

https://dspace.org/

Personality traits and locus of control as predictors of work motivation

Rajan, Sandhya Puthanpurayil

2008-04-10T07:31:48Z
http://hdl.handle.net/10539/4751

Downloaded from a DSpace repository. https://dspace.org/

Introduction

Work motivation is a key concern in any organisation (Latham & Pinder, 2005). Previous research in the field of work motivation has highlighted the importance of personality constructs in the work motivation arena (Harris, Bolander, Lebrun, Docq & Bouvy, 2004; Kanfer & Heggestead, 1991; Kanfer & Ackerman, 2000). The importance of understanding the intricate relationship between personality and work motivation, lies in its potential in influencing the work motivation levels of employees in an organisational setting (Fisher, Katz, Miller & Thatcher, 2003). Understanding the relationship between personality traits and sources of work motivation (intrinsic or extrinsic) suggests a vast area of research, in the field of work motivation (Harris et al., 2004; Latham & Pinder, 2005; Tett & Burnett, 2003). Research into this relationship provides insight into influencing the work motivation levels of employees in an organisational setting, which ultimately impacts organisational productivity and success (Robbins, 1998).

The study began by exploring the work motivation construct and the different types of work motivation. Theories of work motivation were outlined, with an emphasis on content theories, focusing on needs or drives within the individual, particularly Maslow's (1943) Hierarchy of Needs model and Hertzberg's (1959) Motivator-Hygiene Theory. These early theories of work motivation were focused on as they form the foundation of research into the work motivation construct and play a key role in organisational psychology (Robbins, 1998). These theories could be linked to the type of motivation, extrinsic or intrinsic, with based on the understanding, that, need levels in an individual influences the type of

motivation that the individual is most susceptible to (Amabile, Hill, Hennessey & Tighe, 1994).

With a view to understanding the role that personality traits play in the area of work motivation, an exploration of the personality construct was then undertaken, with a look at the major theories surrounding this construct. The trait theories of personality were detailed with an emphasis on Cattell's theory. Cattell viewed personality as a study of all behaviour, including what is concrete and observable and what may only be inferred (Heffner, 2002). Cattell's theory seeks to understand personality using sixteen dimensions. Cattell's theory thus provided a significantly thorough breakdown of the personality construct, whereby each dimension could be explored and its relationship to the type of work motivation that the individual is most susceptible to, could be investigated.

The construct of locus of control has been connected with various phenomena in the area of work, such as a person's occupational success, performance and career (Liik & Laud, 2002). Previous research conducted on the locus of control construct has highlighted the role it plays in the work environment, including attitudes towards work (Duvdevany & Rimmerman, 1996; as cited in Strauser, Ketz & Kiem, 2002). It is the relationship between an individual's *work* personality and work motivation that is the specific focus of this research. As such, the research focused on *work* locus of control, as defined by Spector (1988) as the perceived control which an individual holds in the workplace, which is a key factor in the success of any task. This study investigated the relationship between locus of

control and work motivation, using Ryan and Deci's (1985) Self-Determination Theory (SDT).

Most work motivation theories, including the ones in this study, were developed in America or Western Europe and the cross-cultural validity thereof, has not been sufficiently researched (Fisher et al., 2003). Research conducted by Huang and Van de Vliert (2003) highlights the importance of the culture, socio-economic status and nationality of an individual, which determine the individual's value system and ultimately determine the needs that motivate the individual. This research also examined the trends that emerge, in the light of the demographics of age, race and field of work, of the sample used in this research, in terms of understanding the applicability of current theories of work motivation, in culturally diverse South Africa.

Chapter 1: Work motivation

Work motivation plays a key role in the field of organisational behaviour and personnel psychology (Kanfer & Heggestad, 1997). In any organisation, success is measured by performance and productivity (Fisher et al., 2003). As such, the attainment of these organisational goals are dependent on the effort and ability of its employees (Robbins, 1998). Motivating employees to exert effort and use their ability thus becomes a major focus in any organisation (Robbins, 1998).

In research, the work motivation construct has been researched in various forms, as an independent variable, a dependent variable, a moderator variable, a set of processes, a personal characteristic and a situational influencer (Kanfer & Heggestad, 1997). The importance of understanding this construct lies in its influence on various organisational phenomena, from organisational successes and failures, to different performances by employees in similar work settings (Kanfer & Heggestad, 1997).

The focus of this research was to investigate the association between personality traits and work motivation. To investigate this association, it was important to first gain a better understanding of the work motivation construct, starting with a definition of the construct, its evolution and the various theories defining and explaining aspects of the construct. In this chapter, content theories of work motivation are emphasised, while a short description is given on the process theories, with a view to using the content theories of Maslow and Hertzberg, as a basis for this research.

1.1 Work motivation defined

Work motivation can be described as a set of psychological processes that cause the energisation, direction and sustenance of behaviour (Steers & Porter, 1991). As such, the work motivation construct relates to behaviour demonstrated by an individual in a work-related setting (Robbins, 1998). Thus, this construct can be influenced by forces in the environment and by forces within the individual (Ambrose & Kulik, 1999). Work motivation is an abstract construct, which can be viewed differently, depending on the theoretical lens that is used (Pinder, 1998; as cited in Ambrose & Kulik, 1999). Using equity theory as a lens, work motivation is shown as a behavioural and attitudinal construct, which can be measured via satisfaction and performance. If viewed using goal-setting as the underlying theory, it can be seen as a behaviour, allowing performance to be its measure (Ambrose & Kulik, 1999). Research into the field of work motivation is predominantly "content" and "process" related. In order to understand these two angles of research, it is important to glance at the evolution of this construct in the field of research.

1.2 Previous research on the work motivation construct

Research in the field of work motivation started out by focusing on the motives and needs of employees (Ambrose & Kulik, 1999). As such, theories of work motivation that were developed initially, focused on needs as the driving force behind motivating employees' work behaviour (Robbins, 1998). Maslow's (1943, 1970) hierarchy of needs model, Alderfer's (1972) ERG theory, McClelland's (1961) learned needs and Hertzberg's motivation-hygiene theory, were some of the theories that formed the foundation of work

motivation theories (Robbins, 1998). These theories will be outlined further in this chapter, in section 1.4.

During the 1990's, the focus expanded to incorporate research on job characteristics, which motivate individuals, research on the need for achievement and research on the Protestant Work Ethic (Ambrose & Kulik, 1999). Examples of research conducted with these new foci in mind, are the use of Hertzberg's distinction of intrinsic and extrinsic factors in Maidani's (1991) research on a comparison of public sector and private sector employees' preference of job attributes which indicated that public sector employees placed more importance on extrinsic factors than private sector employees. Jurkiewicz and Massey (1997) also indicated similar findings in their research of public sector supervisory and non-supervisory employees. Gabris and Simo's (1995) research revealed that employees of non profit organisations displayed a lower need to compete and for autonomy and a higher need to serve the community (Ambrose & Kulik, 1999). Leviatan (1980) examined work motivation in non-United States of America (non-U.S.) contexts and discovered that older kibbutz workers were more motivated by characteristics in jobs which satisfied higher order needs rather than job characteristics which satisfied lower order, physical needs (Ambrose & Kulik, 1999).

Furthermore, early research with its limited focus on employee motives and needs provided much insight in the field of work motivation (Latham & Pinder, 2005). However, the research omitted to take into consideration personality and dispositional factors which are important influencers of work motivation (Ambrose & Kulik, 1999). Recent studies

(Kanfer & Heggested, 1997; Tett & Burnett, 2003) have focused on personality as the main determinant of work motivation. Harris's (1994) research revealed that students in different fields of study, have differing personality and cognitive styles and place importance on different needs. Research conducted by Barrick and Mount (1991) as cited in Kanfer and Ackerman (2000) revealed the importance of the construct of Conscientiousness, of the Five Factor model of personality, in differences in work motivation.

Recent research has also focused on the culture and nationality of the individual, when studying work motivation. In individualistic cultures, emphasis is placed on individual interest, self-reliance and self-motivation, indicating that individuals belonging to these cultures are motivated by intrinsic factors (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). In collectivistic cultures, the emphasis is on economic and social security, leading such individuals to be motivated more extrinsically (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). Thus, the study of work motivation has expanded to include more human factors – personality, age, occupational type, demographics and culture, shifting the focus from organisational needs to the personal needs and personality of the employee.

The different theories of work motivation explain this construct using different viewpoints. Thus it is important to firstly understand the various types of work motivation, before investigating the theories underpinning this construct.

1.3 Types of work motivation: intrinsic and extrinsic motivation

This research differs from prior research, which focused on personality constructs influencing work motivation levels, in that, it proposes to identify the trends of relationships that exist between personality traits (in conjunction) and types of work motivation (Latham & Pinder, 2005). In order to investigate this, it is vital to gain a better understanding of the different types of work motivation. Motivation differs not just in intensity or levels, but also in type or orientation. DeCharms (1968) differentiated between behaviour that is intrinsically motivated and behaviour that is extrinsically motivated (Amabile, Hill, Hennessey & Tighe, 1994). This difference in orientation is based on the underlying attitudes and goals that give impetus to the action (Ryan & Deci, 2000). A definition of work motivation which highlights the split into intrinsic and extrinsic types, which was the definition of choice for this research, is that work motivation can be defined as a combination of forces (intrinsic or extrinsic) that initiates behaviour in the workplace and determines the form, direction, intensity and duration of that behaviour (Fisher et al., 1998).

1.3.1 Intrinsic motivation

Intrinsic motivation can be defined as the motivation to perform a task, primarily for its own sake, for example, for interest, curiosity or enjoyment (Amabile et al., 1994). Intrinsic motivation was first discovered in a study on animal behaviour by White (1959), where it was noted that organisms explore, play and display curiosity even when there is no reinforcement or reward (Ryan & Deci, 2000). In humans, intrinsic motivation is a state that is present from birth, whereby one is born naturally curious, inquisitive and playful

(Ryan & Deci, 2000). This inherent motivational tendency plays an important part in one's cognitive, social and physical development and later on in performance, persistence and well-being in activities during the entire life span (Ryan & Deci, 2000). Intrinsic motivation can be said to exist within an individual as well as in the interaction between an individual and a specific task (Ryan & Deci, 2000). Operant theory (Skinner, 1953) views behaviour as being motivated by rewards. Thus intrinsic activity can be viewed as one in which the reward is the activity itself, a "labour-of-love" (Amabile, 1994). Ryan and Deci (2000) viewed intrinsic motivation as satisfying innate psychological needs of autonomy, competence and relatedness.

1.3.2 Extrinsic motivation

Extrinsic motivation can be defined as the motivation to perform a task primarily in response to something apart from the task itself, for example, for recognition or monetary rewards (Amabile et al., 1994). Most activities that individuals engage in are extrinsically motivated (Ryan & Deci, 2000). After early childhood, societal demands place pressure on individuals to engage in tasks that are not inherently interesting (Ryan & Deci, 2000). People then engage in these activities primarily to connect with significant others (family, peer-group, or society) (Ryan & Deci, 2000). In an organisational setting extrinsically motivated behaviours place importance on external rewards such as increased salary, material possessions, prestige, acknowledgment and positive feedback from others (Ambrose & Kulik, 1999).

1.4 Theories of work motivation

Work motivation theorists differentiate between content and process theories (Steers & Porter, 1991). Content theories of motivation focus on needs or drives within the individual, as primary influencers of work motivation (Steers & Porter, 1991). This, as mentioned in section 1.2, were the earlier fundamental theories of work motivation (Ambrose & Kulik, 1999). Process theories focus on the cognitive antecedents or leading events of work motivation (Steers & Porter, 1991). Research into the work motivation construct started out by focusing on the motives and needs of employees, as expanded on in section 1.2 (Ambrose & Kulik, 1999). In this research, the need theories of Maslow and Hertzberg have been focused on, in an attempt to explain and understand the personality correlates of work motivation, as they play an important role in the field of organisational psychology and form the foundation of research in the work motivation arena.

1.4.1 Need theories

1.4.1.1. Maslow's hierarchy of needs

Maslow's (1943, 1968) hierarchy of needs model, was the foundation for theories of work motivation (Robbins, 1998). Maslow hypothesised a five-level pyramid, starting with the most basic *physiological* need comprising of the requirements of food, water, shelter, sex and other bodily needs (Benson & Dundis, 2003). The next level consists of *safety* needs comprising of security and stability, including freedom from anxiety and stress. Then exists the level of *social* needs for friendship and social affiliation (Robbins, 1998). This level includes the need for belongingness, friendship and love (Benson & Dundis, 2003). The level of *esteem* needs which comprise of the requirement for self-respect and respect and

acknowledgement from others, including the need to feel competent, confident and self-assured, follows. The most sophisticated need is conceptualised as the need for self-actualisation, comprising of the requirement for the fulfillment of one's potential, to "be all that one can be" (Benson & Dundis, 2005; Robbins, 1998; Steers & Porter, 1991).

Maslow (1943) proposed that people progress up the hierarchy as lower needs are satisfied. Needs that are not yet met serve as motivators. The basic premise of Maslow's model is that unless an individual's basic needs are met, higher levels of need have no significance, as survival is the most basic human need (Benson & Dundis, 2003). Thus, motivation of an individual requires an understanding of the level of the hierarchy that the person is on and focusing on satisfaction of the needs at that level itself, or the level above it (Robbins, 1998).

Maslow classified needs into two separate categories. Lower order needs comprised of *physiological* and *safety* needs, which can be satisfied externally by incentives such as higher pay or a secure contract (Robbins, 1998). Higher order needs comprised of *social*, *esteem* and *self-actualisation* needs, which can be satisfied internally.

Maslow and various authors of management texts and books, such as Wilson, Dejoy, Vandenberg, Richard and McGarth (2004), modified the model to fit into the organisational setting in numerous ways (Benson & Dundis, 2003). The first basic need was defined as one of wages. Maslow proposed that if individuals deem that they are adequately paid, they will not spend time contemplating a perceived inequity of payment and will give attention

to other work matters (Maslow, 1970). Wages fulfill the basic survival needs of food, shelter, warmth and clothing (Benson & Dundis, 2003). The second need of safety is characterised by the need for physical and mental safety in the working environment (Maslow, 1970). This includes training provided by the organisation for its employees, as the employee equates training with safety (Maslow, 1970). The willingness of the organisation to invest resources in the employee's training is interpreted by the employee as being secure in the work environment (Benson & Dundis, 2003). The third level refers to social belongingness in the workplace environment (Maslow, 1970). Congenial working relationships with co-workers, subordinates and superiors is sought by individuals, in an attempt to "find their place" in the social hierarchy (Maslow, 1970). The need for esteem is translated to the need for self-esteem of employees (Benson & Dundis, 2003). This is based on the individual's successful performance appraisals and incentives, rewards and recognitions that are received in the workplace (Benson & Dundis, 2003). As the lower needs are satisfied, the individual moves towards self-actualisation, seeking to develop their potential, to gain new knowledge and take risks, gaining more confidence (Benson & Dundis, 2003). Maslow (1970, p. 25) posits that as an individual grows and progresses in the workplace "duty becomes pleasure and pleasure is merged with duty", suggesting a shift from extrinsic motivation to intrinsic motivation.

1.4.1.2. Hertzberg's motivator-hygiene theory

Hertzberg (1959) proposed two major types of needs, namely *motivator* and *hygiene* needs. Hertzberg described motivator needs as being very similar to Maslow's higher order need of self-actualisation (Furnham, Forde & Ferrari, 1998). He described motivator needs as

needs concerned with the nature of the work and the consequences of the work itself (Furnham et al., 1998). Hertzberg proposed that motivator needs were fulfilled by motivator factors such as achievement, recognition, the work itself, responsibility and advancement (Furnham et al., 1998). Hygiene needs are described as being related to the context of the work (Furnham, Petrides, Tsaousis, Pappas & Garrod, 2005). As such, hygiene factors include supervision, interpersonal relations, physical working conditions, salary, company policies, benefits and job security (Furnham et al., 1998). These were equated by Hertzberg to Maslow's lower order physiological, esteem and safety needs (Furnham et al., 2005).

