248
6.3 AIMS OF THE PRESENT RESEARCH	... 251
6.4 METHODOLOGY	... 252
(i) Data Collection Procedure	... 252
(ii) Characteristics of the Sample	... 253
(iii) Measurement of the Concepts	... 253
1. Job Characteristics	... 253
2. Job Attitudes	... 254
3. Higher Order Need Strength	... 255
4. Self Actualization and Self Esteem	... 255
5. Combination Score	... 256
6.5 ANALYSIS	... 258
(i) Moderated Analysis	... 259
(ii) Correlation Analysis	... 259
(iii) Analysis of Covariance	... 260
6.6 RESULTS	... 263
(i) Analysis of Covariance	... 265
(ii) Matched Group Correlation	... 267
6.7 DISCUSSION	... 271



CHAPTER 6 - MODERATORS BETWEEN JOB CHARACTERISTICS ANDWORK OUTCOMES6. INTRODUCTION

One of the major themes developed in the latter part of this research has been the relationship between work, the attitudes associated with it, and need importance. The previous study examined the basic variables of this relationship, the present study develops this by examining possible moderators on the work characteristic, job attitude association.

A cursory glance at any group of employees shows that whilst the type of work done may be similar, individuals reaction to that work in terms of their satisfaction or motivation, differ widely. Obviously the factors which moderate between the characteristics of a job and an employees attitude towards that job have been of considerable interest to researchers.

In examining these interactions a number of personality variables have been postulated, for example belief in the Protestant Ethic (Blood, 1969); Need for Achievement (Stone, Mowday and Porter, 1977); Self Esteem (Inkson, 1978) and Higher Order Need Strength (Hackman and Lawler, 1971; Brief and Aldag, 1975; Jackson, Paul and Wall, 1981)) and even differences in geographical location (Hulin and Blood, 1968; Turner and Lawrence, 1965). The variable Higher Order Need Strength, also termed Self Actualization (Sims and Szilagyi, 1976) and Growth Need Strength (Hackman and Oldham, 1976; Oldham, Hackman and Pearce, 1976; Umstot, Bell and Mitchell, 1976), has received the greatest amount of contemporary attention.

Research using Higher Order Need Strength (HNS) gained momentum with the work of Turner and Lawrence (1965) whose concepts

were later modified by Hackman and Lawler (1971). They postulated that employees react positively to five "core" job characteristics; variety, task identity, autonomy, task significance and feedback, and those with increased HNS respond especially positively to jobs high in these "core" characteristics. The hypothetical relationship between job characteristics and response to work was later systematized in the model by Hackman and Oldham (1976) presented in Figure 6.1.

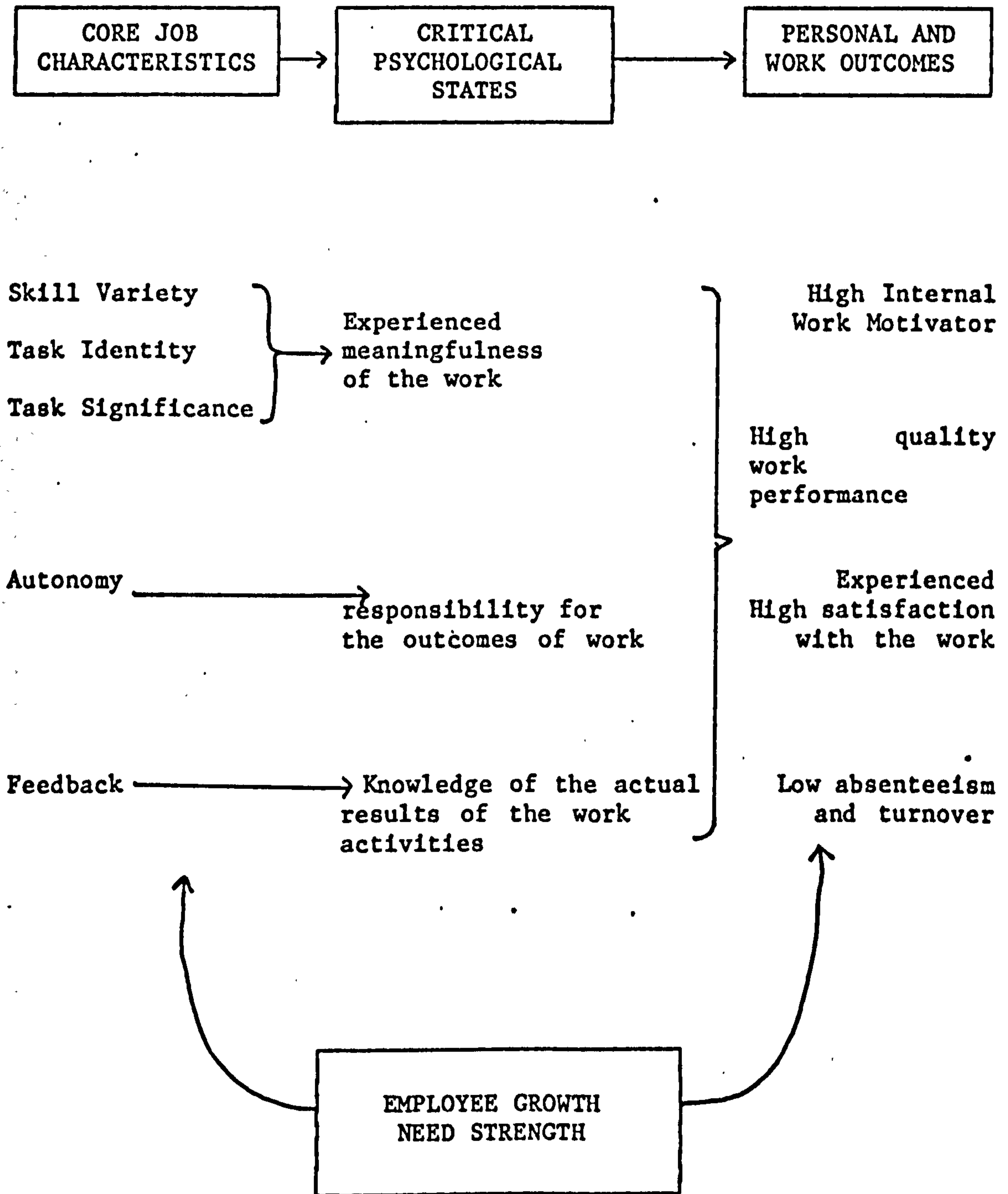
At the most general level five "core" job characteristics are seen as prompting five psychological states, which in turn lead to a number of beneficial personal and work outcomes. Experienced meaningfulness is enhanced primarily by skill variety, task identity and task significance; experienced responsibility for work outcomes is increased when a job has high autonomy; knowledge of results is increased when the job is high on feedback.

We will now examine the methodological approach generally used in these studies.

Figure 6.1

THE JOB CHARACTERISTICS MODEL OF WORK MOTIVATION

(from Hackman and Oldham, 1976, p256)



## 6.2 METHODOLOGY OF PAST RESEARCH

Research in this field has generally used the following operationalizations.

### (i) Job Characteristics

The majority of research has used the Job Diagnostic Survey (JDS) (Hackman and Oldham, 1976) to measure job characteristics (eg. Hackman and Oldham, 1976; Wanous, 1974; Oldham, Hackman and Pearce, 1976). Others have used either shortened or modified versions (Brief and Aldag, 1975; Stone, Mowday and Porter, 1977; Jackson, Paul and Wall, 1981).

### (ii) Higher Order Need Strength (HNS)

Previous studies have generally indexed HNS with the "growth need strength" scale of the Job Diagnostic Survey (Hackman and Oldham, 1975) or similar measures (eg. Hackman and Lawler, 1971; Wanous, 1974). The instruments use individuals stated preference for various job characteristics eg. "the chance to exercise independent thought and action in my job" to infer the existence of higher order needs. (Wanous, 1974; Brief and Aldag, 1975; Sims and Szalagyi, 1976). Others have used the "job choice" section of the JDS in which employees indicate their preference for 12 pairs of hypothetical jobs. eg. "A job where you are often required to make an important decision" versus "A job with many pleasant people to work with". For each item a job characteristic having the potential for satisfying one of the lower needs is paired with a job characteristic relevant to higher order need strength. (Hackman and Oldham, 1975; Oldham, Hackman and Pearce, 1977)



The justification for measuring higher order need strength by preference for levels of job characteristics will be discussed in some detail below (p 246).

### (iii) Personal and Work Outcomes

The feelings and attitudes an employee has to his work have been examined in two ways, with reference to personal or subjective outcomes, for example motivation and satisfaction; and to work or objective outcomes, for example performance or rate of absenteeism. Personal outcomes will be discussed first.

#### 1. Personal Outcomes

The major concepts examined are global or specific job satisfaction (JS) and internal work motivation (IWM). The former has been measured with the Job Diagnostic Inventory (JDI) (Smith, Kendall and Hulin, 1969) which measures supervisory, co-workers, pay and promotion satisfaction or the Job Diagnostic Survey (Hackman and Oldham, 1975). The latter concept, IWM is also measured with the JDI and assesses the degree of positive internal feelings arising from effective performance on the job. It has been operationalized in the studies by Hackman and Oldham (1975), Oldham, Hackman and Pearce (1976) and Jackson, Paul and Wall (1981).

#### 2. Work Outcomes

Although the assessment of work outcomes has always been somewhat problematic three major concepts have been examined, performance, absenteeism and salary. The first of these is assessed by asking supervisors to rate the effort expended, work quality and work quantity of a subordinate's work (Wanous, 1974; Hackman and Oldham, 1975; Sims and Szalagyi, 1976). Salary has in the past been used as a measure of performance (Oldham, Hackman and Pearce, 1977)

but must be corrected for tenure in the organization and can only be used when employees are from nearly identical grades in the same organization. The methodological approach of this research area has been briefly discussed, attention will now focus upon the results it has generated.

#### (iv) Interpretation of Results

The Hackman and Oldham model (Figure 6.1) has been examined primarily in terms of the job characteristic/work outcome relationship (Hackman and Lawler, 1971; Brief and Aldag, 1975; Oldham, Hackman and Pearce, 1976; Sims and Szalagyi, 1976). Within this paradigm there has been inconclusive evidence for the mediating effect of HNS on the relationship. Whilst an early study by Hackman and Lawler (1971) and later by Oldham, Hackman and Pearce (1976) indicated that employees with increased HNS respond more positively to jobs high in the "core" dimensions other research has questioned such a straightforward role.

The study by Oldham, Hackman and Pearce (1976) which examined the relationship between job characteristics (combined to form a measure of motivational potential) job satisfaction and internal work motivation, supported the hypothesis that individuals with increased HNS and job satisfaction respond more positively, in terms of performance, salary and internal work motivation, to jobs with high motivational potential, than individuals with decreased HNS and job satisfaction. With one exception the relationship between motivational score and work outcome performance measures were significantly higher for individuals with increased job satisfaction and HNS, than for those dissatisfied with their job and having decreased HNS. However, like a number of other studies (eg. Jackson

et al, 1981) they report that the moderating effect is not as pronounced in the relationship with internal motivation as it is with job satisfaction.

Hackman and Oldham (1976) who examined the relationships within the model from a slightly different perspective, considered the psychological states/work outcome relationships and the job characteristics/psychological state relationships. They hypothesized;

1. The relationship between the three psychological states and outcome variables will be stronger for individuals with increased HNS than for individuals with decreased HNS.
2. The relationships between job characteristics and their corresponding psychological states will be greater for individuals with increased HNS.

They report that all the differences between the increased and decreased HNS groups were in the predicted direction and, with the exception of task identity, statistically significant.

Summarizing this research Oldham et al (1976) have concluded that employees are more likely to perform well in an enriched environment when they desire growth satisfaction and are satisfied with the organization's internal environment. When decreased growth needs and dissatisfaction are combined, negative relationships between job complexity and performance measures are often observed. They have suggested that such employees find a complex, challenging job out of line with their own needs and perform relatively poorly at it. By the same token, when faced with a simple and routine job they react favourably.

However other studies have not been so supportive. For example, in a partial replication, Brief and Aldag (1975) report



that although internal work motivation increased with increases in task significance, autonomy and feedback the differences in these increases between groups with increased and decreased HNS was not, in the main, significant. Furthermore they also report a number of unexpected results. Whilst employees with increased HNS displayed stronger relationships between job characteristics and internal work motivation, contrary to expectations, those with decreased HNS displayed stronger relationships between job characteristics and effective responses more extrinsic to the work (eg. promotion).

A further replication by Sims and Szalagyi (1976) also report mixed conclusions. Examining relationships between job characteristics, satisfaction and performance for individuals with increased and decreased HNS they reported that HNS was a statistically significant moderator in 10 of the 20 relationships. Specifically, individuals with increased HNS were reported to exhibit stronger relationships between variety and satisfaction with work, feedback and satisfaction with supervision; dealing with others and satisfaction with work and friendship and satisfaction with work. The moderating effects of the HNS on the autonomy/performance and feedback/performance relationships were in the expected directions, though not statistically significant. Interestingly, contrary to Hackman and Oldham's (1976) model those with low HNS were found to have stronger relationships between task identity and performance; dealing with others and performance, and friendship and performance. The lack of moderating effect on the task identity/satisfaction relationship has also been observed by Hackman and Lawler (1971) and Brief and Aldag (1975).

A later study by Mowday, Stone and Porter (1979) using a within-job rather than the more common between-job analysis assessed



the moderating effect of need importance on the relationship between work characteristics and work outcomes they hypothesized that those individuals with increased needs for achievement and autonomy would react more favourably to jobs with increased scope than those with decreased needs. Conversely those individuals with increased affiliation needs would react less favourably to this type of work because it does not provide the opportunity for social interaction.

As predicted within a group of individuals working in high scope jobs those with increased achievement needs were less likely to leave whilst those with increased affiliation needs were more likely to. However contrary to expectations when individuals working in low scope jobs were assessed, turnover was unrelated to either achievement or autonomy needs. Furthermore a number of inexplicable results emerged, for example, neither performance feedback or the opportunity to do a "whole" piece of work were related to achievement needs.

An overview of research suggests inconclusive support of the Hackman, Lawler model. Whilst some studies have observed statistically significant differences in the expected direction between increased and decreased HNS groups, others have reported inexplicable results.

Moreover the moderating effect of HNS on the relationship between job characteristics and job attitudes is particularly important because it has far-reaching effects on job redesign thinking. Consider for example, Oldham, Hackman and Pearce (1976, p402) following conclusion:

"The implications of the findings for change are straightforward .... If employees lack the desire for growth need satisfaction ... the implementation of job change should

be done with caution".

Others, like Hackman, Oldham, Janson and Purdy (1975) have gone even further, suggesting that employees low in HNS may react negatively to complex or enriched jobs because they will be psychologically "stretched" too far by such jobs or because they will not value the kinds of outcomes that such jobs provide.

The implications of this second point are more contentious. For example, Hackman and Oldham (1976) report that whilst employees within increased HNS do react more positively to complex jobs, the signs of the relationship between the job characteristics and outcome measures are positive, even for those individuals with decreased HNS. Nevertheless, if there is substantive evidence to support the view that higher order need strength will affect an employees reaction to job enrichment schemes then this must affect the thinking of practitioners. Before such conclusions are drawn it is important to enumerate a number of problems associated with past research which could be considered fundamental to any interpretation.

## 6.2 PROBLEMS ASSOCIATED WITH MEASUREMENT OF HNS

It will be argued that there are two major problems associated with the normal measures of HNS (eg. Hackman and Lawler's "job choice" and "would like" format). In summary these are:

1. "Response artifacts" arising from measuring HNS on the same occasion as job attitudes and characteristics.
2. The basic assumptions underlying measures of HNS which use individuals stated preference for levels of various job characteristics as a basis for inferring the existence and strength of HNS needs.

It will be argued that it is implausible to measure HNS, described, for example by Hackman and Lawler (1971, p255) as; "The need for personal growth and development with various job attitudes". Certainly to use attitudes to work experience as possible mediators is justifiable, but does this measure bear any relationship to personal growth and development?. It will be concluded that there is little evidence to support this assumption. These problems will now be examined in greater detail.

### (1) Response Artifacts

The question of response artifacts is one which has been more frequently voiced since Salancik and Pfeffer's 1977 paper in which they argued that observed correlations between job attitudes, satisfaction and HNS could be an artifact of the procedures used and more parsimoniously explained in terms of consistency. They refer to McGuire's (1968) "socratic effect" which arises from the individual's awareness of his own responses to questions and being aware of these responses additional questions are answered in a

manner consistent with past answers. The effect has been summarized by Jackson et al (1981, p2):

"Having stated that he values given characteristics indicating stronger higher need strength and that they are present in his job, the individual may see little option than to report satisfaction with them, independent of his own feelings".

Evidence relating to the importance or extent of the consistency effect is difficult to assess particularly because few studies report the precise order in which the questions were asked, suggesting that most researchers are insensitive to the potential artifacts of their procedures.

However it will be recalled that of the three potential moderators studied by Wanous (1974), HNS was the most successful, possibly because compared to the protestant work ethic or urban/rural differences it bore the closest resemblance to the employee reaction it moderates. Therefore it could be argued that the relative success of HNS as a moderator can in part be explained by the explicit relationship between the moderating variable and work characteristics.

The only study to date which systematically examines this problem is the research by Jackson, Paul, and Wall (1981). This measured HNS (using the JDI procedure) twice in the same population, once separately in time from, and once in conjunction with the measurement of job characteristics. If a "real" moderator effect is present then analysis based on each measure of HNS would demonstrate an equivalent moderating effect. If, however, striving for consistency is in operation, then the analysis based on HNS measured in conjunction with job characteristics will demonstrate the



stronger moderating effect. The results suggested that the observed effect of HNS on the relation of job characteristics to general job satisfaction cannot be interpreted as a function of striving for consistency, the effect of the moderator being equally evident where HNS was measured separately in time from the other variables.

Because of the conflict of evidence between Jackson et al's findings and the implications of Wahba's research it was considered important to reduce the possibility of the consistency effect in the present study by randomizing the administration of the importance measures and the JDI. It must also be remembered that the present measure of need importance bears much less resemblance to job attitudes than the past HNS measures.

#### (ii) Applicability of HNS

The second problem is rather more fundamental than the first since it questions the suitability of measuring higher order need strength by preferences for internally motivating work characteristics (Hackman and Lawler, 1971).

Instruments measuring HNS have been of two kinds, those measuring preferences for intrinsic job characteristics and the "job choice" type. The former uses the individual's stated preferences for various task characteristics to infer the existence of Higher Order Need Strength. How HNS, as measured by the growth need strength scale of the JDS relates to the personality variable "self actualization" postulated by Maslow (1954) is a matter for debate. In examining this question three areas of research are relevant; first, an earlier study which examined work preferences of individuals with increased self actualization scores, second, studies which have correlated the "job choice" section of the JDS

with personality indices, and finally studies which have attempted to moderate the job characteristic/personal outcome relationship with related personality indices.

1. The Importance of Intrinsic Work Characteristics to Groups with Increased Self Actualization Scores

Chapter 5 examined the importance and satisfaction individuals with increased self actualization scores report for both intrinsic and extrinsic aspects of their job. Briefly, this group reported significantly greater satisfaction with both the intrinsic and extrinsic aspects of their work. They also considered the extrinsic aspects to be significantly less important than the intrinsic. However, contrary to the JDS premise, those individuals with low and those with high self actualization scores could not be significantly differentiated on the basis of the importance they assigned to the intrinsic aspects of their work. (cf Table 5.4).

2. Correlation of the Growth Need Strength (GNS) scale of the JDS

The second approach to this problem examines the relationship between the GNS measures of higher order need strength and related personality indices.

In 1977 Aldag and Brief reported the correlations of the "job choice" section of the JDS with a number of personality indices reflecting higher order need strength, using Ghiselli's (1971) "Self Description Inventory". Results from the study showed that the "job choice" section correlated positively with achievement and self actualization the correlations ranging from 0.14 to 0.34. However this sheds little light on the problem because the Ghiselli indices

of self-actualization were also based on attitudes towards work rather than personality indices.

It is only more recently that the JDS has been correlated with personality indices. Stone, Ganster, Woodman and Fusilier (1979) using Jackson's (1967) "Personality Research Form Manual" report that the "job choice" section of the JDS correlates with needs for achievement ( $r = 0.24$ ), autonomy ( $r = 0.18$ ), change ( $r = 0.27$ ), endurance ( $r = 0.18$ ) and interestingly, with social desirability ( $r = 0.21$ ). They conclude that only a low degree of convergence was found between the JDS and personality indices measures of higher order need strength.

### 3. Moderation of the Job Characteristics/Personal Outcome Relationship by Related Personality Indices

Finally the moderator relationship between job characteristics and personal outcomes when personality indices are used will be examined. It will be argued that the differences between these and studies using HNS substantiates the evidence that HNS bears little or no relationship to growth need strength as measured by personality measures.

An interesting introduction to this topic is Wanous's (1974) work which reports that of the three moderators examined, Protestant Work Ethic, Urban/Rural differences and higher order need strength the latter was the most successful moderator, arguably because it bears the closest relationship to the variable which it is moderating. A number of more recent studies have examined the moderating effect of personality indices (Sims and Szalagyi, 1976; Stone, Mowday, and Porter, 1977; Inkson, 1978). Stone et al examined Need for Achievement (N.Ach) and Need for Autonomy (N.Aut) as

moderators of the job scope/job satisfaction relationship. They report that N.Aut failed to moderate the relationship while N.Ach moderated it but the results were opposite to those generally reported using the HNS (eg. Hackman and Lawler, 1971; Brief and Aldag, 1975; Wanous, 1974) which report stronger correlations between job characteristics and job satisfaction for groups with increased HNS. In contrast Stone et al report higher correlations between job characteristics and job satisfaction for individuals with decreased N.Ach.

Inksons' (1978) hypothesis that job performance would correlate with work satisfaction for individuals with increased self esteem scores, but not for those with decreased esteem scores, received some support.

When esteem was rated by a trained interviewer the relationship between performance and intrinsic satisfaction scales was significantly moderated by the need for esteem. Interestingly esteem failed to moderate the relationship when measured by questionnaire.

Finally, Sims and Szalagyi (1976) have used the normal measure of HNS (Hackman and Lawler, 1971) with locus of control (Rotter, 1966) as possible moderators of the job characteristic/job satisfaction relationship. They predicted that "internals" (ie. individuals who perceive they have some control over their destiny) would be more responsive to enriched job characteristics than "externals" (ie. individuals who believe that their destiny is controlled by factors extrinsic to themselves). Internals would be more likely to perceive a direct connexion between the job and satisfaction of intrinsic needs while externals would not perceive this relationship.



The results provided no support for this hypothesis. Externals were found to have stronger relationships between autonomy and satisfaction with work, autonomy and satisfaction with supervision and dealing with others and satisfaction. Locus of control did not moderate the relationships involving variety, feedback, task identify, or performance.

To summarize, personality indices generally fail to moderate the job characteristic relationships in the same way as higher order need strength measured by job preferences, suggesting that the latter indices are not measuring a similar underlying trait. If one also considers the correlations between GNS and personality indices and the findings of Chapter 5 then it becomes apparent that there is little evidence to support the assumption that measures of job preference bear a relationship to Maslows concept of self actualization.

Examination will now be made of the moderating effect of Self Actualization and Self Esteem on the job characteristic, work outcome relationship.

### 6.3 AIMS OF THE PRESENT RESEARCH

The present study examined the following areas:

1. The degree to which the GNS measure of HNS relates to the Q-Sort measure of self actualization and self esteem.
2. Hackman and Lawler's (1971) proposition that the relationship between job characteristics and job attitudes ie. internal work motivation (IWM) and job satisfaction (JS) is stronger for those individuals with greater higher order need strength self actualization and self esteem.
3. The hypothesis that a combination of HNS and self actualization will provide a more powerful moderator than either singly, in the job characteristic/job attitude relationship.

## 6.4 METHODOLOGY

### (1) Data Collection Procedure

Whilst some studies have examined employees from one occupational group (Shepard, 1970; Stone and Porter, 1973; Wanous, 1974) an adequate test requires that moderating effects on the job characteristics/job outcome relationship be examined for employees in a number of jobs (Hackman and Lawler, 1971; Stone, 1976; Jackson, Paul and Wall, 1981). Following this requirement this study used a cross-sectional sample of occupations. Supervisors in a number of organizations; Banks, Finance Offices, Building Engineers, Catering establishments and Schools were approached and permission sought to distribute the questionnaires amongst the workforce. If permission was granted individuals were approached individually, told the nature of the survey and asked to participate. They were then given the questionnaires and asked to fill them in in their own time, although on a number of occasions the supervisor gave permission for groups to fill in the questionnaires during working hours. Each individual was told the questionnaire would take from half an hour to one hour to complete. Because of the sensitive nature of some of the questions anonymity was of paramount importance to reduce the possibility of response bias associated with social desirability. For this reason individuals were asked not to put their names on the questionnaires whilst complete confidentiality was assured. Further, each was given an envelope addressed to the researcher in which their questionnaire could be placed and sent as soon as they were completed. Respondents in the employment of the University of Liverpool were given internal mail envelopes whilst the others were given stamped addressed envelopes. This was designed to allay any

anxiety individuals might have about their supervisors seeing their completed questionnaire.

Two hundred and fifty questionnaires were distributed and 180 returned, representing a response rate of 72%, which is within the range of acceptance. Some questionnaires were deleted from the sample because of excessive missing data or obvious response errors, for example, placing more than 10 ticks in each need category. This reduced the sample to 170. See Appendix 6.1 for questionnaire.

### (ii) Characteristics of the Sample

The sample was collected to reflect a cross section of the working population, thus 14% were employed in Occupational Category 1; 13% in Category 2; 34% in Category 3; 24% in Category 4; 8% in Category 5 and 5% in Category 6 (see Chapter 5.5 (ii) for a description of the occupational categories used). The education level of the sample reflected the occupational cross section, 2% left school before the age of 14; 34% 14 to 16; 29% at 17; 22% 18 to 23; and 13% had received post graduate training. Therefore the sample included an above average number of respondents who had received higher education. Like the previous study the sample was skewed towards the younger age group, 41% were under 30, 33% 31 to 40; and only 26% were over 41 years of age. Finally, 58% of the sample were male and 42% female.

### (iii) Measurement of the Concepts

#### 1. Job Characteristics

Job characteristics were measured by the Job Diagnostic Survey (Hackman and Oldham, 1975; 1976). A full description of the instrument, including a reliability analysis can be found in Hackman



and Oldham (1975). Overall the measures met the acceptance criterion for reliability. The means, standard deviations and reliabilities of the scales are shown in Table 6.2. The job dimensions of the instrument are; (summarized from Hackman and Oldham, 1975; p161),

**Skill Variety** : The degree to which the job requires different activities and skills.

**Task Identity** : The degree to which the job requires completion of the whole, identifiable piece of work.

**Task Significance** : The degree to which the job has substantial impact on the lives of others.

**Autonomy** : The degree to which the job provides freedom and independence in scheduling the work and determining the procedures.

**Feedback from the Job Itself** : The degree to which the work activities required by the job result in the individual obtaining clear and direct information about the effectiveness of his performance.

## 2. Job Attitudes

**General Satisfaction (GS)** : The overall measurement of the degree to which the individual is satisfied with his job.

**Internal Work Motivation (IWM)** : The degree to which the individual is self motivated to perform effectively on the job. The internal reliability of this scale, at 0.33 (alpha coefficient) was significantly lower than the other scales and must be taken into consideration in the analysis.

**Specific Satisfactions** : A number of scales providing separate measurement of job security; pay and compensation; social satisfaction, peers and co-workers; and supervision and

opportunities for personal growth. These were summed and averaged to form an overall measure.

3. Higher Order Need Strength (HNS)

This measures the individual's desire to obtain "growth" satisfaction from his work. It uses the "would like" format of the JDS, individuals being asked to indicate how much they would like to have a number of specified conditions present in their job, some of which (eg. "The chance to exercise independent thought and action in my job") focus on the growth relevant aspects of the job.

4. Self Actualization and Self Esteem Need Strength

These are designed to measure the extent to which the individual values the importance of potential growth factors in their lives. A full description is given in Chapter 2.2. Unlike the HNS these measures are pertinent to all aspects of the individual's life. The esteem need strength is defined as the extent to which the individual values self worth and confidence again related to all aspects of life. These needs were assessed using the Q-Sort technique discussed in the second chapter. In the previous studies this measure was administered in the form of cards, on which were written an aspect of each need. In the present study it was considered necessary to convert the measure to one which could be self administered, primarily because the use of an individually administered test would be limited in terms of time spent data collecting.