1.4.1.3. Alderfer's ERG theory

Alderfer (1972) simplified and condensed Maslow's hierarchy to three basic needs, positing the ERG theory, identifying the needs of *growth, relatedness* and *existence*. *Existence* needs comprise of material requirements, which correspond to Maslow's physiological and safety needs (Robbins, 1998). The need for *relatedness* includes the demand for a relationship with others and the establishment of an identity, which corresponds with Maslow's social and esteem needs (Steers & Porter, 1991). The need for growth, which corresponds with Maslow's *self-actualisation* need, reflects the necessity for personal development and growth (Robbins, 1998). Maslow's proposition that a higher level need only becomes available when the lower level needs are met, is not recognised by Alderfer (Fisher et al., 2003). Alderfer suggested the frustration-regression hypothesis, stating that when individuals are frustrated in meeting of their higher level needs, a re-emergence of lower level needs occur (Steers & Porter, 1991).

1.4.1.4. McClelland's learned needs

McClelland's learned needs divides motivation into needs for *power* (to control and domination), *affiliation* (friendly and socialising) and *achievement* (pursuing and attaining goals) (Steers & Porter, 1991). The drive for *power* is demonstrated in people who enjoy competitive situations, where they can be in charge (Robbins, 1998). The drive here is for control over others and with status and prestige (Robbins, 1998). The need for *affiliation* leads individuals to seek cooperative situations, where the emphasis is on cordial, friendly relationships with others (Robbins, 1998). The drive for *achievement* comprises the striving to do some task better and more efficiently (Robbins, 1998).

McClelland suggests that it is the strength of a need that in turn determines the individual's motivation to behave in a manner such that that specific need is satisfied (Fisher et al., 2003). Thus, for example, the need for achievement can be linked to entrepreneurial behavious (Fisher et al., 2003). According to McClelland, the strength of the needs in an individual is not innate but is influenced by the environment (Fisher et al., 2003).

Needs theorists propose that requirements that are not yet met serve as work motivators in an individual. Thus, an individual who has unsatisfied physiological and safety needs, will be motivated by financial incentives, which will enable the individual to satisfy those needs (Huang & Van de Vliert, 2003). Such an individual can be expected to be extrinsically motivated. An individual who has a need for self-actualisation will seek out tasks which are seen as challenging and interesting, and which allow the individual to be creative and

innovative (Huang & Van de Vliert, 2003). Such an individual can be expected to be intrinsically motivated.

1.4.2 Process theories

Recent research on employee motivation has had a predominantly cognitive emphasis (Hodgkinson, 2003). Cognitive theorists posit that a mediating cognitive event separates the antecedent stimuli and the final behavioural response (Pate, 1978). In the area of work motivation, the intervening cognitive event is either expectancy, which focuses on end goals expected by an individual; or extraexpectancy, focusing on causal attributions and social comparisons together with expected end goals (Pate, 1978). For the purposes of this research, where the focus is on need theories, the following sections will briefly outline Adams' equity theory, Vroom's valence-instrumentality-expectancy model, and Deci and Ryan's cognitive evaluation theory.

1.4.2.1 Adams' equity theory

The foundation of cognitive theories of work motivation lie in equity theory (Adams, 1963, 1965) and expectancy theory (Porter & Lawler, 1968; Vroom, 1964; as cited in Hodgkinson, 2003). According to Adams' equity theory, individuals compare personal output/input ratios with those of significant others' (Pate, 1978). This comparison rests on their own perception of fairness. A perception of inequity leads to psychological tension in the individual, affecting motivation (Hodgkinson, 2003).

The potential actions that an individual who perceives some inequity will take, is either a behavioural or cognitive alteration of one's own inputs or outcomes or an alteration of the significant others' inputs or outcomes (Hodgkinson, 2003). It could also lead to a change of the significant other; or the individual will leave the situation (Hodgkinson, 2003).

1.4.2.2 Vroom's Valence-Instrumentality-Expectancy (VIE) model

Vroom's Valence-Instrumentality-Expectancy (VIE) model of work motivation posits that efforts are dependent on expectations of rewards (Griffin & Harrell, 1991). He posited the equation:

Motivation = Expectancy × Instrumentality × Valence (Vroom, 1964).

Vroom viewed *expectancy* as the probability of success as viewed by an individual; *instrumentality* as the connection of success and reward and *valency* as the value of obtaining that goal, as perceived by the individual (Huitt, 2001). Motivation is dependent on how positively or negatively the individual views the reward (Vroom, 1964; as cited in Lindner, 1995). Expectancy theory thus states that a certain behaviour depends on the expectation that that specific behaviour will be followed by a certain outcome, the attraction of that outcome to that individual is dependent on the individual (Robbins, 1998).

In the area of work motivation, *expectancy* can be influenced by ensuring that employees understand what is expected of them, in terms of work performance (Fisher et al., 2003). *Instrumentality* can be influenced by ensuring that employees understand the reward system and that rewards are dependent on work performance (Fisher et al., 2003). *Valency*

is influenced by understanding the employees' needs so that rewards that are offered will fulfil those needs (Fisher et al., 2003).

1.4.2.3 Deci and Ryan's cognitive evaluation theory (CET)

Deci and Ryan's (1985) cognitive evaluation theory (CET) posits that intrinsic motivation is dependent on the belief of control over the activity, feeling related to it and feeling good about oneself when one is engaged in that activity (Mandigo & Holt, 2000). This theory emphasises that an individual who perceives an event as being rigid, overly strict, with a threat of punishment, will label the event as controlling (Frederick-Recasino & Schuster-Smith, 2003). This results in a decrease in the individual's sense of autonomy, leading to a perception of an external locus of control, resulting in a low level of intrinsic motivation (Frederick-Recasino & Schuster-Smith, 2003). In events where there is a low level of external control, an individual feels more in control and autonomous, which enhances intrinsic motivation levels (Frederick-Recasino & Schuster-Smith, 2003).

1.4.3 Critique of work motivation theories

There are many discussions on the merits and criticisms of work motivation theories. A full discussion of this is beyond the scope of this study, hence only a couple of instances will be illustrated. Need based theories of work motivation explain why individuals act in a certain way, but do not explain why specific actions are chosen in specific situations to obtain specific results (Latham & Pinder, 2005). While research supports Maslow's postulation of five levels of need, they fail to support his postulation of the hierarchical arrangement of the needs (Griffin & Harrell, 1991).

Several criticisms exist against Deci and Ryan's cognitive evaluation theory. Firstly, the majority of the studies testing the CET theory were conducted in laboratory settings (Gagne & Deci, 2005). Hence the results cannot be fully generalised to organisational settings (Gagne & Deci, 2005). Most of the activities required in work settings are not intrinsically satisfying, hence the use of strategies to enhance intrinsic motivation, is not always practical in an organisational environment (Gagne & Deci, 2005). Contrary to Deci and Ryan's theory, since most people who work need to earn money, using monetary rewards as the primary incentive in a work setting, is found to be more practical (Gagne & Deci, 2005).

1.5 Age and work motivation

Previous studies have shown that age is linked to work motivation (Harris, 1994). Older people are found to be more intrinsically motivated choosing to work in and even change professions to find occupations that are interesting and personally fulfilling (Harris, 1994). Younger people, on the other hand, aim for financial incentives, due to their need for stability and security. This can be related to the changing socio-economic status of individuals as they mature. A further possible explanation is that younger people who are starting out on careers, seek financial stability, and are motivated by physiological, security and social needs, as represented in Maslow's hierarchy of needs. As they mature in age and become more secure in their careers and hence more financially secure, their physiological needs are satisfied and they are now motivated by the need for self-expression.

Inglehart (1997) explained this phenomenon by stating that in richer societies, individuals take survival needs for granted, such that values related to economic development are overruled by values related to the enhancement of self-expression (Huang & Van de Vliert, 2003). According to Maslow's hierarchy of needs, which postulates that as lower needs are satisfied, higher needs become salient, this trend suggests that people from the lower end of the socio-economic spectrum, who are younger in age, will be more motivated extrinsically, while people residing on the higher end of the socio-economic spectrum, who are older in age, will be more motivated intrinsically (Huang & Van de Vliert, 2003).

1.6 Race and work motivation

The values that workers attach to intrinsic and extrinsic job satisfaction are dependent on the race, culture and nationality of the individual (Clark, 1998; as cited in Huang & Van de Vliert, 2003). Culturally inherited traits, which are also largely dependent on the race of the individual, are seen as responsible for an emphasis on higher needs by certain individuals. Contrary to the supposition that this is so because their lower level needs have been gratified (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). In individualistic societies, which are characteristic of Western countries, such as America, there is a higher percentage of the Caucasian race.

In individualistic societies, individuals are more self-reliant and self-motivated and there is an emphasis on individual interests (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). Thus workers belonging to these societies place a greater significance on intrinsic

factors (Huang & Van de Vliert, 2003). Adigun and Stephenson (1992, as cited in Huang & Van de Vliert, 2003) found that British workers were more motivated intrinsically by factors such as achievement, the work itself and recognition.

In African countries, such as Nigeria, where there are a higher percentage of individuals belonging to the African race, it was found that they were more motivated extrinsically by factors such as pay fringe benefits and working conditions. Thus, it seems that in collectivistic societies, which are characteristic of African and Asian countries, there is an emphasis on economic and social security, leading workers belonging to this society to be more motivated extrinsically by factors such as economic security and social affiliation (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003).

1.7 Field of work and work motivation

Research conducted by Harris (1994) on the perceptions of engineering, nursing and psychology students' personalities showed that engineering students were high on cognitive structure and endurance, nursing students were high on nurturance and psychology students were in-between. Research by Tett, Jackson and Rothstein (1991) also indicated that certain personality traits are characteristic of certain occupations.

Using Maslow's hierarchy of needs as a background, and generalising from the research findings mentioned above, it can be assumed that individuals interested in analytical, scientific occupations may have a need for self-actualisation, and thus may be more likely to be motivated extrinsically. Individuals in humanitarian professions have unmet social

needs and are therefore more likely to be motivated extrinsically, leading them to choose those fields of study (Maslow, 1943). This could indicate, that, understanding the need level of an individual could play a role in understanding into which occupation an individual enters into.

The focus of the next chapter is personality, which will provide a detailed exploration of the personality construct, which is vital in investigating the role that personality traits play in the field of work motivation. This will be followed by a chapter detailing the link between personality traits and work motivation, which was the primary focus of this research.

Chapter 2: Personality

The study of personality has always been a central focus in psychological theory and research (Srivastava, 2006). Some theorists consider the study of personality to be the study of individual differences (Buss, 1989). Individuals differ in personality styles, just as they differ in terms of other psychological characteristics, such as intelligence and cognitive styles (Hampson & Colman, 1995). Different personality theories concern themselves with the study of different aspects of individual characteristics, in an attempt to understand how the different characteristics evolve and their impact on the life of an individual (Srivastava, 2006).

A broad definition of personality is "*internal properties of a person that leads to characteristic patterns of behaviour*" (Hampson & Colman, 1995, p. 2). This broad definition of the personality construct allows one to study it using various approaches. Personality theories can be grouped into four classes, namely the psychodynamic, trait, cognitive-behavioural, and humanistic theories (Peterson, 1992). Each approach reflects a different origin and tradition in the field of psychology (Hampson & Colman, 1995). Since the primary aim of this study was to investigate the association between personality traits and work motivation, for the purposes of this research, a brief description of the most influential approaches on the trait approach will be provided, while the trait approach will be focused upon.

In this study, the trait theory has been chosen as the basis for understanding personality, as it provides a detailed breakdown of the personality construct into various dimensions. Trait theory by its “de-constructing” nature allows a comprehensive view of the personality construct. This allows for an in-depth look at the various dimensions and their relationship to work motivation, which was the primary focus of this research.

2.1 Psychodynamic theory

In psychodynamic theories, "dynamic" refers to the continual changing of the energies that motivate and influence behaviour (Berzoff, Flanagan & Hertz, 1996). Psychodynamic theories, the main proponents of which were Sigmund Freud, Carl Jung, Erik Erikson and Melanie Klein, emphasise the influence of instinctive drives and forces, and the importance of developmental experiences in the formation of personality (Berzhoff et al., 1996).

Early psychodynamic theories focused mainly on the influence of unconscious drives and forces (Boeree, 2006). This emphasis on the unconscious received much criticism (Boeree, 2006). Latter psychodynamic theories placed a greater emphasis on conscious experience and its interaction with the unconscious, in addition to the role that social factors play in development (Berzoff et al., 1996).

Psychodynamic theories postulate that the study of human behaviour should focus on internal processes, personality, motivation and drives, and the importance of childhood experiences (Berzoff et al., 1996). Early theories about the role of the unconscious sexual

and aggressive drives have been re-evaluated to focus on conscious experience, resulting in, for example, the birth of ego psychology (Boeree, 1997).

Psychodynamic theory suggests that the basis for human personality lies largely hidden in the unconscious, and is the result of how a person negotiates conflicting, deep-rooted desires and instincts (Carver & Scheier, 2000). It also views the early years of development as making a critical contribution to the adult psyche, depending on how various psycho-sexual stages are resolved (Carver & Scheier, 2000).

2.2 Cognitive-behavioural theory

Cognitive-behaviourists study the thought processes that lead to behaviour and help to point out the “dysfunctional attitudes” and “irrational beliefs” that lead to bad behaviour or situations that may cause discomfort (Miller, 1995). Its origins are in behavioural theory, focusing on both classical conditioning and operant learning. Aspects of cognitive social learning theory are also a part of this theory, such that ideas concerning observational learning, the influence of modeling, and the role of cognitive expectancies in determining behaviour are inherent in this theory (Miller, 1995). Cognitive-behavioural theory also takes into account the ideas of cognitive theory, which focus on the thoughts, cognitive schema, beliefs, attitudes, and attributions that influence one's feelings and mediate the relationship between antecedents and behaviour (Miller, 1995). The limitations of cognitive behavior theory is the emphasis that it places on cognitive processes, in uncovering the best way to change internal dialogue and thinking therapy (Miller, 1995).

The cognitive perspective of personality is that people are who they are because of the way they think, including how information is attended to, perceived, analyzed, interpreted, encoded and retrieved (Carver & Scheier, 2000). Cognitive psychology proposes that individuals have habitual thinking patterns which are characterised as personality (Carver & Scheier, 2000). Personality is thus a composition of an individual's characteristic cognitive patterns (Carver & Scheier, 2000).

2.3 Humanistic theory

Humanistic theory arose out of Carl Rogers' opposition to the "dehumanising nature" of psychodynamic theory (Pervin & Oliver, 1997). The central tenet of humanistic psychology is the actualising tendency, which Rogers describes as the drive that leads individuals to engage in activities resulting in personal satisfaction and a contribution to society (Rogers, 1980). According to Rogers (1980), this tendency is inherent in every organism and can be defined as the motivation to develop one's potentials to the fullest extent.

In contrast to the pessimistic nature of psychodynamism, humanistic psychology is based on an optimistic view of human nature and the direction of people's movement is basically towards self-actualisation (Boeree, 1998). Humanistic theory states that a person's identity is formed through a series of personal experiences, which is a reflection of how the individual is perceived by both him or herself and the outside world - the *phenomenological field* (Boeree, 1998). Experiences of which individuals are unaware of are also stored in this phenomenological field, which thus contains both conscious and unconscious perceptions.

Rogers (1980) sees the self as primarily conscious. The most important determinants of behaviour are those that are conscious or are capable of becoming conscious. Roger argues against Freud's theory of the unconscious by stating that a notion of the self that includes a reference to the unconscious cannot be studied objectively as it cannot be directly known (Pervin & Oliver, 1997).

Rogerian personality theory distinguishes between the real self, which is created through the actualising tendency and is defined as the self that one can become, and the ideal self, which is created through the demands of society (Boeree, 1998). For an individual to be truly happy and to reach a state of self-actualisation, the public and hidden selves must be as similar or congruent as possible (Rogers, 1980). Rogers believed that when a state of harmony is reached between all aspects of a person's life, surroundings and thoughts, the ideal state of congruence is reached (Pervin & Oliver, 1997).

Criticisms arose against Rogers, labelling him a naive optimist and point out the violent history of humanity. However, Rogers defends his view by referring to the fact that his theory is based on more than twenty-five years of experience in psychotherapy (Pervin & Oliver, 1997).

2.4 Trait theory

Trait theorists such as Allport, Eysenck and Cattell view behaviour as being guided by underlying *traits* (Feist & Feist, 1998). *Traits* can be defined as relatively permanent characteristics of an individual, such as being outgoing, shy, friendly or confident (Srivastava, 2006). It is the characteristic way in which an individual perceives, behaves or

feels (Boeree, 2003). The identification, classification and understanding of these traits, forms the basis of their understanding of personality (Feist & Feist, 1998). Trait theorists differentiate between *traits* and *types*, defining *types* as temporary changes in one's personality, such as being angry, depressed or anxious (Srivastava, 2006). Thus types can be described as a person's reaction to something (Srivastava, 2006). Personality traits can be defined as *"intraindividual uniqueness in propensities to behave in indentifiable ways in light of situational demands"* (Tett & Gulerman, 2000; as cited in Tett & Burnett, 2003, p. 502).

The basic assumption underlying all trait theories is that behaviours and traits are linked to one another in hierarchical fashion (Ferguson, n.d). At the bottom of the hierarchy are specific behaviours (Ferguson, n.d). At the next level up are surface traits, each of which are linked directly to a set of related behaviours (Ferguson, n.d). At the highest level, linking related surface traits, are central traits, considered to be the fundamental dimensions of personality (Ferguson, n.d). This research will outline the theories of Allport and Eysenck, who were prominent trait theorists that influenced Cattell and will then focus on Cattell's trait theory, which is the basis of this research.

2.4.1. Gordon Allport

Gordon Allport (1867-1967) was one of the early trait theorists. One of the core principles of his theory was that human behaviour is motivated by *propriate functioning* (Boeree, 1998). *Propriate functioning*, he described, as the striving to function in a way so as to express the self (Boeree, 1998). Allport posited that as the proprium or the self develops, so

does one's *personal traits*. Preferring to use the term *personal dispositions*, he defined it as unique characteristics, which were concrete, easily recognisable and consistent, and which defined the person (Boeree, 1998).

Allport believed that a small number of specific traits predominate in every individual's personality (Srivastava, 2006). Labelling these *central traits*, Allport viewed these as being most closely linked to one's proprium, thereby being the building blocks of one's personality (Boeree, 1998). Allport argued that occasionally one of the central traits can become a dominant force, becoming a *cardinal trait* (Srivastava, 2006). Cardinal traits are so dominant that it influences every activity that the individual involves in, such that they define an individual's life (Allport, 1937). Allport theorised that central traits and cardinal traits are influenced by the environment. As the child develops, specific behaviours and interactions become part of the personality, such that they are functionally autonomous, no longer requiring the causative agent (Srivastava, 2006). Finally, Allport identified *secondary traits*, describing them as traits which are less conspicuous and less consistent, identified only by an individual's significant others (Allport, 1937). One's preferences, attitudes and traits are displayed in situations are all secondary (Boeree, 1998).

Allport's theory has been criticized as little research exists to establish the existence and utility of the trait concept (Boeree, 1998). Additionally, his theory fails to yield general, lawful psychological principles (Boeree, 1998).

2.4.2. Hans Eysenck

Hans Eysenck, a British psychologist, was the first person to provide a mathematical view to understand personality traits (Boeree, 2003). He saw traits as dimensions, using orthogonal factor analysis to uncover the most significant dimensions present in all individuals (Boeree, 2000). Eysenck argued that heredity was the prime determinant of individual difference in personality and that different physiological functioning were a result of individual differences in personality (Eysenck, 2004). Eysenck measured personality on the dimensions of *extroversion-introversion, neuroticism* and *psychoticism* (Eysenck, 2004).

On the *neuroticism* dimension a high score indicated a nervous, emotional person, while a low score indicated emotional stability (Boeree, 2003). In his research, Eysenck found that everyone in his sample, measured somewhere on this dimension of normality to neuroses, leading him to label neuroticism as a true temperament (Boeree, 1998). A true temperament, he defined as having a genetic basis and which is a physiologically-supported dimension of personality (Boeree, 1998). Linking the personality dimension of neuroticism to physiology, led him to study the sympathetic nervous system (Boeree, 1998). Eysenck hypothesized that the sympathetic nervous system is more responsive in some people, leading to sympathetic hyperactivity, making them more susceptible to nervous disorders (Boeree, 1998).

On the *extroversion-introversion* dimension, Eysenck interpreted a low score as being introverted, having traits of being cautious and unsociable and a high score as being extroverted, possessing sociable and impulsive traits (Eysenck, 2004). Linking this

personality dimension to physiology, Eysenck hypothesized that extraversion-introversion is a matter of the balance of “inhibition” and “excitation” in the brain itself (Boeree, 1998).

A high score on the *psychoticism* dimension indicated that the individual possessed a tendency to psychosis, a middle score indicated a bit of eccentricity, while a low score indicated normality (Boeree, 2003). Eysenck proposed that the kinds of qualities found in high psychoticistic people include a certain recklessness, a disregard for common sense or conventions, and a degree of inappropriate emotional expression (Boeree, 2003).

Research into Eysenck’s proposition about the links between physiology and personality has yielded mixed results. Eysenck’s claim that neuroticism was linked to activity levels in the visceral area was not supported by Boeree (2003). However, people who scored higher on neuroticism were found to be at a higher risk of dying of cancer and of coronary heart disease (Grossarth-Maticek & Eysenck, 1995).

Various criticisms have been aimed at Eysenck’s personality theory. It was originally developed from a small sample and this has led to an oversimplification (Boeree, 2003). The testing is based on self-reports, therefore being influenced by the test-taker’s mood during that period of time (Boeree, 2003).

2.4.3. Raymond Cattell

Raymond Cattell was another prominent trait theorist. As previously discussed, this was the personality theory of choice in this research. Cattell's starting point was Allport's and Odbert's (1936) work on personality, which identified over 18,000 words relevant to human

personality. By various processes of elimination, Cattell reduced this list to 16 source traits. Cattell's model of personality is a descriptive model which was created in an attempt to develop a common taxonomy of personality traits (Fehringer, n.d.). The goal of Cattell's research was to bridge the gap between language and personality, by identifying "personality relevant adjectives" in the natural language, which relate to specific traits (Fehringer, n.d., p.2). In order to increase generalisability, Cattell, in his research, included different age groups including adolescents, adults and children, from the United States, Britain, Australia, New Zealand, France, Italy, Germany, Mexico, Brazil, Argentina, India and Japan (Hall, Lindzey & Campell, 1998). Using psychometric testing he collected large amounts of data, which he then reduced into clusters of correlating items (McKenna, 2001).

Cattell aimed to delve deeper into the personality to learn how traits are organized and interlinked, thus leading to his differentiation between *source traits* and *surface traits* (Cattell, 1984). He began by studying *surface traits*, which he saw as the portions of personality that are visible (Cattell, 1965). He further believed that surface traits often appear in clusters, or groups. Some traits appeared together so often that they seemed to represent a single more basic trait. He called such underlying personality characteristics *source traits. Source traits* were seen as representing the underlying personality structure and became the basis for the 16 Personality Factor questionnaire (16PF) (Cattell, 1982). He viewed source traits as predicting surface traits, such that, each surface trait could be traced back to an underlying source trait and each source trait gives rise to one or several surface traits (Feist & Feist, 1998). Using a statistical technique called factor analysis to reduce surface traits to source traits, he developed a list of 16 underlying source traits he

considered the basic number necessary to describe an individual personality (Cattell, 1982). A diagrammatic representation of Cattell's theory is represented in Figure 1 on page 33.

Cattell believed that there were three major sources of data, which could provide the necessary information when researching personality traits (Fehringer, n.d.). Thus, he identified source traits through L data (life record), which included records of a person's behaviour in society, Q data (questionnaires), which allowed the person to assess their own behaviour and T data (objective tests), where a situation is created, where the subject is unaware of the personality trait that is being measured (Cattell, 1965, 1982).

Using these measures of observation he identified 35 primary traits, 23 of which are characteristic of normal personality and 12 characterise abnormal personality. The 16PF questionnaire (the questionnaire that was used in this study) yields Q data, defining, the basic, underlying personality of an individual, disregarding the environment in which one applies it or the manner in which one uses it (Feist & Feist, 1998).

Cattell also identified motivation traits underlying the dynamics of personality (Cattell, 1965). He viewed motivation as a complex phenomenon, and saw a network of motives, or a dynamic lattice, as guiding any attitude, which he viewed as a desire to act in response to a specific situation. Additionally, he viewed motivation as a subsidiation chain, such that some motives exist subsidiarily to others (Feist & Feist, 1998). Cattell in 1983 differentiated between *ergs*, which are innate drives or motives such as sex, curiosity and anger and *sems*, which are learned or acquired dynamic traits.

Cattell viewed personality as a study of all behaviour, including what is concrete and observable and what may only be inferred (Srivastava, 2006). He postulated that the meaning of small segments of behaviour could be fully understood only when seen within the framework of the entire functioning person.

Cattell was criticised for producing an overly simplistic model of personality. Using the argument that certain traits are important in understanding some people but irrelevant in the understanding of other people, his theory of personality traits is seen as being too rigid (Srivastava, 2006). Another criticism of his theory is the failure to replicate it, despite several attempts (Fehringer, n.d.). However, despite all these criticisms, Cattell's research contributed greatly to the field of personality psychology, leading the way to further investigation and discovery of the 'Big Five' dimensions of personality (Fehringer, n.d.).

2.4.4 Strengths and limitations of trait theories of personality

One of the biggest strengths of trait theories is that it is based on statistical data (Srivastava, 2006). Thus, the principles are derived from objective findings, not on subjectivity or the personal experiences of the theorist (Srivastava, 2006). The use of the scientific approach in identifying personality traits leads to a theory that is unbiased and more widely accepted (Eysenck, 2004). Trait theory has led to the development of a number of assessment instruments. Trait theories provide much insight into personality, interaction and beliefs about the self and the world that is held by an individual (Eysenck, 2004). This allows a comparison between people, to ascertain which traits lead to better performance in college, in relationships or in different careers (Eysenck, 2004). Thus, trait theories play an important role in personality, educational and organisational psychological research.

Trait theories, however, do not provide a good prediction of future behaviours (Srivastava, 2006). While concentrating on *traits*, it neglects to understand a person's *state*, which guides an individual's temporary way of interaction and dealing (Srivastava, 2006). Thus an individual who has traits of an introvert, being shy and reserved in most situations, could display gregarious and extroverted traits in the company of close friends (Srivastava, 2006). Trait theories do not provide an explanation of personality development, its reliance on statistics means that it concentrates just on the present behavioural traits of an individual, disregarding the past and the future (Srivastava, 2006). This lack of a personality development theory, leads to trait theories providing no explanation or guidance on the changing of personality traits (Srivastava, 2006). These gaps in the theory reduce the applicability of trait theories.

The following chapter will outline the link between personality and the field of work motivation. It will highlight the important role that personality traits play in the field of work motivation, which was the focus of this research.

Chapter 3: Personality and work motivation

The relationship between personality and work motivation has been the focus of much research. Amabile, Hill, Hennessey and Tighe (1994) and Pelletier, Fortier, Vallerand and Tuson (1995) state that much of the literature focuses on the relationship between intrinsic and extrinsic motivation and Hertzberg's motivator-hygiene distinction. Vallerand (1997) noted that more than 800 published literature focus on this relationship, emphasising the role of situational, contextual and global areas. Hertzberg's motivator-hygiene distinction can be linked to Maslow's (1943) hierarchy of needs theory (Furnham, Forde & Ferrari, 1998). Firstly, the importance of personality trait expression will be investigated. Thereafter, Maslow's hierarchy of needs model will be linked to Hertzberg's motivator-hygiene theory, before investigating the link between personality traits and work motivation, using Maslow and Hertzberg's theories.

3.1 Importance of personality trait expression

Studies in interpersonal approaches to personality have revealed that personality trait expression is such a fundamental part of human nature that, a failure in this process leads to anxiety (Bakan, 1966; Cote & Moskowitz, 1998; Wiggins & Trapnell, 1996; as cited in Tett & Burnett, 2003). Murray (1938) proposed that needs inspire behaviour such that the initiating circumstances are changed so that an end which is appealing to the individual, can be attained (Tett & Burnett, 2003).

These revelations holds an important implication for intrinsically motivated individuals, as it implies the possibility that such an individual will seek out and be motivated to perform tasks that provide opportunities for expressing their unique personality traits (Tett & Burnett, 2003). Extrinsically motivated individuals gain pleasure or displeasure from others' reactions to their trait expression (Tett & Burnett, 2003). They will view favourable trait expressions as those that are met with praise and tangible rewards, and will be motivated to repeat those tasks and avoid trait expressions that have elicited unfavourable responses from others (Tett & Burnett, 2003).

3.2 Linking Hertzerg's motivator-hygiene classification and Maslow's hierarchy of needs model to work motivation

Maslow's (1943, 1968) most basic *physiological* need comprising of the requirements of food and water, *safety* needs comprising of security and stability, *social* needs for friendship and social affiliation, *esteem* needs which comprise of the requirement for respect for oneself and respect and acknowledgement from others are related to Hertzberg's hygiene need. Hertzberg's hygiene need is influenced by the physical and psychological work environment, supervision, interpersonal relations, physical working conditions, salary, company policies, administrative practices, benefits and job security (Furnham et al., 1998).

Maslow's most sophisticated need, which he postulated as the need for *self-actualisation*, comprises of the requirement for the fulfilment of one's potential. This too can be related to

Hertzberg's motivator needs, which is the need for achievement, recognition, the work itself, responsibility and advancement (Furnham et al., 1998). Hertzberg himself described his motivator needs as being very similar to the higher-order needs in Maslow's (1954) hierarchy theory (Furnham et al., 1998). George and Jones (1997) stated that intrinsic work values, which are actually the end states desired by the individual, are dependent on the content of the work, while extrinsic work values are independent of work content. This suggests a link between the needs of the individual and the type of motivation that the individual is most susceptible to.

3.3 The relationship between work motivation and personality

Furnham et al. (1999) stated that extraverts are drawn to jobs that satisfy motivator needs while those scoring higher on the neuroticism scale are attracted towards jobs that satisfy hygiene factors. According to Cattell (1990), extraverts posses traits of being sociable, impulsive, warm, enthusiastic, bold and self-sufficient. Jobs that are enriching to the individual can be linked to Maslow's (1943) need for *self-actualisation*, which focuses on the fulfilment of one's potential. Thus, it seems that an individual who scores higher on the extraversion dimension would be motivated by the need for self-actualisation.

A neurotic individual falls under Cattell's (1984) factor of anxiety, displaying traits of being tense and anxious. Furnham et al. (1998) states that such an individual is motivated by hygiene factors. Since, Hertzberg's hygiene factors are linked to Maslow's (1943)

physiological, safety, and esteem needs, it seems that individuals scoring high on the neurotic dimension are motivated by physiological, safety, social and esteem needs.

Barrick and Mount (1993) state that conscientiousness is high in jobs requiring autonomy, while other researchers found that conscientiousness was significantly related to job performance. Conscientiousness falls under Cattell's (1984) factor of self-control, signifying traits of being self-exacting, hard working, persevering and responsible, conscientious and dominated by a sense of duty. It seems likely that a conscientious individual would be motivated to perform jobs requiring autonomy, which would allow them to display their capabilities and enrich themselves, fulfilling their need for self-actualisation.

Furnham et al.'s (2005) research found that extraversion and agreeableness were significant positive predictors of work relationships. Extraverts and individuals scoring high on agreeableness rated relationships with co-workers as important for feeling happy in the working environment. Agreeable individuals possess traits of being kind, tolerant, friendly and who seek satisfactory relationships with others. Both of these types of individuals fall under Cattell's factor of extraversion (Schrueger, 1992). The need for positive relationships with others is congruent with Maslow's social and esteem needs, indicating that such individuals would be strongly motivated by relationships in the working environment. Furnham et al. (2005) also found that neuroticism was a significant predictor of relationships at work, as individuals scoring high on this dimension believe they need support from others and are dependent on help from others.

A further research finding of Furnham et al.'s (2005) research was that extraversion, openness and conscientiousness were positively related to intrinsic factors, namely influence and advancement at work, while agreeableness was a negative predictor. This was explained by stating that agreeable individuals place importance on cooperativeness, rather than competitiveness, while a conscientious individual places importance on achievement striving, dutifulness and self-discipline. Such an individual is thorough, ambitious, industrious, enterprising, determined, confident and persistent (Furnham et al.., 2005).

Neuroticism and conscientiousness were found to be a take out significant positive predictors of extrinsic factors, namely financial and working conditions (Furnham et al., 1999; 2005). This was explained by stating that conscientious individuals place an emphasis on extrinsic work aspects which enable them to perform better at their jobs. Openness was a negative predictor, indicating that individuals possessing the traits of being creative, daring, original, liberal and insightful, rated financial and working conditions as being of low importance to them (Furnham et al., 2005).