To convert the measurement to one which could be self administered the 50 items were randomly sorted and placed in the left hand column of a table (see Appendix 6.1), the remaining page

being divided into five parts labelled 1 (most important) to 5 (least important). Respondents were instructed to assign these degrees of importance to each item with the constraint that only 10 ticks could be placed in each column.

A pilot study with a sample of 20 suggested that the instructions and task were generally understandable. In the main study 10 respondents reported that they could not fill in this section.

As in previous analysis each of the five need scores were calculated by assigning a score of 5 to items placed in the most important category, ranging to 1 in the least important. Need scores were then calculated by summing the scores of each of the 10 items representative of each need. The questionnaire and scoring procedures are shown in Appendices 6.1 and 6.2.

##### 5. Combination Score

The third measure is a combination of HNS and self actualization scores, combined to examine the hypothesis that growth need strength may be better measured with such a combination.

In the creation of these measures Jackson et al's (1981) procedure was followed with the modification that the groups were trichotomized rather than quartized, because of the smaller sample in the present study. Three sample groups of approximately equal sizes were formed for both HNS and self actualized scores. The groups were labelled High (H), Medium (M) and Low (L). In creating sub-groups a simple combination of HNS and self actualization scores was considered inappropriate because some individuals could be high on self actualization and low in HNS, but would, through simple combination appear equal to a respondent with

medium scores in each. Therefore a group was designated High if they were high in both self actualization and HNS, or high in one and medium high in the other. The medium group contained respondents medium in both or medium in one and low in the other. The group designated low comprised those low in both. Finally, the remaining group, labelled Inconsistent (C) contained those whose scores on the two scales were not adjacent, for example, high on HNS and low on self actualization.



## 6.5 ANALYSIS

Jackson, Paul and Wall (1981) have questioned the analytic procedures of many of the moderator studies. Most have relied on selecting groups high and low on HNS and comparing the magnitude of correlation between the dependent and independent variables thus relying almost solely on a pattern of findings in the predicted direction to confirm a positive outcome.

One of the problems associated with this type of subgroup analysis is the reduced or dissimilar variance between groups. For example, a group with high HNS scores may have uniformly high mean job characteristic scores and therefore reduced variance. Conversely those with low HNS scores may all have low job characteristic scores, thus rendering the two groups dissimilar in terms of the correlations between job characteristics and job attitudes. This problem of variance can be eliminated with the use of a matched pairs design where job characteristics are matched across the upper, middle and lower groups and subsequently job characteristics and job attitudes correlated. No study to date has used such a design although it is used in the present analysis.

In attempts to apply a more rigorous analytical approach past research has used both multiple regression (Hackman and Oldham, 1975) and moderated regression (Stone, Mowday and Porter, 1977) techniques. The latter assume a linear relationship between moderator and the predicted criterion relationship. Consequently, Stone et al were unable to distinguish between non-linear moderators and no moderators at all. In an alternative approach Jackson et al (1981) adopted an analysis of covariance paradigm, which, unlike moderated regression allows several independent variables to

be entered in parallel as predictors while testing for a moderating effect, but which unlike the latter makes no assumptions about the curve of the hypothesized moderator effect. This was the procedure used by the present analysis.

(i) Moderated Analysis

There appears to be no consensus of opinion about the division of groups necessary to consider a moderating effect. Wanous (1974) and Hackman and Oldham (1976) used a median split, while Stone et al (1977) and Brief and Aldag (1975) used a trichotomization, and Oldham et al (1976) and Jackson et al (1981) a quartile division. The latter was considered inappropriate for the present study because of the small data set ( $n = 43$ ) which would render uninterpretable any multiple regression or analysis of covariance, therefore trichotomization was performed.

The analysis met two criteria summarized below;

1. Comparability with previous studies to allow a comparison of the self actualization, self esteem and the combination scores with the HNS as moderators.
2. Relevant analyses of the moderating effect by the most appropriate statistical technique.

(ii) Correlation Analysis

To allow comparison with past research a trichotomization and sub-group correlation was performed. However rather than simply correlating sub-groups the present analysis used a matched group design. This involved matching pairs of scores for job characteristics across the upper/medium, upper/lower and medium/lower comparisons. Therefore within each group analysis the

mean and variance of the job characteristic variable was similar (see Appendix 6.5). This design eliminated problems of unequal sub group variance but resulted in a reduction of sample size.

The moderating effect was evaluated with the use of the Pearson Product Moment correlation coefficient to calculate correlations between job characteristics and attitudes across the three groups. The significance of the differences between the correlations of the sub groups was assessed with the Z test (Ferguson, 1959; Appendix 6.3).

### (iii) Analysis of Covariance

The moderating effect of HNS, self actualization, self esteem and the combination score was also assessed with an Analysis of Covariance. This technique has been successfully used by Jackson et al (1981) and has the advantage, unlike the moderated regression used by Stone et al (1977), of making no assumptions about the curve of the hypothetical moderator effect.

Analysis of covariance within the multiple regression paradigm requires that the categorical variable, in this case the moderators be entered into a nominal scale if polynomial trends are to be examined. For this reason the three groups formed by trichotomization of the HNS, self actualization, self esteem and combination score were treated as nominal rather than ordinal groups. To allow this conversion a set of dummy variables were created by treating each category as a separate variable and assigning scores for all cases depending on their presence or absence in each of the categories. The measures HNS, self actualization and self esteem contained three categories and so two dummy variables were created for each, while the combination score,

with four categories required the creation of three dummy variables. The scoring procedure for the dummy variables is shown in Table 6.1. In this way, any relationship between moderator and

Table 6.1

Types of Cases	Names of Dummy Variables	
	D1	D2
High	1	0
Medium	0	1
Low	0	0

the predictor criterion relationship may be captured up to the second degree of nonlinearity.

Testing the hypothesis that the measures of Growth Need Strength moderate the relationship between job characteristics and job attitudes requires several regression solutions. These solutions are based on  $R^2$ , the "coefficient of determination", which indicates the proportion of variation in each of the job attitudes explained by the job characteristics and the growth need strength.

The regression solutions required are;

(1) A simple correlation regression to obtain  $R^2_x$ , the amount of variance in job satisfaction or IWM explained by a linear combination of the five job characteristics. The significance of  $R$  values can be tested with the  $F$  ratio.

In a simple regression, values of the dependent variable (job attitudes) are predicted from a linear function of the form;

$$Y^1 = A + BX$$

Where  $Y^1$  is the estimated value of the dependent variable  $Y$ ,  $B$  is



a constant by which all the values of the independent variable (job characteristics) are multiplied and A is a constant which is added to each case. (Nie et al, 1975; p323).

However, because the five job characteristics are added independently to the equation the true form is:

$$Y^1 = A + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5$$

(ii) The second solution, to obtain  $R^2_{zx}$ , requires a multiple regression with a linear combination of the job characteristics and the dummy variables of the growth need strength measures. Thus, only the additive terms of the moderator are used, this corresponds to main effects only.

The regression model containing only the linear terms can be written thus:

$$Y^1 = A + B_1D_1 + B_2D_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7$$

where  $D_1$  and  $D_2$  are the dummy variables for Z (measures of growth need strength).

(iii) The third regression solution, to obtain the multiple correlation  $R_{zxzx}$  examines the moderating effect of GNS measures, is a full or saturated model containing all the interactional terms. For the sake of simplicity the model will show the independent variable  $X_1$  to  $X_5$  as simply X.

$$Y^1 = A + B_1D_2 + B_2D_2 + B_3X + B_4(D_1X) + B_5(D_2X)$$

The interactional terms  $(D_1X)$  and  $(D_2X)$  are created by multiplying  $D_1$  by X and  $D_2$  by X.

## 6.6 RESULTS

The correlation coefficients, means, standard deviations and internal reliabilities amongst all the variables used in the analysis are presented in Table 6.2.

The internal reliability of each scale was analysed by the Kuder Richardson Alpha coefficient and ranges from a high of 0.81 (Task Variety) to a low of 0.33 (Internal Work Motivation). The latter finding is of some interest, Hackman and Oldham (1975) report a reliability coefficient for this scale of 0.76, whilst Oldham, Hackman and Pearce, a year later, report 0.71. However Jackson, Paul and Wall (1981), like the present study, using a British sample, report a significantly lower coefficient of 0.44, which has repercussions on the use of the Internal Motivation Scale on a British sample.

The means and standard deviations bear a close resemblance to those reported by Hackman and Oldham (1975) and Jackson, Paul and Wall (1981) although a number of differences are apparent. Specifically, the present sample reported increased Task Identity, (mean of 5.3 compared to 4.69 reported by Jackson et al. (1981) and 4.8 by Hackman et al (1975). This may be a reflection of the characteristics of the present sample, who consisted of a cross section of employee types in contrast to those of Jackson et al whose sample was drawn from school leavers.

In general the scale intercorrelations are lower than those reported by Jackson et al (1981) and closer to those reported by Hackman and Oldham (1975). The potential moderators (HNS, self actualization and self esteem) show varying degrees of correlation with the dependent variables, Job Satisfaction and Internal Work

Table 6.2

**SPEARMAN CORRELATION COEFFICIENT MATRIX, MEANS, STANDARD DEVIATIONS AND RELIABILITIES FOR MEASURES OF JOB CHARACTERISTICS  
OUTCOME VARIABLES AND HIGHER ORDER NEED STRENGTH**

	1	2	3	4	5	6	7	8	9	10
1. Task Variety										
2. Task Identity	.25									
3. Task Significance	.38	.07								
4. Autonomy	.45	.39	.14							
5. Feedback	.33	.23	.29	.24						
6. General Job Satisfaction	.16	.02	.31	.10	.20					
7. Internal Work Motivation	.34	.16	.09	.34	.30	.24				
8. HNS	.24	.20	.09	.10	.14	-.10	.24			
9. Self Actualization	.26	.15	.02	.25	.13	-.10	.08	.09		
10. Self Esteem	.09	-.02	.00	.07	.09	.00	.32	.18	.24	
MEAN	4.9	5.3	5.0	5.4	5.0	4.9	5.3	5.5	30.5	
Standard Deviation	1.6	1.5	1.4	1.3	1.4	1.4	1.1	1.2	5.0	
Internal Reliability	.81	.75	.68	.73	.74	.76	.33	.71	.53	

n = 170 Internal reliability estimated using Kuder-Richardson Alpha Coefficient on item and test variance  
(Appendix 2.2)

Significance level : where  $\rho > .18$   $p < .01$   
where  $\rho > .15$   $p < .05$

Motivation, and the Independent variables (Task Significance, Task Identity, Task Variety, Autonomy, Feedback). A number are of particular interest, most importantly HNS does not correlate with self actualization ( $r = 0.09$ ) but is positively correlated with self esteem ( $r = 0.18, p < 0.01$ ). Self actualization does not correlate with either Internal Work Motivation ( $r = 0.08$ ) or General Job Satisfaction ( $r = -0.10$ ). Conversely self esteem correlates with Internal Work Motivation ( $r = 0.32, p < 0.01$ ) but not with General Job Satisfaction ( $r = 0.00$ ).

(i) Analysis of Covariance

The results of the analysis to investigate the predicted moderators HNS, self actualization, self esteem and the combination score, HNS + SA are presented in Table 6.3. The first row shows the value resulting from the linear combination of the five job characteristics for the dependent variables general job satisfaction (GJS) and internal work motivation (IWM). This demonstrates that a significant 12% of the variance in general job satisfaction and 21% of variance in internal work motivation can be explained by a linear combination of the five job characteristics, the multiple R values are shown in Appendix 6.4. The second row shows the increase in explained variance resulting from the addition of each of the four measures of Growth Need Strength to the linear equation. It can be seen that only the addition of self esteem to internal work motivation significantly increases the explained variance. The third row shows the further increase in explained variance with the addition of the moderator (interactional) effects of the measures of Growth Need Strength and job characteristics. It would appear that the introduction of the moderator effects of the combined score (SA



Table 6.3

INCREMENT IN MULTIPLE R<sup>2</sup> RESULTING FROM THE ADDITION OF HNS, SELF ACTUALIZATION, SELF ESTEEM AND HNS AND SELF ACTUALIZATION AS INDEPENDENT PREDICTOR AND AS A MODERATOR, AND MULTIPLE CORRELATION R FOR THE FULL EQUATION

PREDICTORS	HNS		Self Actualization		Self Esteem		HNS + Self Actualization	
	GJS	IWM	GJS	IWM	GJS	IWM	GJS	IWM
Job Characteristics	.12**	.21**	.12**	.21**	.12**	.21**	.12**	.21**
Job Characteristics + GNS	.02	.03	.03	.01	.00	.07**	.04	.03
Job Characteristics + GNS + Moderator Effect	.07	.05	.10*	.04	.04	.03	.11*	.10*
TOTAL MULTIPLE R	.47**	.54**	.50**	.51**	.40**	.55**	.52**	.58**

\* p < 0.05

\*\* p < 0.01

(n = 170)

GJS = General Job Satisfaction

IWM = Internal Work Motivation

+ HNS) significantly increases the explained variance for both internal work motivation and general job satisfaction. Such an increase also occurs with self actualization and general job satisfaction. However, contrary to the hypothesis neither HNS or self esteem moderate the relationship between internal work motivation, general job satisfaction and job characteristics.

Having established general support for the hypothesized moderating influence of HNS and self actualization on the job characteristic/ job satisfaction, internal work motivation relationship, it is necessary to examine the influence in more detail.

#### (ii) Matched Group Correlation

The means and variance of the job characteristics, general job satisfaction (GJS) and internal work motivation (IWM) for the matched pair design are presented in Appendix 6.5. It will be observed that the means and variance of the job dimensions are equal across the three groups. Table 6.4 (i) and (ii) shows the zero-order correlations between the dependent and independent variables for each group. An examination of the correlations demonstrates a number of moderating effects in the hypothesized direction. As would be expected from the analysis of covariance the greatest number are observed when the combination score is used as a moderator where the combination score HNS and self actualization moderates in the predicted direction between IWM and Task Variety, Task Significance and Autonomy; and between GJS and Task Variety and Autonomy. The analysis of covariance also showed that self actualization moderates between GJS and job characteristics whilst Table 6.4 demonstrates this is localized specifically in the

Table 6.4 (1)

MATCHED GROUP CORRELATIONS : Internal Work Motivation

INTERNAL WORK MOTIVATION	HNS + Self Act		Self Actualization		Self Esteem		HNS		
	Upper	Middle Lower	Upper	Middle Lower	Upper	Middle Lower	Upper	Middle Lower	
Task Variety	.58 (27)	.55* (27)	.03 (27)	-.08* (31)	.46* (31)	-.06 (31)	.53* (25)	-.13 (25)	.23 (25)
Task Identity	.31* (29)	-.19 (29)	.06 (29)	.11 (33)	.11 (33)	.29 (33)	.41 (22)	.07 (22)	.29 (22)
Task Significance	.10 (31)	.09 (31)	.06 (31)	.05 (34)	.39 (34)	-.04 (34)	.28 (29)	.02 (29)	.24 (29)
Autonomy	.06 (31)	.03 (31)	-.29 (31)	.11 (28)	.35 (28)	-.05 (28)	.32 (26)	.19 (26)	.23 (26)
Feedback	.15 (27)	.59 (27)	.39 (27)	-.05 (27)	.40 (27)	.20 (27)	.40 (20)	.28 (20)	.05 (20)
							.63** (26)	-.29 (26)	.20 (26)
							.08 (28)	.44** (28)	-.27 (28)
							.40* (29)	-.15 (29)	.11 (29)
							.36 (30)	.36* (30)	-.12 (30)
							.56 (31)	.46 (31)	.23 (31)

Significance between correlations (Z test) \* p < 0.05  
 \*\* p < 0.01

Number in each group shown in brackets

MATCHED GROUP CORRELATIONS : General Job Satisfaction

JOB SATISFACTION	HNS + Self Act			Self Actualization			Self Esteem			HNS		
	Upper	Middle	Lower	Upper	Middle	Lower	Upper	Middle	Lower	Upper	Middle	Lower
Task Variety	.47 (27)	.17 (27)	.10 (27)	.23 (31)	.01** (31)	-.29 (31)	.53* (25)	-.08 (25)	-.12 (25)	.31 (26)	-.19 (26)	.21 (26)
Task Identity	-.27* (29)	-.07 (29)	.06 (29)	.00 (33)	-.41 (33)	.20 (33)	.15* (22)	-.15 (22)	.21 (22)	.50* (28)	-.23* (28)	-.05 (28)
Task Significance	.35 (31)	.26 (31)	.36 (31)	.22 (34)	.51 (34)	.37 (34)	.15 (29)	.15 (29)	.44 (29)	.47* (29)	-.01 (29)	.36 (29)
Autonomy	.12 (31)	.05 (31)	-.15 (31)	-.24* (28)	.38 (28)	-.23 (28)	.15 (25)	.06 (25)	.07 (25)	.39 (31)	-.08 (31)	.10 (31)
Feedback	.27 (27)	.37 (27)	.45 (27)	.34 (27)	.18 (27)	.07 (27)	.07 (20)	.21 (20)	-.34 (20)	.23 (28)	.18 (28)	.19 (28)

Significance between correlations (Z test) \* p < 0.05  
 \*\* p < 0.01

Number in each group shown in brackets



moderator effect on GJS and Task Variety. Both higher order need strength and self esteem moderated only one relationship, for both the moderation was between IWM and the job characteristics, feedback. However, it must be remembered that, contrary to the Jackman/Lawler model, in 10 of the 40 relations the lower group correlation is greater than the upper group, this being particularly prevalent when self actualization is used as a moderator. The significance of the differences between the correlations is assessed with a Z test (Guilford and Fruchter, 1973) and presented in Table 6.4. This shows that in 8 of the 40 cases the upper group have significantly greater correlations than the lower whilst in 3 cases this trend is reversed. The Z scores for the upper/middle, upper/lower and middle/lower combinations are presented in Appendix Table 6.6.

## 6.7 DISCUSSION

This discussion examines the two major aims of the study, first the use of growth need strength as a moderator in the job characteristics/attitudes relationship and secondly the relationship between higher order need strength and self actualization.

With regard to the former the findings from the present investigation demonstrated using both a matched group correlation design and analysis of covariance that, of the four moderators used, HNS, self actualization, self esteem and the combination score, the latter derived from combining HNS and self actualization most successfully moderated the job characteristics/job attitude relationships. Therefore measuring growth need strength with attitudes to personal growth outside the work situation can add valuable information to that derived from within.

There is also evidence that self actualization moderates the relationship between general job satisfaction and a number of job characteristics. However little evidence of the moderating effects of HNS or self esteem were found. Discrepancies between the present study's findings with regard to HNS and those of previous studies could arise from sampling differences. The present sample consisted of respondents from a wide range of jobs whilst in other studies (eg. Hackman and Lawler, 1971; Wanous, 1974; Stone, 1976; Inkson, 1978; Jackson, Paul and Wall, 1981) only non managerial employees were sampled. Whilst in the majority, correlations between job characteristics and outcomes are greater for higher HNS than for lower in 9 of the correlations observed the trend is reversed. This is inconsistent with the findings of several previous studies (eg. Hackman and Lawler, 1971; Wanous, 1974; Brief and Aldag, 1975;

Jackson et al, 1981) which all report stronger correlations between job scope, job satisfaction and internal work motivation for "higher" than for "lower" growth need strength based sub groups. However as the earlier review showed examination of the literature which has used nonwork measures of growth need strength reveals a rather different state of affairs. When nonwork measures are used (Wanous, 1974; Sims and Szalagyi, 1976; Stone, Mowday and Porter, 1977; Inkson, 1978) moderation of the relationship, if at all present, is in the opposite direction, suggesting that there is little convergence between personality measures of self actualization and other measures of higher order need strength. This is particularly pertinent when one considers that the present measure of self actualization does not correlate with higher order need strength, as measured by the "would like" format ( $r = 0.08$ ), and neither does physiology need importance ( $r = 0.06$ ) or belonging ( $r = 0.00$ ). However, self esteem ( $r = .17, p < 0.05$ ) and safety ( $r = -0.31, p < 0.01$ ) both correlate significantly. These findings seem to indicate that whilst self esteem and achievement correlate moderately with higher order need strength there is little evidence to support the view that measures of self actualization and higher order need strength, as measured by work preferences are measuring the same concept.

Further the self actualization measure, like other personality measures used as moderators appears to moderate the relationship in the opposite direction. In all but the relationship between general job satisfaction and task variety and feedback the upper group have either negative or lower correlations between the independent variables than the lower need groups. Thus the relationship between job characteristics and job attitudes can be

lower for those individuals with greater self actualization need strength and the predicted moderating effect is only observed when this measure is combined with a measure of importance of intrinsic work characteristics.

In summary, this study examined the original Hackman and Oldham (1976) model which postulated that the relationship between core job dimensions and work outcomes, motivation and satisfaction are moderated by growth need strength. It is concluded that the most successful moderator was a combination of the traditional measure of higher order need strength and a measure of self actualization which measures need importance outside the work environment. It also concluded that the postulated measure of need importance based on Q-sort methodology bore very little statistical relationship with higher order need strength as measured by Porter-type instruments. This finding adds empirical weight to the argument proposed throughout this thesis that the latter instrument does not measure what Maslow (1954) conceptualized as "self actualization" and in fact bears a closer relationship to self esteem.

The next and final chapter of the thesis synthesizes the findings from this research into five major themes, each pulling together information arising from the various studies conducted.



## CHAPTER 7

### CONCLUSIONS

	Page
7. INTRODUCTION	... 274
7.1 SUMMARY OF THEMES	... 275
(i) The Mechanisms of the Model	... 275
(ii) Operationalization	... 275
(iii) Syndromes of Behaviour	... 275
(iv) Work and Needs	... 275
(v) The Importance of Needs to Different Groups of People	... 276
7.2 DISCUSSION OF THEMES: THEME 1 - THE MECHANICS OF THE MODEL	... 277
(i) Are there 5 Independent Needs?	... 277
(ii) Are the Needs Hierarchically Arranged?	... 279
(iii) The Relationship between Need Satisfaction and Need Importance	... 280
7.3 THEME 2 - OPERATIONALIZATION OF THE HIERARCHY	... 284
7.4 THEME 3 - THE SYNDROMES OF BEHAVIOUR	... 289
7.5 THEME 4 - NEEDS AND WORK	... 295
7.6 THEME 5 - THE IMPORTANCE OF NEEDS TO DIFFERENT GROUPS OF PEOPLE	... 300
7.7 IMPLICATIONS FOR ACTION	... 304
(i) Research	... 304
(ii) General Psychology	... 305
(iii) Work	... 306

CHAPTER 7 - CONCLUSIONS7. INTRODUCTION

This thesis has explored a number of aspects of Maslow's Hierarchy of Needs which in the conclusion will be synthesized under five broad themes. These themes represent areas of importance which have been investigated from various angles throughout the thesis. Thus the conclusion draws together findings from across the research which adds to the understanding of these central questions.

For the sake of simplicity the empirical evidence relating to each theme is not discussed in detail here but presented in full in Appendix 7.

The major themes of the thesis are summarized in the following Sections.

## 7.1 SUMMARY OF THEMES

### (i) The Mechanisms of the Model

This theme examines the salient propositions relating to the hierarchy of needs theory, more specifically these are:

- a. That there are five independent needs.
- b. That the needs are hierarchically arranged.
- c. That the relationship between satisfaction and importance within a need is negative.

The specific analyses are presented in Appendix 7.1

### (ii) Operationalization

The second theme explores the problems associated with operationalization of the hierarchy concepts and the creation of an instrument to measure need importance.

The reliability and validity analyses are presented in Appendix 7.2

### (iii) The Syndromes of Behaviour

The third theme explores the characteristics, attitudes, values or syndromes associated with each need.

The syndromes of each need are shown in Appendix 7.3

### (iv) Work and Needs

The fourth theme centres on the argument that measures of need importance based on attitude to work are not a sufficient measure of the hierarchy and goes on to discuss whether knowledge of general need importance can increase the understanding of the relationships between job characteristics and work outcomes like motivation and satisfaction.

Appendix 7.4 presents the relevant data.

(v) The Importance of Needs to Different Groups of People

The final theme notes the similarities between need syndromes and symptoms and social class characteristics. The relationship between social class position, age, sex and need importance are explored.

Appendix 7.5 presents the relevant data.



7.2 DISCUSSION OF THE THEMES: THEME 1 - THE MECHANICS OF THE MODEL

The salient propositions in the hierarchy of needs model can be represented in the form presented in Figure 7.1

THE HIERARCHY OF NEEDS MODEL

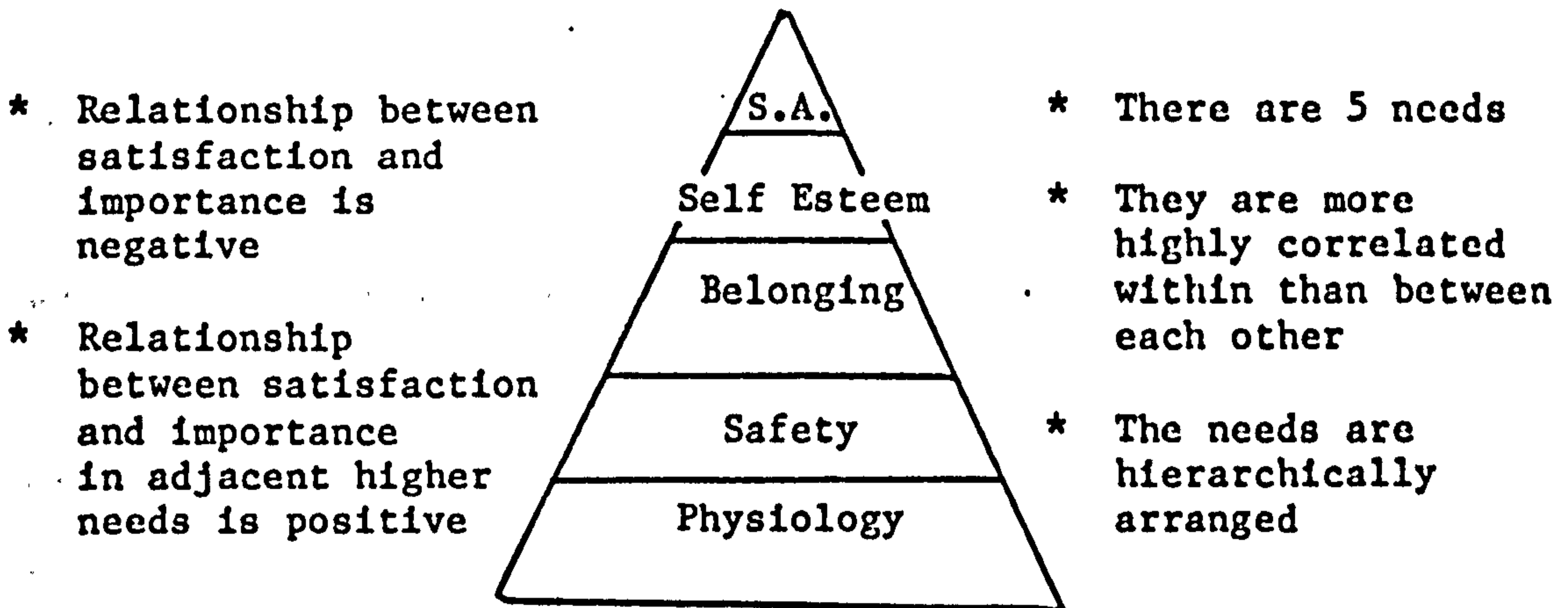


Figure 7.1

Maslow has specified both the number of needs and their relationship to each other. The results pertaining to the number and independence of the needs will be examined first.

i. Are There Five Independent Needs?

This research has not examined directly whether there are five needs or the appropriateness of the titles Maslow has assigned to them. The number of needs postulated, for example by Murray (1938) or Fromm (1955) has to a certain extent reflected the level of specificity the theorist is operating at.

The present study, because it examined Maslow's propositions specifically rather than need motivation generally used the actual

need aspects hypothesized by Maslow (1954). However within this framework we were able to examine both the independence of the needs and the possibility of more parsimoniously viewing them as a three stage hierarchy, like that postulated by Alderfer (1972) or the two stage hierarchy postulated by Lawler (1973). This was achieved by using within- and between-need correlations and factor analyses.