3.4 Conclusion

Mitchell (1979, as cited in Latham & Pinder, 2005) stated that individual differences had little influence on work motivation. However, later researchers contradicted his findings (Barrick et al., 2001; as cited in Latham & Pinder, 2005). Michel and Daniels (2003; as

cited in Latham & Pinder, 2005) state that research into the role of personality is the fastest growing area in motivation research. Schmidt, Ones and Hunter (1992)'s research concluded that personality is the primary predictor of elements of motivation. Linking personality to need levels in individuals, and thereby to types of work motivation that they are most susceptible to, shows that personality traits play an important role in the area of work motivation. Further research is needed to understand how significant the various traits are in influencing and even predicting motivation of individuals in the workplace.

Chapter 4: Locus of Control and Work Motivation

The secondary aim of this study was to investigate the relationship between locus of control and work motivation. As such, this chapter focuses on the locus of control construct with a view to understanding this construct. Thereafter, its relationship to work motivation will be investigated.

4.1 Foundation of the Locus of Control (LOC) construct

The foundation of the Locus of Control construct lies in Julian B. Rotter's (1954) Social Learning Theory. The main principle behind Social Learning Theory is that personality represents an interaction between an individual and the environment (Mearns, 2004). According to Rotter, behaviour is understood by taking into account, both the individual, in terms of his or her life history of learning and experiences, and the environment, in terms of the stimuli that it affords (Mearns, 2004).

The four main components of social learning theory are *behaviour potential, expectancy, reinforcement value,* and *the psychological situation* (Rotter, 1954). *Behaviour potential,* he described as the likelihood of engaging in a particular behaviour, in a particular situation (Mearns, 2004). *Expectancy* was described as the subjective belief that a specific behaviour will lead to a specific outcome (Mearns, 2004). *Reinforcement value* referred to the desirability of a particular outcome, to the individual (Mearns, 2004). *The psychological situation,* was described by the individual's subjective understanding of the environment

(Mearns, 2004). Rotter (1966) believed that by understanding these components that one can predict behaviour.

Using this view of behaviour, Rotter (1954) postulated that personality is the interaction between a person and his or her environment. According to him, personality does not reside within an individual independent of the environment that the individual is in (Rotter, 1954). Thus, an individual's behaviours are not simple, reflex responses to the environment. Rotter stated the environment that an individual responds to or acts in is dependent on that particular individual's learning experiences and life history (Rotter, 1966). The stimuli that people respond to are shaped by their life experiences (Rotter, 1966). Thus different individuals might experience the same environment in very different ways (Rotter, 1966). Personality was seen by Rotter as a relatively stable set of potentials by which an individual responds to a situation (Mearns, 2004).

4.2 Locus of control – Internal vs. External

The Locus of Control (LOC) construct arose from Rotter's concept of generalised expectancies for control of reinforcement (Mearns, 2004). Locus of control refers to the belief held by an individual, as to whether a behaviour will lead to a rewarding outcome. Locus means "place" (Rotter, 1954). People with "Internal" (high General Expectancy) locus of control, were posited as believing that through their behaviour they can control the likelihood of receiving reinforcers (Rotter, 1954). People with "External" (low General Expectancy) locus of control, were believed to not see as much link between their behaviour and the likelihood of being rewarded (Rotter, 1954). Thus locus of control,

according to Rotter (1966) refers to people's self-beliefs about their ability to control events in their life (Strauser, Ketz & Keim, 2002). It refers to the individual's beliefs about how the likelihood of a particular behaviour leads to a specific reinforcement (Mearns, 2004).

According to Rotter (1966), as mentioned previously, the locus of control construct is a stable personality trait, which described the extent to which people attribute the control of events to themselves or to forces in the external environment. Rotter (1966) described locus of control as one's belief in oneself to control life events. Locus of control can be described as the perception of control that an individual holds. An individual with an internal locus of control believes that outcomes are a result of one's own behavioural or personal attributes (Marks, 1998, as cited in Strauser et al., 2002). An individual with an external locus of control perceives outcomes to not be related to own behaviour but to external forces beyond his control, such as luck, fate or power held by others (Marks, 1998 as cited in Strauser et al., 2002). Rotter (1966) viewed the locus of control construct as a continuum where an individual can be classified from very internal to very external. Rotter also created the Internal-External Locus of Control Scale to measure individual differences in this characteristic (Hock, 1995). The scale has been widely used, and research on Internal-External dimensions flourished in the 1970's (Hock, 1995). This dimension of internal versus external locus of control has come to be seen as a relatively stable dimension of personality (Hock, 1995).

4.3 Locus of control and organisational psychology

Perceived control is a key factor in the success of any task, and the construct of locus of control has been connected with various phenomena and areas of working life, such as a person's occupational success, performance and career (Liik & Laud, 2002). An individual's internal locus of control has been linked positively to innovative strategies in the workplace (Miller, Kets de Vries & Toulouse, 1982; Mueller & Thomas, 2001), financial performance (Govindrajan, 1889; Lee & Tsang, 2001) and organisational survival (Anderson, 1977; Boone, de Brander & Hellemans, 2000; as cited in Praag, Sluis & Witteloostjuin, 2004).

Research conducted by Andrisani and Nestel (1976), Praag et al., (2004) and Semeijn, Boone, van der Velden and van Witteloostjuin (2004) has revealed that employees with a higher internal locus of control out perform employees with a higher external locus of control in achievement-related domains such as career and education. Rotter's 1966 study revealed that internals prefer tasks with higher degree of complexity and which are more dependent on skills (Praag et al., 2004). Spector (2002) provided evidence on the impact of locus of control on an individual's psychological satisfaction and well-being at work. Spector (1987) suggested that internals attempt to exert more control in the workplace, in the areas of work flow, task accomplishments, operating procedures, work assignments, relationships with supervisors and subordinates, working conditions, goal-setting, work scheduling and organisational policy. Theron (1992) posited that internals perceive control as leading to desired outcomes and rewards. Robbins in 1998 suggested that internals

experience more job satisfaction, have lower absenteeism rates, are more social in the work setting and more involved in their jobs, than externals (Pretorius, 2004).

A person with an internal locus of control believes that personal abilities lead to positive outcomes, which then increases their motivation to work and succeed (Wise, 1999). It is suggested that individuals with a higher internal locus of control perform better in the workplace because their positive control expectancies are associated with a lower vulnerability to stress (Anderson, 1977), a larger capability of learning (Boone, Brabander, Carree, Jong, Olffen & Witteloostuijn, 2002) a higher capacity to process information (Lefcourt, 1982) and a greater tendency to be proactive, in the workplace (Miller & Toulouse, 1986; as cited in Praag et al., 2004).

A person with an external locus of control does not believe that his or her own actions have an influence on future outcomes, leading to motivational, emotional and cognitive deficits (Wise, 1999). Rotter's 1966 study, as well as Spector's 1987 study on the locus of control construct revealed that externals prefer well structure, i.e. routine tasks. Theron (1992) posited that externals are more conforming and compliant, making them easier to supervise, than internals, in the workplace. A study conducted by Liik and Laud (2002) on the styles of leadership and work locus of control found internal locus of control to be more strongly related with the intrinsic (r =.55 p<.001) than extrinsic job satisfaction (r =. 40 p<.001). Since the type of locus of control is related to the type of job satisfaction, and type of job satisfaction is based on what motivates the individual, the relationship between locus of control and type of motivation, is an important area for research. Thus, it can be seen

that the locus of control construct plays an important role in various aspects of the working environment, such as in influencing performance dimensions, performance incentives and participation in tasks, motivating employees, as well as the attitudes of employees. This research focused on the relationship between locus of control and work motivation, more specifically intrinsic and extrinsic motivation.

4.4 Locus of control and work motivation

The locus of control construct has been linked to intrinsic motivation by Ryan and Deci (2000) as cited in Harris, Bolander, Lebrun, Docq and Bouvy (2004). An internal locus of control attribution is a sign that the individual has internalised the reasons of his actions: the 'why' of his actions are situated in his own needs (Harris et al., 2004). An internal locus of control attribution for a given task means that the subject has either an intrinsic motivation or an internalised extrinsic motivation (Harris et al., 2004). Ryan and Deci in 1985 posited that feelings of competency in a task, resulting from interpersonal events and structures such as rewards or feedback, enhances intrinsic motivation, because it satisfies the psychological need for competence (Harris et al., 2004).

Ryan and Deci (1985) proposed the Self-Determination Theory (SDT) and Cognitive Evaluation Theory (CET), which is a sub-theory within SDT, to explain how external motivators can potentially affect intrinsic motivation and performance. Using CET as a background, Deci and Ryan (1985) argued that offering extrinsic rewards for tasks that are intrinsically motivating could result in a decrease likelihood of the rewarded behaviour occurring in the future. According to Ryan and Deci (1985) self-determination is related to

the feeling of choice and the belief that an individual has control over his or her own actions. Self-determination, which is the most important factor in intrinsically motivated behaviour, occurs mostly when the locus of control over the outcomes is perceived as internal. Research on this proposition has yielded mixed results (Robbins, 1998). However this theory holds significance in the workplace where traditional employee benefits such as increased pay, which was previously believed to act as an incentive, could actually lower intrinsic motivation, thereby lowering employee motivation levels (Robbins, 1998).

4.5 Locus of control in South Africa

Culture can be described as the underlying system of values specific to a particular group or society, which moulds the development of certain personality traits (Mueller & Thomas, 2001). This then motivates individuals belonging to a particular society to display certain behaviours, not displayed in other societies. In an effort to measure cultural differences between countries in values, beliefs and work rates, Hofstede (1980) posited five dimensions. The focus is on the association between the cultural dimension of individualism and psychological traits. In individualistic societies, social ties are loose and the emphasis is on personal initiative and achievement. In collectivistic cultures, there is an emphasis on group membership (Mueller & Thomas, 2001). An internal locus of control orientation is seen to be dominant in individualistic cultures rather than in collectivistic cultures. Reitz and Groff in 1974 found in their study that workers in the United states were more internal than Mexican workers on Rotter's leadership/success subscale and more internal than Japanese and Thai workers on the respect, politics and luck/fate subscales (Mueller & Thomas, 2001).

In South Africa, the collectivistic nature of the African tradition, seems to indicate that Black South Africans would have a greater external locus of control in comparison to Caucasian South Africans. However, studies conducted by Moodley, Rajab and Ramkissoon (1979) found no significant difference in the LOC construct between Black and Caucasian South Africans. Riordin (1981) found no difference in the LOC construct between liberal English speaking students and Black students, but found conservative, Afrikaans speaking White students to be more internal than Black students and liberal English speaking Caucasian students. The changing political situation since 1994, has also led to changes in the social climate in South Africa. Increased opportunities for better education and career prospects, has led many Black South African individuals to attain success through their own efforts, thus increasing the perception of control over their own outcomes (Kischner, 2003). These changes to perceived control, impacts the self-belief of an individual, possibly leading to a significant impact on the locus of control construct.

Conclusion

Work motivation with its link to employee behaviour, plays an important role in the area of organisational psychology (Robbins, 1998). In this study, the work motivation construct was viewed using a variety of theories – content and process. This allowed a comprehensive understanding of the work motivation construct, particularly of the various theories that explained its distinction into intrinsic and extrinsic types of work motivation. As mentioned earlier, an emphasis was placed on content theories, which form the foundation of work motivation theories and which have been used extensively in organisational psychology, where needs and drives within the individual are linked to the type of work motivation that the individual responds to.

Personality was viewed from various angles, starting with psychodynamic theory, humanistic theory, cognitive-behavioural theory and lastly, trait theory. These main approaches to personality indicated how personality is viewed differently, using different approaches. The trait theory of personality provided the comprehensive breakdown of the personality construct, as viewed in this study. Since the primary focus of this research was to investigate the relationship between personality traits and work motivation, the trait theory was focused on. Cattell's trait theory provided a comprehensive breakdown of the personality construct, thus allowing a detailed investigation into the link between various personality traits and intrinsic and extrinsic motivation, which was the primary focus of this research.

Thereafter, an investigation into the locus of control construct and its relationship to work motivation was undertaken using self-determination theory, which was the secondary focus of this study. Lastly, the demographics of age, field of work and race were also investigated, with regards to their role in the field of work motivation.

Chapter 5: Methods

5.1 Rationale

The importance of understanding the intricate relationship between personality and work motivation, lies in its potential in influencing the work motivation levels of employees in an organisational setting (Fisher et al., 2003). Viewing motivation as a state that is influenced by an individual's personality, suggests a vast, largely untapped research area (Latham & Pinder, 2005). Research into this area can potentially provide revealing insights into increasing employee work motivation, thereby increasing employee job satisfaction and ultimately increasing organisational productivity (Latham & Pinder, 2005). By shedding light on the personality traits that are related to specific types of work motivation, organisations can use the assessment of these personality traits as a potential decision-making tool when hiring employees (Fisher et al., 2003). This would ensure a better personality-environment fit, ensuring better job satisfaction and eventually increasing organisational productivity and organisational success.

Previous studies on work motivation have signified the importance of personality constructs in the field of work motivation. Research conducted by Kanfer and Heggestead (1991) as cited in Kanfer and Ackerman (2000) on the relationship between the Motivational Trait Questionnaire (MTQ) and various personality measures indicated the validity for trait clusters of Personal Mastery, Competitive Excellence and Anxiety. Barrick and Mount's (1991) as cited in Kanfer and Ackerman (2000) research revealed the importance of the construct of Conscientiousness, of the Five Factor model of personality,

in differences in work motivation. Social personality researchers emphasise differences in goals as important in impacting work motivation (Kanfer & Ackerman, 2000). This research differs from prior research, in that, it proposes to identify the trends of relationships that exist between personality traits (in conjunction) and work motivation.

Previous research has focused on different personality inventories, based on different underlying theories (Harris, Bolander, Lebrun, Docq & Bouvy, 2004; Kanfer & Ackerman, 2000; Kanfer & Heggestead, 1991). This research also differed from prior research in terms of the instrument that was used to measure the personality construct, as the 16PF questionnaire, which is based on Cattell's theory, was used. The Five Factor Model (FFM) provides the most parsimonius representation of the dimensions of personality (Kanfer & Ackerman, 2002). Thus, it is not the most optimal structure for the evaluation of individual differences in motivational trends (Kanfer & Ackerman, 2002). There is considerable overlap between the FFM and other measures of personality, such as Eysenck's Psychoticism-Extraversion-Neuroticism (PEN) model, which recognises the traits of Psychoticism, Extraversion and Neuroticism and Cattell's Sixteen Personality Factors (16PF) (Popkins, 1998). Cattell's 16PF yields sixteen primary traits which provide a comprehensive understanding of an individual's personality (HSRC, 1995). As such, this instrument yielded dimensions of personality at a more fundamental level that the FFM which provides a condensed measure of personality dimensions (Popkins, 1998). For the purposes of this research which sought to uncover the relationship between personality traits and work motivation type, the 16PF was chosen as it is believed to provide the best possible comprehensive examination of dimensions of personality.

Additionally, previous studies in the work motivation area have focused on personality constructs influencing work motivation levels (Harris et al., 2004). This study differs from earlier studies, in that, the association between certain personality traits and intrinsic and extrinsic motivation were investigated. On the basis of the findings obtained, possible predictions of motivational sources (intrinsic or extrinsic) was attempted by the presence or absence of specific personality traits, in individuals.

In multilingual, multiracial South Africa, the area of work motivation is still largely supported by theories which were originally derived from a Western perspective (Fisher et al., 2003). Most work motivation theories were developed in America or Western Europe and the cross-cultural validity thereof, has not been sufficiently researched (Fisher et al., 2003). Research conducted by Huang and Van de Vliert (2003) highlights the importance of the culture, socio-economic status and nationality of an individual, which determine the individual's value system and ultimately determines the needs that motivate the individual. This research also investigated the trends that emerged, in the light of the demographics of the sample used in this research, in order to understand the applicability of current theories of work motivation, in culturally diverse South Africa.

Locus of control can be described as the perception of control that an individual holds (Ketz & Kiem, 2002). An individual with an internal locus of control believes that outcomes are a result of one's own behavioural or personal attributes (Marks, 1998 as cited in Strauser et al., 2002). In the field of work, locus of control plays a key role in

occupational performance and success (Liik & Laud, 2002). Research conducted on the locus of control construct has highlighted the role it plays in attitudes towards work (Duvdevany & Rimmerman, 1996; as cited in Strauser, Ketz Kiem, 2002). It is the relationship between an individual's work personality and work motivation that is the specific focus of this research. As such, the research focuses on *work* locus of control, as defined by Spector (1988) as the perceived control which an individual holds in the workplace, which is a key factor in the success of any task. The construct of *work* locus of control has been connected with various phenomena and areas of working life, such as a person's occupational success, performance and career (Liik & Laud, 2002; Strauser et al., 2002). A person with an external work locus of control does not believe that his or her own actions have an influence on future outcomes, leading to motivational, emotional and cognitive deficits (Wise, 1999). A person with an internal work locus of control believes that personal abilities lead to positive outcomes, which then increases their motivation to work and succeed (Wise, 1999).

5.2 Research aims

5.2.1 Primary aim:

The primary aim of this study was to determine which personality traits, as measured by Cattel's Sixteen Personality Factor questionnaire (16PF), are associated with intrinsic and extrinsic motivation (as measured by the Work Preference Inventory).

5.2.2 Secondary aims:

The study also investigated the relationship between locus of control and source of work motivation (intrinsic or extrinsic). The study further investigated the association between the demographic variables of race, field of work and age with source of work motivation, respectively.

5.3 Research questions

5.3.1 Primary research questions

Is there an association between personality traits and intrinsic motivation?

Is there an association between personality traits and extrinsic motivation?

5.3.2 Secondary research questions

What is the relationship between locus of control and work motivation?

Does race have an association with source of work motivation?

Does age have an association with source of work motivation?

Does field of work have an association with source of work motivation?

5.4 Research hypotheses

5.4.1 Primary research hypotheses

A. There is an association between specific personality traits, as measured by the 16PF, and intrinsic work motivation, as measured by the WPI.

B. There is an association between specific personality traits, as measured by the 16PF, and extrinsic work motivation, as measured by the WPI.

5.4.2 Secondary research hypotheses

C. There is a relationship between locus of control, as measured by the WLC, and source of work motivation (intrinsic or extrinsic), as measured by the WPI.

D. Race does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI.

E. Age does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI.

F. Field of work does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI.

5.5 Research design

The design of this research was quantitative, non-experimental, cross-sectional and correlational (Rosenthal & Rosnow, 1996). Quantitative questionnaires were administered to participants whereby the relationships between certain variables were investigated. There was no manipulation of variables, an absence of a control group, and no random assignment, leading this to be a non-experimental, correlational study (Rosenthal & Rosnow, 1991). Since several questionnaires were administered once-off to the participants, at various stages of life, this is a cross-sectional design (Rosenthal & Rosnow, 1991). Due to the nature of the study, the design is convenient but poses limitations when establishing causality (Rosenthal & Rosnow, 1991).

5.6 Sample

Individuals from various fields, engaged in full-time work, were the sample for this research. As such, for the purpose of convenience, lecturers and administration staff, at different faculties at the University of the Witwatersrand were asked to participate in this study. Furthermore, individuals in different fields of work, outside of the University, also participated in this research. Thus, a non-probability, convenience sampling method was used (Rosenthal & Rosnow, 1991). Since random sampling was not used, there is a possibility of bias as only the participants approached would have the option of participating in the study, and the possibility of being approached was based on the researcher's resources, such as availability of time and access to the various faculties (Rosenthal & Rosnow, 1991). However, since the resulting sample consisted of a relatively heterogenous group of participants, the generalisability of the study has not been compromised severally.

A sample of 61 individuals between the ages of 18 and 65 years was obtained, as can be seen from Table 1 below ($\bar{M}$= 35.5 years, SD = 9.9). A more detailed description of the demographic variables of field of work, race and gender, as well as the frequencies for each of these, is provided in the following chapter, in section 6.2.

Table 1: Descriptive Statistics for Demographic Variable of Age

	N	Minimum	Maximum	Mean	Standard Deviation
Age	61	18	64	35.49	9.90

5.7 Instruments

A questionnaire which consisted of a cover letter, containing information about the nature of the research, procedure and instructions; a demographics section; the 16PF questionnaire; Spector's Work Locus of Control questionnaire and the Work Preference Inventory questionnaire was given to participants to respond to (a copy of these instruments can be found in Appendix A).

5.7.1 Demographics

This section asked participants' age, race, sex and faculty / field of work. The questions were forced-choice or open-ended. Where it was forced-choice, the participant was requested to choose a response from a specific response set. The item asking for the participant's age was open-ended.

5.7.2 Sixteen personality factor (16 PF- SA 92) questionnaire

The South African 1992 version of the 16 PF- SA 92 was used to provide detailed information on 16 primary personality traits (HSRC, 1995). The 16 PF- SA 92 is a self-report questionnaire, based on Cattell's theory and it provides a quantitative profile of an

individual's personality traits (Feist & Feist, 1998). Cattell used factor analysis to uncover sixteen primary traits, which provides a comprehensive understanding of an individual's personality (HSRC, 1995). These 16 factors are Warmth, Reasoning, Emotional Stability, Dominance, Liveliness, Rule-Consciousness, Social Boldness, Sensitivity, Vigilance, Abstractedness, Privateness, Apprehension, Openness to Change, Self-Reliance, Perfectionism and Tension (Conn & Rieke, 1994). A table of the dichotomous 16 personality traits is provided in the next chapter. These sixteen factors can be collapsed into second order factors of extraversion, anxiety, emotional sensitivity, independence and compulsivity (HSRC, 1995). The 16 PF- SA 92 consists of 160 multiple choice items and requires an average of 35 minutes to complete (HSRC, 1995).

The internal consistencies of the 16 first order factors range from 0.52 to 0.74 (HSRC, 1995). An internal consistency of 0.70 or higher is generally regarded as acceptable, which indicates that the 16 PF- SA 92 contains some items that fall below the accepted range. The 16 PF- SA 92 is considered to be a valid instrument for the measurement of personality in South Africans who are 18 years old and older, from any subgroup, possessing a Grade 12 or equivalent thereof and who are sufficiently fluent in the test language (HSRC, 1995).

5.7.3 Work preference inventory (WPI)

The WPI which was developed by Amabile (1987) was used to measure intrinsic and extrinsic motivation. The scale consists of 30 items, 15 of these assess intrinsic motivation and 15 measure extrinsic motivation. Intrinsic motivation is measured using the elements of self-determination, competence, task involvement, curiosity and interest (Amabile, Hill,

Hennessey & Tighe, 1994). Extrinsic motivation is measured using the elements of evaluation concerns, recognition concerns, competition concerns, focus on financial incentives and focus on dictates of others (Amabile et al., 1994). The multiple-choice items are assessed on a 4-point Likert scale and the test requires 5-10 minutes to complete.

In Amabile et al.'s (1994) study, the test-retest reliability scores for the WPI was 0.82 for intrinsic motivation and 0.76 for extrinsic motivation. Since this is higher that the acceptable 0.70 range, the WPI can be assumed to be reliable for measuring intrinsic and extrinsic motivation. In South Africa, the WPI was used in a study by Steinbuch (2001) to research perceived organisational characteristics and personality measures as predictors of motivation in the work place, and yielded reliability coefficients of 0.73 for extrinsic motivation scale and 0.70 for intrinsic motivation scale. The WPI was validated by Amabile et al.'s (1994) study on college students and working adults.

5.7.4 Work locus of control scale (WLCS)

Spector's (1988) Work Locus of Control scale was used to measure employee beliefs about control in their work environment, in general (Bistrova, 2002). The scale consists of 16 items, measuring items on a seven point Likert scale (Spector, 1988; as cited in Bistrova, 2002). The response categories range from zero, which represents "disagree very much" to seven, which represents "agree very much" (Spector, 1988; as cited in Bistrova, 2002).

The WLCS was reported to have reliability coefficient alphas ranging from 0.75 to 0.85, which is higher than the acceptable 0.70 mark (Spector, 1988; as cited in Bistrova, 2002).

In South Africa, in a study conducted by Nunns and Airgays (1992), the WLCS yielded a reliability coefficient of 0.84. In a study conducted on the perceived organisational characteristics and personality measures as predictors of motivation in the work place, the WLCS yielded an acceptable reliability coefficient of 0.80 (Steinbuch, 2001). The validity of the WLCS with other instruments measuring locus of control has been demonstrated (Hoff-Macan, Trusty & Trimble, 1996; Spector,1988; as cited in Bistrova, 2002).

5.8 Procedure

Individuals from various fields, engaged in full-time work, were the sample for this research. As such, for the purpose of convenience, lecturers and administration staff, at different faculties at the University of the Witwatersrand were asked to participate in this study. A list of lecturer names and office numbers was obtained from the secretary in each faculty. An envelope contained the questionnaire booklet as explained in the previous section and the responding addressed envelopes were sent to randomly selected, prospective participants at the University's Internal Mail. The responding addressed envelope had the research supervisor's name on the cover, and was marked 'Internal Mail'.

Furthermore, individuals in different fields of work, outside of the University, were also invited to participate in this research. In this case, each individual was approached individually by the researcher and informed about the nature of the research. It was made clear that participation was voluntary and there would be no negative effects if the individual chose not to participate. They were informed that confidentiality and anonymity was guaranteed as no identifying data was required. Only the research supervisor and the researcher had access to the data, and only group trends were observed. If the individual

agreed to participate, then an envelope containing a cover letter, containing information about the nature of the research, procedure and instructions; demographics section; 16PF questionnaire; Spector's Work Locus of Control questionnaire and WPI questionnaire, was handed to them. The individual was required to complete the questionnaires within a week and hand it back to the researcher in an envelope, which was provided with the above material.

5.9 Ethics

Ethics clearance was obtained from the ethics committee at the University of the Witwatersrand, for the purpose of conducting this research (a copy of the ethical clearance can be found in Appendix B). The cover letter that was handed with the questionnaires, stated the nature of the research and the nature of the questionnaires (Refer to the cover letter in Appendix B). It was explained that none of the questionnaires requested identifying data and the intention of the research was to identify group trends only. Thus, anonymity of the participants would be maintained. It also stated that only the researcher and the research supervisor would have access to the data and that all questionnaires would be destroyed after completion of the data analysis. Thus, confidentiality was also assured. It was further emphasized that participation was voluntary and not compulsory, bearing no consequences on anyone choosing not to participate in the study. It was further stated on the covering letter that completed answer sheets would be an indication that the participant had voluntarily consented to participate in the research. Lastly, the letter specified that no individual feedback would be provided, as only group trends would be observed.

5.10 Statistical analysis

Statistical analysis was conducted via descriptive statistics, Cronbach alpha coefficients, correlations, analysis of variance and multiple regression, using a statistical programme named SAS (version 9.1). Further information on these statistical procedures will be outlined below.

5.10.1 Descriptive statistics and Cronbach alpha coefficients

Descriptive statistics, including the means, standard deviations, ranges and degree of skewness were carried out on the interval variables: personality traits, scores on the WLCS, scores on the WPI and age. Thereafter the frequencies of the nominal variables: faculty/field of work, race and gender were obtained. This was done in order to ascertain the distribution of the data and to further isolate the further statistical procedures that should be carried out, in order to answer the research questions.

The internal consistency of the instruments was measured using Cronbach's alpha coefficients. This provided an indication of the reliability of the measuring instruments, further indicating the degree of reliability of the findings of this research (Rosenthal & Rosnow, 1991)

5.10.2 Correlation

As the descriptive statistics obtained earlier indicated a normal distribution across all the scales used in this study, parametric tests were conducted. Pearson's product-moment correlation coefficients were used to analyse the association between variables, in this

study. Pearson's product moment correlation was used to investigate the association between the variables of personality traits and the total scores on intrinsic motivation, and the total scores on extrinsic motivation. Pearson's correlation techniques were also used to investigate the association between the variables of personality traits and total scores on work locus of control and the variable of age.

The correlation coefficient is based on the covariance, which is a number reflecting the degree to which the two variables vary together (Howell, 1997). The correlation coefficient indicates the strength of the relationship between the two variables (Howell, 1997). The sign of the correlation coefficient indicates the direction of the relationship (positive or negative) (Howell, 1997). The correlation coefficient is measured on a scale of –1.00 to +1.00, such that the closer it is to either limit, the stronger is the relationship between the two variables (Howell, 1997).

5.10.3 Analysis of variance (ANOVA)

As the descriptive statistics obtained earlier indicated a normal distribution across all the scales used in this study, parametric statistical tests were conducted. Levene's test for homogeneity of variance was conducted and since all the assumptions were met, ANOVAs were conducted. The underlying assumptions for conducting ANOVAs are normality, equality of variance and that the data should at least be interval (Howell, 2002). The categorical variables of faculty/field of work, gender and race were analysed using the ANOVA procedure, which was used to investigate the association between these variables respectively and scores obtained for intrinsic and extrinsic motivation.

5.10.4 Multiple regression

Conducting correlational analysis indicates if certain variables are associated, however, it is through regression analysis that one understands how the variables are associated (Howell, 1997). The underlying assumptions of multiple regression are normality, that data should be at least interval and equality of variance. Furthermore, the condition indices indicated that multi-collinearity was not a problem (Howell, 1997). In this study, forward stepwise multiple regression was used to understand which personality variables were the best predictors of source of work motivation. The forward stepwise multiple regression method was selected as it analyses each variable individually to find a model with the best regression equation, such that the personality variables which are the best predictors of intrinsic and extrinsic work motivation, could then be uncovered.

Chapter 6: Results

6.1 Introduction

This chapter will focus on the results obtained from the statistical analysis of the data obtained in this study. Firstly, the demographics of the sample will be outlined. Thereafter, descriptive statistics will be focused on, highlighting further, the reasons for choosing the analytic techniques that were used in this study. The results of the internal consistency of the measuring instruments, used in this study, using Cronbach's alpha statistics, will be reported on. The primary hypothesis of this study, which was to investigate the relationship between personality and extrinsic and intrinsic motivation, has been explored, using Pearson's product-moment correlation, and the results will be outlined. The results of the multiple regression will be explained to see if certain personality traits can predict extrinsic or intrinsic motivation.

The secondary research hypotheses of investigating the association between locus of control and extrinsic and intrinsic motivation, has been explored using correlation techniques also, which will also be explained. Thereafter, the remaining secondary hypotheses will be analysed via the results of the ANOVA procedures, to see if there is an association between age, race and faculty/field of work and extrinsic and intrinsic motivation. A key to the abbreviations used in the statistical tables, follow:

Std. Deviation = Standard Deviation

16 PF = Sixteen Personality Factor

LOC = Locus of Control

ExtrMot = Extrinsic Motivation

IntrMot = Intrinsic Motivation

IV = Independent Variable

DV = Dependent Variable

Factor A = Reserved - Warm

Factor B = Concrete thinking – Bright, Abstract

Factor C = Emotional - Calm

Factor E = Adaptable - Assertive

Factor F = Serious - Enthusiastic

Factor G = Expedient - Conscientious

Factor H = Shy – Bold

Factor I = Tough-minded – Tender-minded

Factor L = Trusting – Resentful, Suspicious

Factor M = Practical - Imaginative

Factor N = Forthright – Socially Proper

Factor O = Composed - Worrisome

Factor Q1 = Conservative - Progressive

Factor Q2 = Group-oriented – Self-Sufficient

Factor Q3 = Spontaneous – Self-Disciplined

Factor Q4 = Relaxed – Tense

6.2 Description of the sample

Table 2: Demographics of sample (frequency table for Faculty, Gender, Race)

Faculty/Field of work	**Number**	**Percentage(%)**
Humanities	8	13
Science	12	20
Engineering	15	25
Commerce	8	13
Other (secretarial, manangerial)	18	30
Gender		
Male	41	67
Female	20	33
Race		
White	10	16
Black	22	36
Coloured	2	3
Indian	27	44

The sample size was 61. The age of the participants ranged from 18 to 64. The majority of the participants (87%) were between 20-49 years of age. The majority of the sample was male (67%) compared to female (33%). The sample was not equally representative in terms of all race categories, with the majority being Indian (44%), followed by Black (36%), White (16%) and Coloured (3%). In terms of faculty/field of work, 25% of the participants belonged to the Engineering field of work, 20% to the Science field, 13 % each belonged to

Humanities and Commerce field of work, while 30% of the participants, cited other fields of work, for example Electronics.

6.3 Sample statistics

Table 3: Descriptive statistics for Demographic Variable of age

	N	**Range**	**Mean**	**Mode**	**Std. Deviation**
Age	61	18-64	35.49	28	9.89

From the descriptive statistics in the table above, it was concluded that age was normally distributed, allowing parametric tests to be conducted. Kolmogorov-Smirnov tests were run which indicated that this variable was normally distributed.