Theoretically, it has to be remembered that the needs are not completely independent, for Maslow (1954) has stressed on a number of occasions that they are to a certain extent overlapping. Nevertheless the theory predicts that the correlation of importance within items representative of a need will be greater than that between needs. The first study (Appendix 7.1B) found direct support for this hypothesis, the between-need item correlations being significantly less than the within-need correlations. Whilst few studies which have used factor analyses have shown all of Maslow's five need categories as independent factors (Payne, 1970; Roberts et al, 1971; Herman and Hulin, 1973; Walters and Roach, 1973) the present study reports that between 50% and 70% of items representing a need category are grouped together in a single factor (Table 2.2). The remaining 30% were distributed across the other factors, for example items C15 and C10 did not fall within the main body of the belonging need factor (Factor V). Thus no evidence was found of either the three stage hierarchy proposed by Alderfer (1972) or the simple differentiation between higher and lower needs reported by Walters and Roach (1973). The only possible modification was the separation of the safety needs into physical safety (B2, B3, B4) and predictability (B5, B9, B10, B11, B15).

In summary, this research demonstrated clear evidence for the independent nature of the needs and provided no empirical support

for either the two or three stage hierarchy postulated by earlier studies; the only possible modification being the division within the safety needs.

(ii) Are the Needs Hierarchically Arranged?

As Figure 7.1 shows Maslow (1954) has postulated a specific sequence of gratification between the needs. The basic needs for physiology and safety must be satisfied before the higher needs can assume importance. Two areas of study are pertinent to this hypothesis, first the correlation matrix between need importance, shown in Appendix 7.1 and secondly the syndromes of behaviour discussed in Theme 3.

A hierarchical arrangement of needs would be shown by decreasing correlations between a particular need and needs lower in the hierarchy. The correlation matrix (Appendix 7.1) demonstrates that, with the exception of the correlation between self actualization and self esteem (0.20,  $p < 0.05$ ) all other correlations between needs were negative and in many cases, significantly so.

Chapters 3 and 4, which examined syndromes of behaviour, also have bearing on the hierarchical arrangement of needs, although in a more anecdotal manner. Examination of the symptoms associated with increased needs for self actualization and self esteem demonstrated that the means to lower need gratification are clearly apparent. Income, occupation, education, housing, and work characteristics are all of a standard which has allowed the gratification of the physiology and safety needs. This provides general evidence that the means of lower need gratification are a pre-requisite for the emergence of higher need importance. A more specific study of the hierarchical arrangement of needs will be discussed in the following Section.

(iii) The Relationship between Need Satisfaction and Need Importance

In examining how movement from one need to another occurs Maslow (1954) uses two propositions:

- a. The higher the satisfaction with a need the lower its importance, which predicts a negative correlation between satisfaction and importance.
- b. The higher the satisfaction with a need the higher the importance of the adjacent higher need, which predicts a positive correlation.

Both propositions were examined in Chapter 4.9 and the results summarized in Appendix 7.1.A. These results demonstrated that whilst satisfaction and importance are negatively correlated for the safety and physiology needs the correlation was positive for the belonging and self esteem needs. A number of researchers (Alderfer, 1972, Wanous and Zwany, 1977) have questioned the simplicity of Maslow's model, proposing instead that need fulfilment moderates the relationship, the proposed negative correlation occurring only when the need is unfulfilled, while the correlation is positive when the need is fulfilled. The present findings reflect those reported by Wanous and Zwany (1977) who, using Alderfer's, Existence, Relatedness, Growth model (1972) found that the correlation between importance and satisfaction was insignificant for the Existence needs and positive for both Relatedness and Growth needs.

Alderfer's (1972) proposition that need fulfilment acts as a moderator in the need satisfaction/need importance relationship was supported in the present research. Increased needs for safety and physiology were associated with unfulfilled basic needs, anxiety



about health, overcrowded homes, low income, unsafe neighbourhoods, and here the correlation between satisfaction and importance was negative. Conversely increased belonging and self esteem needs were associated with fulfilled needs, increased education, and income, greater general satisfaction, wider leisure activities, and here the correlation was positive. (Appendix 7.3)

The second proposition, that there will be a positive correlation between satisfaction and importance in adjacent need categories received mixed support. Like earlier studies (eg. Lawler and Suttle, 1972; and Wanous, 1977) this research reported that none of the observed correlations were significant (Appendix 7.1A). For two, safety/belonging, esteem/self actualization the correlation as predicted was positive, though insignificant, whilst for the other two, physiology/safety, belonging/esteem the correlation was slightly negative.

In conclusion, working from the framework of those need aspects specified by Maslow, these studies demonstrated that the five needs could not be more parsimoniously subsumed into either a two stage or three stage model and, though overlapping on a minority of items, formed five coherent groups.

Support for hierarchical arrangement of the needs was gained from both the correlation matrix of the needs and on an anecdotal level, from the syndromes of need importance. However, like a number of earlier studies the simplicity of the need satisfaction/need importance relationship proposed by Maslow was questioned. It was argued that the proposed negative correlation occurs only when the needs remain unfulfilled, as is the case of the physiology and safety needs, when needs are fulfilled the correlation is positive. Thus the present research supported

earlier findings which propose need fulfilment as a moderating variable in the need satisfaction/need importance relationship. Finally, only mixed support was found for Maslow's proposition that the correlation between importance and satisfaction in adjacent needs is positive.

A number of general comments can be made about the relevance of the hierarchy model to motivational theory and understanding human behaviour.

First the model postulates both motivational states and syndromes of behaviour associated with those states. However it is not a theory of personality traits in the sense that it hypothesizes underlying, constant personality dimensions. Its value, it could be argued stems from the scope it allows psychologists and individuals to examine their own and others motivation. It will be argued more fully in Theme 2 that knowledge of need orientation increases understanding of behaviour at work and adds another dimension to facilitate successful selection and development. It has been seen in Chapter 6 that consideration of motivation increases the power to predict an individuals reaction to particular job characteristics, in terms of job satisfaction and motivation.

The specific mechanisms of the model are more controversial, and only systematic longitudinal studies could demonstrate movement through the hierarchy or the causal relationship between satisfaction and importance across needs. Generally, the present and past research suggests that the relationship between importance and satisfaction depends upon need fulfilment and is not as simplistic as the model postulated by Maslow suggested. Overall however this study has shown that if appropriate instruments for measuring need importance are used some aspects of the hierarchical

model proposed by Maslow receive clear empirical support in areas where support has not been generated in the past, possibly because previous researchers have used inappropriate analytic tools.

### 7.3 THEME 2 - OPERATIONALIZATION OF THE HIERARCHY

The examination of the hierarchy of needs model depended upon a reliable and valid measurement of need importance. A review of available instruments discounted all, either because they pertained only to work experience or because their validity or reliability could be brought into doubt.

It became clear that the first task of the research was to design a reliable and valid measure of need importance. The items used directly reflected the areas of importance which Maslow (1954) associated with each need. This was a theoretical instrument so when some items proved unrelated to other items of the need which they represented, they were retained so that all aspects of the need as proposed by Maslow were reflected.

The creation of the instrument was based on a Q-sort technique in which individuals ranked in five categories the importance they assigned to each need aspect. The measure met the criteria for reliability with regard to test-retest agreement, internal consistency and inter-item correlations (Appendix 7.2 presents a summary of the results of these analyses). Validity was examined by a factor analysis which yielded five bipolar factors with between 50% and 70% of items representative of a need category grouped together in a single factor.

Many analyses throughout these series of studies appertain to the construct validity of the instrument. Maslow's hierarchy of needs hypothesis proposes a number of characteristics or syndromes associated with each need which Theme 3 explores in some detail. In summary the syndromes associated with need importance are very similar to those proposed by Maslow. (Appendix 7.3)



The strengths of the instrument are its high validity and reliability coefficients and its resulting profile which reflects all areas of need importance rather than isolated work areas.

However if the instrument is to be used more extensively in the future as a marketable tool, rather than simply for research purposes, then the following points must be taken into consideration. First the belonging need scale is not as homogeneous or reliable as the other scales. Secondly, the instrument is orientated very much to well educated middle class individuals attaining high self actualization scores.

As a research instrument the Q-sort mirrors accurately what Maslow proposed were the criteria of self actualization, therefore if it is subsequently used as a diagnostic or selection tool this basic premise must be made clear. Asking individuals if they value "Having autonomy" or "Having an efficient perception of reality" may well be using a vocabulary common to, and understood by a certain group of people but outside the semantic experience of another group. If this is the case then "personal growth" or "movement towards the actualization of potential" may be developing but remaining unmeasured by the instrument because the words of Maslow's concept of self actualization are outside the experience of groups of people. However, this particular interpretation, that self actualization may be developing in the manner which Maslow proposed, by autonomy, clarity and knowledge but remain unmeasured by the instrument because of semantic differences, is not supported by the literature reviewed in Chapter 3. This discussed the studies which suggested that the syndromes of behaviour proposed by Maslow could be clearly reflected in social class characteristics. The hypotheses of Chapter 3, that lower class individuals would be

safety/belonging orientated and middle class individuals esteem/self actualization orientated stemmed specifically from the sociological literature of social class differences. The observation that need importance differences reflected social class differences supported in principle what many sociologists and psychologists (Bernstein, 1958; Walter, 1964; Robinson and Rackshaw, 1972; Lindberg, 1974) had been observing since the 1950's. Therefore more important than the question of the semantics of the instrument is the question of the middle class value bias of the higher needs. This question will be left until Theme 5 when the discussion will turn in more detail to the middle class orientation of the higher needs. However it can be concluded at this stage that differences in need importance do not reflect differences in semantics per se.

Having discussed the instrument in some detail attention will now focus upon its possible areas of use; its use for research purposes will be discussed in each theme, however as a tool for the practitioner in industry and counselling two possible areas of use are envisaged. First, as work patterns become increasingly flexible and redeployment a norm for many companies the need for a reliable and indepth profile of the individuals skills, abilities, aspirations, values, work preferences, personality and motivation is critical. In the past decisions about careers have been made in young adulthood and that career path retained, in future increasing technological innovation will necessitate for many individuals mid-career changes, such eventualities are already being envisaged and planned for by companies like ICI and Chloride. Again, like redeployment, planned mid career changes rely increasingly on the practitioners' skills in accurately profiling individual abilities and motivation. To instigate this flexibility all aspects of the

individual must be examined both within and outside work. Individuals may have skills, abilities, areas of importance at present only exhibited in their out of work activities which could be transferred to their work activities. Both Dubin (1956) and Taveggia and Hedley (1976) have observed that for many people, particularly those in unskilled or semi-skilled work, out of work activities represent the most important aspect of their life. Therefore to gain an overall view of an individuals potential these outside work skills, abilities, interests and motivation must be considered. For example, an individual may have developed carpentry and wood-working skills in his outside activities which though at present not used at work, could if redeployment was necessary, be transferred to his work activities and used as a basis for retraining in a job which used these skills. This is the basis for the "Transferable Skills Inventory" developed recently at Leeds University (Hopson, 1979) which identifies the range of skill preferences across an individuals experience. In a similar manner the Q-sort measure of need importance could be used to identify motivational orientation at present only apparent in the home situation but which could be useful when changes of career or job flexibility are considered. For example, an understanding of what is important to an individual would assist more fully in examination of alternative work than simply relying on the present job. An individual may be doing manual repetitive work yet express a desire for esteem need gratification, the safety and belonging needs being satisfied by out of work activities. Such an individual may find working in a more independent, non-routinized job more rewarding. Conversely if an individual is safety orientated the routine, closely supervised work he does may satisfy his safety needs in the

way a non-routinized, independent job will not. Of course knowing an individual's need motivation is only one aspect of suitability for a job; skills, abilities, knowledge and personality are also important variables. However, identification of needs further increases the practitioners knowledge of an individual and the type of job which might be suitable.

In a similar manner to career counselling and selection the Q-sort instrument has possible uses in general counselling and self development. Again it is another measure which could serve to increase the counsellors knowledge of his client and indeed the clients knowledge of himself. Knowing that an individual values friendship, loving and caring relationships and prefers the gratification of these needs to all others increases our understanding of the choices he makes in his life and might allow him to understand himself more fully.



#### 7.4 THEME 3 - THE SYNDROMES OF BEHAVIOUR

Elicitations of importance and satisfaction are the most visible and direct measure of need hierarchy concepts. However, in the main motivation cannot be directly viewed but rather manifests itself in syndromes and more specifically in symptoms which are the behavioural manifestations of the needs.

Symptoms were observed in Chapter 4, for a number of reasons, first, although the concept is central to the hierarchy theory most researchers (eg. Blau, 1964; Hall and Nougiam, 1968) have examined only broad syndromes, most notably occupational position. Secondly, the only studies which have examined symptoms, the work of Aronoff and Messe (Aronoff, 1967; . . . Aronoff and Messe, 1971) have reported broad agreement with the hierarchy and warrant further investigation. Finally the relationship between need importance and need symptoms has repercussions on the predictive validity of the theory. Are, for example, as Maslow (1954) predicts, individuals with increased safety needs mistrustful, withdrawn and dependent on others?.

In general the studies found that the observed syndromes and symptoms were similar to those hypothesized by Maslow, with a few interesting exceptions. The complete results are presented in Appendix 7.3, but will now briefly discussed highlighting areas of inconsistency.

Maslow (1954) . . . has postulated that when the needs for physiology and safety are ungratified and therefore of importance the individual will be present-orientated, mistrustful and withdrawn, seeing the world as generally unsafe, inconsistent and unreliable. He is dependent on others, desires a stable, secure and

protected, world and may exhibit personal incompetence and an inability to meet responsibility.

The syndromes and specific symptoms observed are a direct reflection of Maslow's propositions, those individuals with increased safety or physiology needs on the most general level are employed in noncomplex, routine manual work. They perceive their world as unjust, unsafe and untrustworthy, and themselves as lacking in personal competence. A number of points are of particular interest, first, this deprivation is reflected in one of the few objective measures in this study, number of people per room. Secondly, the high incidence of parental separation observed in this group reflects one of the general causes of lower need frustration, inappropriate childhood experiences.

Increased belonging need importance can be expected developmentally, characterizing young adulthood. However its persistence in adulthood, associated with a desire to possess affectionate relationships with others, Maslow postulates, could be the result of unstable bonding with parents or the loss of a close bond. The empirical support for these syndromes is rather mixed, the 20 to 30 year age group did have significantly greater belonging needs but overall there was no indication of either unstable bonding or ungratified friendships even though both these criteria were examined. Instead a mixed group of differences, in job satisfaction and attitudes to Britain were observed, the only significant finding being that the upper median group were more likely to see coworkers as a major source of job satisfaction, reflecting perhaps the desire of belonging to a wider social group, although this desire was not present in their attitudes towards friends or spouse.

In discussing the symptoms of the belonging needs two

findings are relevant. First the actual items which constitute the need are the least homogeneous of all the needs, with regard to both internal consistency and inter-item correlation. Secondly, the range of scores in both upper and lower quartiles is small, suggesting that we are dealing with a disparate group of items which do not have great variance. In conclusion, Maslow's proposition that increased belonging needs are associated with unstable bonding or ungratified friendships remains unsupported although the developmental aspects of the need are substantiated.

The syndromes associated with increased importance of esteem needs are not postulated by Maslow to the same extent as either the lower needs or self actualization. They are not associated with the deprivation or lack of control which characterize the lower needs but more importantly gratification of these lower needs must occur before esteem assumes importance. The basis for gratification of the lower needs is clearly apparent in the syndromes associated with self esteem presented in Appendix 7.3. In contrast to the groups discussed earlier, those with increased esteem needs are better educated, employed in work with people, they feel more satisfied with the opportunities they have been given to satisfy their ambitions and more personally competent, trusting and optimistic. They are generally more satisfied, particularly with intrinsic and extrinsic aspects of their job, seeing job interest as a major source of job satisfaction. These characteristics reflect the means which allow satisfaction of the lower and belonging needs and motivation is now directed towards achievement, adequacy, competence and reputation.

Although the self actualization items reflect directly many of those proposed by Maslow (1954) the first observation to note is



that prepotency was not apparent in "1% of the population" (Maslow, 1954; p204) but rather in 20% of the sample. (Appendix 7.2) Secondly, increases in self actualization were characterized by the greatest number of significant differences (25, as opposed, for example, to the 8 for belonging).

Perhaps the most striking characteristic of individuals with increased self actualization needs is their position in society with regard to their income, occupation, education, and social mobility, which appears more privileged than the deprived position associated with increased lower need importance. This position has allowed these individuals to gratify their more basic needs whilst many of their attitudes reflect those proposed by Maslow. "Acceptance of self" is reflected in perceptions of satisfied ambitions, fair opportunities, and personal competence; "democratic" character structure in concerns about the treatment of minorities, attitudes to health care, increased liberalization, and trust in people.

Many of the specific symptoms proposed by Maslow have not been observed either because they were not included in the questionnaire or because they have not emerged as characteristics. Taking the latter first, Maslow speaks of "deep and profound interpersonal relationships", which would be apparent in increased marital adjustment, attitude to friends or to children. However individuals with increased self actualization needs do not differ in their attitudes to friends or spouse but do express decreased enjoyment of their children. Similarly Maslow characterizes self actualization as "relatively ..... little anxiety", but for the present sample increased self actualization was not associated with any lessening of anxiety.

Some symptoms of self actualization, "mystical experiences",



"detachment", "resistance to enculturation" were not examined in the study. Mystical experiences are central to Maslow's analyses of the self actualized individual and, it will be argued in Theme 5, are the aspects which both separates this definition from Reisman's "other directed" middle class group and bears the closest resemblance to other philosophies of personal growth. Therefore this aspect of self actualization might be the most fruitful direction for research in this area.

The study of syndromes could be considered central to the present research for a number of reasons. First, whilst syndromes represent for Maslow the fundamental data of personality study, neither he or any researcher after him, with the exception of Aronoff (1967) have examined syndromes. The surprisingly small amount of work in the field can probably be accounted for by the industrial setting of most research which has been more concerned with the relationship between work characteristics and need importance than syndromes. When Aronoff (1967) examined the cane-cutters and fishermen of St Kitts he found direct empirical support for the relationship between need importance, behaviour and attitudes. Yet this research, presumably because it was not conducted in an organizational framework has made very little impact upon the manner in which the hierarchy is viewed. Interestingly the main review in the field, Wahba and Bridwell (1976) arrives at broad conclusions about the model without even acknowledging that outside the organizational field there were other, more supportive studies. This discussion must therefore conclude that it is imperative that a review of research outside the organizational setting, like that conducted by Wahba and Bridwell, redress this balance. The only review of this type, conducted by Roberts (1973), reported work in

the fields of anthropology, business administration, education, political science, psychology and sociology, but the report is not only out of date, but, more importantly, remains unpublished.

Secondly, investigations of syndromes of behaviour are of paramount importance because they demonstrate the profound effect the environment has on motivation. For example, whilst there are exceptions, the majority of people who are unemployed and living in substandard homes are safety orientated. The figures in Table 3.9 show clearly how unusual it is for an individual in this situation to transcend basic need gratification, only 6% of the lower class group being self actualization orientated.

This study is the first systematic examination of syndromes of behaviour and provides clear support for Maslow's belief that growth motivation, as opposed to deficiency motivation, develops in a benign environment. It also highlights the importance of examining the hierarchy across a range of situations and experiences, and emphasizes the need to review research outside the organizational setting, much of which is supportive to redress the balance of Wahba and Bridwells (1976) less than supportive review.

Finally, Aronoff and Messé (1971), have examined the effect of differences in need importance on group dynamics with some success. The present research favoured the survey design because of the paucity of evidence in their field. However, having gathered evidence about broad trends, future research could more profitably separate groups of high and low need importance and examine in greater detail the effect this has on group dynamics or interpersonal behaviour.

## 7.5 THEME 4 - NEEDS AND WORK

The relationships between work, need importance and satisfaction has attracted the majority of research in the field of Maslow's hierarchy of needs (eg. Blau, 1964; Hall and Nougiam, 1968; Huizinga, 1970; Wanous and Zwany, 1977). Many of these studies have used either Porter's (1961) Need Satisfaction Questionnaire to measure need importance, or the "growth need strength" scale of the Job Diagnostic Survey (Hackman and Oldham, 1975) to measure self actualization, here termed Higher Order Need Strength (HNS). The result of this is that in 1976, when Wahba and Bridwell conducted the first comprehensive survey of research in organizational settings, they concluded that they could find very little well constructed and documented evidence to support the existence of a hierarchy of the form which Maslow hypothesized. Throughout this research it has been argued that Porter's NSQ or other instruments which measure motivation only in a work situation, do not provide a sufficient measure of self actualization or need importance. Four findings support this contention.

First, if HNS is similar to self actualization when measured by a personality measure, then a high positive correlation between the two could be expected, in fact, as Appendix 7.4 shows, there is no correlation. The positive correlation between HNS and Self Esteem suggests that HNS reflects "the desire for strength, for achievement, for adequacy, for mastery and competence" (Maslow, 1954; p.90) rather than the more mystical and autonomous attitudes which characterize self actualization.

Secondly, the JDS measure of HNS and the NSQ measure of self actualization both presuppose that increased growth needs are



characterized by increased importance of intrinsic work characteristics. For example the JDS asks "How much would you like the chance to exercise independent thought and action in your job?", whilst the NSQ "How important are the feelings of job fulfilment you get from the job?". Chapter 5 examined the relationship between self actualization and the importance of intrinsic work characteristics and found that although the two were significantly positively correlated, individuals with increased self actualization needs and those with decreased self actualization needs could not be significantly differentiated by the amount of importance they assigned to intrinsic work characteristics. Therefore this study provided no support for the presupposition that importance of intrinsic work characteristics are an accurate measure of self actualization need importance.

Thirdly, it has been argued earlier that HNS bears a closer resemblance to self esteem than self actualization. This proposition is further supported by the correlation of the needs to internal work motivation, self esteem and HNS are both highly correlated whilst self actualization is not.

Finally if HNS and self actualization are conceptually similar they could be expected to moderate the job characteristics/work outcomes relationships in a similar manner. However as Table 6.4 and Appendix 7.4 show, self actualization on a number of occasions moderates the relationship in the opposite direction to that found when HNS is moderating (ie. correlations between job characteristics and work outcome are greater for the lower need strength group). This reversal of moderating effect has also been observed by Stone, Mowday and Porter (1977), using a personality measure of need for achievement and Sims and Szilagyi



(1976) using "locus of control", suggesting that personality indices and work based HNS are not measuring a similar underlying trait.

This discussion has concentrated on using data from this research to argue that work related measures of need importance are not sufficient, however a number of related studies are also pertinent. These studies question whether one can obtain an accurate measure of motivation by examining only work experiences, and suggest that one cannot. Dubin (1956) and Taveggia and Hedley (1976) both demonstrate that the majority of people report that out of work activities are the most interesting, and central part of their life. Therefore to measure need importance only by reference to work experience leaves a large part of motivational potential untapped.

To summarize, it has been argued that the measurement of need importance by reference to work attitudes is not sufficient, both because it does not make reference to a large part of motivational potential and because the growth need strength bears very little resemblance to self actualization as proposed by Maslow (1954). The problem is that many studies have used these measures and from them drawn conclusions about the empirical validity of the hierarchy. This has led to the commonly held belief (see particularly Wahba and Bridwell, 1976) that the hierarchy model is empirically unsupported. It has been argued that because the work situation instruments are not valid measures of need importance these conclusions are pre-emptive. When more valid instruments are used, for example in the present study and in Aronoff's work, the results are more positive. This is not to say that the NSQ and JDS instruments are untenable, on the contrary they have allowed a fuller understanding of many work and attitudinal relationships,

however, they are measures of work motivation not general motivation and therefore their applicability to an empirical examination of the hierarchical concepts is strictly limited.

Having argued that HNS is not a sufficient measure of self actualization need importance the thesis proceeded to investigate whether a general measure of motivation like self actualization could add anything to our understanding of work. One area of work which has generated unflagging research interest is the relationship between the characteristics of a job and the outcomes of that job, for example performance, satisfaction and motivation (eg. Hackman and Lawler, 1971; Brief and Aldag, 1975; Oldham, Hackman and Pearce, 1976; Sims and Szalagyi, 1976; Jackson, Paul and Wall, 1981). Many researchers have used the Hackman and Oldham model (1976, Figure 6.1) which proposes that the relationship between job characteristics and personal and work outcomes are moderated by critical psychological states. A number of moderators eg. Protestant Work Ethic (Hulin and Blood, 1968); need for achievement, (Stone, Mowday and Porter, 1977); self esteem (Inkson, 1978) and locus of control (Sims and Szilagyi, 1976) have been examined although "growth need strength" appears to be the most frequent, most often measured with the NSQ. In the light of our criticism of this instrument it was hypothesized that this measure combined with the self actualization measure would act as a more powerful moderator than HNS alone. The results of this moderator analyses are shown in Table 7.4 and demonstrate that knowledge of general motivation can add to our understanding of work, for in relationships between job characteristics, job satisfaction and internal work, motivation the combined information from HNS and self actualization was the most successful moderator.

Conversely work characteristics can increase our understanding of need importance. A quarter of the variance in self actualization need importance can be explained by job characteristics, and specifically 18% by the complexity of work with data (Appendix 7.4).

Work occupies over half most adults waking experience: this study has demonstrated that the understanding of work can be increased by reference to general motivation and, more specifically, need importance. Attitudes, values and sources of satisfaction outside the work environment are just as important to the individuals reaction to work, as are attitudes and sources of satisfaction inside the work environment.

7.6 THEME 5 - THE IMPORTANCE OF NEEDS TO DIFFERENT GROUPS OF PEOPLE

From a sociological perspective, many of the symptoms which Maslow suggests characterize the "arrestive" personality and the self actualized individual are remarkably similar to those observed in different social class groups. Interestingly, although the characteristics of basic need gratification are so similar to the social class characteristics described by Bernstein (1958), Robinson and Rackshaw (1972), McGuire (1952) and White (1952), and the characteristics of self actualization close to Reisman's concept of the "other directed" individual (1961) no previous research has attempted to connect the two.

Maslow has repeatedly stressed the importance of the environment in allowing actualization of potential to occur. The environmental forces on an individual are many and varied and a broad concept like "social class" can only serve as an umbrella term subsuming many possible attitudes, values and characteristics. However as a broad umbrella term it has its uses, allowing us to identify possible trends.

With social class two other variables, sex and age were examined and it was observed that when grouped by age, sex and social class the clusters resulting from cluster analyses reflected social class. Further, need importance within social class groupings were homogeneous, indicating that individuals from similar socio-economic backgrounds tend to feel that the same sorts of things are important to them. This was also reflected in the preponent needs across social class groups where there were clear differences, the middle class being esteem and self actualization



orientated, the working class, belonging and esteem orientated and the lower class, physiology and belonging orientated. The similarity of need importance within a social class shows clearly the profound effect the environment has on gratification of the basic needs for physiology, safety and belonging. It is also interesting to note that although the majority of people within a social class share similar need prepotencies there are always a minority who do not. For example, 6% of the lower class sample were self actualization orientated whilst 1% of the middle class sample were physiology orientated. Thus for a minority of individuals the environmental situation does not have the profound effect on need gratification as it has on the majority of individuals. Because personality characteristics were not collected in the study which examined social class we do not know in what ways this minority with atypical needs differed from the majority. However purely for anecdotal purposes it may be noted that one of the middle class respondents with preponent physiology needs was suffering from a severe disease of the liver, and so clearly this basic need had not been gratified.

The second theme, "operationalization of the hierarchy" discussed at some length whether differences in need importance across social class reflected differences in the understanding of phrases like, "having a freshness of perception" or "being spontaneous". It concluded that they did not because the differences we observed have been reported previously by many psychologists and sociologists. However we did note then, and will discuss more fully now, the notion that the aspects of self actualization proposed by Maslow bear close resemblances to a subsection of the middle class group which Reisman (1961) observed

and has termed the "other directed individual". Therefore the attributes valued by Maslow as reflecting the highest point of personal growth; independence, autonomy, realization and creativity are also the attributes most highly valued and most often demonstrated by the middle class group. This might be a reflection of the characteristics of Maslow's self actualized group who consisted primarily of well-educated public figures. It is also a reflection of a value system based on the western philosophy of the independent, detached, articulate, self knowing, all knowing man. The question is whether the working class values of comradeship and community spirit do not also reflect the highest point of personal growth. This is a question not of research but rather of orientation. Maslow worked with the assumption or conceptual framework that the aspects he observed in his select group of self actualized individuals reflected high personal growth. Created within this framework the Q-sort instrument makes the same assumption, and if it is to be used in future this assumption must be made explicit. The independent, detached, autonomous, democratic framework favoured by Maslow is one way to describe personal growth but other philosophies and religions have described it in other ways and this must be borne in mind when Maslow's framework is used.