6.4. Correlation coefficients- Cronbach's alpha

Table 4: Correlation coefficients of Extrinsic and Intrinsic Motivation and Locus of Control

Instrument	**Correlation Coefficient**
Extrinsic Motivation	0.75
Intrinsic Motivation	0.89
Locus of control	0.83
16 PF- SA 92	0.72

A score of 0.70 and above is considered to be satisfactory in measuring the reliability of an instrument (Rosenthal & Rosnow, 1991). As can be seen from the scores in Table 4 above, Spector's Work Locus of control questionnaire and the Work Preference Inventory (WPI),

measuring extrinsic and intrinsic motivation, were found to have scores higher that 0.70, allowing the conclusion that these instruments were reliable. The 16 PF- SA 92 was found to have a score of 0.72, which is also higher than 0.70, making it a reliable instrument for this study.

6.5. Correlational analysis: Personality and work motivation

Pearson's product moment correlation was conducted to test the first part of the primary hypothesis - that there is an association between specific personality traits, as measured by the 16PF, which was the independent variable (IV) in this study, and extrinsic work motivation, which was the dependent variable (DV) in this study, as measured by the WPI.

Table 5: Correlation between intrinsic motivation and 16 PF- SA 92 factors

		FACTOR A	**FACTOR B**	**FACTOR C**	**FACTOR E**	**FACTOR F**	**FACTOR G**	**FACTOR H**	**FACTOR I**
IntrMotr		0.063	0.11	-0.08	0.17	-0.06	0.052	-0.15	0.24
	p	0.63	0.41	0.53	0.19	0.63	0.69	0.25	0.07

		FACTOR L	**FACTOR M**	**FACTOR N**	**FACTOR O**	**FACTOR Q1**	**FACTOR Q2**	**FACTOR Q3**	**FACTOR Q4**
IntrMotr		-0.15	0.01	0.30	-0.04	-0.03	0.15	0.23	-0.31
	p	0.24	0.94	**0.02**	0.77	0.79	0.26	0.07	**0.02**

N = 61

Values in bold indicate significance at p < 0.05

A significant positive relationship was found between intrinsic motivation and Factor N ($r = 0.30$, $p = 0.02$), as presented in Table 5. Factor N includes the traits of socially proper behaviour, including characteristics of being a private person, who is conscious of social rules and exhibits socially appropriate behaviour and attitude (Schuerger, 1992). This relationship indicates that individuals who are more likely to be intrinsically motivated, possess the personality trait of being exhibiting more socially proper behaviour (Schuerger, 1992).

A significant negative relationship was found between intrinsic motivation and Factor Q4 ($r = -0.31$, $p = 0.02$). Since Q4 includes the trait of Tension, this indicates that individuals who are more likely to be intrinsically motivated, possess the personality traits of being less tense, exhibiting traits of being more sedate, relaxed, composed and satisfied (Schuerger, 1992).

No significant relationship was found between Factor A (Warmth), Factor B (Intelligence), Factor C (Calmness), Factor E (Assertiveness), Factor F (Enthusiasm), Factor G (Conscientiousness), Factor H (Boldness), Factor I (Tender-mindedness), Factor L (Resentfulness), Factor M (Imagination), Factor O (Worrisomeness), Factor Q1 (Progressiveness), Factor Q2 (Self-sufficiency), Factor Q3 (Self-discipline), respectively, and intrinsic motivation. Pearson's product moment correlation was also conducted to test the second part of the primary hypothesis - that there is an association between specific personality traits, as measured by the 16PF, which was the independent variable (IV) in this

study, and extrinsic work motivation, which was the dependent variable (DV) in this study, as measured by the WPI.

Table 6: Correlation between Extrinsic Motivation and 16 PF- SA 92 factors

		FACTOR A	**FACTOR B**	**FACTOR C**	**FACTOR E**	**FACTOR F**	**FACTOR G**	**FACTOR H**	**FACTOR I**
ExtrMot	**r**	0.21	-0.06	-0.01	0.22	0.02	0.09	-0.01	0.25
	p	0.10	0.66	0.94	0.09	0.91	0.47	0.92	0.06

		FACTOR L	**FACTOR M**	**FACTOR N**	**FACTOR O**	**FACTOR Q1**	**FACTOR Q2**	**FACTOR Q3**	**FACTOR Q4**
ExtrMot	**r**	0.16	-0.00	0.22	0.15	-0.01	0.17	0.27	-0.11
	p	0.22	0.97	0.08	0.24	0.95	0.19	**0.04**	0.41

N = 61

Values in bold indicate significance at p < 0.05

A significant positive relationship was found between extrinsic motivation and Factor Q3 ($r = 0.27$, $p = 0.04$). Since Factor Q3 includes the trait of self-discipline, this indicates that individuals who are more likely to be extrinsically motivated, possess the personality traits of being more in control of emotions and behaviour in general, more socially aware and careful and sometimes exhibit compulsive or stubborn behaviour (Schuerger, 1992).

No significant relationship was found between Factor A (Warmth), Factor B (Intelligence), Factor C (Calmness), Factor E (Assertiveness), Factor F (Enthusiasm), Factor G (Conscientiousness), Factor H (Boldness), Factor I (Tender-mindedness), Factor L (Resentfulness), Factor M (Imagination), Factor N (Social properness), Factor O (Worrisomeness), Factor Q1 (Progressiveness), Factor Q2 (Self-sufficiency), Factor Q4 (Tenseness) and extrinsic motivation. This can be viewed in Table 6.

6.6. Stepwise multiple regression

Table 7: Stepwise multiple regression to determine personality predictors (IV) of extrinsic work motivation (DV), as measured by WPI.

Predictors	**R square**	**Adjusted R square**	**Durbin-Watson**	**F**	**p**	**df**	**Beta**
(Constant)	0.074	0.034	1.609	19.35	<0.0001	2,58	24.147
I	0.163	0.044		5.64	0.01		0.822
Q3	0.196	0.058		4.68	0.04		0.773

N = 61

Values in bold indicate significance at p < 0.05

From Table 7, it can be seen that the best fit model is:

Extrinsic motivation = bo + b1Factor I + b2 Factor Q3 + error

=24.147 + 0.822 Factor I + 0.773 Factor Q3 + error

These personality traits, in conjunction, are able to predict 20 % of the total score of the WPI. This is a weak, positive relationship. B1 is positive, so Factor I (Sensitivity) is

positively related to extrinsic motivation, B2 is positive, so Factor Q3(self-discipline) is positively related to extrinsic motivation, therefore individuals who are tough minded and self-disciplined, appear to be more extrinsically motivated.

Table 8: Stepwise multiple regression to determine personality predictors (IV)of intrinsic work motivation (DV), as measured by WPI.

Predictors	**R square**	**Adjusted R square**	**Durbin-Watson**	**F**	**p**	**df**	**Beta**
(Constant)	0.097	0.013	2.01	21.43	<0.0001	5,55	36.564
Q4 I	0.193	0.082		4.87	0.0002		1.058
I N	0.262	0.040		6.74	0.001		0.594
N Q1	0.311	0.077		6.33	0.0003		-0.764
Q3 Q4	0.405	0.039		6.34	0.02		-0.999

N = 61

Values in bold indicate significance at p < 0.05

From Table 8, it can be seen that the best fit model is:

Intrinsic motivation = bo + b1Factor I +b2 Factor N + b3 Factor Q1 + b4 Factor Q4 + error

=36.564 + 1.058 Factor I +0.594 Factor N + (-0.764) Factor Q1 + (-0.999) Factor Q4 + error

These personality traits, in conjunction, are able to predict 40 % of the total score of the WPI. It is a strong, positive relationship. B1 is positive, so Factor I (sensitive) is positively related to intrinsic motivation. B2 is positive, so Factor N (socially proper) is positively

related to intrinsic motivation. B3 is negative, so Factor Q1 (conservative) is negatively related to intrinsic motivation. B4 is negative, so Factor Q4 (Tension) is negatively related to intrinsic motivation. Thus, individuals who are more sensitive, more socially proper in nature, less conservative and less tense appear to be more intrinsically motivated.

6.7. Correlational analysis: Secondary variables

Table 9: Correlation between Age and Source of Motivation

		Age
ExtrMot	**r**	0.05
	p	0.72
IntrMot	**r**	0.15
	p	0.25

N = 61

Values in bold indicate significance at p < 0.05

From Table 9, it can be seen that no significant relationship exists between age and extrinsic motivation (r = 0.05, p =0.72). Similarly, between age and intrinsic motivation (r = 0.15, p =0.25), in this study.

Table 10: Correlation between locus of control and source of motivation

		LOC
ExtrMot	**r**	0.78
	p	**< 0.0001**
IntrMot	**r**	0.6
	p	**<0.0001**

N = 61

Values in bold indicate significance at p < 0.05

From Table 10, it can be seen that there is a significant positive relationship between locus of control and extrinsic motivation ($r = 0.78$, $p < 0.0001$). A significant positive relationship was also found between locus of control and intrinsic motivation ($r = 0.6$, $p < 0.0001$), in this study.

6.8 Analysis of variance (ANOVAs)

The secondary hypotheses tested were whether Faculty/Field of work, race or age does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI. The results obtained were as follows:

Table 11: Results of ANOVA for faculty/field of work and source of motivation

	ExtrMot	**IntrMot**
F	2.23	1.24
p	0.08	0.3

df (4,52)

N = 61

From Table 11, it seems that there is no significant difference between the various faculty/fields of work and extrinsic or intrinsic motivation.

Table 12: Results of ANOVA for race and source of motivation

	ExtrMot	**IntrMot**
F	0.32	1.02
p	0.81	0.39

df (3,57)

N = 61

From Table 12 , it seems that there is no significant difference between the various race groups and extrinsic or intrinsic motivation.

Chapter 7: Discussion

The aim of this research was to investigate the relationship between personality traits and intrinsic and extrinsic motivation. Furthermore, the relationship between locus of control, and work motivation was explored. Thereafter, the demographic variables of age, race, faculty or field of work and intrinsic and extrinsic motivation was also explored. The following sections will discuss the results that were obtained in relation to the literature.

7.1 Primary aim

The primary aim of this study was to determine which personality traits, as measured by Cattell's 16PF, are associated with intrinsic and extrinsic motivation (as measured by the Work Preference Inventory).

7.1.1 Personality traits and extrinsic motivation

B. There is an association between personality traits and extrinsic work motivation.

The findings of this study indicate that there is a significant, positive correlation between self-discipline and extrinsic motivation (see Table 6). It was further found that self-discipline appears to be a partial positive predictor of extrinsic work motivation (see Table 7). An individual who scores high on the score of self-discipline falls under Cattell's broad factor of self-control. Such an individual is in control of his or her emotions and behaviour, is socially aware and careful, is regardful of social reputation and sometimes exhibits obstinate or compulsive behaviour (Cattell, 1984). According to Hertzberg's (1959)

motivator-hygiene theory, one would expect such an individual to be motivated by hygiene factors. Hygiene needs are described as being related to the context of the work (Furnham et al., 2005). As such, hygiene factors include supervision, interpersonal relations, physical working conditions, salary, company policies, benefits and job security (Furnham et al., 1998). These were equated by Hertzberg to Maslow's lower order physiological, esteem and safety needs, where the esteem need includes the need for establishing good interpersonal relationships (Furnham et al., 2005). Since Maslow's lower-order needs overlap the extrinsic motivator factors, one can assume that individuals who seek to satisfy their lower-order needs would be motivated by extrinsic factors.

This finding is supported by research done by Garbarino (1975, cited in Amabile et al., 1994), who found that extrinsically motivated individuals display rigid behaviour when engaged in a task. Rigid or obstinate behaviour in the workplace is a trait exhibited by individuals who score high on the factor of self-discipline (Schuerger, 1992). The broad factor of self-control also houses the trait of conscientiousness, which is predominant in self-disciplined people (Cattell, 1984). Conscientious individuals display traits of being self-exacting, hard working, persevering and responsible, dominated by a sense of duty (Cattell, 1984). Furnham et al. (1999; 2005) found conscientiousness to be a significant positive predictor of extrinsic factors, namely financial and working conditions This was explained by stating that conscientious individuals place an emphasis on extrinsic work aspects which enable them to perform better at their jobs and fulfill their need for self-actualisation (Furnham , 2005).

The personality trait of self-discipline is only a partial predictor of extrinsic motivation, as it must be combined with sensitivity to predict extrinsic work motivation, in this study (see Table 7). An individual who scores high on sensitivity exhibits traits of being gentle, artistic, fastidious, feminine, demanding of attention, impatient, dependent and impractical (Cattell, 1984). Such an individual dislikes crude people and occupations involving rough work (Schuerger, 1992). An individual possessing this trait is likely to seek fulfilment in the actual work itself, seeking to be enriched by the work. According to Hertzberg's motivator-hygiene theory, an individual who is artistic, creative and demanding in a work environment would be motivated by motivator needs related to the nature of the work such as such as achievement, recognition, the work itself, responsibility and advancement (Furnham et al., 1998). Such an individual would be more likely to be intrinsically motivated, being motivated by a need for fulfilment in the work itself, rather than by extrinsic factors such as salary or working conditions. This finding also contradicts the findings by Amabile, Hennessey and Grossman (1986) and Koestner, Ryan, Bernieri and Holt (1984) (in Amabile et al., 1994) who found that individuals who are motivated extrinsically exhibit lower creativity levels in various tasks. However, the positive association between sensitivity and extrinsic motivation is supported by the findings of George and Jones (1997) who found that extrinsic work values are independent of work content, and are driven by motivator needs, which involve finding fulfillment in the work itself, congruent with Maslow's (1943) need for self-actualisation.

This study further finds that the personality traits of being more sensitive and self-disciplined are likely to be predictors of extrinsic motivation. The regression equation for

the total score on the WPI indicated that the personality traits of sensitivity (Factor I) and self-discipline (Factor Q3), in conjunction, are able to predict 20 % of the total score of the WPI. The sensitivity trait is related to gentle, artistic, fastidious behaviour, while self-discipline falls under the domain of self-control, including socially aware, obstinate or compulsive behaviour (Cattell, 1984). This is contradictory to by Amabile, Hennessey and Grossman (1986) and Koestner, Ryan, Bernieri and Holt (1984) (in Amabile et al., 1994) (as discussed earlier),who found that extrinsically motivated individulas exhibit lower creativity levels in various tasks, but is supported by the research of George & Jones (1997), as discussed earlier. This research finds that specific personality traits, as measured by the 16PF, are associated with extrinsic work motivation, as measured by the WPI.

7.1.2 Personality traits and intrinsic motivation

A. There is an association between personality traits and intrinsic work motivation.

The trait of socially proper behaviour was found to be positively correlated to intrinsic motivation (see Table 5). An individual who scores high on the factor of socially proper behaviour is a private person who is conscious of social rules and exhibits socially appropriate behaviour and attitude (Schuerger, 1992). Using Hertzberg's (1959) motivator-hygiene theory, one would expect such an individual to be motivated extrinsically by hygiene factors which include the need for positive relationships with others, which is congruent with Maslow's social and esteem needs. Such an individual would be expected to be strongly motivated by relationships in the working environment. This finding contradicts the assumption that individuals who score low on the trait of socially proper

behaviour would be more intrinsically motivated. However, Furnham et al. (2005) found that such an individual would place more emphasis on the extrinsic aspects of the job, such as working conditions and relationships with co-workers.

It was further found that tension is negatively correlated to and appears to be a predictor of intrinsic motivation (Tables 5 & 8). Thus, according to this finding, individuals who are relaxed, composed, satisfied and who sometimes exhibit lazy behaviour and low performance, would be motivated intrinsically. This finding is contradicted by Hertzberg's 1943 motivator-need theory, as individuals who pursue hygiene needs which overlap Maslow's need for self-actualisation, would be expected to be artistic, driven, hard working and determined in the pursuits of personal growth and development (Furnham et al., 1998). An individual who is motivated intrinsically would, according to Maslow, be driven by the need for self-actualisation, and would be driven in the pursuit to "be all that one can be" (Benson & Dundis, 2005, p2).

It was further found that sensitivity is a positive predictor of intrinsic motivation (see Table 8). A person who scores high on the sensitivity dimension is sensitive, aesthetic, sentimental, tender minded, intuitive and refined (Cattell, 1984). According to Hertzberg (1943), individuals who exhibit these traits are more likely to be motivated by motivator needs which are congruent with Maslow's higher order needs, seeking to be motivated by factors such as achievement, recognition, the work itself, responsibility and advancement (Furnham et al., 1998). Hence this theory does support the findings of this study.

The last finding was that individuals who score low on the conservative dimension are more intrinsically motivated (see Table 8). Such individuals are likely to be cautious and careful of new ideas, and not interested in liberal ideas and intellectual thought (Cattell, 1982). This finding is not supported by Hertzberg's 1943 theory, as it was expected that such intrinsically motivated individuals who are motivated by higher order needs such as need for self actualisation would be more creative and liberal. This is also in contrast to the findings by Furnham et al. (2005) who found traits of being creative, daring, original, liberal and insightful, in individuals who are more intrinsically motivated.

This research further found that the personality traits of being more sensitive, more socially proper, less tense and less conservative, in conjunction, are likely to be predictors of intrinsic work motivation. The regression equation for the total score on the WPI indicated that the personality traits of tension (Factor Q4) and conservative behaviour (Factor Q1) are negative predictors, in conjunction with sensitivity (Factor I) and socially proper behaviour (Factor N) which are positive predictors of intrinsic work motivation. These personality traits, in conjunction, are able to predict 40 % of the total score of the WPI.

Existing theories of work motivation, when used to explain the results obtained, have failed to provide a satisfactory explanation for some of the contradictory findings obtained. It was found that sensitivity was a positive predictor of extrinsic work motivation, and a positive predictor of intrinsic work motivation, in this research. While the results for intrinsic motivation are consistent with previous studies, the finding of sensitivity being a positive predictor of extrinsic motivation is inconsistent with studies conducted outside of South

Africa . The theories of work motivation used as basis for this research were largely derived and based on Western culture and value systems (Fisher et al., 2003). The value system and culture in which an individual is raised, ultimately governs the behaviour of the individual. Although these theories are largely derived in the Western, individualistic society, they seem to be invalid and inconclusive in understanding the personality traits of individuals in South Africa's culturally diverse population (Fisher et al., 2003). In South Africa, a large percentage of the African and Asian population follows a collectivistic culture where traits such as being sensitive and submissive are encouraged in the upbringing of individuals belonging to these cultures (Steinbuch, 2001). It is possible that individuals belonging to these cultures would exhibit such traits in the work environment (Steinbuch, 2001).

7.1.3 Locus of control and work motivation

C. There is a relationship between locus of control, as measured by the WLC, and source of work motivation (intrinsic or extrinsic), as measured by the WPI.

A significant positive correlation was found between locus of control and extrinsic motivation ($r = 0.78$, $p =<0.0001$) and between locus of control and intrinsic motivation ($r = 0.6$, $p < 0.0001$) (see Table 10). This result is supported by Liik and Laud (2002) who found that internal locus of control to be more strongly related with the intrinsic ($r = 0.55$, $p<.001$) than extrinsic job satisfaction ($r = 0.40$, $p<.001$). Since the type of locus of control is related to the type of job satisfaction, and type of job satisfaction is based on what motivates the individual, the relationship between locus of control and work motivation, is significant.

In South Africa, the collectivistic nature of the African tradition, seem to indicate that Black South Africans would have a greater external locus of control in comparison to Caucasian South Africans (Kirschner, 2003). However, studies conducted by Moodley, Rajab and Ramkissoon (1979) found no significant difference in the locus of control construct between Black and White South Africans. Riordin (1981) found no difference in the locus of control construct between liberal English speaking students and Black individuals, but found conservative, Afrikaans speaking Caucasians to be more internal than Black individuals and liberal English speaking Caucasians (Kircshner, 2003). In this study, the sample was not equally representative in terms of all race categories, with the majority being Indian (44%), followed by Black (36%), White (16%) and Coloured (3%). Hence, investigation into the mediating effects of culture into the relationship between locus of control and type of work motivation could be undertaken.

The study investigated the relationship between locus of control and source of work motivation (intrinsic or extrinsic).

7.2 Secondary hypotheses

The study further investigated the association between the demographic variables of race, field of work and age with source of work motivation.

7.2.1 Age and work motivation

D. Age does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI.

No significant relationship was found between age and extrinsic motivation ($r = 0.05$, $p = 0.72$) and between age and intrinsic motivation ($r = 0.15$, $p = 0.25$) (see Table 9). This is in contrast to the findings of Harris (1994) who found that older people are more intrinsically motivated, choosing to work in and even changing professions to find occupations that are interesting and personally fulfilling, while younger people aim for financial incentives, due to their need for stability and security. A possible explanation for this is the changing socio-economic status, as individuals grow older. Younger people are starting out on careers, seek financial stability, and are motivated by physiological, security and social needs, as represented in Maslow's hierarchy of needs. As they mature in age and become more secure in their careers and become more financially secure, their physiological needs are satisfied and they are now motivated by the need for self-actualisation.

A possible explanation for the contradictory findings obtained in this research, in terms of the association between age and work motivation, where no significant relationship was found, could be related to the applicability of the theories used as basis for this research and the South African population. The theories of work motivation used in this research are largely derived from a Western perspective (as discussed earlier in section 7.1.2). The applicability thereof when understanding the work motivation dynamics, of the culturally diverse South African population, has not been investigated. As mentioned earlier the

personality and behaviour of an individual is governed by the culture and value systems that an individual is exposed to (Fisher et al., 2003).. South Africa's collectivistic culture could have a major influence on the workplace dynamics (Fisher et al., 2003). However this finding can only be thoroughly investigated when using theories derived in South Africa, which take this South Africa's culture into account.

7.2.2 Faculty/field of work and work motivation

E. Field of work does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI.

No significant relationship was found between field of work and extrinsic motivation and between field of work and intrinsic motivation (see Table 11). This is in contrast to the findings of the research conducted by Harris (1994) on the perceptions of engineering, nursing and psychology students' personalities, which showed that engineering students were high on cognitive structure and endurance, nursing students were high on nurturance and psychology students were in-between. Research by Tett et al. (1991; as cited in Harris, 1994) also indicated that certain personality traits are characteristic of certain occupations. Using Maslow's hierarchy of needs as a background, it can be explained that individuals interested in analytical, scientific occupations probably have a need for self-actualisation, and are motivated extrinsically, while individuals working in humanitarian professions have unmet social needs, therefore are also motivated extrinsically, leading them to choose those fields of study (Maslow, 1943). In this study, 25% of the participants belonged to the Engineering field of work, 20% to the Science field, 13 % each in Humanities and

Commerce, while 30% of the participants, cited other fields of work. A more even spread across the various field of work and a larger sample could probably have elicited more conclusive results.

A possible explanation for this contradictory finding of non-significance, could be related the sampling design of this study. A convenient sample methodology was used, where the participants of this study either volunteered to be in the study, by means of completing the questionnaires sent to them by internal mail, or were actively sought by the researcher and asked to voluntarily participate in this study. It is possible that the individuals who actively participated in this study shared similar personality traits while individuals sought by the researcher in terms of their familiarity with the researcher, also shared certain personality traits. This could have led to a sampling bias resulting in these non-significant results. A true experimental research design with minimum sampling bias could result in more significant findings (Rosenthal & Rosnow, 1996).

7.2.3 Race and work motivation

F. Race does have an association with source of work motivation (intrinsic or extrinsic), as measured by the WPI.

No significant relationship was found between race and extrinsic motivation and between race and intrinsic motivation (see Table 12). This is in contrast to the findings that the values that workers attach to intrinsic and extrinsic job satisfaction is dependent on the race and nationality of the individual (Clark, 1998; as cited in Huang & Van de Vliert, 2003). In

this study, the sample size was relatively small (n = 61). Additionally the sample was not equally representative in terms of all race categories, with the majority being Indian (44%), followed by Black (36%), White (16%) and Coloured (3%). Both of this could have impacted the results obtained. Culturally inherited traits are seen as responsible for an emphasis on higher needs by certain individuals, contrary to the supposition that this is so because their lower level needs have been gratified (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). In individualistic cultures, where there is a higher prevalence of Caucasian race groups, individuals are more self-reliant and self-motivated and there is an emphasis on individual interests (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). Thus, workers belonging to these cultures place a greater significance on intrinsic factors (Huang & Van de Vliert, 2003). Adigun and Stephenson (1992, as cited in Huang & Van de Vliert, 2003) found that British workers were more motivated intrinsically by factors such as achievement, the work itself and recognition while Nigerian workers were more motivated extrinsically by factors such as pay fringe benefits and working conditions. In collectivistic cultures, where there is a higher percentage of non-Caucasian race groups, there is an emphasis on economic and social security, leading workers belonging to this culture to be more motivated extrinsically by factors such as economic security and social affiliation (Hofstede, 1991; as cited in Huang & Van de Vliert, 2003). In South Africa, an additional factor to consider is urbanisation, where a large percentage of the population is moving into urban areas. This move could have an impact on the culture and value sytems of the individual, independent of the race of the individual. The relationship between race and work motivation, in South Africa, can only be thoroughly investigated when using theories and instruments derived in South Africa.

7.3 Conclusion

The study was meaningful in investigating the relationship between personality and work motivation, which was the primary focus of this research. The results obtained indicated that there was an association between certain personality traits and intrinsic and extrinsic motivation. The results further indicated that sensitivity and self –discipline, in conjunction, appear to be predictors of extrinsic motivation, while sensitivity, socially proper behaviour, tension and conservative behaviour, in conjunction, appear to be predictors of intrinsic motivation. However, since this study took the form of a non-experimental, cross-sectional and correlational design, and the sample size was relatively small (n=61), it poses limitations when establishing causality (Rosenthal & Rosnow, 1991).

While most of the results obtained in this study are supported by previous research in this area, some of the findings were contradictory, such as individuals who are more conservative and who exhibit more socially proper behaviour appear to be more extrinsically motivated (Amabile, et al., 1986; 1994). The current theories of work motivation failed to explain these contradictory findings. However these theories have risen from a Western background, where the culture and value systems of the individual differ from the cultural diversity found in South Africa. This could explain the difficulty in applying these theories to explain the findings, in the context of South Africa.

The findings on investigating the relationship between locus of control and work motivation was congruent with previous research in this area, where, internal locus of

control was found to be strongly associated with intrinsic motivation and external locus of control was found to be strongly associated with extrinsic motivation.

The demographic variables of field of work, age and race were not found to be significantly associated with work motivation. This was contradictory to previous research where older individuals were found mainly to be more intrinsically motivated, compared to younger individuals (Harris, 1994). Individuals belonging to Caucasian race groups were found to be more extrinsically motivated, while non-Caucasian individuals were found to be more intrinsically motivated (Huang & van de Vliert, 2003). Individuals working in different occupations had different motivation types (Harris, 1994).

This study was limited in terms of the sample size and the sampling strategy used, which was convenience sampling. However, it shed important light on the important role that personality traits play in the field of work motivation. Moreover, it highlighted the shortcomings of western theories of work motivation, when applied to the multi-cultural population of South Africa.

Chapter 8: Limitations, Implications and Recommendations

A number of limitations related to the existing literature and the methodology of the sample, will now be explored. These have impacted the validity and generalisability of the results obtained. The implications of this study will also be explored. Finally, recommendations will be given, for future research in this area.

8.1 Theoretical

Firstly, in work motivation literature, Hertzberg's (1943) motivator-hygiene theory and Maslow's (1943, 1968) hierarchy of needs model were the basis of this research. These theories of work motivation, when used to explain the results obtained, failed to provide a satisfactory explanation of the contradictory findings obtained. Thus, for example, it was found that sensitivity was a predictor of extrinsic work motivation, in this research. This contradicted the theories of Hertzberg and Maslow, where individuals exhibiting traits of being creative, reserved, fastidious, feminine, demanding of attention, impatient and dependent would be expected to be more intrinsically motivated (Schrueger, 1992).

The existing theories of work motivation have been derived from a Western perspective and the applicability thereof, in South Africa, has not yet been fully researched (Fisher et al., 2003). Research conducted by Huang and Van de Vliert (2003) highlights the importance of the culture, socio-economic status and nationality of an individual, which determine the individual's value system and ultimately determine the needs that motivate

the individual. Most work motivation theories were developed in America or Western Europe and the cross-cultural validity thereof, has not been sufficiently researched (Fisher et al., 2003). South Africa contains a multilingual, multi-racial society and work culture where the area of work motivation is still largely supported by theories derived from Western perspectives (Fisher et al., 2003). The applicability of Western theories of work motivation, in South Africa, must be explored further to ascertain its suitability and validity thereof, when applied to the South African work context (Fisher et al., 2003). The changing urban-rural dimensions as well as the various cultural dimensions of the South African population must be explored, in terms of their influence on the personality and work behaviour of individuals in the work place (Steinbuch, 2001). Thus the applicability of these theories of work motivation as a basis while explaining and understanding the work and organisational behaviour of individuals in South Africa, might be limited. This research therefore highlights the gap in theories of work motivation in South Africa. A recommendation for future research would be to apply theories derived in South Africa, which would take into account, the unique nature of the South African population, and increase the validity of this study.

8.2 Methodological

The design of this research is quantitative, non-experimental, cross-sectional and correlational (Rosenthal & Rosnow, 1991). Cross-sectional, correlational designs are descriptive and can only be used to establish association between the variables (Rosnow & Rosenthal, 1991). This focus of this research, in addition to establishing association

between the primary variables of personality traits and work motivation, was also to investigate which personality traits could predict intrinsic or extrinsic motivation. Thus, the research design used was not ideal in investigating this aim, impacting the validity of the results obtained. Another limitation of this design is instrument reactivity, where, it is difficult to measure how subjects reacted to the situation of being given questionnaires to complete, as questionnaires were sent to the individuals and they were given a week to complete and return them (Rosnow & Rosenthal, 1991). The results obtained could have been impacted by reactivity of the subjects to the instruments and this could have impacted the reliability and validity of the results obtained.

Additionally, a convenience sampling method was used. Questionnaires were sent in envelopes to lecturers in different faculties and the researcher had no control over the environment in which each subject completed the questionnaires. History is another problem which could have arisen here and which could have impacted the results obtained, as the design has no control over any external events that could have influenced the participants, while completing the questionnaires (Rosnow & Rosenthal, 1991). History refers to events in the environment that occurs during the testing period, other than the independent variable, which could have influenced the results of the participants in the study (Rosnow & Rosenthal, 1991). There is no way of being sure that any historical causes have resulted in changes in the relationship between variables in this study and have impacted the results that were obtained. This could have an impact on the reliability and validity of this study.

It is recommended that in order to increase the validity of the study and to counteract the effects of history, the study is replicated and the results are compared to this study. Additionally the study should be conducted in an environment such that the researcher has more control over the “testing situation”, perhaps by testing the respondents together at a venue, on the same day. The researcher should take into consideration the historical events taking place during the period that the testing takes place, so that the influence of history on the results obtained, can be taken into account.

In a convenience sampling situation, there is always a threat of sampling bias. Here, the sample was not randomly chosen, but individuals in various fields of work, outside the university were also approached by the researcher and asked to participate in the study. Since this was dependent on the researcher’s familiarity with the individuals, a certain bias exists in the sampling procedure, which could have impacted the external validity of this study. In future studies, it is recommended that an experimental design is chosen, with random sampling, in order to increase the validity of the results of the study. Using a non-experimental, correlational study, with a larger sample size, as well as including the demographic variable of socio-economic status, would reveal more insightful information regarding the association between personality traits and work motivation in South Africa. This would also increase the validity and reliability of the results.

8.3 Practical

Employee motivation is a key concern in any organisation, as it impacts employee behaviour and eventually organisational productivity (Kanfer & Heggestad, 1997). This research indicates that personality traits are associated with work motivation. This finding holds great significance in organisational settings, where the pursuit of increasing employee motivation, is a key concern of every employer (Kanfer & Heggestad, 1997). The findings indicate that personality traits could play a key role in the type of motivation that an individual reacts to. It highlights the importance in understanding the personality of the individual employees, when incentivising employees in order to increase their motivation, and produce more effective work behaviour (Robbins, 1998). Increasing motivation in the workplace can take numerous forms, but work motivation can be directly influenced, when the personality of the individual employee is taken into account, bearing in mind the cultural background and "need level" that the individual is at (Schuerger, 1992).

8.4 Conclusion

This study has shed some light, primarily, on the role that personality traits play in the field of work motivation. It has also highlighted some shortcomings in the applicability of Western theories of work motivation to the South African context.