Future research could examine more closely the attributes of the self actualized individual and their relative importance to the concept. For example although self actualization is the preponent need for many of the middle class individuals observed in these studies it is important to note that some aspects are rated much higher than others. Table 2.4 has demonstrated that the core of this need is the valuing of objectivity, spontaneity, sympathy, a freshness of perception, humour and free will. Interestingly

"experiencing mystical thoughts" does not fall within this core and as Table 2.2 shows, is judged the least important of all the items. Maslow saw the experiencing of mystical thoughts as the most obvious manifestation of self actualization. In summary, there is an overlap of middle class values and Maslow's concept<sup>of</sup> self actualization with the experiencing of mystical thoughts specifically demonstrating the self actualized state, therefore concentration on mystical experiences may provide the most fruitful avenue of future research in self actualization for it is that aspect which allows this framework of personal growth to transcend cultural relativity, mysticism being an attribute postulated by most philosophies of personal growth.

Generally this research on social class and syndromes has demonstrated the profound effect the environment has on gratification of the lower needs and the similarity in need importance of people from similar environments. Social class position is highly related to need importance particularly for self actualization where controlling for education, occupation and income does not reduce the relationship. This research has examined many aspects of social class position; personal competence, trust in people, income, and education and therefore has been able to examine those which are specifically related to need importance. Fuller research is needed to examine why a minority of individuals do not exhibit the typical need importance of their social class, and what is it about those people from deprived unsatisfactory backgrounds which has allowed them to place their need importance in the higher rather than the lower needs.

## 7.7 IMPLICATIONS FOR ACTION

The application of scientific research to practice is a diffuse and uncertain process. This research has developed techniques and concepts, rather than immediately usable theories or action packages. These techniques and concepts will become valuable when people either in research, in counselling or in industry, relate them to their own situation and problems.

The psychological techniques discussed in this thesis include the measurement of need importance, the examination of individual differences and the assessment of satisfaction. The concepts used are many and varied; trust in people, personal competence, intrinsic and extrinsic motivation, job complexity.

In applying this research to industry or counselling we have to look for the integration of specific techniques and concepts like these into work and research problems. The major integrations are summarized according to their application to research, to general psychology or to work. In each some of the applicable points are these:

### 1. Research

The major applications to research in the field of Maslow's Hierarchy of Needs are twofold. First, the thesis has argued at some length that the most frequently used measures of need importance based on Porter's Need Satisfaction Questionnaire are insufficient measures. If the hierarchical concepts are to be examined empirically then such measures like the Q-sort instrument must take account of motivation and importances which have developed outside as well as inside the work situation. This leads into the



second aspect of the thesis, which is the need for a contemporary review of general research pertaining to Maslow's hierarchy of needs hypothesis. The major review in the area is incomplete for a number of reasons, first it only examines research carried out in an organizational setting and secondly it is based on instruments like Porter's NSQ, which, it has been argued, are insufficient measures of need importance.

Finally the thesis was able to identify a number of issues which would be deserving of future research. Because "mystical experiences" were the syndromes which linked Maslow's concept of self actualization and personal growth most firmly to other growth theories or beliefs, these mystical experiences, whilst not examined here, should be examined by future research. Although this research demonstrated the profound interaction between the individual and his environment, it also identified a group of people with atypical needs. For example, on the deprived inner city council estate examined, a minority of individuals considered self actualization as their most important need. This might simply be a function of social desirability, however it could also reflect a difference which future research could address.

Finally the thesis demonstrated the usefulness of examining motivational theories with information about values and attitudes, these, the "syndromes" of behaviour, constituted one of the most useful sources of data in the present research.

#### (ii) General Psychology

As this research has noted on a number of occasions one of the central paradoxes of Maslow's work is that, whilst often quoted as a theory of motivation, the concept of a need hierarchy has

received very little supportive empirical evidence. This thesis went some way towards clarifying that paradox. First it argued that many of the instruments which formed the foundation of validity studies were insufficient measures of need importance. Secondly it examined many of the central propositions of the theory with a more relevant instrument. These examinations clarified a number of points, much evidence supported the proposition that increased importance of the higher needs were associated with satisfied lower needs. It also suggested, as had some earlier research, that the relationship between need satisfaction and importance was moderated by need fulfilment. Perhaps most important the research revealed the link between social class position and need importance which illustrated the profound effect the environment has in determining needs.

### (iii) Work

The final area which this thesis pertains to is the work area, which historically has usually acted as a backdrop for examinations of hierarchical concepts. There emerged clear links between job characteristics and attitudes and need importance to a degree which has not been observed before. More specifically the research showed the usefulness of using self actualization as well as HNS to moderate the relationship between job characteristics and personal outcomes. Both point to the importance of measuring need importance outside as well as within the organizational setting.

The application of techniques and concepts developed in this thesis to the foregoing areas can provide two kinds of direction for future work.

First, that although much of the literature has focused on developing critiques of Maslow's hierarchy, remarkably little attention has been directed to explaining the issues to which he devoted the last years of his life. These include "peak experiences", transcendence of the self, and the process of meta-motivation. In the context of both research and general psychology these facets of the human potential are still largely unexplored. The application of the Q-sort methodology developed in this thesis can play a constructive part in initiating this exploration.

Secondly, our research has resolved and affirmed the empirical standing of the elements in Maslow's hierarchy, so the particular concerns of researchers engaged in studying behaviour in organizations can now be redirected to encompass their subjects non-work context - where better opportunities for the expression of true self actualization may be found. This may also serve to guide organization behaviour research attentions away from detailed examinations of the rights and wrongs of Maslow's hierarchy and instead cultivate a desire for the development of research programmes that assist in the creation of a working environment which permits at least occasional expression of true self actualization.

BIBLIOGRAPHY



- Alder, A. The Practice and Theory of Individual Psychology.  
New York : Harcourt, Brace and World, 1972.
- Aldag, R.J. & Brief, A.P. Examination of a measure of higher order and need strength. In O. Behling and J.C. Henderson (Eds) Proceedings of the 20th Annual Conference : Midwest Academy of Management. Columbus : Ohio State University, 1977.
- Alderfer, C.P. Convergent and discriminate validation of satisfaction and desire measures by interview and questionnaire. Journal of Applied Psychology, 1967, 51, 509 - 520.
- Alderfer, C.P. Existence, Relatedness, and Growth.  
New York : The Free Press, 1972.
- Allport, G.W. Becoming : Basic Considerations for the Psychology of Personality. New Haven, Conn. : Yale University Press, 1955.
- Andrews, F.M. & Stephens, B. Developing measures of perceived life quality : Results from several national studies. Social Indicators Research I, 1974 ; 1 - 26.
- Angyal, A. Foundations for a Science of Personality  
New York : Commonwealth Fund, 1941.
- Argyris, C. Integrating the Individual with the Organization.  
New York : John Wiley, 1964.
- Aronoff, J. Psychological Needs and Cultural Systems.  
Princeton, N.J. : Van Nostrand, 1967.
- Aronoff, J & Messe, L.A. Motivational determinants of small group structure. Journal of Personality and Social Psychology. 1971, 17 319 - 324.
- Aronoff, J. A Test and Scoring Manual for the Measurement of Safety, Love and Belongingness, and Esteem Needs.  
Department of Psychology, Michigan State University, 1972, Technical Report, unpublished.
- Atkinson, J.W. (Ed) Motives in Fantasy, Action and Society,  
NJ : Van Nostrand, 1958.

- Bardwick, J. . The Psychology of Women, a Study of Bio-Cultural Conflicts. N.Y. Harper and Row, 1971.
- Baruch, R. The interuption and resumption of a womens career. Harvard Studies in Career Development. 1966, No.5, Cambridge, Mass.
- Beer, M. Leadership, Employee Needs and Motivation. Columbus, O.: Burea of Business Research, Ohio State University, 1966.
- Bernstein. "Some Sociological Determinants of Perception, British Journal of Sociology, 1958, 9, June, 161 - 166.
- Bettleheim, B. Children of the Dream, London ; MacMillan, 1969.
- Blood, M.R. Work values and job satisfaction. Journal of Applied Psychology, 1969, 53, 456 - 459.
- Blau, B. Occupational study of job satisfaction and need satisfaction. Journal of Experimental Education, 1964, 32, 383 - 388.
- Blau, P & Duncan. O.T. The American Occupational Structure. New York : Wiley.
- Blunt, P. 'Normal' Science and some of its dangers for research into organizational theory and behaviour. Australian Psychologist 1977, 12, No. 2 1975 - 185.
- Bowlby, J. Maternal Care and Mental Health Geneva : World Health Organization. Monogr. No. 2, 1951.
- Bradburn, N.M. The Structure of Psychological Well-Being Chicago ; Aldine, 1969.
- Brief, A.P. and Aldag, R.J. Employee Reactions to Job Characteristics : A Constructive Replication. Journal of Applied Psychology, 1975, 60, 182 - 186.
- Bromley, D. The Psychology of Human Ageing. London : Penguin Books, 1974.
- Buhler, C. and Allen, M. Introduction to Humanistic Psychology. California : Wadsworth, 1972.
- Butler & Haigh. Changes in the relation between self-concepts and ideal concepts consequent upon client-centered counselling. In : R.Rogers and R.F. Dymond (Ed) Psychotherapy and Personality Change. Chicago : University of Chicago Press, 1954.

- Campbell, A. Converse, P. and Rogers, W. . The Quality of American Life. Perceptions, Evaluations and Satisfactions.  
New York : Russell Sage Foundation, 1976.
- Campbell, A. Subjective Measures of Well Being.  
American Psychologist, 1976, Feb. 117 - 124.
- Cantril, H. The Pattern of Human Concerns. New Brunswick,  
New Jersey : Rutgers University Press, 1965.
- Cassirer, E., Kristeller, P.O. and Randall, J.H.  
The Renaissance Philosophy of Man. Chicago :  
University of Chicago Press, 1948.
- Cattell & Warburton. Objective Personality and Motivational Tests : A Theoretical Introduction and Practical Compendium. II : University of Illinois Press, 1967.
- Centers, M. Motivational aspects of occupational stratification.  
Journal of Social Psychology. 1948, 28, 187 - 217.
- Centers, R. and Bugental, D.E. Intrinsic and extrinsic job motivations among different segments of the working population. Journal of Applied Psychology.  
1966, 50, 193 - 197.
- Cofer, C.N. & Appley, M.H. Motivation : Theory and Research.  
New York : John Wiley, 1964.
- Cohen, A.K. & Hodges, H.M. Characteristics of the Lower - Blue - Collar Class. Social Problems. 1963, 10, 303 - 334.
- Cooley, C.H. Human Nature and Social Order New York : Schocken, 1964.
- Cronbach, L and Meehl, P. Construct validity in Psychological tests, Psychological Bulletin, 1955, 52, No. 4, 281 - 302.
- Crowne, D. & Marlowe, D. The Approval Motive.  
New York : Wiley, 1964.
- Cummings, L.L. and Elsalmi, A.M. Empirical research on the bases and correlates of managerial motivation : a review of the literature. Psychological Bulletin.  
1968, 70 (2), 127 - 144.
- Dictionary of Occupational Titles (4th Ed)  
U.S. Employment Service, 1977.



- Douvan, E. & Adelson, J. The adolescent experience,  
New York : Wiley, 1966.
- Drews, E.M. & Lipsam, L. Values and Humanity  
New York : St. Martins Press, 1971
- Dubin, R. Industrial Workers Worlds ; A study of the  
central life interests of industrial workers.  
Social Problems. 1956, 3, 131-142.
- Erikson, E.H. Childhood and Society (2nd Ed.)  
New York : Norton, 1963.
- Everitt, B. Cluster Analysis Heinemann Educational Books, 1974.
- Eysenck, H. The Effects of Psychotherapy,  
Journal of Consulting Psychology, 1952, 16, 319-324.
- Ferguson, G.A. "Statistical Analysis in Psychology and  
Education." New York : McGraw-Hill. 1959.
- Franklin, J. Schiele, B. Brozek, J & Key, A. Observations on  
Human Behaviour in Experimental Semi starvation and  
rehabilitation. Journal of Clinical Psychology  
1948, 4, 28 - 45.
- Frenkel - Brunswick, E. Wishes and Feelings of duty in the course  
of human life, in Jones, H.E. (ed) Research in Aging.  
Proceedings of Conference at University of California,  
Social Research Council, 1951, (mimeographed).
- Friedlander, F. Comparative work value systems.  
Personnel Psychology, 1965, 18, 1 -20.
- Fromm, E. The Sane Society. New York : Rinehart, 1955.
- Ghiselli, E.E. Explorations in Managerial Talent  
Pacific Palisades, Ca : Goodyear Publishing Co, 1971.
- Goldberg, R.T. Need Satisfaction and Rehabilitation Progress  
of Psychotic Patients. Journal of Counselling Psychology,  
1967, 14, No.3, 253 - 257.
- Goldstein, K. The Organism. Boston : Beacon Press, 1965.
- Gollin, E. Organizational Characteristics of Social Judgement :  
A developmental investigation. Journal of Personality,  
1968, 20, 139 - 154.



- Goode, B. After Divorce, Glencoe : Illinois, Free Press, 1956.
- Goodman, R.A. On the operationality of the Maslow Need Hierarchy. British Journal of Industrial Relations. 1968, 6, 51 - 57.
- Graham, W.K. & Balloun, J. An Empirical Test of Maslow's Need Hierarchy. Journal of Humanistic Psychology, 1973, 13, No. 1 97 - 108.
- Guilford, J.P. Factor Analysis in a test - development program. Psychological Review, 1948, 55, 79 - 94.
- Gurin, G. Veroff, J. and Feld, S. Americans View their Mental Health. New York : Basic Books, 1960.
- Hackman, J.R. and Lawler, E.E. Employee reactions to job characteristics. Journal of Applied Psychology Monograph 1971, 55, 259 - 286.
- Hackman, J.R. : Oldham, G.R. : Janson R & Purdy, K. A new strategy for job enrichment, California Management Review, 1975.
- Hackman, J.R. & Oldham, G.R.: Development of the job diagnostic survey. Journal of Applied Psychology, 1975, 60, 159 - 170.
- Hackman, J.R. & Oldham, G.R.: Motivation through the design of work : Test of a theory. Organizational Behaviour and Job Performance, 1976, 16, 250 - 279.
- Hall, D.T. & Nougiam, K.E. An examination of Maslow's Need Hierarchy in an organizational setting. Organizational Behaviour and Human Performance. 1968, 3, 12-35.
- Hall, and Nougiam, Theories of Personality. (3rd Ed) New York : Wiley and Son. 1968.
- Harlow, H. Motivation as a factor in the acquisition of new responses. In Brown, J.S. et al. Current Theory and Research in Motivation : A Symposium. Lincoln : Univ. of Nebraska Press, p. 24 - 49. 1953.
- Herman, J.B. & Hulin, C.L. Managerial Satisfaction and Organizational Roles : An Investigation of Porters Need Deficiency Scales. Journal of Applied Psychology, 1973, 57, No.2, 118 - 124.
- Heron, W. Doane, D. Scott, T. Visual disturbances after prolonged perceptual isolation. Canadian Journal of Psychology, 1956, 10, 13 - 18.

- Herzberg, F. Mausner, B. and Synderman, B.B.  
The Motivation of Work (2nd Ed) New York : Wiley, 1959.
- Hodge, R. & Treiman, D. : Social Participation and Social Status,  
American Sociological Review 1968, 33, 722 - 740.
- Hoffman, L.W. Fear of Success in 1965 and 1974 : A follow - up  
Study. Journal of Consulting and Clinical Psychology,  
1977, 45, No. 2, 310 - 321.
- Hollingshead, A.B. and Redlich, F.R. Social Stratification and  
Psychiatric disorders. American Sociological Review.  
XV III, 1953.
- Holmberg, A.R. Nomads of the Long Bow : The Siriano of  
Eastern Bolivia. Chicago, University of Chicago  
Press, 1960.
- Hopson, B. Transferrable skills inventory, University of Leeds. 1979.
- Horner, A. and Buhler, C. Existential and humanistic psychology :  
A hope for the future in philosophy, psychotherapy and  
research. International Psychiatry Clinics.  
1969, 6 (3), 55 - 73.
- Huizinga, G. Maslow's Need Hierarchy in the Work Situation.  
Groningen : Walters - Noordhoff, 1970.
- Hulin, C.L. and Blood, M.R. Job enlargement, individual differences  
and worker responses. Psychological Bulletin, 1968, 69, 41-55.
- Hunt, S : Sineer, K. : and Cobb, S : Components of depression :  
identified from a self rating inventory for survey use.  
Archives of General Psychiatry. 1967, 16, 441 - 447.
- Inkson, J.H. Self Esteem as a Moderator of the Relationship  
between Job Performance and Job Satisfaction.  
Journal of Applied Psychology. 1978, 63, No.2, 243 - 247.
- Jackson, D.N. Personality Research Form Manual.  
Goshen, N.Y. : Research Psychologists Press, 1967.
- Jackson, P.R. Paul, L.J. and Wall, T.L. Individual differences  
as moderators of reactions to job characteristics.  
Journal of Occupational Psychology, 1981, 54, 1 - 8.
- Kagan, J. and Moss, M. Birth of Maturity.  
New York, : Wiley, 1962.

- Koch, S. The Current Status of Motivational Psychology, in Milestones in Motivation, Contributions to the Psychology of Drive and Purpose. Ed. Russell, Ed : 1951, Harvard University Press.
- Kohlberg, L. Development of Moral Character and Moral Ideology, p.p. 383 - 431 in Hoffman, M. and Hoffman, L. (Eds). Review of Child Development, New York : Russell Sage Foundation, 1964.
- Kohn, M. Class and Conformity, a Study of Values, Illinois : The Dorsey Press, 1969.
- Kohn, M. and Schooler, C. Occupational Structure and Intellectual Flexibility : A Longitudinal Assessment of their Reciprocal Effects, 1973, National Institute of Mental Health, Unpublished Manuscript.
- Korman, A.K. Self esteem as a moderator of the relationship between self - perceived abilities and vocational choice. Journal of Applied Psychology, 1967, 51, 65 - 67.
- Korman, A.K. The Psychology of Motivation. New Jersey : Prentice-Hall, 1974.
- Lawler, E.E. and Suttle, J.L. A causal correlation test of the need hierarchy concept. Organizational Behaviour and Human Performance, 1972, 7, 265 - 287.
- Lawler, E.E. Motivation in Work Organizations. Monterey, Calif. : Brooks / Cole, 1973.
- LeShan, L. Time orientation and social class Journal of Abnormal and Social Psychology, 1952, 17, 589 - 92.
- Ley, P. Quantitative Aspects of Psychological Assessment : an Introduction. London : Duckwork, 1972.
- Likert, R. A technique for the measurement of attitudes. Archives of Psychology 1932, No. 140.
- Lipinski, B. Sex role conflict and achievement motivation in college women. Dissertation Abstracts, 1966, 26, 4077.



- Lollar, D. An operationalization and validation of the Maslow Need Hierarch. Educational and Psychological Measurement, 1974, 34, 639 - 651.
- London, M. Crandall, R. and Seals, G. The contribution of job and leisure satisfaction to quality of life. Journal of Applied Psychology, 1977, 62, No. 3, 328 - 334.
- Lundberg, M. The Incomplete Adult, Social Class Constraints on Personality Development. New York : Greenwood Press, 1974.
- Lynn, S. The process of learning parental and sex role identification. Journal of Marriage and Family. 1966, 28 (4), 446 - 470.
- Maas, H. Some social class differences in family and group relations, of pre and early adolescents. Child Development, 1951, 22, 145 - 152.
- Maccoby and Jacklin, The Development of Sex Differences, Stanford : Stanford University Press, 1955.
- Maddi, S.R. Personality Theories : A Comparative Analysis. (Rev. ed) Homewood SU : Dorsey Press, 1972.
- Markham, S. The Working Class Subculture : A new view ; Social Problems, 1961, 9.
- Maslow, A.H. A Theory of Human Motivation. Psychological Review, 1943, 50, 370 - 396.
- Maslow, A.H. Motivation and Personality New York, Harper, 1954.
- Maslow, A.H. Deficiency Motivation and growth motivation. In Nebraska Symposium on Motivation, 1955.
- Maslow, A.H. Eupsychia ; the good society. Journal of Humanistic Psychology. 1961, 1, 1 - 11.
- Maslow, A.H. Some basic propositions of a growth and self actualization psychology, in Perceiving, Behaving, Becoming : A New Focus for Education Washington D.C. : Yearbook of the Association for supervision and curriculum development, 1962.



- Maslow, A.H. Self-actualized people, in G.B. Leuitas (ED), The World of Psychology. Vol. 2, New York : Braziller, 1963.
- Maslow, A.H. A theory of metamotivation : the biological resting of the value life. Journal of Humanistic Psychology. 1967, 7, 93 - 127.
- Maslow, A.H. Towards a Psychology of Being. (2nd Ed) Princeton : Van Nostrand, 1968.
- Massarick, F. Goal setting as co determined by institutional and class factors, in Butler (Ed) The Course of Human Life : A Study of Goals in the Humanistic Perspective, New York : Springer Publish. Co., 1968.
- McClelland, D. Atkinson, J. Clark, E. Lowell, E. The Achievement Motive, New York : Appleton, 1953.
- McGregor, D. The Human Side of Enterprise. New York : McGraw - Hill, 1960.
- McGuire, W.J. Family life in lower and middle class homes. Marriage and Family Living, 1952, 14, 1 - 6.
- McGuire, W.J. A syllogistic analysis of cognitive relationships. in M.J. Rosenberg et al (Ed) Attitude Organization and Change 65 - 111 New Haven, Yale University Press, 1968.
- Messé, L, Aronoff, J. and Wilson J.P. Motivation as a mediator of the mechanism underlying role assignment in small groups. Journal of Personality and Social Psychology, 1972, 24, 84 - 90.
- Miller, S.M. and Reis man, F. The working class subculture : A new View. Social Problems, 1961, 9 : 86 - 97.
- Mitchell, V.F. and Moudgill. P. Measurement of Maslow's Need Hierarch. Organizational Behaviour and Human Performance, 1976, 16, 334 - 349.
- Mizruchi, E. Social Class and success in Structured Social Inequality : A Reader in Comparative Social Stratification, C. Heller (Ed) New York : MacMillan, 1969.

- Morse, N.C. and Weiss, R.S. The function and meaning of work and the job. American Sociological Review, 20, 191 - 98, 1955.
- Mowday, R.T., Stone, E.F. & Porter, L. The interaction of Personality and Job Scope in Predicting Behaviour. Journal of Vocational Behaviour, 1979, 15, 78 - 39.
- Murray, H.A. Explorations in Personality : A Clinical and Experimental Study of Fifty Men of College Age. New York : Oxford, 1938.
- Newman, C. The importance workers assign to the aspects of their job. Archives of Psychology. 1948.
- Nie, N. : Hull, C.H. : Jenkins, J.G. : Steinbrenner, K: & Brent, D.H. Statistical Package for the Social Sciences. (2nd Ed) New York, McGraw-Hill, 1975.
- Nunnally, J.C. Psychometric Theory. New York : McGraw-Hill, 1967.
- Oldham, G.R. : Hackman, J.R. & Pearce, J.L. Conditions under which employees respond positively to enriched work. Journal of Applied Psychology, 1976, 61, 395 - 403.
- Olsen, S.M. Family, Occupation and Values in a Chinese Urban Community. Phd. dissertation. Cornell University, 1964.
- Orwell, G. Down and Out in Paris and London. London : Penguin, 1969.
- Page, E.B. Journal of the American Statistical Association, 1963, 58, 216 - 230.
- Pavalko, R.M. Sociology of Occupations and Professions. Illinois : Peacock Publishers, 1971.
- Payne, R. Factor analysis of a Maslow-type need satisfaction questionnaire. Personnel Psychology. 1970, 23, 251 - 268.
- Porter, L.W. A study of perceived need satisfactions in bottom and middle management jobs. Journal of Applied Psychology, 1961, 45, 1 - 10.

- Porter, L.W. & Lawler, E.E. Managerial Attitudes and Performance. Homewood, Ill. : Irwin, 1968.
- Pressey & Kihlen. Psychological Development through the Life Span. New York : Harper and Brothers, 1957.
- Rainwater, L. : Coleman, R : Richard, P and Handle, S. Workingmen's Wives : New York : Oceana Publications, 1962.
- Rainwater, L. Marital Sexuality in four cultures of poverty. Journal of Marriage and the Family 1964, 26, 417 - 430.
- Rayner, J. The Social Structure of Modern Britain : The Middle Class Aspects of Modern Sociology : London : Longmans, Green and Co. 1969.
- Reisman, D. et. al. The Lonely Crowd New Haven : Yale University Press, 1950.
- Reisman. Some characteristics of Middle Class position. New York : Appleton-Century-Crofts. 1961.
- Roberts, K.H. : Walter, G.A. and Miles, R.E. A factor analytic study of job satisfaction items designed to measure Maslow need categories. Personnel Psychology. 1971, 24, 205 - 220.
- Roberts, T.B. Maslow's Human Motivation Needs Hierarch : A Bibliography in Research in Education, Bethesda, Md : Eric, 1973, Ed - 069 - 591.
- Robinson, L.S. & Rackshaw, M : A question of answers The Journal of Social Psychology. 67, 1972.
- Roe, A. Psychosocial Dynamics of Occupational Information and Employment. University of Colorado, Report on the Harvest House Conference : 1960.
- Rogers, C.R. & Dymond, R. (Eds) Psychotherapy and Personality Change : Co-Ordinated Studies in the Client - Centered Approach. Chicago : University of Chicago Press, 1954.
- Rogers, C.R. On Becoming a Person, Boston : Houghton Mifflin, 1961.
- Rotter, J.B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80 (1).



- Rummel, R.J. Applied Factor Analysis  
Evanston : Northwestern University Press, 1970.
- Rutter, M. Maternal Deprivation Reassessed.  
London : Penguin, 1972.
- Rutter, M.L. Relationships between child and adult  
psychiatric disorders.  
Acta Psychiat. Scand. 1972, 48, 3 - 21.
- Salancik, G.R. and Pfeffer, J. An examination of  
Need - Satisfaction. Models of job attitudes.  
Administrative Science Quarterly  
1977, 22, 427,- 456.
- Schaffer, R.H. Job Satisfaction as related to need  
satisfaction in work.  
Psychological Monographs, 1953, 47. Whole No. 264.
- Schneider, B. & Alderfer, C.P. Three studies of measures  
of need satisfaction in organizations.  
Administrative Science Quarterly,  
1973, 18, 489 - 505.
- Scigal, S. Non Parametric Statistics for the Behavioural  
Sciences. McGraw - Hill, 1956.
- Shepard, J.M. Functional specialization, alienation  
and job satisfaction. Industrial and Labour Relations  
Review, 1970, 23, 207 - 219.
- Simpson, E. Democracies Stepchildren  
(A Study of Need and Belief)  
New York : Jossey - Bass Inc., 1971.
- Sims, H.P. and Szilagyi, A.D.  
Job Characteristics relationships :  
Individual and Structural Moderators.  
Organizational Behaviour and Human Performance  
1976, 17, 211 - 230.