Using the 16PF and the WPI as a means of investigating the relationship between personality traits and work motivation, the researcher found that the personality trait of self-discipline is associated with extrinsic motivation, while socially proper behaviour and tension is associated with intrinsic motivation. It was also further found that sensitivity and

self discipline, in conjunction, are likely to be predictors extrinsic motivation while, sensitivity, socially proper behaviour, tension and conservative behaviour, in conjunction, are likely to be predictors of intrinsic behaviour. When using current theories of work motivation to explain the contradictory finding of sensitivity being a positive predictor of extrinsic motivation , it was found that theories of work motivation derived from a Western perspective, seem to have limited applicability, when used to explain work motivation, in South Africa.

The study further concluded that locus of control was associated with work motivation, as supported by previous research in this area. However, the findings of this research failed to establish an association between the demographic variables of age, race, field of work and extrinsic and intrinsic work motivation.

Reference List

Alderfer, C. P. (1972*) Existence, Relatedness and Growth.* New York: Free Press

Allport, G. W. (1937). *Personality: a psychological interpretation*. New York: Holt, Rinehart, & Winston.

Amabile, T.M., Hennessey. B.A. and Grossman, B.S. (1986). Social influences on creativity: The effects of contracted-for reward*. Journal of Personality and Social Psychology*, 50, 14–23

Amabile, T.M., Hill, K.G., Hennessey, B.A. & Tighe, M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations*. Personality and Social Psychology,* 66 (5), 950-967.

Ambrose, M.L. & Kulik, C.T. (1999). Old Friends, New Faces: Motivation Research in the 1990's. *Journal of Management,* 25 (3), 231-292.

Anderson, C. R.(1977). Locus of control, coping behaviors and performance in a stress setting: A longitudinal study. *Journal of Applied psychology,* 61, 156-161

Andrisani, P.J. & Nestel, G.(1976). Internal-external control as contributor to and outcome of work experience. *Journal of Applied Psychology,* 61, 156-165.

Barrick, M. R. & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.

Barrick, M.R. & Mount, M.K (1993). Autonomy as a moderator of the relationships between the big five personality dimensions and job performance. *Journal of Applied Psychology*, 78, 111–118.

Benson, S.G. & Dundis, S.P. (2003). *Journal of Nursing Management*, 11, 315-320.

Berzoff, J. Hertz, & Flanagan, L. M. (1996). *The theory of self psychology. In Inside out and outside in: Psychodynamic clinical theory and practice in contemporary multicultural contexts.* Northvale, NJ: Jason Aronson.

Boeree, C.G. (1998). *Personality theories: Albert Bandura.* Retrieved March 30, 2005, from http://www.ship.edu/~cgboeree/bandura.html

Boeree, C.G. (2006). *Personality Theories*. Retrieved, October 15, 2006 from http://www.ship.edu/~cgboeree/bandura.html

Boone, C., Brabander, B., Carree, M., Jong, G., Olffen, W., & Witteloostuijn, A. (2002). Locus of control and learning to cooperate in a Prisoner's Dilemma game. *Personality and Individual Differences*, 32, 929-946.

Buss DM. (1989). Conflict between the sexes: Strategic interference and the evocation of anger and upset. *Journal of Personality and Social Psychology*; 56, 735–747.

Carver, C. S., & Scheier, M. F. (2000). Perspectives on personality (4th ed.). Needham Heights, MA: Simon & Schuster.

Cattell, R.B. (1965). The Scientific Analysis of Personality. Middlesex: Penguin Books.

Cattell, R.B. (1982). The Inheritance of Personality and Ability: Research methods and findings. New York: Academic Press.

Cattell, R. B. (1984). Personality as a scientifically based concept. In J. Kuper & M. Kuper (Eds.), The social science encyclopedia (pp. 10-37). London: Routledge & Kegan Paul.

Cattell, R. B. (1990). Advances in Cattellian personality theory. In L. A. Pervin (Ed.), Handbook of personality: Theory and research (pp. 101-110). New York: Guildford.

Eysenck, M.W. (2004). *Psychology: An International Perspective*. Edinburgh: Oliver & Boyd.

Fehringer, H.M., (2004*) Contributions and Limitations of Cattell's Sixteen Personality Factor Model*. Retrieved 6 June, 2006 from http://www.personalityresearch.org/papers/fehringer.html

Feist, J. & Feist, G.J. (1998). Theories of Personality (4th ed.). Boston: McGraw Hill.

Ferguson, T.J. (n.d). *Introductory Psychology*. Retrieved 17 February, 2006 from http://www.usu.edu/psycho101/lectures/chp15personality/personality.htm

Fisher, J., Miller, K., Katz, L & Thatcher, A. (2003). *South Africa at Work: Applying Psychology to Organisations*. Johannesburg: Witwatersrand University Press.

Frederick-Recasino, C.M. & Schuster-Smith, H. (2003). Competition and intrinsic motivation in physical activity: A comparison of two groups. *Journal of Sport Behaviour, 26* (3), 240-248.

Furnham, A., Forde, L. & Ferrari, K. (1999). Personality and work motivation. *Personality and individual Differences, 26* (6), 1035-1043.

Furnham, A., Petrides, K.V. Tsaousis, Pappas, K. & Garrod, D. (2005). A cross-cultural investigation into the relationships between personality traits and work values. *The Journal of Psychology*, Retrieved 4 August, 2006 from http://findarticles.com/p/articles/mi_hb3514/is_200501/ai_n13266779

Furnham, A., Tsaousis, I., Pappas, K., Garrod, D. (2005). A cross-cultral investigation into the relationship between personality traits and work values. *The Journal of Psychology, 39* (1) 5-33.

Gabris, G.T. and Simo, G. (1995). Public Sector Motivation as an Independent Variable Affecting Career Decisions. *Public Personnel Management, 24* (1), 33-51

Gagne, M. & Deci, E.L. (2005). Self-determination theory and work motivation. *Journal of Oragnisational Behaviour,* 26, 331-362.

George, J.M. & Jones, G. (1997). "Experiencing Work: Values, Attitudes, and Moods." *Human Relations*, 50, 393-416

Griffin, L. and A. Harrell. 1991. An empirical examination of managers' motivation to implement just-in-time procedures. *Journal of Management Accounting Research*, 3, 98-112.

Grossarth-Maticek R., Eysenck H. J. (1995) Self-regulation and mortality from cancer, coronary heart disease, and other causes: A prospective study. *Personality and Individual Differences 19* (6), 781-795.

Hall, C. S., Lindzey, G., & Campbell, J. B. (1998). *Theories of personality* (4th ed.). New York: Wiley.

Hampson, S. E., & Colman, A. M. (Eds.). (1995). *Individual differences and personality.* London: Longman.

Harris, R., Bolander, K., Lebrun, M., Docq, F., & Bouvy, M. T. (2004). Linking perceptions of control and signs of engagement in the process and content of collaborative e-learning. In S. Banks, Goodyear, P., Hodgson, V., Jones, C., Lally, V., McConnell, D., & Steeples C. (Eds.), *Fourth International Conference on Networked Learning* (pp. 245-250). UK : Lancaster University.

Hertzberg, F. (1959). *The Motivation to Work*. New York: John Wiley and Sons.

Hock, R.R. (1995). *Forty studies that changed psychology*. Englewood Cliffs, NJ: Prentice Hall.

Hodgkinson, G.P. (2003). The interface of cognitive and industrial, work and organizational psychology. *Journal of Occupational and Organisational Psychology, 76* (1), 1-25.

Howell, D.C. (1997). *Fundamental Statistics for the Behavioural Sciences* (4th ed.) Belmont: Duxbury Press.

Howell, D.C. (2002). *Statistical Methods for Psychology* (5th ed.) Belmont: Duxbury Press

Huang, X., & Van de Vliert, E. (2003). Where intrinsic job satisfaction fails to work: National moderators of intrinsic motivation. *Journal of Organizational Behavior*, 24, 159-179.

Huitt, W. (2001). Motivation to learn: An overview. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved March 12, 2006 from http://chiron.valdosta.edu/whuitt/col/motivation/motivate.html

Human Sciences Research Council (1995). *Manual for the Sixteen Personality Factor Questionnaire*. Pretoria. Institute for personality and ability testing.

Jurkiewicz, C.L., and Massey, Jr., Tom K. (1997). What Motivates Municipal Employees: A Comparison Study of Supervisory Vs. Non-Supervisory Personnel. *Public Personnel Management*, 26 (3), 220-222

Kanfer, R. & Ackerman, P.L. (2000). Individual difference in work motivation: Further explorations of a trait framework. *Applied Psychology: An International Review*, 49 (3), 470-482.

Kanfer, R. & Heggestad, E. (1997). Motivational traits and skills: A person-centered approach to work motivation. In L. L. Cummings and B. M. Staw (Eds.), *Research in Organizational Behavior, 19,(* pp.1-57). Greenwich, CT: JAI Press

Kanfer, R.& Heggestad, E.D. (1997). Motivational traits and skills: A person-centered approach to work motivation. *Research in Organisational Behaviour,* 19, 1-56.

Kanfer, R., & Ackerman, P. L. (2000). Individual differences in work motivation: Further explorations of a trait framework. *Applied Psychology: An International Review*, 49, 470-482.

Latham, G.P. & Pinder, C.C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology,* 56, 485-516.

Lefcourt, H. M. (1982*). Locus of Control: Current trends in theory and research*. Hillsdale: NJ: Lawrence Erlbaum

Leviatan, U. & Menachem, R. (eds.). 1980. *Work and Organization in Kibbutz Industry*. Norwood, PA: Norwood Editions

Liik, K. & Laud, K.(2002). The Style of Leadership and Work Locus of control. In Baltin, A. & Soomer, D (Eds.) *Psychology in the Baltics: At the Cross-roads. Union of Estonian Psychologists*. Retrieved 12 August, 2006 from http://www.cs.tlu.ee/osakond/akrediteerimine/akr_aruanne_2004.pdf

Lindner, K. J. (1995). Motivation factors in the promotion of sport participation. *The Hong Kong Journal of Sports Medicine and Sports Sciences, 1*, 33-44

Maidani, E.A. (1991). Comparative study of Herzberg's two-factor theory of job satisfaction among public and private sectors. *Public Personnel Management, 20*(4), 441-448

Mandigo, J.L. & Holt, N.L. (2000). Putting theory into practice: How cognitive evaluation theory can help us motivate children in physical activity environments. *Journal of Physical Education, Recreation & Dance, 71* (1), 44-50.

Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review, 50,* 370-396.

Maslow, A. H. (1970). *Motivation and Personality (2nd.ed.).* New York: Harper & Row.

McClelland, D. C. (1961). *The Achieving Society*. Princeton: Van Nostrand.

McKenna, J. (2001). *Raymond Cattell: Personality Trait Theory*. Retrived 12 June, 2006 from http://www.le.ac.uk/education/resources/SocSci/cattell.html

Mearns, J. (2004). *The Social Learning Theory of Julian Rotter*. Retrieved 11 February, 2006 from http://psych.fullerton.edu/jmearns/rotter.htm.

Miller, D., Kets de Vries, M.F.R. & Toulouse, J-M (1982). Top Executive Locus of Control and Its Relationship to Strategy-Making, Structure, and Environment**.**

The Academy of Management Journal, 25 (2), 237-253

Moodley, S., Rajab, D. and Ramkissoon, R.D. (1979). Internal-external control among South African Students: A Cross-cultural study. *South African Journal of Psychology, 9*, 145-147

Mueller, S. L., & A. S. Thomas. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing, 16*, 51-75.

Pate, L.E. (1978). Cognitive versus reinforcement views of intrinsic motivation. *The Academy of Management Review*, 3, 505-512.

Pelletier, L.G., Fortier, M.S., Vallerand, R.J., Tuson, K.M. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS). *Journal of Sport & Exercise Psychology*, 17, 35-53.

Pervin, L.A. & Oliver, P.J. (1997). *Personality: Theory and Research* (7th ed.). Canada: John Wiley & Sons

Peterson, C. (1992). *Personality*. New York: Harcourt Brace Jovanovich.

Pinder, C. C.(1998). *Work Motivation in Organizational Behavior*. Upper Saddle River NJ: Prentice-Hall.

Praag, C.M. , Sluis, J. , Witteloostuijn, A. (2004). *The Impact of the Locus-of-Control Personality Trait on the Earnings of Entrepreneurs vis-à-vis Employees.* Retrieved 11 February, 2006 from http://ideas.repec.org/p/dgr/uvatin/20040130.html

Pretorius, W. (2004*). Organizational factors influencing the transformational process of a financial institution.* University of Pretoria, Pretoria: Unpublished Doctoral Thesis

Riordin, Z.V.A. (1981). Locus of Control in South Africa. *Journal of Social Psychology.* 115, 159-168

Robbins, S.P. (1998). *Organizational Behaviour: Concepts, Controversies, Applications.* Prentice-Hall.

Rogers, C.R. (1980). *A Way of Being*. Boston: Houghton Mifflin.

Rosenthal, R. & Rosnow, R.L. (1991). *Essentials of Behavioural Research: Methods and Data Analysis* (2nd ed.). Boston: McGraw-Hill.

Rosenthal, R. & Rosnow, R.L. (1996). *Beginning Behavioural Research: A Conceptual Primer* (2nd ed.). London: Prentice Hall.

Rotter, J. B. (1954). *Social learning and clinical psychology.* New York: Prentice-Hall.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs,* 80, 609-633.

Ryan, R.M. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, *25*, 54-67.

Schmidt, F. L., Ones, D. S., & Hunter, J. E. (1992). Personnel selection. *Annual Review of Psychology*, 43, 627-670.

Schuerger, J.M. (1992). The sixteen personality factor questionnaire and its junior versions. *Journal of Counselling & Development*, 71 (2), 231-244.

Semeijn, J., Boone,C., van der Velden. R., & van Witteloostuijn A. (2004).Graduates' personality characteristics and labor market entry: An empirical study among Dutch economics graduates. *Economics of Education Review,* 23. Retrieved 10 March, 2006 from http://www.sciencedirect.com/science/article/B6VB9-4D16SS5-2/2/91a62afb615b8eaee2be746ea5a7556a.

Skinner, B. F. (1953). *Science and Human Behavior*. New York: Free Press.

Silva, A. S. F. (2002). *Personality traits, sel-esteem and body image disturbances of high-school girls in Johannesburg with a propensity to developing eating disorders*. University of the Witwatersrand, Johannesburg: Unpublished Masters Thesis

Spector, L., & A. Robinson. 2002. Genetic Programming and Autoconstructive Evolution with the Push Programming Language. *In Genetic Programming and Evolvable Machines*, 3 (1), 7-40.

Spector, P.E.(1987). Interaction effects of perceived control and job stressors on affective reactions and health outcomes for clerical workers. *Work & Stress*, 1, 155-159

Srivastava, S. (2006). *Measuring the Big Five Personality Factors.* Retrieved 6 November, 2006 from http://www.uoregon.edu/~sanjay/bigfive.html.

Steers, R.M. & Porter. L.W. (1991). *Motivation and Work Behavior*. New York: McGraw-Hill.Inc. Lincoln.

Steinbuch, I. F. (2001). *Perceived Organisational Characteristics and Personality Measures as Predictors of Motivation in the Work Place*. University of the Witwatersrand, Johannesburg: Unpublished Masters Thesis

Strauser, D. R., Ketz, F.K. & Keim, J.M. (2002). The impact of self-efficacy and locus of control on work adjustment. *Journal of Rehabilitation*, 68 (1), 20-26

Tett, R.P. & Burnett, D.D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology*, 88 (3) 500-517.

Theron, S.W. (1992). *A cross-cultural analysis of work-related values in a mining industry*. University of Pretoria, Pretoria: Unpublished Doctoral Thesis.

Vallerand, R.J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M.P. Zanna (Ed.), *Advances in Experimental Social Psychology*, 29, (pp. 271-360). New York: Academic Press

Wilson M.G., Dejoy D.M., Vandenberg R.J., Richardson H.A. & McGrath A.L. (2004) Work characteristics and employee health and well-being: test of a model of healthy work organization. *Journal of Occupational and Organizational Psychology*, 77, 565–588.

Wise, M. (1999). *Locus of Control in Our Daily Lives How the Concept of Control Impacts the Social World*. Retrived 17 March, 2006 from http://www.units.muohio.edu/psybersite/control/overview.shtml

APPENDICES