- Smith, P.: Kendall, L. & Hulin, C. The Measurement of Satisfaction in Work and Retirement.  
Chicago : Rand - McNally, 1969.
- Spiro, M.E. Children of the Kibbutz. Cambridge, Mass. :  
Harvard University Press 1958.
- Spitz, R.A. Anaclitic depression. Psychoanalytic Study of the Child, 1946, 2, 313 - 342.
- Stacey, M. Tradition and change, A Study of Banbury :  
Oxford ; Oxford University Press, 1960.
- Stephenson, The Study of Behaviour, Q - Technique and its Methodology. Chicago: University of Chicago Press, 1953.
- Stone, E.F. The moderating effect of work related values on the job scope - job satisfaction relationship.  
Organizational Behaviour & Human Performance. 1976,15,147-179
- Stone, E.F.: Ganster,C.: Woodman.A.:Fusilier, M.  
Relationships between growth need strength and selected individual differences measures employed in job design research. Journal of Vocational Behaviour, 1979, 14, 329-340.
- Stone, E.F. : Mowday, R.T. and Porter, L.W.  
Higher order need strengths as moderators of the job scope-job satisfaction relationship.  
Journal of Applied Psychology, 1977, 62, 466 - 471.
- Taveggia, T. & Hedley, A. : Job satisfaction, work values and worker dissatisfaction.  
Journal of Vocational Behaviour, 1976, 9, 293 - 309.
- Thorndike, E.L. & Hagen, E. Measurement and Evaluation in Psychology and Education. New York : Wiley, 1969.
- Turner, A.N. & Lawrence, R.R.  
Industrial Jobs and the Worker ; An Investigation of Response to Task Attributes.  
Boston : Harvard University Press, 1965.
- Umstot, D.D.: Bell, C.H. & Mitchell, T.R.  
Effects of job enrichment and task goals on satisfaction and productivity : Implications for job design. Journal of Applied Psychology 1976, 61, 370 - 394.

- Vroom, V.H. Work and Motivation  
New York : John Wiley, 1964.
- Wahba, M.A. & Bridwell, L.G.  
Maslow Reconsidered : A review of research on the  
need hierarchy theory. Organizational Behaviour and  
Human Performance, 1976, 15, 212 - 240.
- Wall, T.D. & Payne, R Are deficiency scores deficient.  
Journal of Applied Psychology 1973, 58, 322 - 326.
- Wanous, J.P. Individual differences and reactions to job  
characteristics. Journal of Applied Psychology  
1974, 59, 616 - 622.
- Wanous, J and Zwany, A. A cross sectional test of need  
hierarchy theory. Organizational Behaviour and  
Human Performance 1977, 18, 78 - 97.
- Waters, L.K. & Roach, P. A factor analysis of need  
fulfillment items designed to measure Maslow need  
categories. Personnel Psychology, 1973,  
26, 185 - 190.
- White, R.W. Lives in Progress, New York :  
Dryden Press, 1952.
- White, R.W. Motivation reconsidered : The concept of  
competence. Psychological Review, 1959,  
(60) 297 - 333
- Wilson, J.P. & Aronoff, J. A sentence completion  
test assessing safety and esteem motives.  
Journal of Personality Assessment, 1973 351 - 354.
- Williams, R. American Society, New York : Knopf, 1959.
- Young, M & Willmott, P.  
Family and Class in a London Suburb  
London, Routledge, 1960.
- Zedeck, S. Problems with the use of  
"Moderator" variables.  
Psychological Bulletin, 1971, 76, 295 - 310.

**PAGE  
MISSING  
IN  
ORIGINAL**

APPENDICES



APPENDICES

- 2.1 The need importance Q-sorts, the items.
- 2.2 The Kruder Richardson coefficient Alpha.
- 2.3 Dendograms: Cluster Analysis of the social class groups.
- 3.1 Formulae, The Kruskal Wallis One Way Analysis of variance, The Mann Whitney.
- 3.1 Homogeneity of need importance.
- 3.2 The significance of the differences between need importance.
- 3.3 Values and significance levels for Mann - Whitney comparisons of need importance between social class groups.
- 3.4 Z values and significance levels for Mann - Whitney comparisons of need importance between age groups.
- 3.5 U values and significance levels for Mann - Whitney comparisons of need importance of safety and belonging in the 20-30 and 31-40 age groups.
- 3.6 Mann - Whitney comparisons of age difference 20-30 and 31-40 social class and sex.
- 3.7 Planned Mann - Whitney tests of sex differences for the belonging needs.
- 4.1 The quality of Life Questionnaire.
- 4.2 Recording data form for the quality of Life questionnaire.
- 4.3 Categorisation and descriptions of open ended questions.
- 4.4 Proportion of each quartile group represented in the variable levels for Education, Income, Social Class and Age.
- 5.1 Study of Occupational conditions.

- 5.2 Occupational conditions: Scaling Procedures and Indices.
- 6.1 Questionnaire: The Job Diagnostic Survey and study of needs.
- 6.2 Scoring procedure for the short form of the Job Diagnostic Survey.
- 6.3 Significance of the difference between two correlations coefficients for Independent groups. The Z tests.
- 6.4 Multiple Regressions: F and Multiple R values - job satisfaction, internal work motivation.
- 6.5 Matched groups analyses - means and variance.
- 6.6 Significance of the differences between correlations of need importance, groups and Job characteristics.
- 7.1 Theme 1: The mechanics of the model.
  - A. The relationship between need satisfaction and need importance.
  - B. The hierarchical position of the needs.
- 7.2 Theme 2: Operationalization.
- 7.3 Theme 3: The syndromes of behaviour.
- 7.4 Theme 4: Needs and work.
- 7.5 Theme 5: Social class and Need importance.

APPENDIX 2.1The Need Importance Q-Sort, the itemsPHYSIOLOGY

- A1 Having a good sex life
- A2 The food that is eaten
- A3 Having enough to eat
- A5 Having enough to drink
- A6 Being warm enough
- A7 Getting enough sleep
- A8 Having enough energy to do things
- A11 The things one drinks
- A13 Eating nutritious goods
- A14 Having good skin

SAFETY

- B1 Having a secure job
- B2 Being free from threat
- B3 Feeling protected
- B4 Feeling safe
- B5 Knowing nothing unexpected will occur
- B8 Having enough money
- B9 Knowing one can rely on transport
- B10 Knowing life is predictable
- B11 Knowing what will happen each day
- B15 Being able to predict what will happen

BELONGING

- C2 Feeling someone cares for you
- C3 Getting on well with ones family
- C4 Being surrounded by friends
- C5 Having someone who is very close
- C6 Feeling someone needs you
- C7 Having special relationships
- C8 Knowing you are loved
- C10 Feeling part of a caring community
- C13 Knowing your parents love you
- C15 Having strong attachments to a home

SELF ESTEEM

- D2 Being held in esteem
- D3 Achieving something
- D4 Feeling confident
- D8 Being of worth
- D9 Having pride in ones accomplishments
- D10 Being respected
- D11 Being well thought of
- D12 Having confidence in ones abilities
- D13 ---- Knowing you are capable of doing things well
- D15 Knowing one can accomplish what one set out to achieve

SELF ACTUALIZATION

- E1 Doing and seeing new things
- E3 Looking objectively at life
- E5 Having autonomy
- E6 Having mystical thoughts
- E7 Having sympathy for others
- E9 Having an efficient perception of reality
- E10 Being spontaneous
- E11 Having a freshness of perception
- E12 Having a sense of humour
- E13 Having free will



APPENDIX 2.2Kuder Richardson Coefficient Alpha

$$r_{xx} = \frac{k}{k-1} \left( 1 - \frac{\sum \sigma_i^2}{\sigma_x^2} \right)$$

$k$  = number of items.

$\sum \sigma_i^2$  = sum of individual item variance

$\sigma_x^2$  = variance of scores on the test, defined as  $(X - \bar{X})^2 / N$

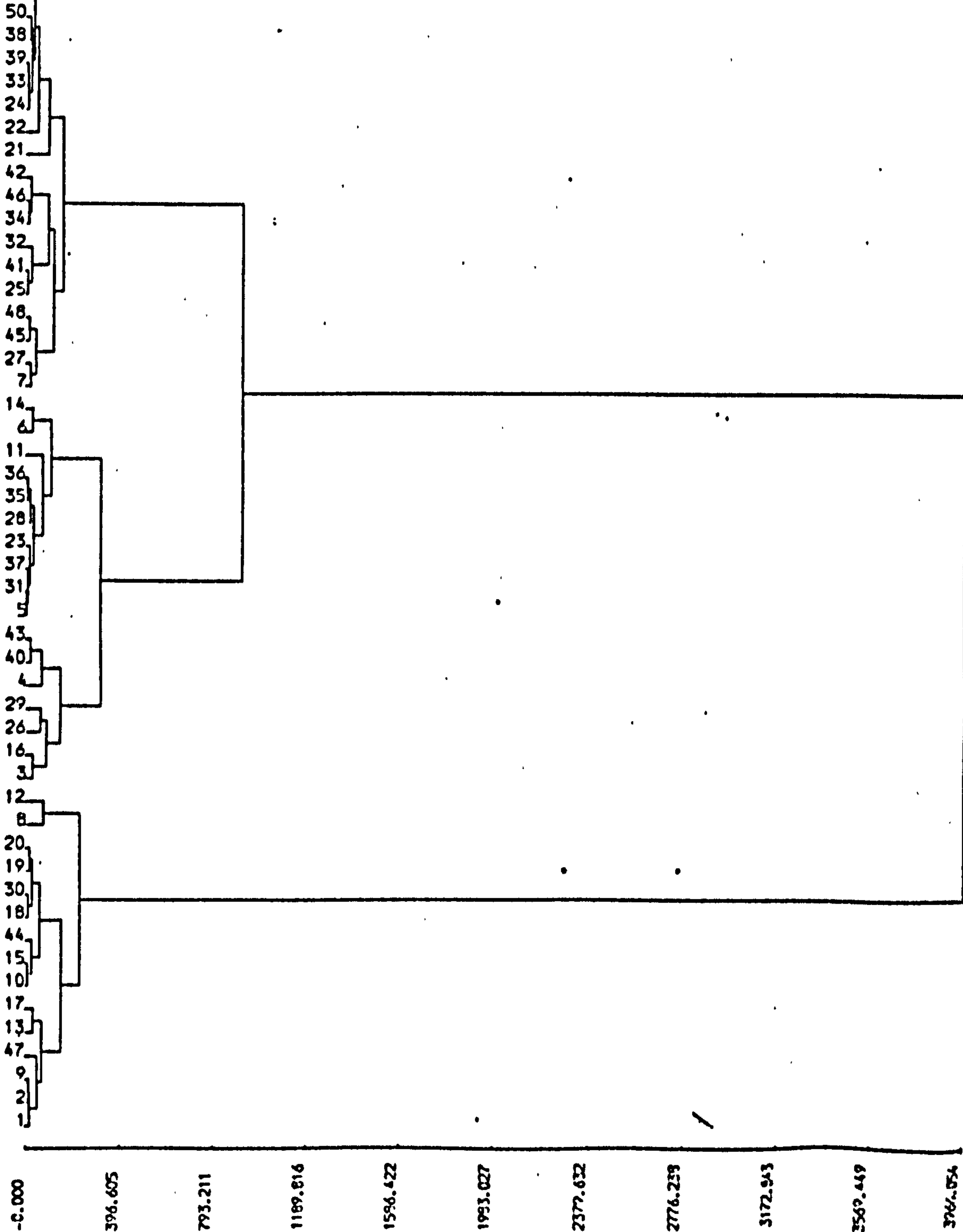
APPENDIX 2.3

Cluster Analysis of the social class groups, middle class,  
working class and lower class: the dendograms.

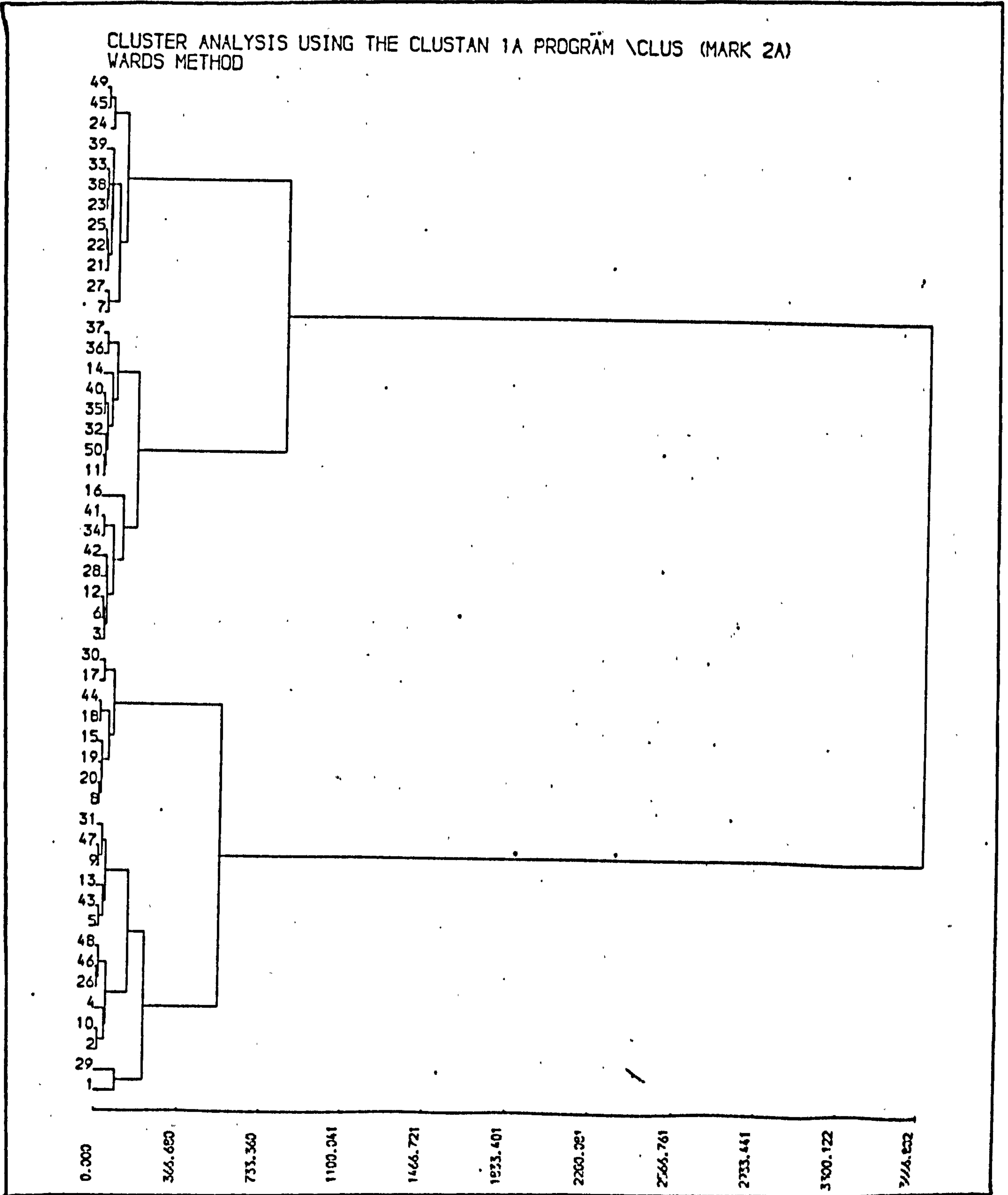
MIDDLE CLASS

CLUSTER ANALYSIS USING THE CLUSTAN 1A PROGRAM \CLUS (MARK 2A)

WARDS METHOD

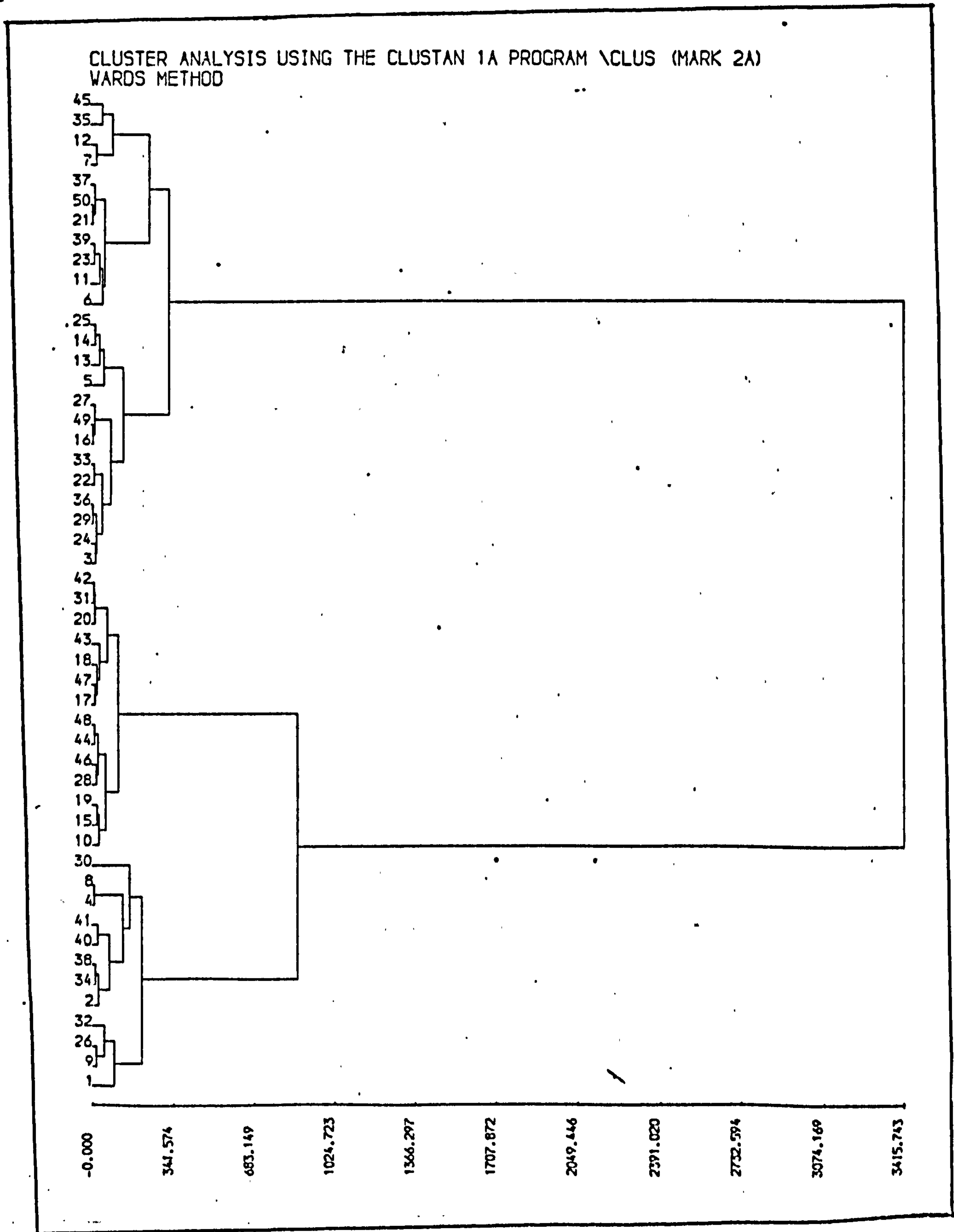


WORKING CLASS





LOWER CLASS



APPENDIX : FORMULAE 3.1Kruskall Wallis one way Analysis of Variance

## Correction for ties

H is computed and divided by:

$$1 - \frac{T}{N^3 - N}$$

where :  $T = \sum t^3 - t$  (Where  $t$  is the number of tied observations in a group of scores.)

$N =$  Number of observations in all  $K$  samples.

$T =$  Sum of all groups of ties.

Formula 2

Mann Whitney for large sample sizes ( 20)

$$Z = \frac{U - \frac{n_1 n_2}{2}}{\frac{(n_1)(n_2)(n_1 + n_2 + 1)}{2}}$$

where:  $U = \frac{(n_1 n_2 + n_1 (n_1 + 1))}{2} - R$

(Seigel, 1956, P123)

APPENDIX : TABLE 3.1Homogeneity of Need Importance

Correlation (W) between rank scores of groups of 10 respondents of equal age, sex and social class.

(Kendall Co-efficient of Concordance)

Age	Lower Class		Working Class		Middle Class	
	Male	Female	Male	Female	Male	Female
20 - 30 W = S =	0.53 (531) *	0.30 (301) *	0.58 (585) *	0.52 (525) *	0.52 (523) *	0.56 (557) *
31 - 40 W = S =	0.26 (266) *	0.20 (200)	0.24 (237) *	0.48 (481) *	0.48 (478) *	0.51 (512) *
41 - 50 W = S =	0.18 (170)	0.30 (308) *	0.43 (429) *	0.10 (101)	0.75 (748) *	0.57 (571) *
51 - 60 W = S =	0.39 (395) *	0.35 (354) *	0.28 (278) *	0.47 (465) *	0.57 (568) *	0.58 (579) *

(W and S Values)

Significant values of S \* P < 0.05

n = 10 ; K = 5 ; P < 0.05 , S = 231

APPENDIX TABLE 3.2

The significance of the differences between need importance  
 Analysis of the sum of ranks within each respondent group.  
 (Friedman's Two Way Analysis of Variance)

Age	Lower Class		Working Class		Middle Class	
	Male	Female	Male	Female	Male	Female
20 - 30	19.1*	12.0*	12.1*	23.4*	20.5*	11.7*
31 - 40	10.8*	6.8	8.3	4.0	11.2*	15.0*
41 - 50	1.3	9.9*	11.2*	7.8	30.1*	25.2*
51 - 60	9.8*	16.6*	20.4*	18.0*	25.3*	20.8*

(F values)

Significant values of F

n = 10 ; df = 4

\* P > 0.05

P > 0.05 ,  $\chi^2 = 9.49$



APPENDIX : TABLE 3.3

Values and significance levels for Mann - Whitney comparisons of need importance between Social Class Groups.

Need	Comparison	Z Value	Significance	Summary
Physiological	LC X WC	4.8	P < 0.001	
	WC X MC	1.8	P 0.05 (not sig.)	LC > WC = MC
	LC X MC	5.3	P < 0.001	
Safety	LC X WC	2.6	P = 0.004	
	WC X MC	4.3	P = 0.001	LC > WC > MC
	LC X MC	6.8	P < 0.001	
Belonging	LC X WC	0.8	P = 0.22	
	WC X MC	2.5	P = 0.005	LC = WC > MC
	LC X MC	4.0	P = 0.001	
Esteem	LC X WC	3.8	P < 0.001	
	WC X MC	1.9	P = 0.02	LC < WC = MC
	LC X MC	4.2	P < 0.001	
Self Actualization	LC X WC	3.4	P < 0.001	
	WC X MC	5.4	P < 0.001	LC < WC < MC
	LC X MC	7.9	P < 0.001	

$$n_1 = 80, \quad n_2 = 80, \quad n_3 = 80$$

APPENDIX : TABLE 3.4

Z Values and significant levels for Mann - Whitney comparisons  
of need importance between age groups

Need	Comparison	Z. Value	Significance Level	
Safety	20 - 30 X 31 - 40	1.58	$p < 0.05$	
	31 - 40 X 41 - 50	0.33	N.S.	
	41 - 50 X 51 - 60	1.00	N.S.	
	20 - 30 X 41 - 50	1.92	$p < 0.02$	
	Belonging	20 - 30 X 31 - 40	4.71	$p < 0.001$
		31 - 40 X 41 - 50	0.15	N.S.
41 - 50 X 51 - 60		0.59	N.S.	
	20 - 30 X 41 - 50	4.82	$p < 0.001$	

(Mann - Whitney for large groups ( $n_1 = 60$  ;  $n_2 = 60$ ) )

APPENDIX : TABLE 3.5

U values and significance levels for Mann - Whitney comparisons of need importance of safety and belonging in the 20 - 30 and 31 - 40 age groups

## Need Category

Sex	Social Class	Safety	Belonging
Male	M.C.	29.2	18.2*
	W.C.	23.1*	44.1
	L.C.	29.3	40.6
Female	M.C.	39.7	11.7*
	W.C.	47.8	17.2*
	L.C.	40.1	44.3

(U values = small group Mann - Whitney test)

\* P < 0.05

APPENDIX : TABLE 3.6

Mann - Whitney comparisons of age differences 20 - 30  
31 - 40; social class and sex

Sex	Social Class	Esteem	Self Actualization
M.	M.C.	27.5*	48.5
F.		26.1*	22.2*
M.	W.C.	31.5	34.2
F.		31.2	32.5
M.	L.C.	40.1	43.5
F.		39.7	27.2

(U values : small group Mann - Whitney test)

\* P < 0.05



APPENDIX : TABLE 3.7Planned Mann - Whitney tests of SexDifferences for the belonging needs

(Mann - Whitney for small groups , U values)

## SOCIAL CLASS

Age	Lower Class	Working Class	Middle Class
20 - 30	35.1	22.1*	23.6*
31 - 40	45.2	49.3	32.4
41 - 50	33.1	39.2	48.8
51 - 60	40.7	39.1	41.2

\* P 0.05 ;  $n_1 = 10$  ;  $N_2 = 10$  ;  $n_3 = 10$   $n_4 = 10$

APPENDIX 4.1THE QUALITY OF LIFE QUESTIONNAIRE

This questionnaire was designed to examine your assessment of various aspects of your life.

I am going to ask you a number of questions which I would like you to answer as honestly and frankly as possible, your individual answers will be kept completely confidential.

SECTION A: CITY AND NEIGHBOURHOOD

A 1. How long have you lived in .....  
 years..... months.....

A 2. I'd like to ask you how satisfied you are with some of the public services you are supposed to receive. Please tell me about how you feel about each thing I mention, using one of these answers -

CARD 3

Very Good
--------------

Fairly Good
----------------

Neither Good Nor Bad
----------------------------

Not Very Good
------------------

Not Good At All
--------------------

A 3. How do you feel about the quality of the schools that the children from around here go to ?

CARD 3

Very Good
--------------

Fairly Good
----------------

Neither Good Nor Bad
----------------------------

Not Very Good
------------------

Not Good At All
--------------------

A 4. How about the police protection around here ?

CARD 3

Very Good
--------------

Fairly Good
----------------

Neither Good Nor Bad
----------------------------

Not Very Good
------------------

Not Good At All
--------------------

A 5. How good do you think relations are between the police and the people around here ?

CARD 3

Very Good	Fairly Good	Neither Good nor Bad	Not Very Good	Not Good At All
-----------	-------------	----------------------	---------------	-----------------

A 6. What about the conditions of the houses around here ?  
Overall would you say they are

CARD 18

Very Well Kept Up	Fairly Well Kept up	Not Very Well Kept Up	Not Well At All Kept Up
-------------------	---------------------	-----------------------	-------------------------

A 7. What about the people who live around here ?  
As neighbours, would you say they are

CARD 3

Very Good	Fairly Good	Neither Good nor Bad	Not Very Good	Not Good At All
-----------	-------------	----------------------	---------------	-----------------

A 8. Would you say that it is safe to go out walking around here at night ? (Alone)

1) YES	2) NO	OTHER.....(specify)
--------	-------	---------------------

A 9. How important do you feel it is to lock your doors when you are going out of the house for just an hour or two ?

CARD 1

Very Important	Somewhat Important	Not Very Important	Not At All Important
----------------	--------------------	--------------------	----------------------



A10. I would like you now to tell me how satisfied you are with ..... as a place to live. I am going to give you a card - this is how I want you to use it. If you are completely satisfied with ..... as a place to live, you would say 'one'. If you are completely dissatisfied you would say 'seven'. If you are neither completely satisfied or dissatisfied, you would put yourself somewhere between two and six; four means that you are neutral or just as satisfied as you are dissatisfied.

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

A11. And what about this particular neighbourhood in ..... All things considered, how satisfied or dissatisfied are you with this neighbourhood as a place to live. Which number comes closest to how satisfied or dissatisfied you are ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

A12. Have you ever lived anywhere else ?

SECTION B: HOUSING

- B 1. Now I have some questions about your house/flat.  
How many rooms have you got, not counting halls and  
bathrooms ?

..... ROOMS

- B 2. How many people live in this house/flat ?

..... PEOPLE

- B 3. Would you say that as a place for you (and your family)  
to live, this place is -

CARD 3

Very  
Good

Fairly  
Good

Neither  
Good Nor  
Bad

Not Very  
Good

Not Good  
At All

- B 4. Now I am going to ask some things that people often  
say they like or dislike about their homes.  
Would you say in general the rooms in this house/flat  
are -

Too  
Large

About  
Right

Too  
Small

- B 5. Would you say that this building is a well built structure ?

1) YES                      2) NO                      OTHER.....(specify)

B 6. How good is the heating in winter ?

CARD 3

Very Good
--------------

Fairly Good
----------------

Neither Good Nor Bad
----------------------------

Not Very Good
------------------

Not Good At All
--------------------

B 7. Considering all the things we have talked about, how satisfied or dissatisfied are you with this house/flat ?  
Which number comes closest to how satisfied or dissatisfied you are ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

SECTION C: COUNTRY

Now I have some questions about how you feel about life in this country.

C 1. Do you feel there are some ways in which life in Britain is getting worse ?

1) YES

2) NO

In what ways do you think it is getting worse ?

.....  
.....

C 2. Do you think there are some ways in which life in Britain is getting better ?

1) YES

2) NO

In what ways do you think it is getting better ?

.....  
.....

C 3. All things considered, do you think things are getting better or worse or staying about the same ?

CARD 4

Better

Worse

Some Better  
Some Worse

About the  
Same



C 4. People sometimes tell us that public officials in this country do not always treat them as fairly as they ought to. What do you think ... would you say that in general public officials treat you ...

CARD 5

Very Fairly

Fairly Enough

Not Very Fairly

Not Fairly At All

C 5. Some people say that there is not as much freedom in this country as there ought to be. What about you ... how free do you feel to live the kind of life you want to ?

CARD 6

Very Free

Free Enough

Not Very Free

Not Free At All

C 6. In what ways do you feel you are not very free ?

.....  
.....

C 7. All things considered, how satisfied are you with life in Britain today.

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

SECTION D: EMPLOYMENT

D 1. Now I want to ask about work. Are you working for pay either full-time or part-time ?

(a)	(i) Full-Time	(ii) Part-Time
(b)	Housewife	(go to D35)
(c)	Unemployed	(go to D42)
(d)	Retired	
(e)	Student	

D 2. If working (a) above -

Would you tell me exactly what your job is called

.....

If necessary, tell me a little more about what you do

.....

D 3. About how many hours do you work on this job on an average week ?

..... hours

D 4. Now I would like to know how much time you spend reading or writing, how much time working with your hands and how much time dealing with people.

First, reading or writing. Here we would like to include any type of written materials, letters, files, memos, books or blueprints. About how many hours a week do you spend reading, writing, dictating or dealing with any kind of written material on your job ?

Time .....

D 5. If any time at all, what do you do ?

.....

D 6. What are they about ?

.....

D 7. Secondly, working with your hands, using tools, using or repairing materials. We would like to include anything that involves working with your hands ; operating a lathe or a dentists drill, moving furniture, playing the piano.

About how many hours a week do you spend working with your hands ?

Time .....

D 8. If any time at all, what do you do ?

.....

D 9. What materials do you work on ?

.....

D10. What tools or equipment do you use ?

.....

D11. Thirdly, dealing with people. Here we do not mean to include passing the time, but only conversations necessary for the job, eg: talking to your boss, selling to customers, advising your clients, teaching, supervising.

About how many hours a week does your job require you to spend dealing with people ?

Time .....

D12. If any time at all, what kind of things do you do ?

.....

If more than one activity, at which one do you spend most of your time ?

.....

D13. Which of these three, working with written materials, working with your hands or dealing with people, is the most important for doing your job ?

CARD 15

(a) Working with written materials
(b) Working with your hands
(c) Dealing with people

D14. What is the second most important ?

a	b	c
---	---	---

D15. If two are of equal importance, which ones ?.....

D16. How closely does the person above you supervise you ?

CARD 16

(a) Does he decide what you do and how you do it
(b) Does he decide what you do, but let you decide how to do it
(c) Do you have some freedom in deciding both what you do and how you do it
(d) Are you your own boss as long as you stay within the general policies of the organisation



D17. When your boss wants you to do something, does he

CARD 17

(a)	Just tell you to do it
(b)	Discusses it with you
(c)	Is it about half and half

D18. How free do you feel to disagree with him ?

CARD 18

(a)	Completely free
(b)	Largely but not completely
(c)	Moderately but not particularly
(d)	Not at all free

D29. I'd like to find out how important a number of things are to you in judging jobs in general; not just your job, but any job. For instance, how much difference does the pay make in how you rate a job. Is pay -

CARD 23

(a) Very Important

(b) Fairly Important

(c) Not Particularly Important

- ( 1) The pay
- ( 2) Fringe benefits
- ( 3) How interesting the work is
- ( 4) The Supervisor
- ( 5) Your co-workers
- ( 6) How clean the job is
- ( 7) The hours you work
- ( 8) How tiring the job is
- ( 9) How highly people regard the job
- (10) Job security
- (11) The amount of freedom you have
- (12) The chance to meet people
- (13) Not being under too much pressure
- (14) The chance to get ahead
- (15) The chance to use your abilities

D30. All things considered, what is it about the job you like best ?

.....

D31. Now I would like to find out how satisfied you are in your job with those things you consider very important or fairly important. Would you say you are -

CARD 24

Very Satisfied

Fairly Satisfied

Somewhat Satisfied

Very Dissatisfied

D32. What is it about the job you like least?

.....

D33. All things considered, how satisfied are you with your present job ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

D34. If you were to get enough money to live as comfortably as you liked for the rest of your life, would you continue to work ?

1) YES

2) NO

D35. If you were a housewife

Different people feel differently about taking care of a home. I don't mean taking care of children, but things like cooking, sewing and keeping house. Some people look on these things as just a job that has to be done, other people really enjoy them. How do you feel about this ?

.....

D36. If working, apart from the money, which do you think is more important to you personally -

(a) Your housework

(b) The job for which you are paid

D37. Overall, how satisfied are you with being a housewife. I don't mean with your family life, but with your housework? Which number comes closest to how satisfied or dissatisfied you feel?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

D38. Have you ever wanted a career?

1) YES

2) NO

D39. Have you ever held a full-time job?

1) YES

2) NO

If yes, what sort of work did you do in your last full-time job?

.....

D40. If you had someone to take care of things here at home, would you like to take an outside job right now, or are you happy enough to be at home?

(a) Would take outside job

(b) Happy enough to be at home



D41. Do you think you are likely to take an outside job in the future ?

(a) YES

(b) DEPENDS

(c) NO

If (a) or (b) -

Women have different reasons for working, what would be your main reason for working ?

.....

D42. What sort of work did you do in your last regular job ?

.....

D43. When was the last time you had a regular job ?

(a) 3 mths

(b) 6 mths

(c) 12 mths

(d) 18 mths

(e) 2 yrs

(f) over

D44. Do you have any activities that you do regularly ?

1) YES

2) NO

If 1) what are they ? .....

D45. Are you looking for a job ?

1) YES

2) NO

What sort of a job are you looking for ?

.....

SECTION E: EDUCATION

E 1. At what age did you leave education ?

(a)

1-14

14-16

16-18

18-23

23+

(b) Do you have any certificates or diplomas ?

1) YES

2) NO

Which .....

(c) Do you have any A levels, diplomas or certificates ?

1) YES

2) NO

Which .....

(d) What University or College did you attend ?

.....

Do you have a College degree or diploma ?

.....

None (specify) .....

E 2. Do you have any skills learnt on a formal or informal basis ?

1) YES

2) NO

.....

E.3. All things considered, how useful do you think your education was for you personally. Which numbers comes closest to how satisfied or dissatisfied you feel ?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

(a) What kind of education would you like to have ?

.....

(b) What are the main reasons you don't/didn't get the kind of education you want/wanted ?

.....

.....

SECTION F: LEISURE

Now, what about the things that you do when you are not working.

F 1. Is there anything that you like to do when you are not working that you get special pleasure out of ?

.....

F 2. Are there things that you wish you could do in your spare time or during your holidays that you cannot do for one reason or another ?

1) YES	2) NO (go to F3)
--------	------------------

If yes, what are the main things that keep you from doing these things ?

.....

F 3. Overall, how satisfied are you with the ways you spend your spare time ? Which number comes closest to how satisfied or dissatisfied you feel ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

F 4. Do you belong to any clubs or organisations ?

1) YES	2) NO
--------	-------

Specify .....



F 5. Do you have any particular problems with your health ?

1) YES

2) NO (go to F6)

If yes, would you say that these problems keep you from doing alot of things you wish you could do ?

(a) Lot of things

(b) Certain things

(c) Can do almost anything

F 6. Of course, most people are sick now and then, but overall, how satisfied are you with your health ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

F 7. In this survey of families, we are trying to get a clear picture of peoples financial situations. Taking into consideration all sources of income, what was your total family income before tax in 1977. Just give me the number on the card

00 Nothing or loss	07 £6000 - £6999
01 £500 - £999	08 £7000 - £7999
02 £1000 - £1999	09 £8000 - £8999
03 £2000 - £2999	10 £9000 - £9999
04 £3000 - £3999	11 £10000 - £10999
05 £5000 - £5999	12 £11000 - £11999
06 £6000 - £6999	13 £12000 - £12999
	14 Over - £13000

F 8. Do you ever worry that your total income will not be enough to meet your family's total expenses and bills ?

1) YES

2) NO

If yes, would you say that you have worries like this -

CARD 8

All of the time

Most of the time

Some of the time

Just now and again

F 9. The things people have - housing, recreation and the like - make up their standard of living. Some people are satisfied with their standard of living, others feel it is not as high as they would like. How satisfied are you with your standard of living ? Which number comes closest to how you feel ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

F10. Have you ever felt at any time in your life that your family has not had enough money to satisfy the basic necessities for food, shelter or clothing ?

1) YES

2) NO

If yes, at what age was this .....

Why did this happen ? .....

SECTION G

We have talked about some of the things you do and some of the things you have. Now I would like to talk about your friendships.

- G 1. Would you say you have a good many very good friends that you could count on if you had any sort of trouble, an average number, or not too many very good friends ?

Good Many
-----------

Average Number
----------------

Not Too Many
--------------

- G 2. How interested would you say you are in meeting new people and making new friends ? Would you say you were -

Very Interested
-----------------

Somewhat Interested
---------------------

Not Very Interested
---------------------

- G 3. All things considered, how satisfied are you with your friendships, with the time you spend with your friends, the things you do together, the number of friends you have, as well as the particular people who are your friends, Which number comes closest to how you feel ?

## CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

- G 4. How frequently do you see the members of your family who do not live in this house ?

## CARD 9

(a)	Every day
(b)	Every couple of days
(c)	Once a week
(d)	Once a fortnight
(e)	Once a month
(f)	Once every couple of months
(g)	A couple of times a year

G 5. Are most of your close friends related to you ?

1) YES

2) NO

G 6. Now lets talk about your family.

Are your parents living ?

1) YES

2) NO

If yes, which do you feel closer to :

(a) Mother

(b) Father

If no, what age were you when they died ? .....

G 7. Would you say that you feel closer to your Mother/Father/  
Parents than most people of your age ?

Closer

About Average

Less Close

G 8. Are you -

Married

Widowed

Divorced

Separated

Single

Together

G 9. How long have you been married ? .....

G10. Is this your first marriage ?

1) YES

2) NO

If no, did your last marriage end by-

(a) Divorce

(b) Death



G11. What is your husband/wife's nationality ?

.....

Is your husband/wife doing any work for money now ?

1) YES	2) NO
--------	-------

If yes, what is his/her main occupation ?

.....

G12. How often do you disagree with your husband/wife about how much money to spend on certain things ?

CARD 10

Never	Rarely	Sometimes	Often	Very Often
-------	--------	-----------	-------	------------

G13. How well do you think your husband/wife understands you - your feelings, your likes and dislikes and any problems you may have. Do you think he/she understands you ?

CARD 11

Very Well	Fairly Well	Not Very Well	Not Well At All
-----------	-------------	---------------	-----------------

G14. How well do you think you understand your husband/wife ?

CARD 11

Very Well	Fairly Well	Not Very Well	Not Well At All
-----------	-------------	---------------	-----------------

G15. How much companionship do you and your husband/wife have ? How often do you do things together ?

All the Time	Very Often	Often	Sometimes	Hardly Ever
--------------	------------	-------	-----------	-------------

G16. Have you ever wished you married someone else ?

Yes Often	Yes Sometimes	Yes, Once in a While	Yes, But Hardly Ever	No Never
--------------	------------------	-------------------------	-------------------------	-------------

G17. Has the thought of ever getting a divorce crossed your mind ?

Yes Often	Yes Sometimes	Yes, Once in a While	Yes, But Hardly Ever	No Never
--------------	------------------	-------------------------	-------------------------	-------------

G18. All things considered, how satisfied are you with your marriage ? Which number comes closest to how satisfied or dissatisfied you are ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---

G19. If Divorced, how long have you been divorced/separated ?

.....

G20. How long were you married and living together ?

.....

Now I have some questions about your marriage before you were divorced/separated.

G21. How often did you disagree with your husband/wife about how much money to spend on various things ?

CARD 10

Never	Rarely	Sometimes	Often	Very Often
-------	--------	-----------	-------	------------

G22. How well do you think your husband/wife understood you, your feelings, your likes and dislikes and any problems you may have had from time to time. Do you think that he/she understood you -

CARD 11

Very Well

Fairly Well

Not Very Well

Not Well At All

G23. How much companionship did you and your husband/wife have ? How often did you do things together ?

CARD 12

All The Time

Very Often

Often

Sometimes

Hardly Ever

G24. If widowed, how long ago did your husband/wife die ?

.....

How long had you been married ?

.....

G25. How many children do you have ?

.....

What are their ages ?.....

G26. How many children do you have living with you ?

.....

G27. Compared to most children, would you say your children have given you -

CARD 13

A Lot of Problems	Quite a Few Problems	Some Problems	Only a Few Problems	Haven't Given You Any Problems
-------------------	----------------------	---------------	---------------------	--------------------------------

G28. Would you say, that in your case, being a mother/father has -

CARD 14

Always Been Enjoyable	Nearly Always Been Enjoyable	Usually Been Enjoyable	Sometimes Been Enjoyable
Hardly Ever Been Enjoyable			

G29. Have you ever wished that you could be free from the responsibilities of being a father/mother ?

1) YES	2) NO
--------	-------

Have you felt this -

Often	Sometimes
-------	-----------

G30. All things considered, how satisfied are you with your family life, the time you spend and the things you do with members of your family ? Which number comes closest to how you feel ?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---



SECTION H

H 1. Now I have some questions of a different kind. Have you usually felt pretty sure your life would work out the way you wanted it to, or have there been times when you haven't been sure at all ?

Pretty Sure

Haven't been Sure

H 2. Is there anything about your life these days which makes you feel frightened or worried ?

1) YES

2) NO

If Yes, what kind of things make you feel frightened or worried ?

.....

H 3. Generally speaking, would you say that -

Most People can be Trusted

You Can't be too Careful in Dealing with People

H 4. Would you say that most of the time people -

Try to be Helpful

Just Look After Themselves

H 5. Do you think that most people would try to take advantage of you if they could get the chance ?

If They Could Get The Chance

Try to be Fair

H 6. Do you think it is better to plan your life a good way ahead, or would you say that life is too much a matter of luck to plan ahead very far ?

Plan Ahead

Too Much Luck to Plan

H 7. When you make plans ahead, do you usually get to carry them out the way you expected, or do things usually come up to make you change your mind ?

Things Work  
Out as Expected

Have to Change Plans

H 8. Some people feel they can run their own lives pretty much as they want to. Others feel the problems of life are sometimes too big for them. Which one are you ?

Can Run Own Life

Problems of Life too Big

H 9. Some people have so many problems in their every day life that they worry they might have a nervous breakdown. Do you ever worry about this ?

1) YES

2) NO

H10. Up to now, have you been able to satisfy most of your ambitions in life or have you had to settle for less than you hoped for ?

Satisfied Most  
of Ambitions

Have Had to Settle for Less

What are the main things that have stood in your way ?

.....

H11. Do you think you have had a fair opportunity to make the most of yourself in your life or have you been held back in some ways ?

Have Had Fair Opportunity

Have Been Held Back

How is that ? .....

H12. Compared to other people you know, would you say that you have enjoyed your life up to now more than most people, about the same, or less than most people ?

More

About the Same

Less

H13. Taking all things together, how would you say things are these days ? Would you say you are very happy, pretty happy, or not too happy these days ?

Very Happy

Pretty Happy

Not too Happy

Now I am going to read a number of statements concerning personal attitudes and traits. As I read each one, tell me if the statement is true or false as it applies to you personally.

H14. I have never deliberately said something to hurt someones feelings.

1) TRUE

2) FALSE

H15. No matter who I am talking to, I am always a good listener.

1) TRUE

2) FALSE

H16. On a few occasions, I have given up doing something because I thought too little of my ability.

1) TRUE

2) FALSE

H17. There has been occasions when I feel like smashing something.

1) TRUE

2) FALSE

H18. I am always courteous, even to people who are disagreeable.

1) TRUE

2) FALSE

H19. I sometimes feel resentment when I do not get my own way.

1) TRUE

2) FALSE

H20. We have talked about various parts of your life. Now I want to ask you about your life as a whole, how satisfied are you with your life as a whole these days? Which number on the card comes closest to how satisfied or dissatisfied you are with your life as a whole these days?

CARD 2

1	2	3	4	5	6	7
---	---	---	---	---	---	---



SECTION I: BACKGROUND INFORMATION

I 1. What is your date of birth ? ..... (Age.....)

I 2. In what area did you live when you were growing up ?  
.....

I 3. Did you live with both your parents until you were 16 ?

1) YES

2) NO

What happened ?

(a) Mother died
(b) Father died
(c) Separation, Father left home
(d) Separation, Mother left home
(e) Divorce, Father left home
(f) Divorce, Mother left home
(g) Respondent left home
(h) Unmarried Mother
(i) Other, specify .....
(j) How old were you when this happened .....

I 4. Where was your father born ? .....

I 5. Where was your mother born ? .....

I 6. What was your father's main occupation while you were growing up ? .....

I 7. At what age did he leave education ? .....

I 8. How happy do you consider your childhood ?

CARD 12

Very Happy	Fairly Happy	Not Very Happy	Not Happy At All
------------	--------------	----------------	------------------

Why was this ? .....

I 9. Did anything happen to you while you were growing up which made you very unhappy and which still makes you unhappy ?

1) YES	2) NO
--------	-------

What was this ? .....

I10. What are your hopes for the future ?

.....  
.....

I11. That is all the questions I have. Is there anything you would like to add to any of the subjects we have discussed ?

.....  
.....

APPENDIX 4.2

Recording data form for the 'Quality of Life Questionnaire'.

QUESTIONNAIRE DATA

Name \_\_\_\_\_

Address \_\_\_\_\_

Date \_\_\_\_\_

Section A

A1 \_\_\_\_\_

A2     1     2     3     4     5

A3     1     2     3     4     5

A4     1     2     3     4     5

A5     1     2     3     4     5

A6     1     2     3     4

A7     1     2     3     4     5

A8     1     2     Other \_\_\_\_\_

A9     1     2     3     4

A10    1     2     3     4     5     6     7

A11    1     2     3     4     5     6     7

Section B

B1 \_\_\_\_\_

B2 \_\_\_\_\_

B3     1     2     3     4     5

B4     1     2     3     4     5

B5     1     2     Other \_\_\_\_\_

B6     1     2     3     4     5

B7     1     2     3     4     5     6     7



Section C

C1     1     2

---



---



---



---

C2

---



---



---



---

C3     1     2     3     4

C4     1     2     3     4

C5     1     2     3     4

C6

---



---



---



---

C7     1     2     3     4     5     6     7

Section D

D1     1     2     3     4     5

D2

D3     \_\_\_\_\_ hrs.

D4     \_\_\_\_\_ hrs.

D5

D6

D7     \_\_\_\_\_ hrs.

D8

D9

D10

---

D11	<u>                    </u> HRS.			
D12	<u>                    </u>			
D13	1	2	3	
D14	1	2	3	
D15	<u>                    </u>			
D16	1	2	3	4
D17	1	2	3	
D18	1	2	3	4
D19	1	2		
D20	1	2		
D21	<u>                    </u>			
D22	1	2	3	4
D23	1	2	3	
			(IF 1, 2, 3)	1 2 3 4
D24	1	2		
D25	1	2	3	
D26	<u>                    </u>			
D27	<u>                    </u>			
D28	<u>                    </u>			
D29	<u>                    </u>			
D30	<u>                    </u>			
D31	1	1 2 3	1 2 3 4	
	2	1 2 3	1 2 3 4	
	3	1 2 3	1 2 3 4	
	4	1 2 3	1 2 3 4	
	5	1 2 3	1 2 3 4	
	6	1 2 3	1 2 3 4	
	7	1 2 3	1 2 3 4	
	8	1 2 3	1 2 3 4	
	9	1 2 3	1 2 3 4	
	10	1 2 3	1 2 3 4	
	11	1 2 3	1 2 3 4	
	12	1 2 3	1 2 3 4	
	13	1 2 3	1 2 3 4	
	14	1 2 3	1 2 3 4	
	15	1 2 3	1 2 3 4	

D32

---

D33

1 2 3 4 5 6 7

D34

1 2

D35

---

D36

1 2

D37

1 2 3 4 5 6 7

D38

1 2

D39

2 1

D40

1 2

D41

1 2 3

IF 1 or 2

---

D42

---

D43

1 2 3 4 5 6

D44

1 2

IF 1

---

D45

1 2

IF 1

---

Section E

E1    1    \_\_\_\_\_  
       2            2    1    \_\_\_\_\_  
       3            2    1    \_\_\_\_\_  
       4            1    \_\_\_\_\_    2    \_\_\_\_\_    3    \_\_\_\_\_

E2    1    \_\_\_\_\_ 2

E3    1    2    3    4    5    6    7  
       A    \_\_\_\_\_  
       \_\_\_\_\_  
       B    \_\_\_\_\_  
       \_\_\_\_\_

Section F

F1    \_\_\_\_\_  
       \_\_\_\_\_  
       \_\_\_\_\_

F2    1    2    \_\_\_\_\_  
       \_\_\_\_\_  
       \_\_\_\_\_

F3    1    2    3    4    5    6    7

F4    1    2

F5    1    2

IF    1            1    2    3

F6    1    2    3    4    5    6    7

F7    00   01   02   03   04   05   06   07   08   09   10

      11   12   14   14            .            .

F8    1    2

IF    1            1    2    3    4

F9    1    2    3    4    5    6    7

F10   1    2

IF    1    6    \_\_\_\_\_  
       7    \_\_\_\_\_  
       \_\_\_\_\_  
       \_\_\_\_\_



Section G

G1 1 2 3  
 G2 1 2 3  
 G3 1 2 3 4 5 6 7  
 G4 1 2 3 4 5 6  
 G5 1 2  
 G6 1 1 2  
 2

---

G7 1 2 3

G8 1 Go to G9  
 2 Go to G24  
 3 Go to G19  
 4 Go to G19  
 5 Go to Section H

G9

G10 1 2

IF 2 1 2

G11 1 2

IF 1

---

G12 1 2 3 4 5

G13 1 2 3 4

G14 1 2 3 4

G15 1 2 3 4 5

G16 1 2 3 4 5

G17 1 2 3 4 5

G18 1 2 3 4 5 6 7

G19 \_\_\_\_\_ years

G20 \_\_\_\_\_ years

G21 1 2 3 4 5

G22 1 2 3 4

G23 1 2 3 4 5

G24 \_\_\_\_\_ years

G25 \_\_\_\_\_ children aged \_\_\_\_\_

G26 \_\_\_\_\_ children

G27 1 2 3 4 5

G28 1 2 3 4 5

G29	1	2						
	IF	1	1	2				
G30	1	2	3	4	5	6	7	

Section H

H1	1	2						
----	---	---	--	--	--	--	--	--

H2	1	2						
----	---	---	--	--	--	--	--	--

	IF	1	_____					
			_____					

H3	1	2						
----	---	---	--	--	--	--	--	--

H4	1	2						
----	---	---	--	--	--	--	--	--

H5	1	2						
----	---	---	--	--	--	--	--	--

H6	1	2						
----	---	---	--	--	--	--	--	--

H7	1	2						
----	---	---	--	--	--	--	--	--

H8	1	2						
----	---	---	--	--	--	--	--	--

H9	1	2						
----	---	---	--	--	--	--	--	--

H10	1	2						
-----	---	---	--	--	--	--	--	--

	IF	2	_____					
			_____					
			_____					

H11	1	2						
-----	---	---	--	--	--	--	--	--

	IF	2	_____					
			_____					
			_____					

H12	1	2	3					
-----	---	---	---	--	--	--	--	--

H13	1	2	3					
-----	---	---	---	--	--	--	--	--

H14	1	2						
-----	---	---	--	--	--	--	--	--

H15	1	2						
-----	---	---	--	--	--	--	--	--

H16	1	2						
-----	---	---	--	--	--	--	--	--

H17	1	2						
-----	---	---	--	--	--	--	--	--

H18	1	2						
-----	---	---	--	--	--	--	--	--

H19	1	2						
-----	---	---	--	--	--	--	--	--

H20	1	2	3	4	5	6	7	
-----	---	---	---	---	---	---	---	--

Background Information

I.1 \_\_\_\_\_

I.2 \_\_\_\_\_

I.3 1 2  
IF 2, 1 2 3 4 5 6 7 8 9  
10 .....Years

I.4 \_\_\_\_\_

I.5 \_\_\_\_\_

I.6 \_\_\_\_\_

I.7 \_\_\_\_\_ years

I.8 1 2 3 4  
IF 2, 3 or 4 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I.9 1 2  
IF 1 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I.10 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPENDIX 4.3

Categorisations and descriptions of open ended questions.

'QUALITY OF LIFE' QUESTIONNAIRE

This appendix will describe the indices used and the citation frequencies of its categories.

1. General Sense of Well-Being

1.1 Happiness

Maslow has stated that growth associated with the higher needs brings with it happiness and satisfaction. To assess these feelings the present study contained three measures :

- (i) Overall life satisfaction (H20); assessed on a seven point likert type scale.
- (ii) Happiness (H13).
- (iii) Assessment of Enjoyment (H12).

1.2 Stress and Anxiety

A number of questions were centred upon worries and concerns. More specifically, subjects were asked whether there was anything that made them feel frightened or worried (H2) and then asked to specify these feelings.

The major categories and frequency of response are presented below.



<u>Major Categories</u>	<u>Frequency of Response</u>
1. Approach of old age, dependency	7%
2. Career, not advancing in occupation	5%
3. Health	5%
4. General violence and crime	5%
5. General anxiety about children or spouse	13%
6. General anxiety about future	12%
7. No worries	53%

Worries such as these are a normal part of life. Campbell et al similarly reports a 44% response rate.

To assess feelings of overwhelming anxiety, individuals were asked whether they ever felt they were going to have a nervous breakdown (H9); 14% answered affirmatively.

### 1.3 Personal Competence

The index measures the extent to which a person feels in control of their life rather than subject to external forces like society, government, supervisors or even luck or fate. The index consisted of four correlated items ( $r = 0.13$ ;  $p < 0.05$ ) directed or measuring such feelings (H1, H6, H7, H8).

For each item, the answer showing the highest personal competence was scored five and the lowest, one. The personal competence scale represented the mean of the four items, ranging from 0 (high) to 5 (low). In many respects, this measure is akin to the esteem concept, particularly the section 'for adequacy, for mastery and competence, for confidence in the face of the world (Maslow, 1968).

#### 1.4 Trust in People

The scale measured the degree to which other people could be trusted (H3, H4, H5). The mean inter item correlation was  $r = 0.26$ ;  $p < 0.05$ . The overall score consists of a mean of the three items, a high score indicating low trust in people.

The individuals general self concept was examined with the Personal Competence index and questions concerning attitudes to past accomplishments, specifically the satisfaction of ambitions and the opportunities that had occurred throughout the life span.

1.5 Ambitions

(a)

The first (H10) concerned the attitudes individuals held towards the satisfaction of their ambitions.

The major reasons given for not satisfying ambitions and having to settle for less and the frequency of response were :

1. The individuals lack of ambition	9%
2. Financial situations	10%
3. No encouragement, or wrong advice	7%
4. Marriage, husband, children	18%

1.5 Opportunities

(b)

The second (H11) examined the lack or presence of opportunities in the individuals life which had or had not allowed him to make the most of himself. The most frequent reasons given for being held back in the actualisation of potential and their frequencies were :

1. Family background	6%
2. Lack of education	17%
3. Marriage, children	23%
4. Personal characteristics	2%
5. Bad or inappropriate advice	6%
6. Had a fair opportunity	65%

### 1.6 Childhood Experiences

Maslow (1954) has hypothesised that one of the situations which can result in frustration of the lower needs is inappropriate childhood experiences. To examine this proposal, the questionnaire contained a number of questions which assessed feelings and experiences of childhood. These dealt with both the objective, whether the individuals had remained with their parents until the age of 16 (I3); fathers occupation and educational level and the subjective attitudes, how close they felt to their parents (G7), how happy they considered their childhood (I8), and the incidence of unhappy experiences (I9).

Of the 33% who reported unhappy experiences, the major categories of responses were :

1. Violence between parents	8%
2. The separation of parents	3%
3. The death of a close relation or parent	10%
4. Illness as a child	6%
5. Poverty	5%



## 1.7 Social Desirability

As a measure of response bias six items from the larger Social Desirability Scale (Crowne and Marlow, 1964) were selected. These measured the extent to which individuals describe themselves in 'favourable socially desirable terms in order to gain the approval of others'. An analysis of the original scale based on other data (Campbell et. al.) suggested that two subscales were involved, the tendency to assert something good, but almost certainly untrue, about ones self; and the tendency to deny something bad, that is almost certainly true.

Three items each were used from the assert good (H14, H15, H18) and assert bad (H16, H17, H19) subscales. The overall score consisted of the mean of the six items, a low score indicating high social desirability.

## 2 Personal Relationships

### 2.1 Marriage.

Over half of the sample were married, 25% were single, 9% widowed, 7% divorced and 4% separated.

A number of indices were created:

Marital Adjustment: Four questions measured the amount of disagreement and understanding within the marriage. The overall score was adjusted for the smaller deviations and means of two of the questions and consisted of the following formulae:

$$\text{Index} = G12 + G15 + (G13 \times 1.4) + (G14 \times 1.4)$$

The individual items were highly correlated

(Mean correlation,  $r = 0.32$ ;  $p < 0.001$ )

A similar index (G21, G221, G222, C23)

examined the marital adjustment of the divorced and separated group prior to their separation. Again the mean inter-item correlation was high ( $r = 0.26$   $p < 0.001$ ).

Marital Disharmony: This examined the extent to which individuals regretted their marriage and thought of divorce (G16 and G17)

### 2.2. Children

Parental attitude towards children were examined by assessing the problems they had caused (G27), the enjoyment they had generated (G28) and whether parents had ever wished to be free from the responsibility (G29). As would be expected only a minority (26%) answered the latter in affirmative terms, most parents

considered parenthood at least "nearly always enjoyable" (74%) and reported few, if any problems.

### 2.3 Friends

Both the number of friends (G1) and the interest in making friends (G2) were investigated. The number and interest in friends were significantly correlated ( $r = 0.37$ ,  $p < 0.001$ ), and were summed to form an index.

### 3. The Residential Environment

#### 3.1 Attitudes towards Britain

Feelings about life in Britain tend to be rather abstract, but never the less of interest because they reflect rather basic attitudes. Individuals were asked in what ways, if any, they thought Britain was getting better or worse (C1 and C2). The major categories of responses and frequencies are listed below ;

The major ways in which life in Britain is seen as getting worse were :

1. Economy, Inflation, Tax	24%
2. Unemployment, No job prospects	32%
3. Crime rate, Violence	53%
4. Attitudes towards minorities, Racial discrimination	7%
5. Ecology, Pollution, Inner City decay	21%
6. Values, to right wing; not enough freedom, too materialistic	15%
7. Morals, Lack of morals, increased sexuality	13%

The major ways in which life in Britain is seen to be improving were:

1. Health, Medical Care	11%
2. Standard of Living	40%
3. More liberal, Tolerant	9%
4. Education, Both quality and availability	2%
5.. No ways in which improving	47%



Attitudes towards a number of other aspects of life in Britain were also assessed, namely, towards the amount of freedom in Britain, and the fairness of treatment by public officials (C4 and C5), these were summed to form an index termed 'public officials'.

### 3.2 Attitudes to the Community and Home

Attitudes towards the community, neighbourhood and home were assessed by a series of rather specific questions about each.

An index of community attitudes consisted of the sum of five questions concerned with attitudes towards the public services, schools, police and neighbours (A2, A3, A4, A5 and A7). Each was scaled on a five point scale ranging from 'very good' (1) to 'not good at all' (5) (mean correlations  $r = 0.37$ ;  $p < 0.001$ ).

Two rather specific aspects of neighbourhood safety were also assessed. These examined the importance of locking doors (A9) and how safe the individual felt walking alone at night (A8).

An index of attitudes towards the home consisted of the sum of two questions, concerned with the home and the heating (B3 and B6), scaled on a similar five point scale (Mean correlation  $r = 0.31$ ;  $p < 0.001$ ). An objective measure of number of people per room was calculated.

#### 4. Personal Resources

##### 4.1 Financial

Financial resources are particularly important in aiding the gratification of the lower needs, physiology and safety. Both the objective income level (F7) and the subjective worries about income (F8) were assessed, past experience of poverty, (F10) was also investigated.

##### 4.2 Education

The age at which the respondent left full time education and the qualifications received were recorded.

##### 4.3 Occupation

Data on occupational level was collected, see Table 4.1 for the description of occupational levels.

##### 4.4 Age

Individuals were categorised into the age groups, 20 to 30; 31 to 40; 41 to 50; 51 to 60.

##### 4.5 Health

The measure of health was elicited by self report, in response to the question 'Do you have any particular problems with your health'. For those who had problems, the interviewer went on to ascertain how important these were.

APPENDIX 4.4.

Proportion of each quartile group represented in the  
variable levels for

1. Education: Leaving age, 1, 1-14 years ; 2, 15-16 years ;  
3, 17-18 years ; 4, 19-23 years
2. Income: 1, £500 to £999 to 14, over £14,000
3. Social Class
4. Age

Quartile division    I = Upper Quartile  
                          II  
                          III  
                          IV = Lower Quartile

Significance of differences assessed with Chi-Square Analyses.

Proportion of people in each category.

Education & Needs

		Min. age $\longrightarrow$		Further Ed.		
		1	2	3	4	
		(27)	(44)	(18)	(31)	
<u>SA</u>	I	p < 0.01	.11	.23	.11	.53
	II		.22	.28	.17	.31
	III		.23	.42	.15	.11
	IV		.28	.53	.09	.09
<u>SE</u>	I	not sig.	.22	.25	.09	.43
	II		.14	.32	.25	.25
	III		.26	.50	.06	.16
	IV		.23	.38	.16	.19
<u>Belonging</u>	I	not sig.	.18	.43	.12	.21
	II		.23	.26	.13	.33
	III		.25	.46	.15	.12
	IV		.18	.25	.15	.40
<u>Safety</u>	I	p < 0.01	.33	.46	.16	.03
	II		.24	.33	.12	.30
	III		.07	.23	.15	.46
	IV		.18	.40	.12	.28
<u>Physiology</u>	I	not sig.	.22	.51	.11	.11
	II		.32	.32	.19	.16
	III		.26	.38	.12	.38
	IV		.25	.25	.12	.37

Sample size, n, presented in brackets.



Income and Needs

		2 (27)	3 (31)	4 (19)	5 (12)	6 (9)	7 (9)	8 (7)	9 (6)
<u>SA</u>	I	.15	.19	.19	.03	.00	.11	.07	.08
	II	.14	.20	.14	.17	.14	.11	.08	.00
NS	III	.30	.27	.15	.04	.07	.07	.04	.00
	IV	.31	.34	.15	.12	.03	.00	.03	.00

<u>SE</u>	I	.21	.25	.18	.15	.03	.09	.00	.06
	II	.10	.21	.18	.07	.10	.07	.13	.11
NS	III	.33	.26	.10	.10	.03	.07	.03	.06
	IV	.22	.29	.16	.06	.13	.06	.06	.00

<u>Belonging</u>	I	.18	.31	.06	.13	.09	.06	.09	.00
	II	.33	.23	.10	.06	.06	.10	.03	.06
NS	III	.22	.28	.25	.12	.03	.06	.00	.03
	IV	.14	.18	.22	.00	.11	.07	.11	.15

<u>Safety</u>	I	.40	.26	.13	.03	.06	.00	.06	.03
	II	.21	.27	.06	.21	.06	.09	.00	.09
NS	III	.15	.26	.19	.07	.07	.11	.07	.04
	IV	.12	.21	.25	.06	.09	.09	.09	.06

<u>Physiology</u>	I	.22	.37	.15	.07	.11	.00	.03	.03
	II	.25	.22	.19	.09	.06	.03	.09	.03
p < 0.01	III	.16	.09	.29	.06	.06	.22	.06	.03
	IV	.25	.34	.00	.15	.06	.03	.03	.12

Sample size n presented in brackets.

Age and Needs

		(45)	(32)	(23)	(20)
		20 - 30	30 - 40	40 - 50	50 - 60
<u>SA</u>	I	.23	.34	.38	.04
	II	.34	.28	.20	.17
NS	III	.38	.23	.07	.31
	IV	.50	.18	.12	.18

<u>SE</u>	I	.31	.32	.18	.12
	II	.28	.25	.21	.25
NS	III	.43	.23	.16	.16
	IV	.45	.19	.19	.16

<u>Belonging</u>	I	.46	.15	.15	.22
	II	.56	.06	.20	.16
p < 0.01	III	.25	.43	.15	.15
	IV	.18	.40	.26	.15

<u>Safety</u>	I	.33	.13	.23	.30
	II	.33	.33	.15	.18
p < 0.05	III	.61	.23	.07	.07
	IV	.25	.34	.28	.12

<u>Physiology</u>	I	.37	.33	.11	.18
	II	.38	.29	.09	.22
NS	III	.48	.19	.26	.06
	IV	.25	.25	.28	.22

Social Class & Needs

		Middle	Upper Working	Working	Lower
<u>SA</u>  p < 0.001	I	.61	.23	.03	.11
	II	.40	.31	.17	.11
	III	.15	.23	.34	.27
	IV	.09	.12	.40	.37

<u>SE</u>  NS	I	.43	.25	.15	.15
	II	.32	.32	.21	.14
	III	.27	.10	.36	.26
	IV	.15	.14	.26	.29

<u>Belonging</u>  NS	I	.28	.21	.28	.21
	II	.40	.16	.13	.30
	III	.15	.31	.31	.21
	IV	.44	.22	.22	.11

<u>Safety</u>  NS	I	.06	.23	.33	.36
	II	.30	.27	.24	.18
	III	.46	.19	.19	.15
	IV	.43	.21	.18	.15

<u>Physiology</u>  NS	I	.14	.14	.37	.33
	II	.22	.26	.29	.22
	III	.45	.22	.22	.09
	IV	.40	.28	.09	.21

APPENDIX 5.1Study of Occupational Conditions

This questionnaire was designed to examine the sort of work you do and how satisfied you are with various aspects of it.

I am going to ask you a number of questions which I would like you to answer as honestly and frankly as possible. Your individual answers will be kept completely confidential.



D1 Now I want to ask about work, are you working for pay either full-time or part-time ?

1.	A. Full-time	B. Part-time
2.	Housewife	
3.	Unemployed	
4.	Retired	
5.	Student	

If Working,

D2 Would you tell me exactly what your job is called ?.....  
(If necessary, tell me a little more about what you do.....)

D3 About how many hours do you work on this job on an average week ?.....

D4 Now I would like to know how much time you spend reading or writing, how much time working with your hands and how much time dealing with people.

First, reading or writing. Here we would like to include any type of written materials, letters, files, memos, books, or blueprints. About how many hours a week do you spend reading, writing, dictating, or dealing with any kind of written material on your job ?

Time.....

	If any time at all
D5	What do you do ?.....
D6	What are they about ?.....

D7 Second, working with your hands, using tools, using or repairing materials. We would like to include anything that involves working with your hands - operating a lathe or a dentists drill, moving furniture, playing the piano. About how many hours a week do you spend working with your hands ?  
 Time.....

D8	If any time at all
	What do you do ?.....
D9	What materials do you work on ?.....

D10 What tools or equipment do you use ?.....

D11 Third, dealing with people. Here we do not mean to include passing the time, but only conversations necessary for the job, for example, talking to your boss, selling to customers, advising your clients, teaching, supervising. About how many hours a week does your job require you to spend dealing with people.?

D12 Time.....

If any time at all
What kind of things do you do ?.....
If more than one activity
At which one do you spend most of your time ?.....

D13 Which of these three, working with written materials, working with your hands or dealing with people, is the most important for doing your job ?

1. Working with written materials
2. Working with your hands
3. Dealing with people

D14 What is the second most important ?

1	2	3
---	---	---

D15 If two are of equal importance, which ones ?

D16 How closely does the person above you, supervise you ?

1. Does he decide what you do and how you do it
2. Does he decide what you do, but let you decide how to do it
3. Do you have some freedom in deciding both what you do and how you do it
4. Are you your own boss as long as you stay within the general policies of the organisation

D17 When your boss wants you to do something, does he,

1. Just tell you to do it
2. Discusses it with you
3. Is it about half and half

D18 How free do you feel to disagree with him ?

1.	Completely free
2.	Largely but not completely
3.	Moderately, but not particularly
4.	Not at all free

D19 Do you work together with other people on the same task as a team, or do you work independently of other people ?

1.	AS A TEAM
----	-----------

2.	INDEPENDENTLY
----	---------------

D20 Are there employees who are under you ?

1.	YES
----	-----

2.	NO
----	----

D21 If 1. How many are there ?.....

D22 Is the speed with which you work controlled by,

1.	YOU
2.	YOUR BOSS
3.	YOUR WORK GROUP
4.	THE SPEED OF THE MACHINERY



D23 How often do you have to work under pressure of time ?

1. VERY OFTEN	2. OFTEN	3. SOMETIMES	4. HARDLY EVER
			5. NEVER

If working under time pressure, does this involve,

1. WORKING LONG HOURS	2. HEAVIER PHYSICAL WORK
3. FASTER PHYSICAL MOVEMENTS	4. FASTER THINKING

D24 Are you required to sit, stand or walk for long stretches of time in your work or can you switch when you want to ?

1. HAVE TO STAY	2. CAN SWITCH
-----------------	---------------

D25 Does your work involve,

1. DOING THE SAME THING IN THE SAME WAY REPEATEDLY
2. THE SAME KIND OF THINGS IN A NUMBER OF DIFFERENT WAYS
3. A NUMBER OF DIFFERENT KIND OF THINGS

I am going to show you a list of things that people may have to do on different jobs.

D26 1. Would you tell me which three of these things are most necessary for doing your job well

.....

D27 2. Which one of these three is most necessary of all ?

.....

D28 3. Which three are the least important ?

.....

D29 4. And which of these three is least important of all ?

.....

1. Making a good impression on others
2. Having a good memory
3. Think quickly
4. Organise things systematically
5. Think up new ways of doing things
6. Plan ahead
7. Handle people well
8. Obey the rules
9. Do heavy work
10. Stick to a job until it is finished
11. Work accurately
12. Communicate clearly
13. Do what you are told
14. Move quickly

D30 I'd like to find out how important a number of things are to you in judging jobs in general; not just your job, but any job. For instance, how much difference does the pay make in how you rate a job, is pay -

3. Very important

2. Fairly important

1. Not particularly important

- 1. The pay
- 2. Fringe benefits
- 3. How interesting the work is
- 4. The supervisor
- 5. Your co-workers
- 6. How clean the job is
- 7. The hours you work
- 8. How tiring the job is
- 9. How highly people regard the job
- 10. Job security
- 11. The amount of freedom you have
- 12. The chance to meet people
- 13. Not being under too much pressure
- 14. The chance to get ahead
- 15. The chance to use your abilities

D31 All things considered, what is it about the job you like best ?

.....

D32 Now I would like to find out how satisfied you are in your job with those things you consider very important or fairly important. Would you say you are,

4. VERY SATISFIED
2. SOMEWHAT SATISFIED

3. FAIRLY SATISFIED
1. VERY DISSATISFIED

D33 What about the job, do you like least ?.....

D34 All things considered, how satisfied are you with your present job ?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Completely satisfied

Neutral

Completely dissatisfied

D35 If you were to get enough money to live as comfortably as you liked for the rest of your life, would you continue to work ?

1. YES

2. NO



APPENDIX 5.2Scaling Procedures and Indices1. Closeness of Supervision

	<u>Score</u>
If D16 = 4 and D17 = 3	1
If D16 = 4 and D17 = 1	2
If D16 = 1 or 3 and D17 = 2	1
If D16 = 1 or 3 and D17 = 3	2
If D16 = 1 or 3 and D17 = 1	3
If D16 = 1 and D17 = 2	2
If D18 = 1 or 2	0
If D18 = 3 or 4	1
If D22 = 1 or 3 or 4	0
2	1
D29 If item 13 more important	Score 1

Total Score = 1 to 6 (Not very close to very close)

2. Routinization

D80

1. Unit of work defined in terms of quantity of work

Yes, score 1 ; No = 0

2. Unit of work defined in terms of amount of work that can be done in a given amount of time

Yes, score 1 ; No = 0

3. Unit of work defined as a complete unit were something intrinsic to the work determines what is a unit

Yes, score 0 ; No = 1

D25

Score 2, 1, 0

Total Score, range 0 to 5 (not routine to very routine)

3. Job Pressure

D23

4. Substantive complexing of the work

1. Complexity of Work with people D12

1. Mentoring: Dealing with people in terms of their total personality in order to advise, council and guide with regard to problems that may be resolved by legal scientific, clinical or professional principles.

2. Negotiating: Exchanging ideas, information and opinion with others to formulate policies and programmes and/or arrive jointly at decisions, conclusions or solutions.
3. Instructing: Teaching subject matter to others, or training others through explanation, demonstration or supervisory practice, or making recommendations on the basis of technical discipline.
4. Supervising: Determining or interpreting work procedure for a group of workers, assigning specific duties to them, maintaining harmonious relations among them and promoting efficiency.
5. Diverting: Amusing others.
6. Speaking, Signalling: Talking with and/or signalling people to convey or exchange information, including giving assignment and directions to helpers and assistants.

5. Complexity of Work with Data D4

1. Synthesizing: Integrating analysis of data to discover facts and/or develop knowledge, concepts or interpretations. Conceiving new approaches to problems, discovering new facts and relationships.

2. Co-ordinating: Determining time, place and sequence of operations or actions to be taken on the basis of analysis of data, executing determinations and/or reporting on events.
  3. Analysing: Examine and evaluate data. Presenting actions in relation to the evaluation, eg: evaluating items for purchase, carrying out feasibility studies. Developing new tests and extending old ones.
  4. Compiling: Gathering, collating or classifying information. Reporting or carrying out prescribed action in relation to information. Applying routine standard tests to determine conformance to specifications eg: routine checking, drafting plans and blueprints.
  5. Computing: Performing arithmetic operations and reporting on and/or carrying out a prescribed action in relation to them. Does not involve counting.
  6. Copying: Transcribing, entering or posting data.
  7. Comparing: Judging the readily observable, functional, structure or compositional characteristics.
6. Complexity of Work with Hands D12
1. Setting Up: Adjusting machinery and equipment, to prepare them to perform another function.



2. Precision Working: Using tools or work aids to work, move, guide or place objects or materials in situations where ultimate responsibility for the attainment of standards occurs and selection of appropriate tools, objects or materials, and the adjustment of the tools required exercise of considerable judgement.
3. Operating-Controlling: Starting, stopping and controlling the actions of machines or equipment designed to fabricate and/or process objects or materials. Operating machines involves setting up the machine and adjusting the machine or material as the work progresses. Controlling equipment involves observing guages, dials, etc. and turning valves.
4. Driving - Operating: Starting, stopping and controlling the actions of machines for which a course must be steered, or which must be guided in order to fabricate, process and/or move things or people, eg: observing guages, estimating distances and determining speed.
5. Manipulating: Using body members, tools or special devices to work, move, guide or place objects or materials. Involves some latitude for judgement with regard to precision attained and selecting appropriate tool, object or material.
6. Tending: Starting, stopping and observing the functioning of machines and equipment. Involves adjusting materials

or controls of the machine, such as changing guides, adjusting timers and temperature guages, turning valves to allow flow of materials, and flipping switches in response to lights. Little judgement is involved in making these adjustments.

7. Feeding - Offbearing: Inserting, throwing, dumping or placing materials in or removing them from machines or equipment which are automatic or tended or operated by other workers. Repetitive, short duration work actions are usually paced by the machines.
  
8. Handling: Using body members, hand tools and/or special devices to work, move, or carry objects or materials. Involves little or no latitude for judgement with regard to attainment of standards or in selecting appropriate tool, object, or material. Examples include situations that involve a small number of special tools obvious as to purpose, such as a broom, a special purpose end wrench, a grass shears, go-no-go guages. Dimensional precision can vary from rough to fine, being built into the structure of the task(s).

## 7. Overall Complexity of the Job

1. Not at all complex. Altogether routine and takes no thought - individual can daydream and still perform his work satisfactorily.

2. Minimal thought. A certain degree of attention is required; for example, to keep from getting hands caught in machinery, to be certain to pick up the right pieces, to remember where something was put. But no planning, scheduling, calculating prolonged thought is required.
3. Simple measurements, scheduling of activities, or rudimentary planning may be required, but most of all considerations are readily apparent and predictable and not very many considerations are needed for any decision.
4. Problem-solving, involving relatively simple remedies for unforeseen circumstances and/or the application of some practical or technical knowledge (not theoretical, but the type known to an experienced practitioner of the trade) to a typical situation. Does not extend to very complex problems requiring much originality, theoretical knowledge, or foresight.
5. Problem-solving, involving the necessity of dealing with people or other relatively unpredictable or obstinate things-animals, for example, or fairly complex machines - where a moderate degree of empathy, insight, or ingenuity is needed to effect small to moderate changes in outcome. Routine selling and auto repairing would fit here.
6. Complex problem-solving, requiring a substantial but not an exceptional degree of insight, originality, or thought. This may involve many variables, but the relationships among the variables will not be extremely complex.

7. The setting up of a complex system of analysis and/or synthesis in which little is fixed beforehand, many variables are involved, their relationships are complex, and outcomes are hard to predict.



Work Importance (D29)(i) Extrinsic Characteristics

1. The pay
2. Fringe benefits
4. The supervisor
5. Your co-workers
6. How clean the job is
7. The hours you work
8. How tiring the job is
10. Job security
13. Not being under too much pressure

Mean inter item correlation ; rho = 0.12

(ii) Intrinsic Characteristics

3. How interesting the work is
9. How highly people regard the job
11. The amount of freedom you have
14. The chance to get ahead
15. The chance to use your abilities

Mean inter item correlation ; rho = 0.12

1. Not particularly important → 3. Very important

APPENDIX 6.1

QUESTIONNAIRE : THE JOB DIAGNOSTIC SURVEY AND

STUDY OF NEEDS.

LIVERPOOL UNIVERSITY

DEPT. OF PSYCHOLOGY

JOB DIAGNOSTIC SURVEY AND STUDY OF NEEDS.

The Job Diagnostic Survey was developed at Yale University to study jobs and how people react to them. The Study of Needs was developed at Liverpool University to consider peoples attitudes to areas of their life.

On the following pages you will find several different kinds of questions about your work and your life. Specific instructions are given at the start of each section. Please read them carefully.

The questions are designed to obtain your perceptions about your life and your reactions to it.

There are no trick questions. Your individual answers will be kept completely confidential, please answer each item as honestly and frankly as possible.

Thank you very much for your cooperation.

Lynda Gratton  
Dept. of Psychology  
Liverpool University  
Liverpool L69 3BX

SURVEY OF OCCUPATIONS

AGE	20 to 30	31 to 40	41 to 50	51 to 60	Over 60
-----	----------	----------	----------	----------	---------

(tick where applicable)

SEX	MALE	FEMALE
-----	------	--------

OCCUPATION (full description) .....

.....

EDUCATION

Age when left full time education

Under 14	
14 to 16	
17 to 18	
19 to 23	
Over 23	

JOB DIAGNOSTIC SURVEY

On the following pages you will find several kinds of questions about your job. Specific instructions are given at the start of each section.

Please read them carefully. It should take no more than 10 minutes to complete this section of the questionnaire.

The questions are designed to obtain your perceptions of your job and your reactions to it.



This part of the questionnaire asks you to describe your job as objectively as you can.

A sample question is given below.

A. To what extent does your job require you to work with mechanical equipment?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Very little; the job requires almost no contact with mechanical equipment.		Moderately				Very much; the job requires almost constant work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

1) To what extent does your job require you to work closely with other people (either "clients", or people in related jobs in your own organization).

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Very little; dealing with other people is not at all necessary in doing the job.		Moderately; some dealing with others is necessary.				Very much; dealing with other people is an absolutely essential & crucial part of doing the job.

2) How much autonomy is there in your job? That is, to what extent does your work permit you to decide on your own how to go about doing the work?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Very little; the job gives me almost no personal "say" about how & when the work is done.		Moderate autonomy; many things are standardized & not under my control, but I can make some decisions about the work.				Very much, the job gives me almost complete responsibility for deciding how & when the work is done.

3) To what extent does your work involve doing a "whole" & identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning & end? or is it only a small part of the overall piece of work which is finished by other people or automatic machines?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.		My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.				My job involves doing the whole piece of work from start to finish; the results of my activities are easily seen in the final product or service.

4) How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Very little, the		Moderate			Very much; the	
job requires me to		variety			job requires me	
do the same routine					to do many	
things over &					different things	
over again.					using a number	
					of different	
					skills & talents.	

5) In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Not very significant		Moderately			Highly significant	
the outcome of my work		significant			the outcomes of my	
are <u>not</u> likely to have					work can affect	
important affects on					other people in	
other people.					very important ways.	

6) To what extent do managers or co-workers let you know how well you are doing on your job?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Very little; people		Moderately;			Very much; managers	
almost never let me		sometimes people may			or co-workers provide	
know how well I am		give me "feed-back"			me with almost	
doing.		other times they			continual "feed-back"	
		may not.			about how well I	
					am doing.	

7) To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing - aside from any "feedback" co-workers or supervisors may provide?

1.....	2.....	3.....	4.....	5.....	6.....	7.....
Very little;		Moderately;			Very much; the	
the job		some times			job is set up	
itself is		doing the			so that I get	
set so I could		job .			almost constant	
work forever		provides			"feedback" as I	
without finding		"feedback"			work about how	
out how well		to me;			well I am doing.	
I am doing.		sometimes				
		it does not.				

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

- 1 The job requires me to use a number of complex or high level skills.
- 2 The job requires a lot of co-operative work with other people.
- 3 The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
- 4 Just doing the work required by the job provides many chances for me to figure out how well I am doing.
- 5 The job is quite simple and repetitive.
- 6 The job can be done adequately by a person working alone - without talking or checking with other people.
- 7 The supervisors & co-workers on this job almost never give me any "feedback" about how well I am doing on my job.
- 8 This job is one where a lot of other people can be affected by how well the work gets along.
- 9 The job denies me any chance to use my personal initiative or judgement in carrying out the work.
- 10 Supervisors often let me know how well I am performing a job.
- 11 The job provides me with the chance to completely finish the piece of work I begin.
- 12 The job itself provides very few clues about whether or not I am performing well.
- 13 The job provides me considerable opportunity for independence and freedom in how I do the work.
- 14 The job itself is not very significant or important in the broader scheme of things.



SECTION THREE

Now please indicate how you personally feel about the job

Each of the statements below is something that a person might say about his or her job. You are to indicate your own, personal feelings about your job by marking how much you agree or disagree with each of the statements.

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

- 1. My opinion of myself goes up when I do this job well.
- 2. Generally speaking, I am very satisfied with this job.
- 3. I feel a great sense of personal satisfaction when I do this job well.
- 4. I frequently think of quitting my job.
- 5. I feel bad and unhappy when I discover that I have performed poorly on this job.
- 6. I am generally satisfied with the kind of work I do in this job.
- 7. My own feelings generally are not affected much one way or the other by how well I do this job.



SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again write the appropriate number in the blank beside each statement.

How satisfied are you with this aspect of your job?

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

- 1. The amount of job security I have.
- 2. The amount of pay and fringe benefits I have.
- 3. The amount of personal growth & development I get in my job
- 4. The people I talk to and work with in my job.
- 5. The degree of respect & fair treatment I receive from by boss.
- 6. The feeling of worthwhile accomplishment I get from doing my job.
- 7. The chance to get to know other people while on the job.
- 8. The amount of support & guidance I receive from my supervisor.
- 9. The degree to which I am fairly paid for what I contribute to this organization.
- 10. The amount of independent thought & action I can exercise in my work.
- 11. How secure things look for me in this organization.
- 12. The chance to help other people while at work.
- 13. The amount of challenge in my job.
- 14. The overall quality of the supervision I receive in my work.

SECTION FIVE

Listed below are a number of characteristics which could be present in any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each one present in your job.

Using the scale below please indicate the degree to which you would like to have each characteristic present in your job.

NOTE: The numbers in this scale are different from those used in previous scales

- |       | 4  | 5 | 6 | 7                                   | 8 | 9 | 10  |
|-------|--|---|---|-------------------------------------|---|---|---|
|       | Would like<br>having this<br>only a moderate<br>amount (or less) |   |   | Would like having<br>this very much |   |   | Would like<br>having<br>this <u>extremely</u><br>much |
| ---1  | High respect and fair treatment from my supervisor               |   |   |                                     |   |   |   |
| ---2  | Stimulating and challenging work                                 |   |   |                                     |   |   |   |
| ---3  | Chances to exercise independent thought & action in my work      |   |   |                                     |   |   |   |
| ---4  | Great job security   |   |   |                                     |   |   |   |
| ---5  | Very friendly co-workers   |   |   |                                     |   |   |   |
| ---6  | Opportunities to learn new things from my work                   |   |   |                                     |   |   |   |
| ---7  | High salary and good fringe benefits                             |   |   |                                     |   |   |   |
| ---8  | Opportunities to be creative & imaginative in my work            |   |   |                                     |   |   |   |
| ---9  | Quick promotion  |   |   |                                     |   |   |   |
| ---10 | Opportunities for personal growth & development in my work       |   |   |                                     |   |   |   |
| ---11 | A sense of worthwhile accomplishment in my work                  |   |   |                                     |   |   |   |

STUDY OF NEEDS

We would like to find out the importance you assign to various parts of your life at the present time. For instance, how important is it to you that someone cares for you and is this more or less important than being respected. On the next page you will find 50 items representing parts of your life which you may or may not consider to be important to you.

On the right of these items are 5 columns.

Column 1

In Column 1, we would like you to mark with a tick the 10 items you consider to be MOST IMPORTANT to you in your life.

Column 2

In Column 2, mark from the remaining 40 items the 10 you consider to be VERY IMPORTANT to you in your life.

Column 3

In Column 3, mark from the remaining 30 items the 10 you consider to be QUITE IMPORTANT to you in your life.

Column 4

In Column 4, mark from the remaining 20 items the 10 you consider IMPORTANT to you in your life.

Column 5

In Column 5, mark the remaining 10 items which you will consider LEAST IMPORTANT.

REMEMBER TO ONLY PUT ONE TICK AGAINST EACH ITEM.

Need Items	Columns				
	1	2	3	4	5
**					
Having enough energy to do things					
Having a secure job					
Feeling someone cares for you					
Having autonomy					
The things one drinks					
Being spontaneous					
Being well thought of					
Knowing what will happen each day					
Being held in esteem					
Feeling someone needs you					
Feeling safe					
Having free will					
Having a good sex life					
Feeling part of a caring community					
Having confidence in one's abilities					
Knowing nothing unexpected will occur					
Having sympathy for others					
Having enough to drink					
Being warm enough					
Looking objectively at life					
Feeling confident					
Knowing you can rely on transport					
Being surrounded by friends					
Being of worth					
Having special relationships					
Feeling protected					
The food that you eat					
Having a freshness of perception					
Being respected					
Knowing your life is predicable					
Eating nutritious food					
Getting on well with your family					
Having an efficient perception of reality					
Having a sense of humour					
Getting enough sleep					
Knowing you are loved					
Being free from threat					
Knowing you can accomplish what you set out to achieve					
Experiencing mystical thoughts					
Having a good skin					
Knowing your parents love you					
Doing and seeing new things					
Having enough to eat					
Knowing you are capable of doing things well					
Having strong attachments to a home town team					
Having pride in what you achieve					
Having someone who is very close					
Having enough money					
Being able to predict what will happen					
Achieving something					

\*\* 1) Most Important    2) Very Important    3) Quite Important  
 4) Important            5) Least Important







APPENDIX 6.3Significance of the Difference between 2 correlationsCoefficients for Independent Groups. The Z Test.

Convert  $r_1$  and  $r_2$  to  $Z_r$ 's

$$z = \frac{z_{r1} - z_{r2}}{\sqrt{1/(N_1 - 3) + 1/(N_2 - 3)}}$$

Values > 1.96, significance level = 0.05

Values > 2.58, significance level = 0.01

APPENDIX 6.4Multiple Regressions: F and Multiple R Values1. Job Satisfaction

	<u>HNS</u>			<u>S.A.</u>		
	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>
Job Charac.	.12	.35	4.2**	.12	.35	4.2**
Job Charac. and Need	.14	.37	3.4**	.15	.39	3.8**
Job Charac. and Interaction	.21	.46	2.2**	.25	.50	2.7**

	<u>S.E.</u>			<u>HNS &amp; S.A.</u>		
	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>
Job Charac.	.12	.35	4.2*	.12	.35	4.2**
Job Charac. and Need	.12	.35	3.0**	.16	.40	3.4**
Job Charac. and Interaction	.16	.40	1.5	.27	.52	2.2**

2. Internal Work Motivation

	<u>HNS</u>			<u>S.A.</u>		
	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>
Job Charac.	.21	.45	7.9**	.21	.45	7.9**
Job Charac. and Need	.24	.49	6.9**	.22	.47	6.0**
Job Charac and Interaction	.29	.54	3.3**	.26	.51	2.9**

	<u>S.E.</u>			<u>HNS &amp; S.A.</u>		
	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>	<u>R<sup>2</sup></u>	<u>Multip.</u>	<u>R F</u>
Job Charac.	.21	.45	7.9**	.21	.45	7.9**
Job Charac. and Need	.28	.53	8.2**	.24	.49	6.9**
Job Charac. and Interaction	.31	.55	3.6**	.34	.58	3.0**

---

Significance of F Values: \* P < 0.05

\*\* P < 0.01



APPENDIX 6.5MATCHED GROUPS ANALYSES - MEANS AND VARIANCE (in brackets)

Divisions	U	-	UPPER
	M	-	MEDIUM
	L	-	LOWER
Characteristics	JS	-	JOB SATISFACTION
	IWM	-	INTERNAL WORK MOTIVATION
	TV	-	TASK VARIETY
	TI	-	TASK IDENTITY
	TS	-	TASK SIGNIFICANCE
	AU	-	AUTONOMY
	FEJ	-	FEEDBACK FROM THE JOB

	COMB			SA			SE			HNS		
	U	M	L	U	M	L	U	M	L	U	M	L
JS	12.4 (23.8)	14.1 (22.1)	16.1 (12.7)	13.8 (11.5)	14.8 (23.6)	15.3 (16.7)	13.2 (33.4)	13.6 (12.7)	13.7 (9.6)	14.0 (19.7)	14.05 (21.3)	15.9 (10.0)
IWM	21.8 (26.9)	22.0 (19.6)	21.9 (16.4)	22.1 (20.1)	24.2 (6.1)	21.7 (11.7)	24.5 (19.9)	22.3 (13.4)	21.0 (18.9)	16.0 (8.9)	17.0 (8.9)	16.8 (10.1)
TV	15.1 (18.4)	15.1 (18.4)	15.1 (18.4)	16.0 (7.4)	16.0 (7.4)	16.0 (7.4)	16.0 (24.2)	16.0 (24.2)	16.0 (24.2)	16.8 (8.9)	16.8 (8.9)	16.8 (8.9)
JS	13.4 (14.5)	14.4 (29.1)	15.7 (14.0)	13.4 (13.9)	13.8 (26.3)	15.5 (15.0)	13.2 (27.9)	16.6 (16.2)	14.1 (21.8)	13.3 (16.9)	13.2 (21.1)	15.1 (13.6)
IWM	22.7 (18.4)	21.4 (14.6)	20.7 (22.2)	22.0 (19.5)	22.5 (21.1)	21.5 (26.3)	23.2 (18.7)	14.9 (7.8)	20.0 (25.9)	21.8 (21.1)	22.5 (20.5)	21.3 (23.4)
TI	16.8 (11.4)	16.8 (11.4)	16.8 (11.4)	16.9 (16.2)	16.8 (16.2)	16.8 (16.2)	15.6 (25.1)	15.6 (25.1)	15.6 (25.1)	16.3 (18.4)	16.3 (18.4)	16.3 (18.4)
JS	12.9 (23.7)	14.0 (27.3)	15.6 (13.0)	13.5 (14.6)	13.4 (24.9)	15.0 (13.8)	13.9 (26.5)	14.0 (12.14)	14.2 (19.14)	14.0 (23.1)	14.4 (18.2)	15.5 (12.5)
IWM	15.1 (19.5)	22.1 (12.9)	21.1 (11.2)	21.9 (22.9)	20.6 (15.5)	21.1 (19.3)	20.3 (17.3)	21.1 (14.3)	24.3 (8.7)	22.6 (22.7)	22.4 (13.5)	20.7 (12.8)

	COMB			SA			SE			HNS		
	U	M	L	U	M	L	U	M	L	U	M	L
TS	15.1 (19.5)	15.1 (19.5)	15.1 (19.5)	15.0 (16.9)	15.0 (16.9)	15.0 (16.9)	16.1 (19.3)	16.1 (19.3)	16.1 (19.3)	16.6 (12.4)	16.6 (12.4)	16.6 (12.4)
JS	11.8 (18.0)	14.4 (22.2)	15.9 (13.0)	13.2 (15.0)	12.4 (26.6)	16.0 (21.4)	13.4 (22.5)	13.2 (15.3)	14.9 (18.4)	13.4 (20.9)	14.0 (16.3)	15.1 (12.5)
IWM	22.6 (22.0)	22.1 (14.3)	22.0 (12.6)	21.7 (27.7)	22.1 (15.5)	22.5 (16.6)	20.0 (20.4)	21.1 (14.5)	24.7 (9.5)	22.2 (28.2)	20.7 (9.7)	20.9 (20.2)
AU	17.3 (9.8)	17.3 (9.8)	17.3 (9.8)	16.8 (11.9)	16.8 (11.9)	16.8 (11.9)	16.7 (13.0)	16.7 (13.0)	16.7 (13.0)	17.7 (12.3)	17.7 (12.3)	17.7 (12.3)
JS	12.4 (15.0)	13.9 (28.5)	16.2 (8.7)	13.0 (10.9)	13.5 (22.8)	15.4 (11.3)	14.5 (24.5)	16.0 (15.9)	14.2 (22.0)	15.2 (10.2)	12.3 (20.4)	13.2 (32.6)
IWM	23.5 (16.0)	22.4 (16.9)	21.3 (16.1)	22.6 (23.5)	22.8 (10.8)	22.2 (19.9)	24.2 (10.4)	14.8 (11.8)	19.9 (26.2)	20.2 (22.7)	22.4 (10.9)	22.5 (31.7)
FEJ	14.7 (20.1)	14.7 (20.1)	14.7 (20.1)	15.4 (14.3)	15.4 (14.3)	15.4 (14.3)	15.8 (13.7)	21.8 (14.7)	15.8 (13.7)	15.1 (14.8)	15.1 (14.8)	15.1 (14.8)

APPENDIX 6.5 6

Significance of the differences between correlations of need importance (divided into upper, medium and lower groups) and job characteristics.



	COMB.			S.A.			S.E.			HNS'		
	U/M	U/L	M/L	U/M	U/L	M/L	U/M	U/L	M/L	U/M	U/L	M/L
	Internal Work Motivation											
TV	0.14	2.25*	2.10*	2.18*	0.07	2.20*	2.43*	1.00	1.16	3.40**	1.73	1.81
TI	1.97*	0.96	0.89	0.00	0.64	0.64	1.23	0.50	0.82	1.42	1.34	2.70**
TS	0.07	0.17	0.02	1.21	0.32	1.59	1.00	0.18	0.81	2.23*	1.23	1.0
AU	0.10	1.17	1.06	0.85	0.53	1.42	0.51	0.37	0.14	0.00	1.97*	1.97*
FEJ	0.97	0.96	0.92	1.66	0.85	0.71	0.50	1.26	0.76	0.37	1.48	1.0
	Job Satisfaction											
TV	1.21	1.46	0.26	0.82	-2.16*	1.15	2.30*	2.50*	-0.14	1.89	0.39	1.5
TI	2.88**	1.30	-0.50	-1.72	0.78	0.94	2.48*	0.21	2.72**	2.92**	2.37**	0.70
TS	0.38	0.03	0.42	1.36	0.66	0.72	0.00	1.23	1.23	2.0*	0.51	1.51
AU	0.30	1.01	0.77	2.50*	0.03	2.46*	0.32	0.29	0.03	1.9	1.16	0.69
FEJ	0.27	0.77	0.37	0.63	1.07	0.44	0.48	1.34	1.80	0.19	0.16	0.03

The Z Test : Significance of differences between the upper/medium upper/lower and medium/lower groups.

Values > 1.96 significance = 0.05 \*  
 > 2.58 significance = 0.01 \*\*

APPENDIX 7SUMMARY OF EACH THEMES RESULTS:NOTE

I    UM   =   Upper Median

          LQ   =   Upper Quartile

          LM   =   Lower Median

          LQ   =   Lower Quartile

APPENDIX 7.1THEME 1      THE MECHANICS OF THE MODELA. THE RELATIONSHIP BETWEEN NEED SATISFACTION AND NEED IMPORTANCE.

- (i) A negative relationship between satisfaction and importance.

: correlations between satisfaction and importance for each need:

Self Esteem	0.16	;	p < 0.05
Belonging	0.19	;	p < 0.05
Safety	-0.06	;	NS
Physiological	-0.11	;	NS

- (ii) Satisfaction with one need category positively correlated to importance of adjacent higher.

: correlates :

Physiology satisfaction / Safety importance	-0.02	NS
Safety satisfaction / Belonging importance	0.11	NS
Belonging satisfaction / Esteem importance	-0.06	NS
Esteem satisfaction / Self actualization importance.	0.13	NS

B. THE HIERARCHICAL POSITION OF THE NEEDS.

(i) Correlations between need importance

a) Overall need score

	1	2	3	4	5
1. SA		.20	-.32	-.48	-.44
2. SE			-.36	-.22	-.59
3. Belonging				-.06	.01
4. Safety					.01
5. Physiological					

b) Mean correlation between items

	1	2	3	4	5
1. SA	.17	.01	-.05	-.13	-.09
2. SE		.18	-.03	-.05	-.03
3. Belonging			.15	-.04	-.01
4. Safety				.20	.02
5. Physiological					.19

\*  $p < 0.05$

\*\*  $p < 0.01$



APPENDIX 7.2THEME 2.OPERATIONALIZATION(i) Reliability

Test - retest : Rank Agreement same ( $p < 0.001$ )

Internal consistency:

## a) Kuder Richardson, coefficient Alpha.

Self Actualization	0.67	; p < 0.01
Self Esteem	0.51	; p < 0.01
Belonging	0.39	; p < 0.05
Safety	0.53	; p < 0.01
Physiology	0.51	; p < 0.01

## b) Inter-item correlations

Self Actualization	0.17	; p < 0.01
Self Esteem	0.18	; p < 0.01
Belonging	0.15	; p < 0.01
Safety	0.20	; p < 0.01
Physiology	0.19	; p < 0.01

(ii) Validity - Are there five needs ?

a) Factor Analysis

Yeilds bipolar factors:

- |     |                             |
|-----|-----------------------------|
| I   | Safety / Self Actualization |
| II  | Safety                      |
| III | Physiology / Self Esteem    |
| IV  | Scattered                   |
| V   | Belonging                   |

Between 70% to 50% of items representative of a need category are grouped together in a factor.

(iii) Prepotency of Needs

Self Actualization	20%
Self Esteem	31%
Belonging	33%
Safety	6%
Physiology	9%

APPENDIX 7.3THEME 3      THE SYNDROMES OF BEHAVIOUR

(These are explained in some detail in chapter 1.2.2.)

Second set of figures e.g. .54, .38 indicates proportion of each category who cited the answer.

SELF ACTUALIZATION

1. Have satisfied their ambitions.  
(UM > LM ; .54, .38 ; p < 0.01)
2. Have had a fair opportunity to make the most of themselves.  
(UM > LM ; .66, .44 ; p < 0.01)
3. Describes childhood as very happy  
(UM > LM ; .43, .03 ; p < 0.01)
4. Have experienced upward social mobility  
(UM > LM ; .61, .30 ; p < 0.05)
5. Thinks its safe to walk alone at night  
(UM > LM ; .63, .37 ; p < 0.01)
6. Thinks Britain is getting worse because of attitudes  
towards minorities  
(UM > LM ; .13, .01 ; p < 0.05)
7. Thinks Britain is getting better because of developments  
in health care  
(UM > LM ; .19 , .06 ; p < 0.05)  
and increased liberalisation  
(UM > LM ; .17, .03 ; p < 0.05)
8. Have creative spare time activities  
(UM > LM ; .32, .13 ; p < 0.05)

9. Freedom as a source of job satisfaction  
(UQ > LQ ; .45, .13 : p < 0.05)  
Self actualization need importance correlates significantly  
with the following attributes :
10. Personal competence  
(0.19, p < 0.05)
11. Trust in people  
(0.32, p < 0.01)
12. Negatively with enjoyment of children  
(-0.31, p < 0.01)
13. Community attributes  
(0.17, p < 0.05)
14. Attitude to public officials  
(0.14, p < 0.05)
15. Length of education  
(0.39, p < 0.01)
16. Income  
(0.25, p < 0.05)
17. Occupation level  
(-0.39, p < 0.01)
18. Hours spent working with data  
(0.40, p < 0.01)  
Complexity of work with data  
(0.71, p < 0.01)
19. Complexity of work with people  
(0.60, p < 0.01)



20. Hours spent manually  
(-0.68,  $p < 0.01$ )  
Complexity of manual work  
(0.19,  $p < 0.01$ )
21. The overall complexity of the job  
(0.69,  $p < 0.01$ )
22. Degree of routinization  
(0.58,  $p < 0.01$ )
23. The degree of supervision  
(0.35,  $p < 0.01$ )
24. Task variety  
(0.26,  $p < 0.01$ )
25. Autonomy  
(0.25,  $p < 0.01$ )
26. Task identity  
(0.15,  $p < 0.05$ )
27. The importance of intrinsic job characteristics  
(0.28,  $p < 0.01$ )
28. The satisfaction of extrinsic job characteristics  
(0.31,  $p < 0.01$ )
29. The satisfaction of intrinsic job characteristics  
(0.26,  $p < 0.01$ )

(ii) Self Esteem

In the following attributes the upper median or quartile of the esteem need group differ significantly from the lower median or quartile.

1. Have satisfied their ambitions  
(UQ > LQ ; .61, .31 ; p < 0.01)
2. Have had a fair opportunity to make the most of themselves  
(UQ > LQ ; .68, .54 ; p < 0.05)
3. Thinks Britain is getting worse because of dropping values  
(UM > LM ; .21, .08, p > 0.05)
4. Interest as a source of job satisfaction  
(UQ > LQ ; .48, .18 ; p > 0.05)

Self esteem need importance correlates significantly with the following attributes ;

5. The general satisfaction with life (0.12, p < 0.05)
6. Personal competence (0.19, p < 0.05)
7. Trust in people (0.31, p < 0.01)
8. Community attributes (0.17, p < 0.05)
9. Number of people per room (-0.17, p < 0.05)
10. Attitude to public officials (0.26, p < 0.01)
11. Length of education (0.19, p < 0.05)
12. Occupation level (-0.15, p < 0.05)
13. Hours spent working with people (0.22, p < 0.01)
14. Hours spent manually (-0.26, p < 0.01)
15. Internal work motivation (0.32, p < 0.01)
16. The importance of intrinsic job characteristics (0.21, p < 0.01)

17. The satisfaction of extrinsic job characteristics  
(0.26,  $p < 0.01$ )
18. The satisfaction of intrinsic job characteristics  
(0.29,  $p < 0.01$ )

(iii) Belonging

In the following attributes the upper median or quartile of the belonging need group differ significantly from the lower median or quartile.

1. Thinks Britain is getting worse because of dropping values  
(UM < LM, .05, .21,  $p < 0.01$ )
2. The complexity of work with people  
(UM > LM, 5.1, 3.9,  $p < 0.05$ )
3. The importance of extrinsic job characteristics  
(UM > LM,  $p < 0.05$ )
4. The satisfaction of extrinsic job characteristics  
(UM < LM,  $p < 0.05$ )
5. Co-workers as a source of job satisfaction  
(UQ > LM ; .50, .32,  $p < 0.05$ ).
6. No sources of job satisfaction  
(UQ > LQ, .21, .00 ;  $p < 0.05$ )
7. Women have significantly greater belonging needs than men.
8. The 20 to 30 age group have significantly greater belonging needs.



(iv) Safety

In the following attributes the upper median or quartile of the safety need group differs significantly from the lower median or quartile.

1. The incidence of parental separation  
(UM > LM ; .25, .09 ; p < 0.05)
2. Thinks Britain is getting worse because of dropping values  
(UM < LM ; .05, .21 ; p < 0.05)
3. Thinks Britain is getting better because of increases in the standard of living  
(UM < LM ; .25, .51 ; p < 0.05)
4. Britain is getting better because of liberalisation  
(UM < LM ; .02, .14 ; p < 0.05)
5. There are no ways in which Britain is getting better  
(UM > LM ; .68, .31 ; p < 0.05)
6. Problems with health  
(UM > LM ; .43, .24 ; p < 0.05)
7. Streets not safe to walk alone at night  
(UM > LM ; 67 ; 42 ; p < 0.01)

Safety need importance correlates significantly with the following attributes

8. Trust in people  
(-0.19, p < 0.05)
9. The number of friends  
(-0.17, p < 0.05)
10. Problems with children  
(0.18, p < 0.05)

11. Enjoyment of children  
(0.38,  $p < 0.01$ )
12. Attitude to public officials  
(-0.17,  $p < 0.05$ )
13. Length of education  
(-0.27,  $p < 0.01$ )
14. Income  
(-0.18,  $p < 0.05$ )
15. Occupation level  
(0.23,  $p < 0.05$ )
16. Hours spent working with data  
(-0.23,  $p < 0.01$ )
17. Complexity of the work with data  
(-0.26,  $p < 0.01$ )
18. Hours spent working manually  
(0.20,  $p < 0.01$ )
19. Complexity of the work with people  
(0.22,  $p < 0.01$ )
20. Degree of routinization  
(-0.21,  $p < 0.01$ )
21. The importance of intrinsic job characteristics  
(-0.27,  $p < 0.01$ )
22. The satisfaction of extrinsic job characteristics  
(-0.23,  $p < 0.01$ )

(v) Physiology

In the following attributes the upper median or quartile of the physiological need group differs significantly from the lower median or quartile.

1. Have satisfied their ambitions  
(UM < LM ; .37, .52 ; p < 0.01)
2. Have had a fair opportunity  
(UQ < LQ ; .33, .66 ; p < 0.05)
3. Have not had a fair opportunity because of family commitments  
(UM > LM ; .27, .11 ; p < 0.05)
4. Britain is getting worse because of unemployment  
(UM > LM ; .41, .23 ; p < 0.05)
5. Has worries about money  
(UM > LM ; .70, .41 ; p < 0.01)
6. It is not safe to walk alone at night  
(UM > LM ; .63, .43 ; p < 0.01)

Physiological need importance correlates significantly with the following attributes:

7. Satisfaction with life in general  
(-0.16 ; p < 0.05)
8. Personal competence  
(-0.15 ; p < 0.05)
9. Trust in people  
(-0.34 ; p < 0.01)

10. Community attributes  
(-0.25 ;  $p < 0.01$ )
11. Number of people per room  
(0.17 ;  $p < 0.05$ )
12. Attitudes to public officials  
(-0.20 ;  $p < 0.05$ )
13. Length of education  
(-0.24 ;  $p < 0.05$ )
14. Occupation level  
(0.24 ;  $p < 0.05$ )
15. Hours spent working with data  
(-0.22 ;  $p < 0.01$ )
16. Complexity of work with data  
(-0.18 ;  $p < 0.01$ )
17. Hours spent working with people  
(-0.23 ;  $p < 0.01$ )
18. Complexity of work with people  
(-0.27 ;  $p < 0.01$ )
19. Hours spent working manually  
(0.39 ;  $p < 0.01$ )
20. Overall complexity of work  
(-0.25 ;  $p < 0.01$ )
21. Degree of routinization  
(-0.22 ;  $p < 0.01$ )
22. The importance of extrinsic job characteristics  
(-0.18 ;  $p < 0.05$ )



23. Satisfaction of extrinsic job characteristics

(-0.21 ;  $p < 0.01$ )

24. Satisfaction with intrinsic job characteristics

(-0.31 ;  $p < 0.01$ )

APPENDIX 7.4THEME 4NEEDS AND WORK(i) HNS and Self Actualization

## 1. Correlation:

Self Actualization and HNS	0.09 NS
Self Esteem and HNS	0.18 ; $p < 0.05$

## 2. Self Actualization and Importance of intrinsic work characteristics.

Correlation, with self actualization	0.28, $p < 0.01$
self esteem	0.21, $p < 0.01$

## 3. Self Actualization and Internal Work Motivation.

Correlation, with self actualization	0.08 NS
self esteem	0.32 ; $p < 0.01$
HNS	0.24 ; $p < 0.01$

## 4. Anomolies in Moderators

(ii) Need Importance and Work1. Variance in need importance explained by job characteristics.

	Overall	Major characteristic
Self Actualization	22%	- Complexity of data (18%)
Self Esteem	16%	- Complexity of work with people (7%)
Belonging	4%	
Safety	11%	- Complexity of work with people (7%)
Physiology	15%	- Hours worked manually (10%)

2. Needs as moderators in the relationship between job characteristics and work outcome.

a) Increment in explained variance by addition of needs as moderators (Moderated Regression Analyses)

Job Characteristics and Internal Work Motivation.

Self Actualization	0.05 ; NS
Self Esteem	0.03 ; NS
HNS	0.05 ; NS
SA + HNS	0.10 ; $p < 0.05$

Job Characteristics and General Job Satisfaction.

Self Actualization	0.10 ; $p < 0.05$
Self Esteem	0.04 ; NS
HNS	0.07 ; NS
SA + HNS	0.11 ; $p < 0.05$

b) Successful Moderators (Matched Group Correlations).

Cases when liner moderator with upper group highest correlation.

Job Characteristics and Internal Work Motivation.

Moderators:	Self Actualization	:	None
	Self Esteem	:	Feedback
	HNS	:	Feedback
	HNS + SA	:	Task Variety, Task Significance

Job Characteristics and General Job Satisfaction.

Moderators:	Self Actualization	:	Task Variety, Feedback.
	Self Esteem	:	None
	HNS	:	None
	HNS + SA	:	Task Variety, Autonomy.

c) Unsuccessful Moderators.

Cases were correlation in lower group greater than is higher.

Job Characteristics and Internal Work Motivation.

Moderators:	Self Actualization	:	Task Identity, Feedback.
	Self Esteem	:	None
	HNS	:	None
	HNS + SA	:	Feedback

Job Characteristics and General Job Satisfaction.

Moderators:	Self Actualization	:	Task Identity, Task Significance
	Self Esteem	:	Task Identity, Task Significance
	HNS	:	None
	HNS + SA	:	Feedback.



APPENDIX 7.5THEME 5SOCIAL CLASS AND NEED IMPORTANCE

- (i) When grouped by age, sex and social class factors resulting from cluster analyses reflect social class groupings.
- (ii) Significant differences in social class composition of all needs.
- (iii) Need preponency across social class.

Middle Class	37% Esteem, 42% Self Actualization
Working Class	41% Belonging, 38% Self Esteem
Lower Class	25% Physiological, 39% Belonging.

- (iv) Homogeneity of need importance within each social class (coefficient of concordance).

Middle Class	;	0.57 (p < 0.01)
Working Class	;	0.38 (p < 0.01)
Lower Class	;	0.31 (p < 0.01)

- (v) Correlations between Social Class and Need Importance

Initial Correlation		Controlling for:		
		Income	Education	Occupation
S.A.	-0.38	-0.33	-0.28	-0.17
S.E.	-0.22	-0.24	-0.18	-0.16
Belonging	0.04	-0.03	0.00	0.11
Safety	0.27	0.33	0.23	0.08
Physiol.	0.23	0.23	0.13	0.09
Correlations > 0.16 ; p < 0.05				
> 0.22 ; p < 0.01				

Table with rows labeled P1 to P25 and columns containing numerical data. A diagonal line is drawn from the top-left towards the bottom-right.

Table with rows labeled P26 to P35 and columns containing numerical data. A diagonal line is drawn from the top-left towards the bottom-right.

Table with rows labeled P36 to P45 and columns containing numerical data. A diagonal line is drawn from the top-left towards the bottom-right.